

Audiences' willingness to participate in Welsh-language media

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Submitted in partial fulfilment of the
requirements of the degree of Doctor of
Philosophy

February 2013

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Abstract

Contemporary media audiences expect to be able to interact with content, but in a minority language context, audience participation presents challenges related to audiences' linguistic confidence. This thesis focuses on Wales, where media producers have suggested that audiences are often reluctant to interact with broadcast and online content in Welsh. To begin to understand this unwillingness, and how it might be overcome, the concept of willingness to participate (WTP) is coined as an extension of willingness to communicate (McCroskey & Baer 1985).

First, interviews with producers are analysed qualitatively to identify potential influences on audiences' WTP. The analysis aims to assess the relative importance of various factors: audiences' feelings of apprehension, self-perceived competence, language background and Welsh language ability, as well as the modality of participation (oral/written) and the level of demand placed on the audience.

Second, a questionnaire is designed and administered to 358 Welsh speakers, to examine audiences' perceptions of different opportunities to participate in media content. A path model of WTP is proposed and tested using quantitative data from the survey. The results support the hypothesis that audiences' apprehension and self-perceived competence predict WTP and that audience response varies according to the media context. While audiences' Welsh language skills are important in explaining their WTP, other aspects of language background, such as Welsh language acquisition context, are found to be less important.

Third, the survey sample is grouped according to common patterns of WTP, to test whether the above effects are consistent across the population or whether different 'types' of audience exist. Using a combination of cluster analysis and thematic analysis of audience comments, four types of audience are proposed and described in detail. Finally, implications for sociolinguistic theory, language maintenance and media production practice are considered and recommendations made.

Parodrwydd cynulleidfaedd i gyfranogi mewn cyfryngau Cymraeg

Crynodeb

Mae cynulleidfaedd cyfryngau cyfoes yn disgwyl gallu rhyngweithio â chynnwys, ond yng nghyd-destun iaith leiafrifol, mae cyfranogiad y gynulleidfa yn cyflwyno heriau cysylltiedig â hyder ieithyddol cynulleidfaedd. Mae'r thesis hon yn canolbwyntio ar Gymru, lle mae cynhyrchwyr ym myd y cyfryngau wedi awgrymu bod cynulleidfaedd yn aml yn amharod i rhyngweithio â chynnwys ar-lein ac sydd wedi ei ddarlledu yn Gymraeg. Er mwyn dechrau deall yr amharodrwydd hwn, a sut gellid ei oresgyn, bathwyd y cysyniad o barodrwydd i gyfranogi fel estyniad o'r parodrwydd i gyfathrebu (McCroskey a Baer 1985).

Yn gyntaf, dadansoddir cyfweiliadau â chynhyrchwyr mewn modd ansoddol er mwyn canfod dylanwadau posibl ar barodrwydd cynulleidfaedd i gyfranogi. Nod y dadansoddiad yw asesu pwysigrwydd cymharol amrywiol ffactorau: teimladau pryderus cynulleidfaedd, eu cymhwysedd hunan-ganfyddedig, eu cefndir ieithyddol a'u gallu yn y Gymraeg, yn ogystal â moddolrwydd y cyfranogiad (llafar/ysgrifenedig) a lefel yr hyn y gelwir amdano gan y gynulleidfa.

Yn ail, dylunnir holiadur a'i ddefnyddio gyda 358 o siaradwyr Cymraeg, er mwyn archwilio canfyddiadau cynulleidfaedd o wahanol gyfleoedd i gyfranogi mewn cynnwys cyfryngol. Cynigir model llwybr o barodrwydd i gyfranogi a'i brofi trwy ddefnyddio data meintiol o'r arolwg. Mae'r canlyniadau yn cefnogi'r hypothesis bod lefelau pryder cynulleidfaedd a'u cymhwysedd hunan-ganfyddedig yn rhagfynegi eu parodrwydd i gyfranogi, a bod ymateb y gynulleidfa yn amrywio yn ôl y cyd-destun cyfryngol. Er bod sgiliau Cymraeg cynulleidfaedd yn bwysig o ran egluro eu parodrwydd i gyfranogi, ceir bod agweddau eraill ar eu cefndir ieithyddol, megis cyd-destun caffael y Gymraeg, yn llai pwysig.

Yn drydydd, caiff sampl yr arolwg ei grwpio yn ôl patrymau cyffredin o barodrwydd i gyfranogi, er mwyn profi a yw'r effeithiau uchod yn gyson ar draws y boblogaeth neu a oes gwahanol 'fathau' o gynulleidfaedd. Gan ddefnyddio cyfuniad o ddulliau clystyrol a thematig i ddadansoddi sylwadau cynulleidfaedd, cynigir pedwar math o gynulleidfa a'u disgrifio'n fanwl. Yn olaf, ystyrir y goblygiadau o ran theori sosio-ieithyddol, cynnal iaith ac ymarfer cynhyrchu ym maes y cyfryngau, gan gyflwyno argymhellion.

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Acknowledgements

The research in this thesis was supported by a Block Grant Partnership award from the Arts and Humanities Research Council (www.ahrc.ac.uk).

Many people deserve thanks for their contributions to this thesis. First, thank you to my excellent supervisor, Devyani Sharma, for her guidance, and to Leigh Oakes, my second supervisor, for his valuable feedback on my work. Thanks also to the rest of the Linguistics department, including Erez Levon, Esther de Leeuw, David Adger, Paul Elbourne and especially Colleen Cotter, for their advice, support and helpful comments on my writing. Thanks to all my fellow labbers, especially Fryni, Rachelle, John, Barb, Ahmad, James, Ruth, Agnieszka, Jad, Fangfang, Abigael and Eva. And thanks to my examiners, Mike Cormack and Jean-Marc Dewaele.

Thanks to my BBC colleagues, especially Faith Mowbray, Anna Guina, Emma Kaye and Ann Charles, who helped with the research in various ways, and to Will Turner, who first suggested I could do a PhD. I'm also very grateful to all the producers and execs at the BBC, S4C and indies in Wales who took the time to talk to me about their work, whether as part of an interview, or more informally.

Thanks to Daniel Cunliffe, Donald Browne, Dave Sayers and Jeremy Evas for their various ideas and suggestions, and to Alan Pickering, Mike Griffiths, Irini Moustaki, Michael Grayer and Julia Diemer, who helped me to understand and enjoy statistics.

I am indebted to all the kind people I met during my fieldwork, some of whom went well out of their way to help me. I'm very grateful for all their warm welcomes, cups of tea and words of encouragement. Thank you in particular to the three people who insisted on driving me miles across various parts of rural Wales, instead of letting me wait for the bus. Thanks to Robin de la Motte for his moral support: his reminder that "if 1% of people are sociopaths and you need 300 respondents, you're *bound* to meet a few" kept me going on the days when the fieldwork wasn't going so well. Most importantly, sincere thanks to everyone who filled in an audience questionnaire. I really appreciate it.

My family have helped immensely with the production of this thesis. Thanks to my mum for coming to help me at the Eisteddfod, to my dad for his project ideas, to my Grandma for the homemade macarons and to my Grandad for his insightful comments on draft chapters of this thesis. Thanks to my partner, Dan, for all his moral and practical support. In particular, thank you for letting me think seriously about giving up. Doing a PhD became much less daunting once I knew I had an escape route. Finally, thank you to Hedy, my cat, who doesn't give a monkey's about the thesis, either way.

Chapter 1: Introduction

Incorporating audience participation into media content can be an effective way for media producers to get to know their audience better, increase audience engagement with content and reflect the diversity of their audience on-air and online. In a minority language media context, enabling audiences to take part in content may also give minority language speakers valuable extra opportunities to use their language. Yet Welsh-language radio, TV and web producers find that their audiences often express an unwillingness to take part in media content. Why do Welsh-speaking audiences often feel this way? And what can media producers do to overcome the apparent problem? Moreover, what can an understanding of these issues contribute to related areas of research, such as sociolinguistics, language maintenance theory and second language acquisition (SLA)?

This thesis addresses these questions by taking a psychological approach to the subject of audience participation. As such, it is the first study that has aimed to document empirically the individual psychology of minority language media audiences. It should be clear from the outset that this is not an investigation of media's impact on language maintenance, but of individuals' short-term psychological reactions to specific opportunities to take part in media content. The theoretical framework for the research is developed in chapter 2, where 'willingness to participate' (WTP) is coined as an extension of the existing concept of willingness to communicate (WTC). Other theoretical constructs are borrowed from the SLA literature: audiences' assessments of their own ability to take part in media content in Welsh are theorised in terms of their self-perceived communicative competence (SPCC), while audiences' feelings of nervousness when given the opportunity to participate are conceived in terms of communication apprehension (CA).

The specific hypotheses and research questions to be tested in the thesis derive from a preliminary study of media producers' experiences of eliciting audience participation in Welsh (chapter 3). It is hypothesised that audiences' willingness to participate in media content is closely linked to both SPCC and CA. More specifically, if people feel apprehensive about taking part in a particular media scenario and/or believe that they are not competent enough in Welsh to take part, their willingness to take part will be reduced. Since the research aims to test the relative importance of the various predictors of WTP hypothesised by media producers, rather than any other factors, various potentially interesting variables are excluded from the study. Audiences' favourable or unfavourable attitudes towards the Welsh language, Welsh media or audience participation, for instance, may be relevant to predicting audiences' willingness to participate in Welsh-language media. However, as these are not put forward by producers as

potential explanations for some audiences' reticence, these attitudinal variables are not incorporated into the model of WTP tested in chapter 5.¹

Analysis of an audience survey (the design and administration of which is described in chapter 4) broadly confirms producers' views (chapter 5), but it is also found that WTP is subject to interesting individual differences. Four distinct 'types' of audience are identified, based on common patterns of response to particular media scenarios, and these are described and profiled in detail (chapter 6).

Based on the findings of the research, it is argued that willingness to participate is a complex dynamic system of interrelated factors, whose outcomes are difficult to predict (chapter 7). While producers' efforts to influence the system may amount to nought, they may also have more dramatic consequences, as one respondent in the present study pointed out:

I found that taking part in [a] TV recording refreshed my conversational Welsh and I came back to being confident as I was in school years. (M70B116/1)²

Since such positive outcomes are possible – albeit not guaranteed – it is suggested that researchers concerned with individuals' language choices, linguistic self-confidence and language maintenance may gain both theoretical and practical insights from an understanding of audiences' willingness to participate in minority language media. From a media production perspective, producers, too, should be aware of both the positive and negative effects their actions can have on audiences' WTP. For this reason, the results of the research are translated into a series of practical recommendations for Welsh-language media producers (chapter 7; also see appendix B for an executive summary).

Theoretical and practical implications for sociolinguistics, language maintenance and SLA are highlighted throughout the thesis and discussed in detail in chapter 7. In particular, I argue that sociolinguistic research should pay greater attention to psychological variables, as these may help sociolinguists to gain a more complete picture of the factors involved in sociolinguistic variation. I also argue that efforts to encourage language maintenance would benefit from a 'life course' perspective (Eckert 1998), which takes into account changes in language use that may

¹ Attitudes are discussed in relation to the qualitative analysis of audience comments, however, in chapters 6 and 7.

² Each respondent in the audience survey has been allocated an ID code. The first four characters indicate the respondent's sex (M = male, F = female, X = missing data), their age group (18 = 18-34, 35 = 35-49, 50 = 50-69, 70 = 70+, XX = missing data) and their L1 (W = Welsh, E = English, B = both, O = other, X = missing data). These are followed by a randomly allocated number from 001 to 358, which serves as a unique identifier. The character after the slash indicates the cluster to which the respondent has been allocated (1 = Enthusiasts, 2 = Avoiders, 3 = Optimists, 4 = Talkers; see chapter 6). Where the cluster is marked as missing (X), this means that the respondent was excluded from the quantitative analysis (the path analysis in chapter 5 and the cluster analysis in chapter 6) due to issues with missing data (see chapter 4).

coincide with major life junctures. In addition, I make a contribution to SLA theory by modelling self-perceived competence in Welsh at two levels of conceptualisation, revealing, for example, that the link between people's self-assessment of their overall Welsh proficiency and their self-perceived communicative competence in specific situations is moderated by individual differences.

The theoretical framework for the thesis is presented in the following chapter, but first, I introduce the thesis with a description of the Welsh context (section 1.1). The history of the Welsh language and its revitalisation is described and current challenges for the maintenance of the language, such as a widespread lack of linguistic self-confidence among speakers, are discussed. The focus then turns to Welsh-language broadcast and online media in particular (section 1.2). My personal motivation for conducting the research is laid out in section 1.3, where I indicate how my own professional experience as a radio and web producer informs the study. For ease of reference, the main aims and the structure of the thesis are presented explicitly in sections 1.4 and 1.5 respectively. The research in this thesis has resulted in two publications so far; references for these are given in section 1.6.

1.1 The Welsh language

In order to set the present study into its wider context, in this section, an account is presented of the history of the Welsh language and its revitalisation (section 1.1.1). Current challenges and priorities for the language are then discussed, with reference to some of the themes that run through the thesis (section 1.1.2).

1.1.1 A history of the Welsh language and its revitalisation

Welsh was the only language of most people in Wales until the Act of Union between Wales and England in 1536. As part of the Act, the Welsh legal system was replaced with the English one, which was only allowed to operate in English (Ball 2007). Since those who spoke English were able to take on the most prestigious jobs in civil administration, and those who spoke Welsh were not, from this point onwards, the Welsh language gradually lost its prestige and went into decline (Dunbar 2004). A major period of societal language shift (Fishman 1964) occurred during the industrial revolution, when an influx of English-speaking workers came from outside Wales. As the English speakers were wealthier and held more prestigious positions than the Welsh speakers, the latter began to speak English in order to communicate with the migrants (Hinton 2001). Another milestone in the decline of Welsh was an influential 1847 Royal Commission report on education, which claimed that Welsh was a hindrance to pupils' progress (Ball 2007). As a result, new schools began to teach through the medium of English, and pupils who spoke Welsh at school were often punished, a practice that continued well into the 20th century, as

today's older generations can attest. In the first half of the 20th century, the Second World War contributed to language loss in Wales: a large number of Welsh-speaking men were killed in the fighting, and in the economic collapse that followed, many of the Welsh speakers who had survived left Wales in order to find work (Morgan 2001). All these factors contributed to the gradual shift from Welsh to English as the most widely-spoken language in Wales.

In the middle of the 20th century, however, efforts began in earnest to bring about the revitalisation of Welsh, that is to "increase the relative number of speakers of [the] language and extend the domains where it is employed" (Grenoble & Whaley 2006: 13). Arguably the most important contribution to this process was the development of Welsh-medium education (Williams 2002). While there had been experiments in Welsh-medium education in the private sector in the 1920s and 30s, the end of the Second World War marked the start of the modern-day Welsh-medium state education system. Although many rural primary schools already used Welsh "naturally as a means of education before there was talk of Welsh-medium schools" (Williams 2003: 16), the Education Act of 1944 allowed local education authorities (LEAs) to consider providing Welsh-medium education on an official basis for the first time. The Act's assertion that children should be "educated in accordance with the wishes of their parents" (Education Act 1944, quoted in Williams 2003: 11) inspired some parents, teachers and councillors to campaign for the foundation of Welsh-medium schools. The first Welsh-medium state primary school opened in Llanelli in 1947; eight more opened in 1949, four in north Wales and four in the south (Lewis 2006). By 1957 there were 30 Welsh-medium primary schools in Wales; the first Welsh-medium secondary school opened in Rhyl in 1956 (I. Morgan 2003). The sector expanded due to the efforts of passionate individuals, including parents who held sit-ins (Miles 2003) and headteachers who were prepared to undermine LEA policy for the cause (Richards 2003); it has been pointed out that much of the campaigning for Welsh-medium education was "fierce and unsavoury" (G. Morgan 2003: 317).

The Welsh-medium education system continued to grow in the 1960s, a decade when the loss of Welsh speakers was especially rapid. A significant turning point in the public's view of Welsh occurred in 1962, when Saunders Lewis, writer and nationalist politician, gave a powerful speech, in Welsh, on BBC Radio Wales, warning Welsh speakers of the decline of the language and of the need for the Welsh-speaking community to take action to prevent its disappearance. Lewis's talk led to the foundation of the Welsh Language Society (National Library of Wales n.d.), which has since organised numerous pro-Welsh campaigns.

In the 1970s and 80s the decline of Welsh levelled out somewhat – at least, on a national level. Locally, the pattern was much more complicated, with some areas losing and others gaining

speakers. While 'naturally' Welsh-speaking areas of Wales lost many speakers, areas that had been almost entirely English-speaking began to make gains. The largest increases were among children and teenagers, who, with attitudes improving towards Welsh, were given increasing opportunities to acquire Welsh as a second language (Aitchison & Carter 2004). Meanwhile, the immigration of English speakers contributed to language shift and the breaking up of the Welsh-language heartlands in north and west Wales. This shift accelerated with the proliferation of English-language electronic media available in Welsh-speaking homes (Hinton 2001). The provision of Welsh-language media became an important cause for many speakers and supporters of the Welsh language and in 1982, following strong campaigning, the Welsh-language TV station S4C (Sianel Pedwar Cymru) was launched. The history of Welsh-language media is discussed in detail in section 1.2.

The 1990s were an important decade for the revitalisation of Welsh. Further expansion of the Welsh-language education system occurred following the 1988 Education Reform Act, which made it compulsory for state-educated pupils in Wales to receive lessons in Welsh, whether as a first or second language. Welsh became a compulsory subject for pupils aged 5-14 in 1990; this was extended to 15 and 16 year olds in 1999 (Mercator-Education 2001). Shortly afterwards, the Welsh Language Act (UK Government 1993) granted English and Welsh legal equality in Wales. The effects of the Act are evident on street signs, which are bilingual in English and Welsh, and in the compulsory provision of public services in Welsh. All public bodies, for instance, are required to provide information in Welsh and to be able to respond to enquiries made in Welsh. The 1993 Act also created the Welsh Language Board, which aimed to promote and facilitate the use of Welsh through various projects and services. The UK's 2001 ratification of the European Charter for Regional or Minority Languages, in contrast, made little practical difference to the position of Welsh, as,

rather than viewing the ratification of the Charter as an opportunity to review its policy with respect to regional or minority languages and as a springboard for significant improvements, the UK Government [...] simply accepted those paragraphs and sub-paragraphs of Part III where [...] satisfactory provision already exists. (Dunbar 2003: 43)

Welsh gained further legal support in 2011, when the Welsh Language Measure declared that Welsh and English both have official status in Wales. The Measure paved the way for the Welsh Language Board to be replaced by the Welsh Language Commissioner role in 2012 (Welsh Language Commissioner 2012). Like the Welsh Language Board, the Commissioner aims to promote and facilitate the use of Welsh, but the role also has powers to enforce organisations' compliance with Welsh language laws.

First evidence of the improving fortunes of Welsh came in the 2001 census. Returns showed that overall speaker numbers had increased in the preceding decade, an upturn that Coupland (2006) attributes to new young learners of Welsh reporting second language skills. Indeed, the Welsh education system has been described as “the most fundamental feature of language revitalisation in Wales” (Williams 2002: 96). In the 2001 census, which was analysed in detail by Aitchison and Carter (2004), 28.4% of the population of Wales claimed to have some Welsh language skills, but this figure varied considerably according to area, from over 90% in some wards to under 10% in others. The trends in the geographical distribution of Welsh speakers observed since the 1980s continued into the 21st century, with the decline of Welsh in the traditional rural Welsh-speaking heartlands and the growth of Welsh in the urban south east (Aitchison & Carter 2004, BBC Cymru Wales 2010). The region that Aitchison and Carter found most puzzling in their 2004 report was south-west Wales, which experienced what they deemed a “catastrophic collapse in numbers and proportions” (Aitchison & Carter 2004: 131) of Welsh speakers in the years 1991 to 2001, despite a strong sense of Welsh identity in the area. Aitchison and Carter could not explain the language shift in the south west, suggesting that the age structure, low literacy, a lack of service occupations (and therefore investment) must be implicated, although “there must be more to it than that, for they are no more than evidence of the underlying problem” (Aitchison & Carter 2004: 132).

The pattern of simultaneous growth and decline seen in 2001 is also evident in the first results of the 2011 census, published shortly before the completion of this thesis (Welsh Government 2012a). The total proportion of people in Wales with some skills in Welsh dropped from 28.4% in 2001 to 26.7% in 2011 (the proportion of people who claimed to be able to *speak* Welsh decreased from 20.8% in 2001 to 19.0% in 2011). The overall decrease is attributed to

demographic changes in the population (including fewer children, more adults and the loss of older cohorts with higher levels of Welsh speakers), the outmigration of Welsh speakers, the in-migration of non-Welsh speakers and changes to people’s skills between Censuses (people who stated that they were able to speak Welsh ten years ago, but could no longer do so). (Welsh Government 2012a: n.p.n.)

The south west region, particularly Carmarthenshire, again experienced a substantial decrease in people reporting Welsh skills. The number of people in Carmarthenshire able to speak Welsh fell by over 6000 from 2001 to 2011 (the percentage fell from 50.3% to 43.9%). Initial commentary attributes this change to the area’s “failure 20 to 30 years ago to establish Welsh medium schools which have done so much to compensate for relative decline in the eastern Valleys” (Osmond 2012).

In 2011, children aged 10-14 were the most likely to be able to speak Welsh (42.2%) and adults aged 45-49 the least (13.0%). Census returns showed gains among children aged 3-4, 23.3% of whom were able to speak Welsh in 2011, compared to 18.8% in Welsh in 2001. There were also rises in the number of people able to speak Welsh in Cardiff, Caerphilly and Monmouthshire, although the growth of the overall population in Cardiff and Caerphilly meant that only Monmouthshire saw an increase in the proportion of people able to speak Welsh (9.9% in 2011 versus 9.3% in 2001) (Welsh Government 2012a: n.p.n.).

1.1.2 Current priorities for Welsh language revitalisation and maintenance

Welsh language revitalisation faces various challenges, many of which are reflected in the Welsh Government's strategic priorities. In this section, I summarise current issues which are relevant to the present research.

Despite its successes in creating new speakers of Welsh, the Welsh education system faces certain challenges. First, there have been calls for greater continuity from one educational stage to the next, to discourage pupils who have attended Welsh-medium primary school from dropping out of the Welsh-language system when they move to secondary school, or taking progressively fewer subjects through the medium of Welsh (Redknap 2006). The results of the survey conducted as part of the present study illustrate the drop-off in Welsh use from one level of education to the next (chapter 5). A current government priority is to increase access to Welsh-medium education after the age of 14 (Welsh Government 2012b), and in 2011, an independent organisation, Y Coleg Cymraeg Cenedlaethol, was established with responsibility for "maintaining, developing and overseeing Welsh medium higher education provision in Wales" (Coleg Cymraeg Cenedlaethol 2011).

Second, it has been said that Welsh-medium education creates fluent speakers but does not encourage language *use* (Evans 2003, Prys, Morris and Cunliffe 2010). In addition, many children and teenagers who learn Welsh as a school subject let their skills lapse after leaving school (ap Dyfrig, Jones & Jones 2006). These issues were raised by participants in the present study and are discussed in chapters 5 and 6. They are also addressed indirectly in the Welsh Government's current Welsh language strategy, which includes the goal of increasing adults' opportunities to use Welsh at work, since the development of the status of Welsh in the workplace may be "important in terms of underlining the value of Welsh-medium education" (Welsh Government 2012b: 37) whereas limiting opportunities for Welsh speakers to use their Welsh at work "deprives Welsh speakers of the opportunity to normalise their use of the language" (*ibid*). The current focus on increasing the use of Welsh in the workplace may give young people more reason to maintain their Welsh after leaving school.

Third, the Welsh Government's focus on facilitating the use of Welsh at work also reflects the general observation that Welsh speakers and learners who want to use their Welsh often lack the opportunity to do so (Pritchard Newcombe 2007), as noted by several participants in the present study (chapter 6).

Finally, many Welsh speakers lack the confidence to use their Welsh, especially in public situations or with strangers (Baker 2003, Irvine *et al* 2006). A lack of linguistic confidence has been cited, for example, as a reason why some people do not use Welsh at work or when accessing public services (Welsh Government 2012b). Nurturing Welsh speakers' linguistic self-confidence is a priority for the Welsh Government and is a main theme running throughout the present study.

1.2 Welsh-language broadcast and online media

In Wales, far more media is available in English than in Welsh. Compared to many other minority languages, however, there is a relatively wide selection of high-quality media content in Welsh. In this section, I chart the development of Welsh-language broadcast and online media. For simplicity, this is divided into radio (section 1.2.1), television (section 1.2.2) and online media (section 1.2.3). (Newspapers, magazines and other print media are not discussed as they fall outside the scope of the thesis, as explained in chapter 2.)

1.2.1 Welsh-language radio

The Welsh language was first used on BBC radio in 1923. In the early days of broadcasting, however, items in Welsh were few and far between, and it was not until the middle of the 20th century that Welsh-language programming began to expand. By the 1970s, several hours of Welsh could be heard on-air each week, within an otherwise English-language schedule. Non-Welsh speakers became fed up with switching the radio on and hearing Welsh they could not understand, while Welsh speakers became frustrated at trying to catch the small amounts of Welsh-language output that were broadcast at inconvenient times (ap Dyfrig, Jones & Jones 2006). These issues were resolved with the launch of Wales's only fully Welsh-speaking radio station in 1977. BBC Radio Cymru broadcasts a mixture of speech and music content whose style lies somewhere between those of network and local radio (Ellis 2000). Its schedule includes content for teenagers and young people in its nightly C2 strand. Having first been broadcast on FM, it can now also be received on digital TV, on DAB (in some areas) and online.

Welsh is infrequently heard on commercial radio in Wales. While some local radio stations, such as Radio Ceredigion (Radio Ceredigion 2010), are obliged to broadcast a certain percentage of their speech or music output in Welsh, several of the stations that ap Dyfrig, Jones and Jones (2006) identified as Welsh-language broadcasters have since closed, reduced their Welsh-

language output or relaunched under a UK-wide brand. Although broadcasting is not a devolved issue, which means it is the responsibility of the UK Government, the Welsh Government has nonetheless vowed to do “all it can to ensure that Welsh-language broadcasting continues to develop and improve” (Welsh Government 2012b: 47), which includes investigating “the possibility of increasing the provision of Welsh-language programming on commercial radio stations operating in Wales” (*ibid*: 52).

Some community radio stations, i.e. stations which are licensed to operate on a “not-for-profit basis focusing on the delivery of specific social benefits to a particular geographical community or a community of interest” (Ofcom 2012), already broadcast programmes in Welsh and this sector is expanding. In 2012, for example, a new community licence was granted to Radio Beca, a group set up in reaction to Radio Ceredigion’s attempts to cut its Welsh-language output (Misstear 2011). The new station is expected to broadcast across three counties, mostly in Welsh (BBC News 2012, Ofcom 2012).

1.2.2 Welsh-language television

Like Welsh-language radio, Welsh-language television also started out on English-language channels. The BBC broadcast its first Welsh-language TV programme in 1953 and by the 1960s, a few Welsh-language programmes per week were broadcast on the BBC and ITV (ap Dyfrig, Jones & Jones 2006, Browne 2007). As had been the case with radio, both Welsh speakers and non-Welsh speakers felt short-changed with the arrangement and there was substantial public support for a dedicated Welsh-language television channel. It was the Welsh Language Society, along with Plaid Cymru and other organisations, that led the campaign for a dedicated Welsh-language channel, to serve Welsh speakers in their own language. Thousands of campaigners took part in direct action protests, including refusing to pay the licence fee, until the Conservatives pledged to create a Welsh-language TV channel for Wales. Following the 1979 election, however, the London-based Thatcher government went back on their manifesto pledge. This broken promise was perceived as not just a language issue, but a national one too: Wales had been cheated by English politicians, and that angered non-Welsh-speaking voters as well as those who spoke Welsh. In 1980, the Plaid Cymru politician, Gwynfor Evans, announced that he was planning to go on hunger strike and was willing to die for the cause. Ministers changed their mind and reinstated their plans for S4C; as a result, Evans’ threat was widely reported as the “single definitive act that transformed the political climate and led to the establishment of S4C” (Jones 2007: 189). The launch of S4C was perceived as “a victory for Wales over the English establishment” (Aitchison & Carter 2004: 20), which created “social momentum” (Dodson & Jones 1984: 31). The fight for and subsequent launch of S4C, has

therefore been described as one of the critical events that contributed to an appetite for Welsh language revitalisation more generally in the 1970s and 80s (Aitchison & Carter 2004: 20).

When it first began broadcasting in 1982, S4C was warmly welcomed throughout Wales, and early viewing figures and measures of audience appreciation were very positive (Bevan 1984). It was not an exclusively Welsh-language broadcaster, however: in peak hours, the channel showed Welsh-language programmes, but at other times of the day, S4C filled the rest of the schedule with programmes from the English-language station, Channel 4. Channel 4 had been launched in England at the same time that S4C went on-air in Wales, but the channel was not available in Wales; the launch of S4C thus brought with it new programmes for Welsh speakers and non-Welsh speakers alike. Despite early successes with this dual-language format, audience figures soon slumped (Bevan 1984: 112). When the Channel 4 schedule expanded in England, viewers in Wales could not receive all the extra programmes, due to the scheduling of Welsh-language programmes. Some non-Welsh-speaking viewers became resentful of S4C's Welsh-language output depriving them of 'their' Channel 4 programmes, and those living on the English borders began redirecting their aerials to receive Channel 4 instead of S4C (Taylor 2008).

In 2009-2010, digital TV switchover took place in Wales, which finally solved the problems regarding access to Channel 4 in Wales. Audiences were now able to watch the full Channel 4 schedule through the digital service, while S4C became an exclusively Welsh-language channel. Despite the apparent success of digital switchover, the period in which the present research was conducted was nonetheless a turbulent one for S4C. In 2010, the channel received severe criticism in the Welsh (Shipton 2010) and UK press (Mail Online 2010) for its very low viewing figures (cf. Evans 2010), lost its Chief Executive (S4C 2010) and had its funding cut – twice (Sweney 2010). It was also announced that responsibility for the channel would transfer from the UK Government's Department for Culture, Media and Sport (DCMS) to the BBC, starting in 2013 (Sweney 2010). During the fieldwork conducted for this thesis, participants frequently offered their thoughts on S4C. Opinions were divided: some were very supportive of the channel and described it as a "lifeline", but many others were critical of aspects of its output and reputation. In contrast, participants spoke highly of Radio Cymru, which was perceived as high quality and uncontroversial.

In an ongoing period of upheaval, actively engaging and interacting with audiences is one way in which media producers can demonstrate the vitality and value of the content they make. Indeed, S4C's digital fund, set up in 2012 to offer seed funding for new creative media products, aims to "expand S4C's appeal and engagement with audiences, and to attract new audiences by offering new digital content, products and services and *interacting with audiences* in new ways"

(S4C Digital Media Limited 2012: 2; my emphasis) and highlights “projects which encourage [...] the contribution of user generated content” (*ibid*) among the activities it wishes to support. For that reason, the present research, which explores how producers can encourage their audiences to take part in content, has been described as “timely” by several producers and executives working in the Welsh media sector.

1.2.3 Welsh-language online media

In contrast to Welsh-language TV and radio, online media in Welsh have been developed as a matter of course, without the need for campaigning (ap Dyfrig, Jones and Jones 2006). The two main Welsh-language broadcasters, the BBC and S4C, have extensive web presences, where audiences can watch and listen to programmes online. S4C’s online service includes Welsh-language games and activities for young children and resources specifically aimed at learners of Welsh, such as synopses of drama serials and clips of factual programmes accompanied by lists of Welsh vocabulary. Since 2000, BBC Cymru has published news and local stories in Welsh, including articles republished from the Welsh-language local newspapers, known in Welsh as *papurau bro*. These papers have long been popular with older generations (Hughes 2008), and the BBC’s collaboration with them has brought their content to a new, younger audience. The BBC Cymru website also includes Welsh-language blogs, features, children’s content and resources for learners of Welsh. The popular Welsh-language magazine Golwg also runs an online news service, called Golwg360, which it launched in 2009.

1.3 Personal motivation

The research presented in this thesis is motivated largely by my own professional experience of producing media content. Before embarking on PhD research, I worked in radio production for a number of years, making English-language speech radio and web content for UK network radio stations, BBC Radio 4, BBC Radio 7 (now known as Radio 4 Extra) and the World Service. I also worked on two overtly multiplatform brands: CBeebies (TV, radio and online content for pre-school children) and BBC Voices, a project which celebrated linguistic diversity in the UK (BBC Voices 2008, Johnson, Milani & Upton 2010, Turner & Law 2009). The Voices project included a major survey of lexical variation, conducted in collaboration with the University of Leeds (BBC Voices 2007b), and culminated in a successful season of language-themed programming across local, national and network radio, TV and websites. It leaves as its legacy an archive of speech recordings from around the UK, available at the British Library (BBC Voices 2007a, Robinson 2012).

Although I have never worked on Welsh-language content directly, most of the roles I have worked in have involved facilitating audience participation of some kind, and I find this one of

the most rewarding aspects of my profession. My personal perspective as a media practitioner therefore informs this thesis in several ways.

First, I have approached the subject of audiences' willingness to participate in Welsh-language media with a view to the practical applications of the research. In appendix B, I provide an executive summary of findings and recommendations for Welsh-language media producers. Although the results of this research may be of interest to media bosses, language activists and other non-academic readers, its practical applications are pitched firmly at the level of the production team. Ethnographic research into multilingual newsroom practice (Perrin & Ehrensberger-Dow 2011) suggests that journalists, tackling problems in their everyday routine, are more likely to drive change in production practice than senior managers, giving instructions from above. Similarly, it is programme makers, rather than policy makers, who are best placed to stimulate audiences' engagement with content. By taking a practice-focused approach, then, I hope to be able to incorporate relevant insights into my own production practice in the future.

Second, my own experience accounts for the 'platform-agnostic' approach in this thesis, that is, the work is not "wedded to any particular medium" (Woodrooffe & Levy 2012: n.p.n.). As one of the BBC's 'new' breed of multi-skilled producers, I am used to making content for multiple platforms, and often talk about my specialist craft as 'audio' rather than 'radio' production. To restrict my research to one platform would not reflect how my generation of producers tends to work. Although most producers remain in departments dedicated principally to radio, television or new media, they are increasingly responsible for creating content for a variety of platforms (Witschge 2013). When it comes to new commissions, the current industry trend is towards creating multiplatform media brands, often centred on a major television series, but supplemented by online content (Doyle 2010). Audiences, too, can experience related material in numerous contexts. In June 2011, BBC Radio 1 introduced the strapline, "listen, watch, share", which emphasised the station's existence beyond the traditional radio platform (Stodd 2011). Audiences listen to Radio 1 on FM, on DAB, on digital TV, online or in podcasts, they watch Radio 1 webcams and videos online, or extended live music coverage on the red button (via digital TV) and they share specially produced or repackaged Radio 1 content on their mobiles or on social media platforms, such as Facebook and Twitter. These elements all form part of a radio brand, but they are delivered and consumed through a range of devices, and in a variety of formats. In today's converging media landscape (Doyle 2010), then, it no longer makes sense to view radio, television and new media as completely separate entities. Instead, it is helpful to distinguish between media content and the platform on which it is published or consumed. Whichever

platform provides the context for audience participation, it is media *content* that invites and entices audiences to take part, and which is therefore of primary interest in this thesis.³

Third, were it not for the year I spent at BBC Cymru Wales in 2004-2005, working on *Voices*, I would not have considered making a foray into academic research at all. The experience of working in a bilingual office, alongside producers of Welsh-language web content, first sparked my interest in Welsh media and Welsh-speaking audiences. The Welsh-speaking producers seemed to ‘do’ audience participation differently to us, the English-speaking producers, in a way I could not put my finger on. Later, ongoing discussions with the project’s partners at the University of Leeds made me re-examine the subject, not just as a passing interest, but as a potentially fruitful research topic.

1.4 Aims of the thesis

The aims of the thesis are to:

- Identify or develop a theoretical and methodological framework to facilitate the study of audience participation in minority language media;
- Describe the biographical background of typical audience members;
- Investigate some of the psychological, sociobiographical and contextual factors that influence audiences’ willingness to participate in Welsh-language media, drawing on existing willingness to communicate (WTC) theory as a starting point;
- Investigate whether these factors have a linear or universal influence across audience members, or whether they cluster in common patterns that characterise ‘types’ of audience that respond to opportunities to participate in distinct ways;
- Identify the empirical, theoretical and methodological implications of the research findings for minority language media studies, sociolinguistics, language maintenance and second language acquisition;
- Translate the research findings into recommendations for media production practice.

1.5 Thesis structure

Chapter 1 introduces the thesis.

Chapter 2 situates the thesis in its research context by defining key terms, reviewing existing literature and developing an appropriate theoretical framework for the research. A research agenda is proposed for the study of audience participation in minority language media, and an

³ It should not be inferred from this approach that the media platform is irrelevant to audiences’ willingness to participate in media content, but rather that the media platform is just one of many variables expected to influence WTP – one which does not fall within the scope of the current project.

overall research question is formulated for the thesis as a whole. A distinction is made between psychological 'traits' and 'states', relevant psychological constructs are discussed and the term 'willingness to participate' is coined as an analogy to 'willingness to communicate'.

Chapter 3 presents a preliminary investigation of Welsh-language media producers' experiences of eliciting audience participation. The study reveals Welsh-speaking producers' approaches to working with audiences, highlighting what they do and why. This work is important because it ensures that the main audience study tests Welsh-speaking producers' assumptions, rather than my own. The results of the analysis are used to build on the theoretical discussion in chapter 2 by generating a series of specific hypotheses, so that producers' assumptions may be tested in later chapters.

Chapter 4 details the methods used to collect data for the main part of the study. The design, piloting and administration of an audience questionnaire are discussed and evaluated. 358 adults with some knowledge of Welsh responded to the questionnaire, in which they reported their imagined responses to four opportunities to take part in media content in Welsh. The statistical techniques used to analyse the resulting data – structural equation modelling (SEM) and cluster analysis – are also introduced in this chapter.

Chapter 5 takes a variable-centred approach to the results of the audience survey. The analysis identifies patterns in WTP across the sample as a whole and analyses state WTP in terms of a number of predictor (or antecedent) variables. The survey results are described statistically and specific hypotheses are tested. A path model of psychological, sociobiographical and contextual antecedents to state WTP is prepared, tested and modified using SEM. Theoretical implications of the findings are discussed.

Chapter 6 takes a person-centred approach to the results of the audience survey. Respondents' comments are analysed qualitatively to highlight individual differences and facilitate comparison with studies of other minority languages. Respondents are organised into different groups using cluster analysis, which enables different 'types' of audience to be identified, based on their WTP in different media scenarios. Four audience types, dubbed Enthusiasts, Avoiders, Optimists and Talkers, are described in detail in relation to finer patterns of WTP.

Chapter 7 summarises the research findings and discusses their empirical, theoretical and methodological implications for minority language media studies, language revitalisation and maintenance, sociolinguistics and applied linguistics. The research findings are translated into practical recommendations for media production practice and their implications for language

policy and language planning are also addressed. The thesis concludes with suggestions for future research directions.

1.6 Associated publications

Law, Philippa. 2010. 'Interacting with the BBC: The maintenance of 'authentic' vs. 'standard' Welsh', in: *Reversing Language Shift: How to Re-awaken a Language Tradition, Proceedings of Conference FEL XIV*, ed. by Hywel Glyn Lewis and Nicholas Ostler (Bath: Foundation for Endangered Languages), pp. 127-131.

Law, Philippa. 2013. 'Experiences of audience interaction by BBC network radio producers: Implications for endangered language media', in: *Minority Languages and Social Media: Participation, Policy and Perspectives*, ed. by Elin Haf Gruffydd Jones and Enrique Uribe-Jongbloed (Bristol: Multilingual Matters), pp. 173-184.

Chapter 2: Research context and theoretical framework

This chapter has two main aims: first, to locate a gap in the literature that may be addressed in the following chapters and second, to identify an appropriate theoretical framework within which to tackle my research questions.

Once key terms used in the thesis have been defined (section 1.1), I address the first aim of the chapter by reviewing existing research on minority language media (section 1.2). Then, in section 2.3, I focus on participative media in particular and propose a research agenda for researchers interested in the effects of participative media on minority language use. This enables me to identify a research area of particular interest and to formulate the overarching research question for the thesis:

What influences audiences' willingness to take up a specific opportunity to participate in the media using their minority language?

In the second part of the chapter, I present the theoretical framework of the thesis. Since existing conceptualisations of audience participation in the media are inadequate for the present purposes, in section 2.4, I develop a way of defining "strongly participative" media and measuring the level of demand media content places on audiences' oral and written language skills.⁴ I then introduce the psychological constructs involved in the research (section 1.4), including communication apprehension (CA) and self-perceived communicative competence (SPCC). After examining and evaluating the notion of willingness to communicate (WTC), I coin a related term, willingness to participate (WTP), to capture audiences' psychological readiness to take part in media content. Understanding how WTP is influenced by certain social, psychological and contextual considerations becomes the principal focus of the remaining chapters of the thesis.

2.1 Definitions of key terms

As indicated in its title, the topic of this thesis is audiences' willingness to participate in Welsh-language media. For the sake of clarity, and to limit the scope of the thesis, the terms "audiences", "participate" and "media" are defined in this section.

⁴ Note that, throughout the thesis, I use the term "oral skills" as shorthand to refer to both speaking and understanding and "written skills" to refer to both reading and writing. Therefore, when I compare "oral" and "written" participation, for example, I am comparing scenarios which involve the audience either speaking or listening (or both) with scenarios which involve the audience either reading or writing (or both).

2.1.1 “Audiences”

A broad definition of “audiences” is employed here, which incorporates actual viewers, listeners or users, as well as the target audience (i.e. the sector of the population for whom content is intended, whether they actually consume the media concerned or not) and the potential audience (i.e. the wider public within the intended reception area of the media produced). This inclusive, flexible definition is in line with how I have observed media producers use the terms “audiences” and “the audience”, both in my professional work and in interviews conducted as part of this research.

2.1.2 “Participate”

For the purposes of the present work, participation can be said to occur whenever an audience member contributes to a media organisation’s content, or offers a legitimate contribution for that purpose.⁵ It is immediately apparent that this definition requires elaboration.

In order for an activity to count as audience participation, participants must act in the role of an audience member (as defined above). A public relations agent or press officer making a contribution to the media in the hope of promoting a product or cause would not count as audience participation, for example. Likewise, an expert drafted in by producers to talk about a particular topic, or someone invited to make a comment on a news event they have witnessed, would not count as an audience participant in that situation.

An audience member’s behaviour must be intended to influence media content in some way, in order to count as audience participation. Shouting at the radio or cooking along with a TV chef might be an indication of engagement with media content, but they are not participation as defined here. Nevertheless, it is not necessary for an audience member’s contribution to actually be included in the media organisation’s content, providing the audience member made the contribution for that purpose. If a radio DJ reads ten emails out on-air per show, but receives twenty, then all twenty listeners can be said to have participated. Any contribution must be broadly ‘legitimate’, however, to fit within the current definition of participation. If a contribution falls clearly outside the kind of contribution that producers might solicit or welcome from the audience – for example if someone were to phone *Gardeners’ Question Time*, a speech radio programme about gardening, to ask the presenters to play a record by Frank Sinatra – then this does not count as participation, since *Gardeners’ Question Time* does not play record requests.

⁵ Note that this definition of participation does not necessarily entail the use of language (see section 2.4).

2.1.3 “Media”

This thesis focuses on media controlled by major broadcast and online content providers such as TV production companies and radio broadcasters; only these types of media organisation are included within the current definition of audience participation. Instances where members of the public create and publish media themselves (e.g. on a private blog or in a fanzine), without the direct editorial control of a media organisation, are not included in this definition of audience participation.

This is a somewhat artificial and problematic distinction, particularly where online media is concerned, since the dividing line between production company, publisher and service provider is currently very fuzzy. To what extent, for instance, can we say that users of Google’s video sharing website, YouTube, are ‘self-publishing’ when they upload a video, as opposed to ‘participating’ within a participatory framework laid down by the company itself? YouTube does not moderate what its users upload; instead, the site operates a takedown policy, where videos are removed if they are marked as inappropriate (YouTube n.d.). This is similar to the BBC’s reactively moderated communities, where messages are published automatically and are only read by moderators if another user complains about a post.⁶ Like the BBC website, in addition to hosting other people’s content, YouTube also produces content itself, which it uses to surround, promote and elicit content from users. The difference between reactively moderated BBC communities and YouTube, in this respect, is that the BBC has greater control over the nature of users’ interaction online, by providing subject-led areas that steer the conversation on to particular topics or restrict it to certain tranches of the audience. YouTube, in contrast, allows users a much freer hand in determining the topic of the content they post online. Whether this is a sufficient basis on which to differentiate between “a media organisation’s content” and self-publishing is debatable.⁷

For the purposes of this thesis, individual users of sites like YouTube, who upload content on their own initiative, are not considered to be contributing to a media organisation’s content, and are thus not engaged in audience participation. However, if a traditional broadcaster were to

⁶ For an example of a reactively moderated area of the BBC website, see BBC Blogs: <http://www.bbc.co.uk/blogs/moderation.shtml> [accessed September 2012].

⁷ YouTube is a good example of the difficulty in labelling different models of online media, as attested by the various court trials which have sought to establish its legal responsibilities. In New York in June 2010, in a case brought by Viacom International Inc. and others, YouTube was judged to be a ‘service provider’, which meant it was covered by the ‘safe harbour’ provision in the United States’ Digital Millennium Copyright Act and therefore protected from Viacom’s billion dollar claims for copyright infringement (Arthur 2010, Stanton 2010). Two months later, in Madrid, YouTube was declared a ‘service provider’, not a ‘content provider’, which again limited its liabilities (Administración de Justicia, 2010). However, in February 2010 an Italian court deemed YouTube to be the equivalent of a publisher, and as a result the company’s executives were held legally responsible for content posted that broke laws on privacy (Donadio 2010).

invite its audience to participate by uploading relevant content to YouTube, then this would count as audience participation in the current definition. In such a situation, YouTube would simply be the means of communication between the audience and the broadcaster, equivalent to telephone, post or email. Although the definition of 'media organisation' remains fuzzy, and will not be addressed further in this thesis, I still find it a convenient distinction to make. By excluding self-published media and other forms of mass and interpersonal communication which arguably do not occur under the control of a content provider, I am not making any assertions about the relative status or prestige of different forms of media. Rather, the distinction serves to place practical limits on the scope of the current study, and reflects the motivation for this thesis: the desire to understand the opportunities for minority language use over which media producers have control.

2.2 Research context: Minority language media

This thesis is situated within an interdisciplinary area of work that has been referred to as minority language media studies. The term 'minority language media studies' offers a concise and apt description of the present research theme, but is not widely used. Cormack (2004) proposed using the term to delineate a specific area of research focused on the impact of the media on minority languages, with the aim of bringing researchers from different backgrounds together into one new field of study. Although, as Cormack (2011) admits, the term has not caught on and a distinct new field has not (yet) been recognised at an institutional level, a network of minority language media researchers is emerging in Europe, with scholars from various disciplines, particularly media, communication and sociolinguistics, coming together to debate issues relevant to minority language media. This cross-fertilisation stems in part from the First Mercator International Symposium on Minority Languages and Research, which was held at the University of Wales in Aberystwyth in 2003. The symposium led to the publication of *Minority Language Media: Concepts, Critiques and Case Studies* (Cormack & Hourigan 2007), the first book to be published that brings together papers specifically on minority language media, and written from diverse disciplinary perspectives, including sociology (Hourigan 2007), Deaf studies (Ladd 2007) and computer science (Cunliffe 2007). The second Mercator Media conference, which took place in Aberystwyth in 2010, helped to extend and reinforce the network of interested parties, drawing in media practitioners and scholars of business and economics, and resulting in the publication of *Minority Languages and Social Media: Participation, Policy and Perspectives* (Jones & Uribe-Jongbloed 2013) to which the author of this thesis is a contributor (Law 2013). The focus of both these volumes is on indigenous western European languages, reflecting the current state of minority language media research as a

whole. Within that focus, Wales has been the most active site of research (see section 2.2.5), and the present thesis contributes to this burgeoning area of work.

In the following sections, existing work is reviewed that is relevant to minority language media studies. Sections 2.2.1 to 2.2.3 summarise what the existing literature has to say about the impact of media on minority languages. Then, in section 2.2.5, the state of the art of minority language media studies is discussed and studies with particular significance for the present research are highlighted. Finally, in section 2.3, the thesis is positioned within a wider research agenda.

In addition to making contributions to minority language media studies, the present research also has theoretical and methodological implications for the related fields of language maintenance, second language acquisition and sociolinguistics. These broad fields are not reviewed here, but relevant studies are considered throughout the thesis as they become pertinent to the discussion. These include, for example, work on other minority languages, such as Guernesiais (Sallabank 2010), Māori (Wells, Kanikingi & McGee 2009) and Catalan (Woolard 2011).

2.2.1 The impact of dominant language media on minority languages

The arrival of broadcast media in a minority language community has frequently been considered a threat to the maintenance of minority languages, since it brings the dominant language into minority language homes. Television, in particular, has been described as “cultural nerve gas” (Krauss 1992: 6) and has been implicated in various instances of language shift (e.g. Dorian 1991, Grenoble & Whaley 1998: 53). Rouchdy (1989) describes how the arrival of electricity in Nubian-speaking Egypt brought Arabic television into every home. This was, the author claims, one of the “major factors linked to the decreasing use of Nubian for primary socialization in non-urban areas” (Rouchdy 1989: 98). Poulsen (1991) asserts that television “operates like a magnet which empties cinemas and club houses and influences the conversation in almost every home”. In Alaska, he says, “the combined dominance of television (5 satellite channels broadcasting for 25 hours per day) and school resulted in very few people being able to speak their own language” (Poulsen 1991: 132).

Some authors claim that language dominance and minoritisation is reproduced in online contexts (Cunliffe & Herring 2005: 132, Cunliffe 2007: 139); if this is the case, then the arrival of the Internet in small language communities might be assumed to have negative effects on language use similar to those attributed to dominant language television. Kelly-Holmes (2004) has provided some evidence for this claim. In her exploratory research into language choice online, she investigated self-reported language use among a very large number of students from

eight countries. In a survey, she first asked them to indicate which language(s) they felt competent enough to be able to use on the Internet. Then the participants logged their online activity for 10 sessions, categorising their language use during each session as fully in language X, fully in language Y or in X and Y languages. Kelly-Holmes found that,

where respondents were members of language groups with large numbers of speakers and where the language is widely considered prestigious, they used their national language more than they used English. However, in the case of a “small” national language, such as Macedonian, the “threat” from English is very clear. There is far more Internet activity in English than in the national language, a situation that could easily become self-perpetuating. (Kelly-Holmes 2004: 72)

Of course, Kelly-Holmes’s study examined online language use only, so inferences cannot be drawn about her participants’ language use in other contexts.

In response to the influx of dominant language media, minority language activists have often demanded, and sometimes secured, media in their own languages, on the assumption that their presence in the media would help counter the negative influences of dominant language media (e.g. Dodson & Jones 1984). The European Charter for Regional or Minority Languages, drawn up in 1992, emphasises this “restitutionary” function of minority language media, providing compensation for damage done (Moring & Dunbar 2008: 8-9). In the next sections, I summarise the purported positive effects of minority language media on minority languages at a community level (section 2.2.2) and an individual level (section 2.2.3).

2.2.2 The impact of minority language media on societal language maintenance

It has often been claimed that minority language media support societal language maintenance. In 2010, for example, the (then) Chair of the Welsh Language Board, Meri Huws, wrote an open letter to the press, in which she stated that she was “in no doubt that S4C has made a unique contribution to the recent prosperity of the Welsh language” (Huws 2010) by raising the language’s status and providing support to Welsh learners. Indeed, Huws suggested that a high-quality Welsh-language television service aimed at children and young families was “essential [...] for the future prosperity and status of the Welsh language”. Scholars have made even broader claims about the impact of minority language media. Riggins (1992) asserts, for example, that “ethnic minority media are making a substantial contribution to the continued survival of minority languages” (Riggins 1992: 283) and Mackey (1976) suggests that access to media could be the most important factor in bilinguals’ maintenance of a minority language (Mackey 1976: 383-384). Fishman (2001) is sceptical, however, and suggests that some minority

language activists afford the media undue prominence in their revitalisation efforts (Fishman 2001: 482).

What the field lacks is robust evidence to back up hunches like these. Cormack (2007) sums up the current state of knowledge about the impact of minority language media on societal language maintenance when he remarks that “most people working in minority language media have no doubt as to the usefulness of their work, but there is a paucity of empirical evidence” (Cormack 2007: 52) (see chapter 3 for a discussion of BBC Cymru Wales producers’ comments on this issue). He goes on to say that “it is not at all clear how much the presence of a minority language in the media actually encourages people to speak the language” (*ibid*: 57). Although no research has been conducted that draws a clear, measurable link between the presence of minority language media and audiences’ continued (or increasing) use of the language in other domains, many authors have suggested ways in which minority language media may support societal language maintenance indirectly:

By increasing prestige and pride among speakers The presence of a minority language in broadcast media may contribute to an increase in the language’s prestige (Cotter 2001, Renz 1987). Pietikäinen (2008) reported this effect in her study of Sami media, where journalists described how the presence of Sami languages in the media has “diminished the stigma of using Sami languages and helped in turning own languages into a cultural heritage and a source of pride” (Pietikäinen 2008: 185). According to Lewis (2001), such an increase in prestige has also been observed experimentally among preliterate speakers of a minority language in Guatemala. He refers to unpublished work in which colleagues who “used recorded texts as part of a matched-guise test found that the mere fact that a Low language guise had been recorded enhanced its prestige significantly” (Lewis 2001: 18). The theme of prestige is pertinent to the study of producers’ views of Welsh-language media, presented in chapter 3.

By ‘normalising’ the language It has frequently been argued that a presence in the media helps minority languages to become ‘normalised’, that is, accepted as a normal, everyday language, by speakers and non-speakers alike (e.g. Moriarty 2009, Warner 2001). Mezhoud (2010) has described this normalisation process as breaking the “taboo” of using the minority language in public. Some of the producers interviewed as part of the present study highlighted the normalising function of Welsh-language media (chapter 3).

By challenging negative discourses about the minority language and its speakers Many speakers of minority languages suffer from the circulation of dominant “ideologies of contempt” (Dorian 1998), which label their languages as ‘outdated’ or ‘irrelevant’ (e.g. McHenry 2002). By creating media content which explicitly or implicitly refutes these ideologies and creates new

ones, communities can take some control over the discourses that circulate around their language. It has been argued that Stephen Greymorning's translation and dubbing of the film *Bambi* into Arapaho, for example, challenged the language's 'outdated' image (Greymorning 2001, Eisenlohr 2004: 31).

In addition to tackling ideologies of contempt explicitly through media content, it has been said that the very presence of a language in broadcast media may help its speakers challenge such discourses by demonstrating that the language is fit for use in key contemporary domains. This positive effect cannot be taken for granted, however. While Moriarty (2011) suggests that the presence of endangered language media "challenges the traditional ideologies and associations of endangered languages as old-fashioned, backward-looking, and a waste of time" (Moriarty 2011: 447), I would caution against the assumption that any presence in the mass media is automatically valuable in this respect. The media are not equally prestigious. By relegating minority languages to the least watched and least prestigious areas of the television schedule (e.g. the early hours of the morning), pejorative discourses about the irrelevance of the language may be afforded more weight. Likewise, if a language community, working on a small budget, produces programmes that are considerably less sophisticated than the mainstream content with which they co-exist, the mismatch in quality between minority and majority could serve to reinforce the language's old-fashioned or 'backward' image. Even if these particular traps are avoided, other pejorative discourses may still be inadvertently fostered. S4C broadcasts high quality TV programmes in Welsh at peak times, for example, but suffered from negative publicity after a Western Mail report suggested that the channel registered "zero viewers" for many of its programmes (Shipton 2010; cf. Evans 2010). Public discourse around the report lent support to the perception that the language is a waste of time and money – a perception which, according to Moriarty (2011), hampers the revitalisation of minority languages.

By reinforcing group identity and a sense of community Media in the minority language may help reinforce group identity among its speakers. Speakers of Slovene in Austria enjoy a small quantity of print and radio media in their native language, which, Busch (2001: 38) argues, "create a communicative space [...] where cultural Slovenian identity can be worked upon". Access to media in the minority language may especially benefit speakers who are scattered over a wide geographical area, by enabling a sense of shared identity to be felt and strengthened among people who are not in personal contact with each other (Pietikäinen 2008). This shared identity, in turn, is assumed to encourage language maintenance.

By stimulating socioeconomic growth A presence in the mass media can foster socioeconomic growth by providing work in the minority language and bringing money back into the language

community. Employment opportunities in the media can encourage talented young people to maintain their language and discourage them from moving to potentially more prosperous areas where the minority language is rarely spoken (Grin & Vaillancourt 1999: 50). Danson (2010) points out that jobs at the TV channel BBC Alba are currently the most well-paid Gaelic-essential roles in Scotland. As Cotter (1999: 145) puts it, “the media site creates a situation where economy and occupation become linked again to the language”. Placing an increased economic value on the language also serves to increase its prestige (Dorian 1998).

Various authors have described how the use of a minority language in the media can help bolster the language itself:

By contributing to corpus planning and standardisation Broadcast media can play a concrete role in language revitalisation by filling in gaps in a language’s lexicon, ensuring the language is fully fit for use by contemporary speakers. Examples of corpus planning via the media include terms for ‘escalator’ and ‘mad cow disease’ in Irish (Browne 1992: 425). Dorian (1994: 487) argues that “a lively broadcasting industry” is not just helpful, but essential, if new coinages are to catch on. The media, particularly radio, can also be instrumental in creating and disseminating a standardised form of language, which can help ready the language for its use in new domains (Micó & Masip 2009, Moring 2007).

The development of standard forms of language in the media may also exert negative effects on societal language maintenance:

By contributing to audiences’ linguistic insecurity Where one variety of a minority language is selected as the standard variety to be used in the media, audiences who do not speak the new standard may come to feel that their own variety is not good enough. It has been claimed, for example, that the Basque media’s adoption of Batua as the standard variety of the language has led to “a sense of dislocation among the audience it is intended to serve and a devaluing of the linguistic capital of certain speakers” (Kelly-Holmes, Moriarty & Pietikäinen 2009: 231). Siegel (1998: 205), too, has reported that the standardisation of Hindi in broadcast and print media in Fiji has “made it almost as much of a foreign language as English”, leading to linguistic insecurity among non-standard Hindi speakers and contributing to language shift away from both non-standard and standard Hindi. It is clear, from studies like these, that minority language media has the potential to work against the maintenance of minority languages as well as for their benefit.

2.2.3 The impact of minority language media on minority language use at an individual level

Just as minority language broadcasters and language activists have claimed that the existence of minority language media promotes minority language use (section 2.2.2), so too have audiences. Chalmers (2010) surveyed audiences' perceptions of the impact of their Gaelic TV and radio consumption on the frequency of their own use of Gaelic. 21% of people believed their use of Gaelic had increased as a result of watching TV in Gaelic and 23% believed it had increased as a result of listening to the radio in the language. A smaller proportion of respondents thought their Gaelic use had decreased due to their TV (10%) and radio (12%) consumption. It is difficult to know how to interpret these figures: it seems unsurprising that those who already choose to consume Gaelic media (and therefore, presumably, are likely to be in favour of its existence) are more inclined to claim it has a positive rather than negative effect on their language use. Perhaps a more interesting outcome of the study is Chalmers' finding that the proportion of respondents who believed that Gaelic media had had a *negative* effect on their use of Gaelic actually doubled between surveys conducted in 1996 and 2005. Chalmers does not explore this part of his data in his brief chapter, but it would be informative to find out why beliefs had changed in this way.

Other authors have argued that minority language media may encourage individuals to use their minority language:

By giving speakers a language-specific topic of discussion Minority language media gives minority language speakers something to talk about; that is, it provides a topic which might be preferentially discussed in the language in which the media was consumed. Previous studies have found that children switch to the language of the media consumed, in order to discuss it. Warner (2001) observed that Hawaiian-speaking children "often shift to English when speaking to one another on the playground or when speaking to one another about popular topics, such as music (for instance, MTV), cartoons, and various other social phenomena which are largely available to the community through English" (Warner 2001: 141). Reyes (2004: 89) reports a similar occurrence of code-switching among Spanish-English bilingual children, but does not elaborate on the significance (or otherwise) of her observation. Since the very limited examples in the literature are of code-switches away from rather than towards the minority language, it is impossible to draw conclusions about whether such instances are evidence of an effect of the language of media consumption influencing language choice, of some factor related to the dominant status of the language chosen, or are simply coincidences, brought about by other factors that influence code-switching in children. In any case, Cormack sounds a warning: "it is not difficult to imagine a situation in which a very popular programme in a minority language is

talked about most commonly in the majority language (music programmes aimed at teenagers may well fall into this category)” (Cormack 2007: 58). Nonetheless, I suggest that this would be a valuable area for future research, since broadcasters often aim to spark discussion among their audiences; S4C’s current strategy document, for example, states that the channel wants to “create content that elicits a response and stimulates discussion” (S4C 2011: 2).

Although all of these potential effects of minority language media may have a role in promoting language use indirectly, the media may also influence individuals’ minority language use directly:

By offering new or additional opportunities for speakers to use the language Cotter’s (1999, 2001) work with the Irish-language radio station Raidió na Life, for example, highlights how media organisations can provide an extra setting where the language is used. The station provides a place where its volunteers, some of whom are not fully fluent in Irish, or would not otherwise have contact with Irish, use the language while they prepare and broadcast programmes. Other minority language media offer audiences opportunities to use their language through various kinds of audience participation, such as taking part in phone-in programmes, voting or commenting on online news stories (Hourigan 2004: 52, Law 2010, Meso Ayerdi *et al* 2011). It is this participatory aspect of contemporary media which is the key focus of the present research and which is discussed further in the next section.

Cormack (2007) noted the potential for audience participation to contribute to minority language maintenance when he commented that “media seem most likely to encourage language use when they are strongly participative, strongly linked to communities [...] of language speakers, and when they can give people a reason for adopting, or asserting, the identity of being a minority language speaker” (Cormack 2007: 66). While the identity and community-building aspects of participation are important to understanding audiences’ responses to participative media content, an investigation of these is beyond the scope of the present study. The first part of the quotation, however (“media seem most likely to encourage language use when they are strongly participative”), provides the theoretical motivation for the research. In its present form, Cormack’s suggestion is ambiguous, however, and requires additional theoretical work before specific hypotheses may be devised. The phrases “encourage language use” and “strongly participative” are problematised in sections 2.3 and 2.4 respectively, in order to formulate a clear research question to be addressed in the remainder of the thesis.

2.2.4 Audience participation in minority language media

There is little previous research into audience participation in minority language media (cf. Cotter 1999, 2001, discussed above) and even less on the factors that influence audiences’

decisions to take part, or avoid taking part, in minority language media content. One such study has been conducted, however, in relation to educational (rather than publicly available) media content. In her doctoral research, Evans (2005, 2006, 2007) investigated low levels of participation in interactive instructional television among non-native speakers of English in South Africa. By interviewing students, teachers and presenters, she tried to understand why so few viewers phoned the TV studio to ask questions during live broadcasts of classes, as they were invited to do. While students' lack of proficiency or confidence in English was found to be an issue in some cases, Evans concluded that a lack of confidence was not the principal cause of low participation among her respondents; rather, the presenters who led the televised instruction were adopting a presentation style that was not conducive to audience participation (Evans 2006). Her discovery that the presenters were actually pleased not to be interrupted by students' questions, as it allowed them to stick closely to their original teaching plan (Evans 2005: 111), serves to confirm her interpretation of the data. However, in dismissing students' proficiency and confidence as minor factors in participation, Evans does not, in my view, distinguish sufficiently between different contexts. She assumes, for example, that the fact that a student speaks to her (as part of her fieldwork) implies that he does not suffer from a lack of confidence in his English (Evans 2005: 127). Yet there is no reason to think that students' behaviour in the face-to-face fieldwork situation should reflect their feelings during the televised classes; their confidence (and many other factors) may well vary between the two. I suggest that the psychological approach adopted in the present research, in which trait- and state-level phenomena (see section 2.5.1) and feelings and behaviour are clearly distinguished, brings greater precision to an investigation of issues like these.

Moreover, Evans' assessment of her respondents' oral proficiency in English appears to be based not only on what they can do in the language (see section 2.5.5), but also on their performance of prescriptivist norms or provision of useful answers. Students' use of "contextually inappropriate language *e.g. What?* instead of *I beg your pardon?*" (Evans 2005: 91, italics in original) is attributed to their underlying lack of sociolinguistic proficiency, for example. Evans also suggests that her participants were "seldom *able* to sustain conversation" (Evans 2005: 90, my emphasis) as they "regularly offered single-sentence responses, at times even a single word answer" (*ibid*). The liberal use of discourse markers during the fieldwork interviews is also taken to be an indication of respondents' low proficiency:

in spite of their claiming to speak English to friends whose proficiency is perceived as superior, it does not appear to be ameliorating theirs as reflected in the following declaration:

Ja, like my friends are like from model schools and they used [sic] to speak English like when I'm around them I like have to like talk like speak the way they do so that I can speak English. (Evans 2005: 104, italics in original)

To my mind, these examples do not necessarily illustrate a lack of English language proficiency, but may instead be indicative of a mismatch between the researcher's and the students' expectations of (or attitudes towards) the communicative context in which these comments were recorded. Expectations may also be relevant in the context of non-participation in the televised classes: it is possible that students are expected to participate in the classes in a particular kind of formal English that is not the students' preferred variety. If so, this may have implications for the students' willingness to ask questions during the broadcasts. The effect of divergent language varieties on willingness to participate in media content is raised by some of the participants in the present study (chapters 3 and 6) and should be examined in more detail in future research.

2.2.5 The state of the art in minority language media studies

While researchers with an interest in minority language media were, for some time, concerned with highlighting the media's general potential to support minority languages, whether in terms of societal language maintenance, corpus planning or, less commonly, individuals' use of the language (sections 2.2.2 to 2.2.3), this broad-brush approach to the impact of minority language media has subsided in more recent work.

Cormack (2007) has called for researchers to abandon the search for simple answers to broad questions regarding the impact of media on minority languages. Instead, he suggests that "greater attention must be made to the specifics of media use" (Cormack 2007: 64) and advocates an ecological approach to minority language media, which "emphasise[s] that media use takes place in a complex behavioural environment" (Cormack 2007: 63). He lists a series of issues that need to be investigated within micro instances of minority language media, including the question of how people interact with and participate in minority language content. Prys, Morris and Cunliffe's (2010) comparison of face-to-face and online Welsh use among teenagers is a good example of how the field is moving in the direction Cormack recommends. They conducted online questionnaires and focus groups to investigate how teenagers use the Internet in Welsh and English. By taking into consideration language backgrounds, self-reported Internet use and attitudes, the researchers were able to build a picture of their participants' online language behaviours, embedded within a larger context. This thesis aims to make a contribution to this area of research, by investigating minority language media at a micro level, incorporating an examination of various aspects of the media context, the social context and especially the psychological context in which audience participation takes place.

The current focus within minority language media studies is on how minority languages are used in social media (Lenihan 2011a, 2011b, Ní Bhroin 2012, Prys 2012, Prys, Morris & Cunliffe 2010) and other online contexts (e.g. Cunliffe 2011, Petzold 2010). This thesis redresses the balance of research somewhat by investigating audiences' willingness to participate, not just in online media, but also in 'traditional' radio and television content.

Much of the most recent work on minority language (online) media has been conducted in relation to Welsh: researchers have studied how people use Welsh in blogs (Cunliffe & Honeycutt 2008, Johnson 2011) and on various social networking sites (Prys 2012, Prys, Morris & Cunliffe 2010), including YouTube (ap Dyfrig & Cunliffe 2010), Twitter (Cunliffe 2012, Johnson 2010) and Facebook (Honeycutt & Cunliffe 2010). Those studies with the greatest relevance to the present research are reviewed here. Prys, Morris and Cunliffe (2010) investigated self-reported language use online among bilingual teenagers in Wales. They found that, in one-to-one situations, language choice did not change according to the media or platform, rather it depended on who the person was talking to. In their Facebook status updates, however, teenagers reported that they were more likely to use English than Welsh, as these were directed at many users, including both Welsh-speaking and non-Welsh-speaking friends. Johnson (2010) came to a similar conclusion in his study of 25 Welsh-English biliterates' use of Twitter. There was great interpersonal variation in language choice among the users. Although the sample size was small, Johnson noticed that the more followers a user had, the more often they chose to use English rather than Welsh in their tweets. He tentatively suggested that users designed their content for their imagined audience (Bell 1984), so the wider the audience, the more likely they were to use the more widely-understood language. This finding hints at an issue in need of investigation: in a multilingual online community, the more successful a user becomes in connecting with others online, the less likely they may be to use their minority language. A study by ap Dyfrig and Cunliffe (2010) found that Welsh-speaking users were not necessarily dissuaded from posting content in Welsh by the presence of non-Welsh-speakers, but instead found other ways to approach audience design. In a preliminary examination of Welsh use on YouTube, they observed that Welsh speakers often uploaded content in Welsh, but added a brief explanation or description of their videos in English, for people who would not understand the Welsh. This led the researchers to suggest that users were considering the needs of their audience, but not allowing the likely presence of non-Welsh speakers to put them off contributing Welsh-language content.

Two earlier studies of minority language websites – one Welsh, one Māori – are particularly pertinent to the present thesis, as they assess, in practical terms, how design decisions may affect people's use of minority languages. Cunliffe and Harries (2005) conducted exploratory

research into the effect of design decisions on a Welsh/English-language community website for teachers. They introduced various innovations on the website, such as the manual translation of messages from Welsh to English, and cross-seeding threads with messages from the other language, to see whether these would influence bilinguals' language choices. The authors studied how bilingual users used Welsh and English on the website by counting contributions in each language, in different areas of the site. Although the study was too small to draw strong conclusions, the results suggested that "language use will vary considerably between different bilingual users" (Cunliffe & Harries 2005: 174). The authors conclude that the particular pro-minority language measures they tested were unsuccessful, but could be effective in other conditions or combinations. The present research takes the results of this exploratory study into account by investigating individual differences among audience members (chapter 6), as well as identifying general tendencies across the sample as a whole (chapter 5). Keegan and Cunningham (2005) demonstrated that design decisions could indeed influence bilinguals' online behaviour and encourage them to use their minority language. They alternated the default language on an existing Māori/English website and measured the resulting traffic to different language areas of the site. It was found that users were more likely to continue their visit in Māori, when that was the homepage's default language. The present thesis builds on this finding by identifying certain design decisions that may affect audiences' willingness to use their minority language in other media contexts (chapter 7).

While the studies reviewed above have investigated a variety of different issues using a range of different methods, none of the existing research takes the individual psychology of media users into account; in this respect, the present thesis makes an original contribution to the field.

2.3 Defining a research agenda

As stated in section 2.2.3, Cormack's (2007) suggestion that "media seem most likely to encourage language use when they are strongly participative" (Cormack 2007: 66) provides the theoretical motivation behind the thesis. Cormack's hypothesis is not tested in itself, but rather, is analysed for its possible interpretations, to help identify some research areas in need of investigation. In this section, the phrase "encourage language use" is problematised, in order to define the scope of the present investigation and formulate a clear research question.

The phrase "encourage language use" is not unambiguous. It is important to ask, therefore: what counts as language use? Where might researchers uncover evidence of the outcomes of strongly participative media? And what kind of effects might producers and language activists hope to see? The term is addressed in two parts; first, "language use" and then, "encourage".

2.3.1 “Language use”

Participative media could encourage the use of a variety of language skills, and all kinds of language use may therefore be of interest when examining the outcomes of such media. In this thesis, I adopt a broad definition of language use, which encompasses any productive or receptive use of spoken or written language.

The potential effects of participative media may, I propose, be investigated among different groups of people, in different contexts and within different timescales. First, *who* might be encouraged to use the language? Effects might be found among the individuals who participate in minority language media, audiences who consume content without participating, those who do not consume the content but are members of the wider language community, or even people who do not currently speak the language but are inspired to learn. Second, *when* might people be encouraged to use the language? Effects could be immediate and short-term, that is, while audiences are consuming or participating in media content, or soon afterwards. Alternatively, people may be encouraged to use the language on a long-term basis, for instance as a cumulative effect of repeated exposure. Third, *in what context* might people be encouraged to use the language? Audiences could be encouraged to use their minority language within the media context, with producers, presenters, hosts or other audience members. Or they could be encouraged to use the language in other contexts, unrelated to the media. Cormack highlighted some of these potential effects when he wrote that,

encouraging speaking of a language should be seen as both a direct effect – as individual programmes might stimulate immediate language use – but more importantly as a longer-term and less direct effect, as the cumulative effect of such programmes would be to encourage more general language use. (Cormack 2006: 217)

Table 2.1: Potential effects of participative media on minority language use.

		<i>Timescale</i>	
		Short-term	Long-term
Context	Within media	Audiences encouraged to participate in a specific example of media content using the minority language	Audiences encouraged to participate in media content repeatedly using the minority language
	Outside media	Audiences and/or others encouraged to use the minority language with others as a result of a specific example of media content	Audiences and/or others encouraged to use the minority language repeatedly or regularly with others

Table 2.1 illustrates how the combination of these timescales and contexts offers four sites where the effects of strongly participative media could be researched. The bottom-right cell of

the table – which represents the potential of the media to encourage people to use their minority language in the long term – has been the subject of the most speculation (see section 2.2.2). The discovery of such enduring effects can be viewed as the ultimate dream for language activists with an interest in demonstrating the media’s positive role in societal language maintenance, although it is arguably also the most problematic (see section 2.2.5). None of these sites has yet been examined in any depth, however, and there is considerable scope and need for an investigation into all these contexts and timescales.⁸

2.3.2 “Encourage”

The notion of “encouraging” language use also needs examination. From a behavioural viewpoint, participative media that “encourage” language use might cause specific instances of language use to occur (for instance as a direct response to content), or they might cause the overall use of the language to increase (e.g. in quantity or frequency), whether at an individual or a societal level. Alternatively, from a psychological viewpoint, “encouraging” language use might mean causing people to feel more inclined to use the language, when the opportunity arises. The concept of “encouraging”, then, may pertain to either behavioural or psychological change. Both aspects are in need of investigation.

2.3.3 The research focus of the thesis

The present work is motivated by the desire to incorporate research insights into future media production practice (see chapter 1), and this informs the focus of the investigation. The top-left corner of table 2.1 is most closely related to the work of media producers, who often wish to elicit language use from audiences in the form of audience participation. The investigation therefore focuses on the potential of participative media to encourage people to use their minority language there and then, in the media context, and not on enduring effects or effects observable outside the media context (both of which would be of prime importance in tracking the impact of minority language media on societal language maintenance). More specifically, the study concerns the individual psychology of audience participation, rather than the effects of participative media on actual language use behaviour. This choice reflects my view that a psychological approach, which can reveal interacting factors underlying participation, has more explanatory power in this context than a behavioural approach. Table 2.2 provides a summary of the research focus.

⁸ Reformulated in Blommaert’s (2006) terms, if you prefer, I am advocating an examination of audience participation in minority language media across ‘scales’, from lower-scale, momentary, situated, individual, subjective scale-levels, up to higher-scale, timeless, translocal, collective, objective scale-levels.

Table 2.2: Summary of the research focus of the thesis.

Broad questions	Focus in the thesis
Who might be encouraged to use their minority language?	Audiences
When might they be encouraged to use their minority language?	Short-term
In what context might they be encouraged to use their minority language?	Within media
What type of effect is being investigated?	Psychological

The overarching research question to be addressed in the thesis is therefore as follows:

What influences audiences' willingness to take up a specific opportunity to participate in the media using their minority language?

While there are many potentially important factors that may be examined, the present research focuses on aspects of audiences' perceptions of the media content, the demands involved in participating and their competence to use the minority language in such a context (see chapter 3). In the following section, I identify and develop an appropriate theoretical framework within which the research question may be addressed.

2.4 Theoretical framework: "Strongly participative" media

Cormack's (2007) suggestion that "media seem most likely to encourage language use when they are strongly participative" (Cormack 2007: 66) was discussed in the previous section. In this section, I attempt to establish what a "strongly participative" media might consist of and how stronger and weaker forms of participation might be distinguished. First, I review existing models of participation (section 2.4.1) and interactivity (section 2.4.2) and then I propose a new approach more suited to a minority language media perspective (section 2.4.3).

2.4.1 Existing measures of 'participation'

Research on democracy, development and citizen participation has addressed the question of how levels of participation can be measured and compared. Arnstein (1969) identified eight levels of citizen participation, from the most "illusory", manipulative forms, where participation is distorted into a "public relations vehicle by powerholders", up to the highest "citizen control", in which "participants or residents can govern a program or an institution, be in full charge of policy and managerial aspects, and be able to negotiate the conditions under which 'outsiders' may change them" (Arnstein 1969: n.p.n.). A simpler, two-level distinction was proposed by Pateman (1970): writing about power relations between management and workers in industry, she distinguished between "full" and "partial" participation. Partial participation is described as "a process in which two or more parties influence each other in the making of decisions but the

final power to decide rests with one party only”, whereas full participation is “a process where each individual member of a decision-making body has equal power to determine the outcome of decisions” (Pateman 1970: 70). More recently, Resmann proposed a measurement of the “intensity of participation” of television programmes, based on the extent of the audience’s power to make production and organisational decisions (Resmann 2009: 14). The measurement instrument places programmes on a participatory intensity continuum, based on the roles of the participants within the programme. Participatory programmes are scored on fifteen parameters, including whether the participant is visible or audible in the programme, whether the participant can produce some or all of the programme and whether the participant has a say in the media organisation. The instrument also includes parameters that capture aspects of audiences’ language use, by differentiating between short interventions, elaborated interventions, multiple opportunities to speak and interaction between the persons present.

Resmann’s measurement instrument is appealing because it offers a quantitative method of assessing the participatory potential of a television programme, including the language use involved. Indeed, some of the factors he identifies, e.g. whether audiences have the opportunity to converse with other people, are relevant to the present research and are incorporated into the scale used in the present study (section 2.4.3). Nonetheless, Resmann’s instrument can be criticised for the specificity of the parameters given and for the equal weighting they are allocated. All programmes are assigned a score out of fifteen, whether all fifteen points are relevant or not. It is easy to imagine situations where programmes are judged to be less intensely participatory than others as a result of failing to score on certain criteria, simply because those particular parameters are not applicable. A television programme which is broadcast live, for example, can never score on the post-production parameter, since there is no post-production for audiences to participate in. The restricted scope of Resmann’s measurement of intensity of participation may be due to his observation that “most participatory (television) programmes are talk shows” (Resmann 2009: 7). Although the instrument may be appropriate for analysing this particular format of pre-recorded talk show, it is not more widely applicable in its current form. My research, in contrast to Resmann’s, is not limited to one media format, genre or platform, and therefore requires a more flexible measure of participative opportunities.

What these three approaches to participation have in common is their preoccupation with “degrees of decision-making clout” (Arnstein 1969: n.p.n.). Since the present research is limited to an investigation of the kinds of audience activity over which media organisations have editorial control (section 2.1.3), I am not immediately concerned with the power relations between audience and producer, but with the language use opportunities that the media can offer, regardless of who controls those opportunities. The measure of “strongly participative”

media therefore needs to be more language-oriented and less politically-oriented than those reviewed above.

Herrera Damas (2003, 2007) takes another approach to the classification of audience participation. She does not create levels or degrees of participation as such, but rather classifies instances of participation according to their aim (e.g. opinion sharing), subject (political or social), modality (oral or written), medium of communication (e.g. in person, by letter) and method of elicitation (e.g. specific call to action). This taxonomy, while focused on the production of media content rather than on democracy, still offers insufficient discrimination at the linguistic level for the present purposes.

Hrastinski (2008) conducted a meta-analysis of research into participation in online learning environments, in order to identify different ways in which participation might be measured. The units of measurement he found include the quantity of messages posted by learners, the quality of such messages (e.g. whether they are on- or off-topic), the length of messages, how often learners log in and estimates of the length of time learners spend participating. Such items may be useful in measuring the degree of *actual* participation in media content, but they do not help establish differences between the *opportunities* to participate under investigation in the present study.

2.4.2 Existing measures of ‘interactivity’

Communication science and human-computer interaction have produced other classifications and measurement instruments that may be relevant to audience participation. Taxonomies of interactivity were examined in the search for a definition and measure of “strongly participative” media and it was found that these instruments, while not motivated directly by citizen empowerment, often tend to focus on the level of control that users are afforded, rather than on what is required of participants in terms of language use.⁹ Aleem (1997), for example, proposed a taxonomy of multimedia interactivity which ranges from passive (in which media is delivered to a user), to reactive (users can control the playback of the media to a limited extent), to proactive (users can manipulate certain variables within the media) to directive (users may create their own content). In a similar vein, Jensen (2008) distinguished between four types of media format on the basis of who creates and who filters the content – the media organisation or the user. In the present research, all content is filtered by the media organisation to some extent, which leaves only a two-way distinction between what Jensen terms “traditionally produced” media and “UGC [user-generated content] in programs” (Jensen 2008: 131), which is inadequate for the present purposes.

⁹ Several researchers favour scales which measure *perceived* interactivity (e.g. Leiner & Quiring 2008, Liu 2003, McMillan & Hwang 2002); however, none of these are suited to the present research.

Koolstra and Bos (2009) take a broader view, aiming to establish an operational definition of interactivity that can be used in many contexts. Factors such as synchronicity (i.e. occurring in real time), physical presence and control over content are all proposed to contribute to the degree of interactivity in a given communication situation, as measured on a 16-point scale. While some of the items included in Koolstra and Bos's scale, such as synchronicity, are relevant to the present research, most (e.g. "use of sight", "use of hearing") are too broad to be useful here. Moreover, the instrument is based on the assumption that interactivity involves at least three communicative turns (see also Kiousis 2002). This does not fit with the definition of audience participation employed in the thesis (section 2.1.2), which states that audience members who offer a contribution that is not used in media content are nonetheless deemed to be participants. Finally, both 'sides' of the interaction are weighted equally in the measurement of interactivity, which means that it is not audience participation, as such, that is being measured by Koolstra and Bos's scale (as is required in the present study), but interpersonal communication between two parties of equal importance.

2.4.3 A proposed scale for measuring the linguistic demand of media content

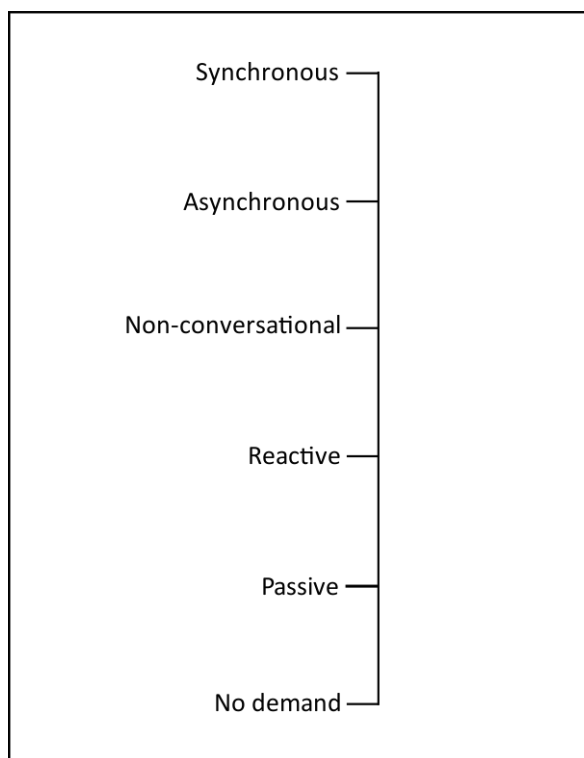
Given that existing accounts of participation and interactivity do not meet the needs of the present research, how might strongly participative media be characterised from a minority language use perspective? I suggest that strongly participative media may be characterised as media content that offers its audiences a linguistically demanding opportunity to participate using the minority language, while weakly participative media is that which offers its audiences the opportunity to take part in a less linguistically demanding way. Thus, specific opportunities to take part in media may be ordered according to the relative level of demand they place on audiences' minority language skills in the course of participation.

In order to establish a scale by which media scenarios may be measured and compared, several assumptions need to be made explicit. First, it is assumed that productive language use is more demanding than receptive language use. Therefore, an opportunity to participate that involves the audience member producing the minority language can be considered to be more strongly participative than one that does not. Second, it is assumed that engaging in conversation (whether orally or in writing) is more demanding than producing language in isolation, due to "the open-endedness of what is said, when and by whom" (Warren 2006: 9). Opportunities to participate that involve conversation are therefore considered to be more strongly participative than those that do not. Third, it is assumed that synchronous conversation, which requires people to think on their feet, is more demanding than asynchronous conversation. Opportunities to participate that involve synchronous or near-synchronous conversation are therefore considered to be more strongly participative than those that involve an exchange over a longer

period of time. It is important to note that one modality of language use – oral or written – cannot be assumed to be inherently more demanding than the other, since this is likely to vary from person to person (see chapter 5). Oral and written participation are therefore treated as separate dimensions.

Figure 2.1 shows a proposed tool for measuring the linguistic demand of media content, that is, the level of demand that media content places on audiences’ oral and written language skills. The linguistic demand of any media content can be assessed on this scale by means of two ratings: one pertaining to the demand placed on oral language skills and another pertaining to the demand placed on written language skills (see figure 2.2 for examples of how this is proposed to work).

Figure 2.1: A proposed tool for measuring the level of linguistic demand involved in media content.



- **Synchronous** Starting at the top of the scale, the most strongly participative form of media is ‘synchronous’, i.e. audience members engage in synchronous (or near-synchronous) conversation with one or more other parties.
- **Asynchronous** ‘Asynchronous’ participative media is that in which audience members engage in conversation with one or more other parties, but not in real time.

- **Non-conversational** 'Non-conversational' media refers to any media content that requires the audience participant to produce language themselves, perhaps in response to some content, but not as part of a conversation.¹⁰
- **Reactive** The term 'reactive' refers to media content that requires audience participants to understand language used in the media, in order to be able to respond in some way. (Audiences who take part might respond non-linguistically, for instance by applauding, or they may respond productively using the other modality, e.g. a scenario in which a radio presenter invites audiences to write an email in response to the show would be reactive on the oral dimension, but non-conversational on the written dimension.)
- **Passive** Media content may be 'passive', in the sense that it places demand on audiences' receptive language skills without requiring a specific response. Most non-participative media content is passive in this sense on at least one dimension: audiences listen to or read a language without making any kind of contribution to the content.
- **No demand** Media content may place 'no demand' on one modality or the other. Audiences who take part in a radio phone-in, for example, engage in synchronous conversation on the oral dimension, but have no demand placed on their written language skills while participating. On occasions, media content may place no demand on either modality, since some examples of media content may not involve the use of language at all. An example of this might be a televised performance by an orchestra, which may be consumed without any demand being placed on either spoken or written language skills. Such media may still be participative (and can be highly demanding in non-linguistic ways): an online game that consists entirely of images and/or non-speech sounds, for example, allows users to take part non-linguistically.

¹⁰ Note that stronger forms subsume weaker forms, e.g. although non-conversational media requires audiences to produce language, it may also involve the receptive skill required at the reactive level.

Figure 2.2: Examples of how the proposed tool may be used to assess the linguistic demand of specific media content.

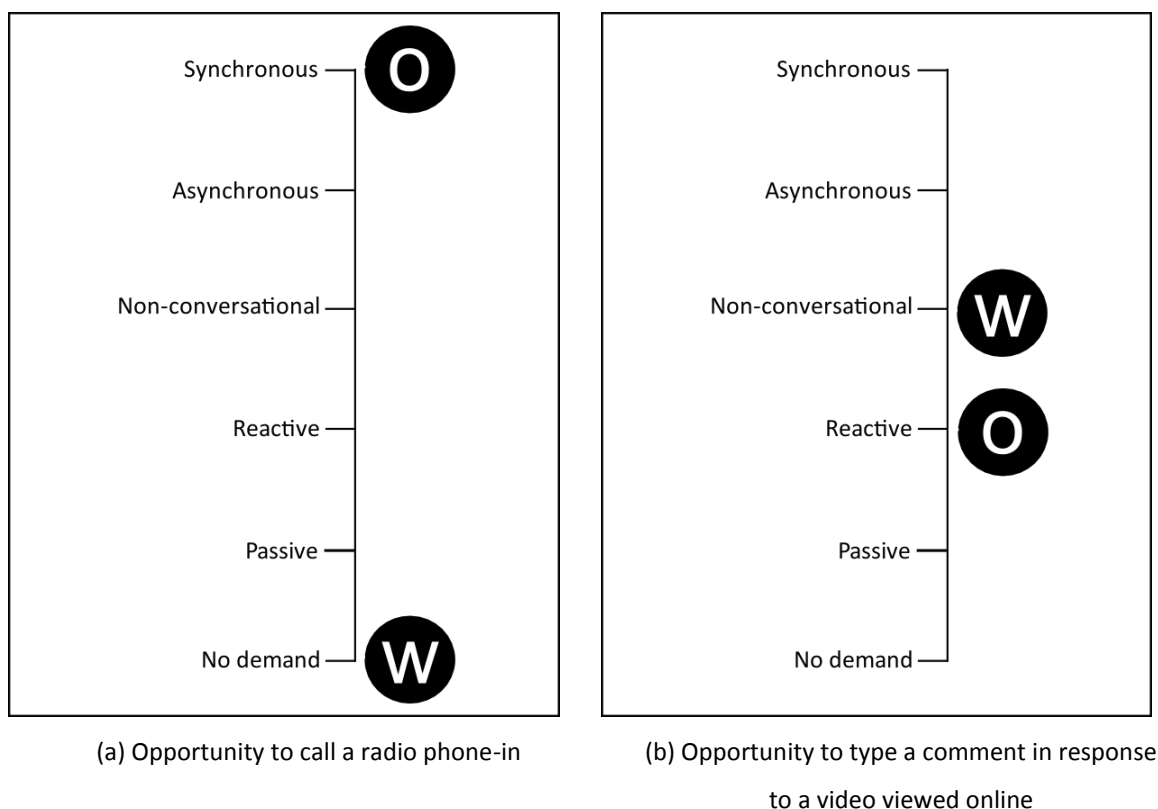


Figure 2.2 illustrates how the scale may be used to assess the demand of media content on audiences' oral and written skills. The first example (figure 2.2a) depicts the demand involved in participation in a radio phone-in programme: audience participants use their oral (O) language skills to engage in synchronous conversation, but no demand is placed on their written (W) language skills. The second example (figure 2.2b) depicts the demand involved when audience participants watch a clip of a discussion programme on YouTube and respond to it by posting a comment underneath: participants use their listening (O) skills in order to be able to react to content non-conversationally in writing (W).

The scale proposed here is used to design relatively high-demand and relatively low-demand fictitious media scenarios (chapter 4) to be compared as part of the investigation of audiences' willingness to participate in Welsh-language media (chapters 5 and 6). The scale is not tested in full in the present study, but see chapter 7 for a preliminary evaluation of its usefulness.

2.4.4 Discussion

As the preceding theoretical work implies, there are several ways in which Cormack's suggestion that "media seem most likely to encourage language use when they are strongly participative" (Cormack 2007: 66) might be interpreted. I have examined several different aspects of the phrase and, as a result, have formulated a research question focused on audiences' short-term psychological responses to media content (section 2.3.3). Based on my chosen interpretation of

Cormack's suggestion, and the present conceptualisation of the most "strongly" participative media as that which places greatest demand on audiences' language skills (section 2.4.3), it seems reasonable to hypothesise what seems to be the opposite of Cormack's suggestion: that audiences will feel more willing to use their language when media are weakly participative, i.e. when little demand is placed on their language skills.¹¹ However, given the definitions developed in this chapter, strongly participative media seem better placed to encourage audiences to use their language in substantial, complex ways that stretch their skills. This leads to an interesting theoretical point: individuals may be more willing to take part in weakly participative content, but perhaps strongly participative content has a better chance of effecting long-term changes in audiences' language use. The investigation presented in this thesis focuses for the most part on audiences' willingness to participate in media content in Welsh at a given moment, for its own sake; in chapter 7, however, I consider how producers may maximise audiences' Welsh use by tailoring opportunities to participate to the specific needs and preferences of different audience 'types'.

The theoretical work conducted above has enabled me to identify themes in the minority language media studies literature in need of investigation. The specific hypotheses tested in the thesis are not presented until chapter 3, however, where they are generated from a series of interviews with producers of Welsh-language media. In the following section, I introduce the psychological framework for the research, from which key constructs – and the relationships hypothesised to exist between them – are derived.

2.5 Theoretical framework: Key psychological constructs

The present research takes an individual psychological approach to audiences' responses to participative Welsh-language media. In this section, I introduce the key psychological constructs that are used throughout the thesis. A distinction is first drawn between different levels of conceptualisation, namely psychological states and psychological traits (section 2.5.1). Willingness to communicate (WTC), a construct which is commonly used in second language acquisition (SLA) research, and which informs the present study, is discussed in section 2.5.2. After evaluating WTC and finding that it needs several adaptations to fit the context of audience participation in the media, a new construct is proposed, called willingness to participate (WTP) (section 2.5.3). Two key psychological variables, communication apprehension (CA) and self-perceived communicative competence (SPCC), are introduced in sections 2.5.6 and 2.5.5 respectively.

¹¹ Recall the broad definition of language use as any receptive or productive use of language (section 2.3.1).

2.5.1 States and traits

In the individual psychology approach, a conceptual distinction is made between temporary, fluctuating psychological states at one end of the spectrum and relatively enduring psychological traits at the other. MacIntyre (2007b) divides the state-trait continuum into three useful levels of conceptualisation, as follows:

At the trait level, the concern is for concepts that endure over long periods of time and across situations; at the trait level the concern is for finding and establishing broad, typical patterns of behaviour. At the situation-specific level of conceptualization, the concern is for concepts that are defined over time within a situation; at the situation-specific level, the concern is for establishing specific, typical patterns of behaviour. At the state level, the concern is for experiences rooted in a specific moment in time without much concern for how frequently those experiences occurred in the past or whether they might occur again in the future. We might know a neurotic person who seems anxious at all times, or a person bothered by speaking in the L2 but not in the L1, or a person feeling nervous right now. Respectively, these are examples of trait, situation-specific, and state anxiety. (MacIntyre 2007b: 565)

The thesis is largely concerned with relationships among audiences' psychological responses to specific participative media scenarios, or, rather, their *imagined* responses to a series of fictitious scenarios presented in the form of a questionnaire (see chapter 4). The scenarios are described in detail, so that audiences might imagine their psychological state when presented with a specific opportunity to participate in a specific place, at a specific moment in time. However, in order to control for certain variables (see chapter 4), various contextual details are absent from the scenarios, which would be explicitly or tacitly present in a true state-level test, where audiences' reactions to actual broadcast or online content were being studied in real time (such as MacIntyre & Legatto 2010). In some respects, then, the scenarios used in the audience questionnaire may be considered 'situational', as they are partly abstracted away from moment-by-moment reality. Therefore, while the present research deals with what I call 'state' SPCC, 'state' CA and 'state' WTP (see below), strictly speaking it may be more accurate to describe what is being measured as 'state-like', or as an intermediate level somewhere between a state and a situation. Nonetheless, for simplicity, I prefer to simply use the term 'state'.

While most attention is paid in the thesis to these state-like constructs, the analysis presented in chapter 5 also integrates relatively more enduring individual factors into an otherwise state-focused model. Although Nezlek (2007) asserts that "approaches that consider traits and situational (or state) measures simultaneously [...] represent an important focus of contemporary research on personality" (Nezlek 2007: 790), the interaction between traits and

states is under-researched in the applied linguistics literature, where studies continue to model either state-level or trait-level phenomena, but not both at the same time. It is especially unusual for researchers to investigate the relationship between trait-level and state-level measurements of one concept; in the present thesis, I begin to address this gap by comparing participants' (trait-like) self-reported proficiency in Welsh to their (state) self-perceived communicative competence in Welsh in specific situations (chapters 5 and 6). The findings of these analyses and their theoretical implications are summarised in chapter 7.

The particular states and traits under scrutiny in the thesis are formally introduced in sections 2.5.3 to 2.5.5, but first, the concept of willingness to communicate is examined.

2.5.2 Willingness to communicate (WTC)

The term 'willingness to communicate' initially appeared in a paper by McCroskey and Baer (1985), who, building on Burgoon's (1976) work on unwillingness to communicate, posited WTC as a personality variable that would account for variability in talkativeness from person to person. Although McCroskey and Baer acknowledged that talkativeness varies from situation to situation, they found that "an individual's willingness to communicate in one context or with one receiver type is highly related to his/her willingness to communicate in other contexts and with other receiver types" (McCroskey & Baer 1985: 5).

MacIntyre and his colleagues took the concept of WTC and adapted it in three important ways. First, MacIntyre and Charos (1996) extended the concept of WTC from the L1 to the L2 context. Second, while McCroskey originally conceived of WTC as a trait-like variable, MacIntyre *et al* (1998) were interested in how WTC varies from one context to another and considered the concept to be a "situational variable with both transient and enduring influences" (MacIntyre *et al* 1998: 546). In this paradigm WTC is situated in a specific moment in time, at "the point at which one is about to communicate" (*ibid*: 546). As conceptualised in MacIntyre *et al* (1998), WTC seems to be better described as a state rather than as a situational variable, since it is concerned with a transient experience at a particular moment in time, rather than across many comparable experiences of, say, using a language in the pub or on the telephone (see section 2.5.1). Indeed, MacIntyre later claimed that in the 1998 conceptualisation, WTC was a state, rather than a situational variable (MacIntyre 2004, 2007b). The third adaptation MacIntyre and his colleagues made to the concept of WTC was to extend the concept to incorporate listening, reading and writing (MacIntyre *et al* 1998), in recognition of the fact that issues of willingness and unwillingness are relevant to all modes of communication. Despite this change, most existing research into WTC still concerns participants' willingness to speak only (cf. MacIntyre, Babin and Clément (1999) and Freiermuth and Jarrell (2006) who investigated both speaking and

writing); willingness to use other language skills, especially receptive skills, is underrepresented in the literature.

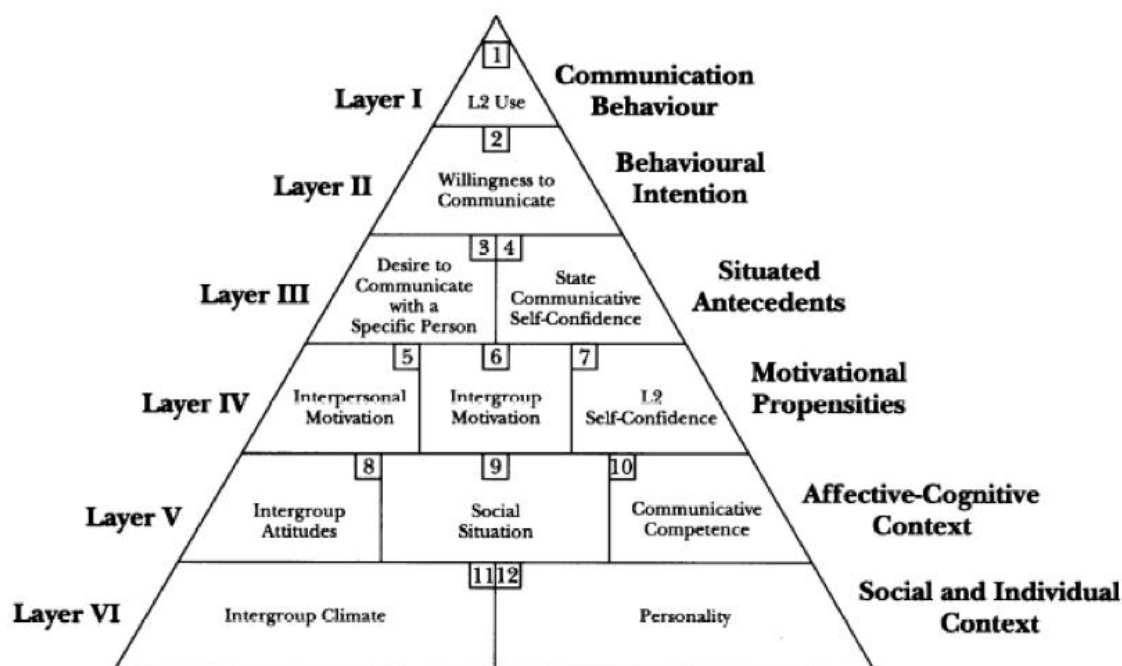
Definitions Various definitions of WTC have been put forward. Some focus on the prediction of communicative behaviour, proposing that, at a trait-like level, WTC is the “predisposition towards actual communication behavior” (Chan & McCroskey 1987: 47) or “the probability of engaging in communication when free to choose to do so” (MacDonald, Clément & MacIntyre 2003: 2). Other definitions divorce trait-like WTC from actual communicative behaviour, depicting it as “the psychological preparedness to use the L2 when the opportunity arises” (MacIntyre 2007a n.p.n.). At a state level, a person’s WTC has been described either as “a readiness to enter into discourse at a particular time with a specific person or persons” (MacIntyre *et al* 1998: 547), or as a decision, “the most immediate behavioral intention [...] preceding usage” (Clément, Baker & MacIntyre 2003: 191). Although these definitions sound very similar (in fact, MacIntyre has used them almost interchangeably), there are methodological implications attached to the choice of one or other approach when studying WTC at the state level. If state WTC is viewed as a frame of mind, or a feeling of preparedness, that feeling can be described along a continuum from ‘very unwilling’ to ‘very willing’ to communicate. If, on the other hand, a person’s WTC is viewed as a decision to communicate, it follows that they are either willing to communicate or they are not; there is no continuum between the two. MacIntyre and Legatto (2010) view state WTC somewhat differently, as a dynamic system of fluctuating affect, where “willingness is re-evaluated on an ongoing basis, even as the language is being used” (MacIntyre & Legatto 2010: 2). This approach disentangles WTC from the decision to communicate and enables speakers’ feelings to be evaluated both before and after the decision to communicate has been taken.

Trait-level WTC Previous research has linked WTC to several other psychological variables. Antecedents to trait-like WTC include extraversion (McCroskey & McCroskey 1986, McCroskey & Richmond 1990), self-perceived communicative competence (McCroskey & McCroskey 1986, MacIntyre, Babin & Clément 1999, Hashimoto 2002, Yashima 2002) and communication apprehension or language anxiety (McCroskey & McCroskey 1986, Hashimoto 2002, Yashima 2002). McCroskey and Richmond (1990) also found an indirect link with self-esteem. Such effects may be mediated by cultural norms, so WTC may be affected more or less by these and other factors in cultures where communication is valued differently (McCroskey & Richmond 1990). MacIntyre (1994) investigated causal pathways among various antecedent variables, with personality traits underlying the factors that are most closely linked to trait-like WTC. He found that levels of introversion and self-esteem predicted communication

apprehension and self-perceived communicative competence, which in turn predicted trait-like WTC.

State-level WTC Somewhat less attention has been paid to WTC at a state level of conceptualisation. Since the present research is principally concerned with state-level constructs, the few investigations that have been conducted into state WTC are of particular relevance to the thesis.

Figure 2.3: Heuristic model of state-level willingness to communicate (MacIntyre *et al* 1998: 547).



MacIntyre *et al* (1998) devised a heuristic model of WTC (figure 2.3), which brings together a large number of factors which are believed to influence state WTC. These factors are presented in layers of a pyramid: the peak of the pyramid (Layer I) represents L2 use, with WTC (Layer II) its immediate precursor. Directly below WTC come the psychological states that affect state WTC (Layer III) followed by more enduring influences such as personality traits, intergroup and long-term cultural factors (Layers IV, V and VI). In this model, WTC is “the final psychological step in preparation for L2 communication” (MacIntyre 2004). The heuristic hypothesises many of the factors that influence a person’s WTC at any given moment, but it does not predict the relationships between them.

Although many later studies draw on MacIntyre *et al*'s (1998) pyramid model of state WTC, most nonetheless continue to conceptualise WTC at a trait-like level (e.g. Clément, Baker & MacIntyre 2003, Hashimoto 2002, Yashima 2002). Three exceptions are discussed here.

In an unpublished study into WTC among Anglophone and Francophone students, MacDonald, Clément and MacIntyre (2003) asked students to recall previous experiences of feeling very willing or very unwilling to communicate in their L2. Although their question was phrased to elicit specific past experiences (i.e. relating to state WTC), most of the responses they quote correspond to common situations rather than specific instances (i.e. relating to situational WTC). Some of these self-reports appear to support the antecedents uncovered in earlier, quantitative research on trait-like WTC, such as perceived communicative competence and the desire to speak to a particular person (e.g. MacIntyre *et al* 1998). Many of the students' comments are difficult to interpret however, and may or may not stem from the particular factors described elsewhere in the literature.

Freiermuth and Jarrell (2006) also used qualitative methods in their investigation of state WTC among female learners of English in Japan. They organised the English language students into groups and asked them to take part in two tasks; in one, they engaged in a face-to-face group discussion, and in the other, they communicated using online text chat. After the groups had all taken part in both tasks, the researchers administered a questionnaire which asked open questions about the students' feelings while taking part in the discussions. In their analysis of the responses, the authors attempt to categorise the students' comments under headings such as 'anxiety', 'power' and 'confidence'. Their interpretations are not always convincing; it is hard to say, for example, whether comments such as "we didn't know who we were talking to, so I could write honestly what I thought" (Freiermuth & Jarrell 2006: 196) are best interpreted in relation to 'anxiety' rather than any other factor. This kind of qualitative data nonetheless adds illuminating detail to our understanding of individuals' psychological experiences of communicating in a second language: most of the students in the study said, for example, that they felt more comfortable using online chat than discussing the task face-to-face. As a result, the authors argue convincingly that using online chat may be a good way for teachers to encourage WTC in their students, by reducing embarrassment and giving students longer to think about what to say. This observation is relevant to the present thesis, since it suggests that teachers (and, by extension, media producers) can create opportunities to participate that are expressly designed to raise students' (or audiences') willingness to communicate.

MacIntyre and Legatto (2010) used a novel 'idiodynamic' method to investigate participants' rapidly changing state WTC: participants in the study completed a communication task in their L2 and then provided a moment-by-moment rating of their WTC, while listening back to a recording of the task. Among the authors' many interesting findings was the lack of a clear negative relationship between state language anxiety and WTC, as might have been expected. Rather, "the moment-to-moment relationship between language anxiety and WTC appears to be

complex – at different times the variables seemed positively related, negatively related, or even independent” (MacIntyre & Legatto 2010: 16). The approach adopted in this study appears to offer a promising method for studying the dynamic interaction of state WTC with its antecedents. Although such a method is not appropriate in the present research (see chapter 4), it should be considered a potentially useful tool in future studies of audiences’ willingness to participate in media content.

Behavioural outcomes Trait WTC has been found to be significantly linked to language use frequency (MacIntyre & Charos 1996, Hashimoto 2002), while state WTC has been shown to predict language use at a given moment (MacIntyre, Babin & Clément 1999). Freiermuth and Jarrell (2006) have also suggested that Japanese students working in groups that encouraged high state WTC produced wordier and higher quality discussions (measured by counting phrases that indicated participants were successfully offering or seeking opinions or expressing agreement or disagreement) than those who had low state WTC. More research is needed to test the idea that WTC predicts quality and quantity of discussion. If state WTC can predict the quality and quantity of communication (however those things are defined), raising or lowering a person’s WTC will have important implications for actual language use outcomes. Behavioural outcomes are not the focus of this thesis; however they are an important area for future research.

2.5.3 Willingness to participate (WTP)

The aim of the present research is to understand, in terms of individual psychology, how participative media can encourage people to use their minority language to contribute to media content (section 2.3). Willingness to communicate appears to be a useful conceptualisation of the state which participative minority language media hopes to engender in its potential audience participants – but in some important respects, the WTC construct is ill-suited to the context of audience participation in the media. In this section, I highlight how the concept may be adapted to better meet the needs of the present research.

Previous researchers have suggested that existing conceptualisations of WTC are applicable only in “situations in which there is a specific person with whom to communicate” (MacIntyre *et al* 2001: 371). In the context of audience participation, in contrast, it is not possible to assume that there is a specific person with whom audiences communicate. When they contact a media organisation, audiences may expect to communicate with a particular person – such as a radio presenter who is currently on-air – or they may not. They may write to a generic email address, for example, without knowing who will read their message. In some cases, it may not even be appropriate to describe audience participation as communicating with a person at all; if a TV

programme invites the audience to vote by text message, such responses are usually tallied automatically, without being read.

Moreover, the definition of audience participation employed in the thesis does not necessarily entail any kind of language use (see section 2.1.2). It is therefore important that the construct used in the present study is equally applicable to studies of non-linguistic participation, in order to ensure that the conceptual framework is applicable to future studies in the field. This suggests that the construct used in the present study should not measure audiences' willingness to communicate as such, but, rather, their willingness to take part in media content, since 'participation' does not imply language use *per se*. I therefore propose a new construct, which I call willingness to participate (WTP).

State WTP – the key outcome variable in the present research – may be defined as audiences' degree of preparedness to engage in a specific opportunity to take part in media content, in a specific context, at a specific moment in time. Like WTC, however, WTP may be conceptualised at different levels, not just as a psychological state, but also as a relatively stable, trait-like variable and as a factor that varies across situations. It is proposed that WTP is applicable to all kinds of participation, both linguistic and non-linguistic; receptive modes of communication (listening and reading) are explicitly included as well as productive ones (speaking and writing). It is also proposed that state WTP be considered a type of affect, rather than a decision; it should be measured, therefore, on a continuum, from low to high, rather than as a choice between participation and non-participation (see chapter 4).

Given the close conceptual link between WTC (section 2.5.2) and WTP (section 2.5.3), it seems likely that many of the factors found to predict state WTC may also underlie state WTP. One proposed antecedent to WTC, linguistic self-confidence (MacIntyre *et al* 1998), appears especially pertinent to the present research context and is discussed in the next section.

2.5.4 Linguistic confidence

As discussed in chapter 1, many Welsh speakers suffer from a lack of confidence in their Welsh. At a state level, this kind of linguistic confidence – or 'state communicative self-confidence' (MacIntyre *et al* 1998) – is not a straightforward concept, since it comprises two distinct aspects: (a) the individual's on-the-spot judgement of how well their communicative competence matches the perceived demands of a particular context, and (b) the individual's sense of nervousness, anxiety or apprehension at the prospect of using their language in a specific context. These two aspects of state-level confidence are conceptualised in the present thesis as self-perceived communicative competence (SPCC) and communication apprehension (CA), respectively, and are discussed in the following sections.

It is important to note that, although they are closely related, CA and SPCC are independent constructs. It is possible to imagine, for example, that a shy person, despite knowing they are linguistically competent to take part in a situation, might be nervous to do so. Conversely, an outgoing person with minimal second language skills might perceive their communicative competence to be low, but nonetheless feel comfortable communicating as best they can. In chapter 3, I pose a research question (Q1) which enables me to test just how independent SPCC and CA are when it comes to influencing audiences' willingness to participate in media content.

While it seems reasonable to hypothesise that state CA and state SPCC are antecedents to state WTP, based on the existing WTC literature, the generation of specific hypotheses is reserved for chapter 3, following a preliminary investigation of beliefs held by producers of Welsh-language media.

2.5.5 Self-perceived communicative competence (SPCC) and self-reported language proficiency

The term 'communicative competence' refers to a speaker's competence not just in the structural elements of a language, such as grammar, phonology and vocabulary, but also in using language appropriately in context.¹² The concept encompasses knowledge and ability relating to "when to speak, when not, and as to what to talk about with whom, when, where, in what manner" (Hymes 2001 [1972]: 60). The present research is concerned with audiences' state *self-perceived* communicative competence (SPCC), that is, their own perceptions of how competent they are to use their language skills in specific situations. State SPCC will fluctuate from one scenario to another, of course; a person who generally considers their command of a given language to be very high, for example, might re-evaluate their abilities downwards in interaction with particular interlocutors, when talking about a particular topic, or when they are feeling ill or frightened.

Respondents' self-assessments of their own general level of competence in Welsh are also relevant to the study. These are measured in terms of trait-like self-reported Welsh language proficiency. While the concept of communicative competence refers to a wide range of language-in-use competencies including an understanding of sociolinguistic norms, language proficiency relates only to the four skill areas – speaking, listening, reading and writing – irrespective of context. At first glance, self-perceived language proficiency may seem an impoverished measure when compared to trait-like SPCC, since it does not take the contextual nuance such as the topic, interlocutor or setting into account. However, since SPCC is, by definition, specific to the communicative context, I suggest that self-perceived language

¹² Note that the term 'communication competence' is also used in the literature (e.g. McCroskey & McCroskey 1988).

proficiency better captures individuals' *general* impression of their competence in Welsh, without the unwanted imposition of contextual cues. There are also methodological advantages to measuring self-reported language proficiency rather than trait-like SPCC (see chapter 4).

It is important to note that state SPCC and trait-like self-reported Welsh language proficiency are not used as proxies for objective measures of respondents' actual competence in Welsh. It is audiences' *perceptions* of their abilities that are crucial here, since these contribute to audiences' linguistic self-confidence, and it is confidence rather than actual ability that is believed to be most closely related to willingness to communicate (MacIntyre *et al* 1998). As McCroskey and McCroskey (1988) put it, "self-reports have little validity as indicants of competent communicative performances but may serve as useful measures of self-perceptions which may function as precursors of communicative choices" (McCroskey & McCroskey 1988: 108).

Previous SLA research has not explicitly modelled the relationship between general self-reported proficiency and SPCC in context; the present thesis makes a contribution to the literature by investigating the nature of the link between the two (chapter 5). There is some existing work, however, on some of the factors that may moderate the link between language proficiency and SPCC: Blood *et al* (2001) found for example, that people who stutter may rate their ability to participate in certain situations that involve speaking lower than other people who report the same level of overall proficiency. Knowledge of additional languages may also strengthen intermediate learners' self-perceptions of their communicative competence in the target language, in certain situations (Dewaele 2010).

2.5.6 Communication apprehension (CA)

Various terms have been used to refer to feelings of nervousness, anxiety or discomfort (at a state level), or the propensity to experience those feelings (at a trait level), while using language. The most common are perhaps 'communicative anxiety' and '(foreign) language anxiety', which appear in the SLA literature, and 'communication apprehension', which stems from the field of psychology. Dewaele, Petrides and Furnham (2008), for example, use the terms 'communicative anxiety' and 'foreign language anxiety' to refer to anxiety in the L1 and L2 respectively. Since 'foreign' is not an appropriate description for either Welsh or English in Wales, the phrase 'foreign language anxiety' is inappropriate in the present context. For the purposes of this study, the notion of 'apprehension' is also preferred over 'anxiety', since the focus is on audiences' imagined feelings of cognitive discomfort in fictitious scenarios, rather than on physiological anxiety responses (such as sweaty hands or shakiness) actually experienced prior to or during an interaction. As McCroskey (1984) puts it,

CA is viewed from a cognitive rather than a behavioral perspective. Although CA indeed may have some behavioral implications [...] it is experienced by the individual internally. *The only effect of CA that is predicted to be universal across both individuals and types of CA is an internally experienced feeling of discomfort [...]* Since people's cognitions are imperfectly related to their levels of physiological arousal, no physiological variable is predicted to be universally associated with CA across people or across types of CA. (McCroskey 1984: 33, italics in original)

The term used in this thesis is therefore communication apprehension (CA) (McCroskey 1984, 2009). It is acknowledged, however, that 'anxiety' and 'apprehension' are closely linked and that the terms are often used interchangeably in the literature (Cheng, Horwitz & Schallert 1999: 439). The conceptualisation of CA adopted in this study has implications for the data collection methods used; these are addressed in chapter 4.

2.6 Summary

The first aim of chapter 2 was to identify a gap in the literature that was suitable for investigation in the following chapters. To address this aim, I considered the senses in which "media seem most likely to encourage language use when they are strongly participative" (Cormack 2007: 66). The basic terms of Cormack's hypothesis were problematised and examined closely. In doing so, it was possible to identify several areas requiring research. Existing work in each area was reviewed; while most of the field was found to be scantily represented in the literature, the gap I found most interesting, and of most practical concern to media production, related to individual audience members' immediate psychological responses to opportunities to interact with media. The overarching research question to be addressed in the thesis was therefore worded as follows:

What influences audiences' willingness to take up a specific opportunity to participate in the media using their minority language?

The second aim of the chapter was to set out the theoretical framework for the thesis. Previous scales and typologies depicting different 'levels' of interactivity or audience participation were found to be inadequate for the present purpose; a new scale was therefore developed, which allows the linguistic demand of media content to be measured. The concept of willingness to communicate (WTC), commonly used in the SLA literature, was introduced and evaluated. Since WTC was found to be poorly suited to the context of media participation, as defined in the present research, the new concept of willingness to participate (WTP) was developed as an extension of WTC. Since it appears likely that communication apprehension (CA) and self-perceived communicative competence (SPCC) may be antecedents to WTP, these concepts were also defined.

Having identified a substantial gap in the literature, a research question to be studied and a theoretical framework within which to investigate it, in the following chapter I translate my overall research question into specific hypotheses. To do this, I present a preliminary investigation into media producers' approaches to and experiences of eliciting audience participation in a minority language – specifically, Welsh. The interviews conducted reflect common beliefs among media producers, which in turn will represent the core assumptions to be tested. Rather than being based on intuition, the hypotheses for the present study are thus generated from producers' beliefs.

Chapter 3: Producers' perspectives on audience participation in Welsh-language media

Within the minority language media studies literature, relatively little attention has been paid to media producers' own perspectives on their work and Browne (2010) has called for more studies that address this gap. The research presented in this chapter does just that.

In this chapter, I present an exploratory study of Welsh-language media producers' perspectives on audience participation.¹³ The study is a preliminary step in the project as a whole and has two objectives. The first is to understand Welsh-speaking producers' approach to working with audiences, to show what producers do and why, in order to avoid making unwarranted assumptions or generalisations about production practice, based on my own professional experience. The discussion focuses in particular on producers' motivations for eliciting participation from their audiences and on the issues they face when trying to encourage audiences to take part in content. The second objective of the chapter is to generate hypotheses regarding audiences' willingness to participate (WTP) in Welsh-language media, to be tested in later chapters. Producers' beliefs about the barriers to audience participation are made explicit, so that their assumptions may be tested in the investigation that follows.

This chapter begins with an account and evaluation of the methods used to conduct this preliminary study (section 3.1). Data was collected from producers of Welsh-language media in a series of semi-structured interviews and then analysed qualitatively using thematic analysis (Braun & Clarke 2006). The results presented in this chapter reveal some interesting insights into producers' priorities, values and ideologies. In contrast to Cormack's observation that "most people working in minority language media have no doubt as to the usefulness of their work" in supporting language maintenance (Cormack 2007: 52), for example, the producers are cautious not to overstate the role they play in supporting Welsh. Indeed, Welsh language maintenance is portrayed in the interviews as a background issue, of less immediate importance to producers than the main goal of producing high quality content to serve the Welsh-speaking audience. It is found that producers who have experience of working with audience participation have a clear image of themselves as "facilitators" rather than "creators" of media content, and that these producers place a high value on publishing audiences' own words. In the context of audience contributions made in writing, however, producers sometimes experience a tension between wanting to publish user-generated content (UGC) in users' own words, while also wanting comments to be understandable; this tension is framed in terms of two language ideologies:

¹³ An earlier version of the research in this chapter was published in Law (2010).

linguistic authenticity and standardisation. Linguistic authenticity is important to producers, who place a high value on enabling audiences to use non-standard Welsh in a media context. However, producers find it difficult to convince some audiences that their own variety of Welsh is welcome in the media, when staff-produced content is written in standardised, often quite formal, Welsh (section 3.3). Both these ideologies, then, have important implications for audiences' willingness to participate. It is suggested that, while standardisation helps to raise the prestige of the Welsh language, with concomitant benefits for language maintenance, the disconnect between media Welsh and non-standard Welsh may simultaneously work against language maintenance by making audiences feel bad about their Welsh.

The second objective of this chapter is addressed in sections 3.3 and 3.4. In section 3.3, I identify media producers' explanations for audiences' willingness or unwillingness to take part in Welsh-language media. Producers' explanations centre on the claim that audiences frequently decline to take part in content, because they believe their Welsh is "not good enough". In section 3.4, I translate these claims into specific, testable hypotheses regarding the factors that may influence WTP. The key variables expected to influence WTP are communication apprehension (CA) and self-perceived communicative competence (SPCC); other variables to be investigated include the modality of participation and the linguistic and education background of potential audience participants. Seven specific hypotheses are drawn together in the form of a conceptual model of WTP, which is tested in chapter 5.

3.1 Methods

In this section, I describe the methods used in the study of Welsh-speaking producers' perspectives on audience participation.

3.1.1 Semi-structured interviews

Interviews are a very common research instrument in the literature on which this thesis draws, from willingness to communicate in a second language (e.g. Kang 2005) to Welsh language planning (e.g. Mac Giolla Chríost 2005) to media practice (e.g. Williams, Wardle & Wahl-Jorgensen 2011).¹⁴ Semi-structured interviews were deemed well-suited to the aims of the study in this chapter, as they enabled me to guide interviewees towards the general areas of interest, without unduly restricting the directions in which the conversation could go. In preparation for data collection, research ethics approval was first obtained from Queen Mary, University of London. Welsh-language media producers were then invited to take part in the research. An interview guide – a list of open questions and prompts designed to elicit rich data – was

¹⁴ See Talmy (2010) for a discussion of the distinction between the interview as research instrument and as social practice.

developed and, as recommended by Dörnyei (2007: 136), tested in a trial interview with a non-Welsh-speaking media producer before fieldwork began.

Table 3.1: Producers who were interviewed for the preliminary study. An X indicates the main platform(s) on which the producer works; a bracketed (X) indicates subsidiary platform(s) or previous experience. Other platforms = e.g. events, print, games, mobile.

Pseudonym	Experience of eliciting audience participation	Relative seniority	Experience of working on different platforms			
			Radio	TV	Web	Other
Rhian	Extensive	Lower	(X)	-	X	(X)
Bethan	Extensive	Lower	-	-	X	(X)
Carys	Extensive	Higher	(X)	X	(X)	-
Marc	Extensive	Higher	(X)	-	X	(X)
Elis	Indirect	Lower	X	-	X	-
Gethin	Indirect	Higher	-	X	(X)	(X)
Sian	None	Higher	(X)	X	(X)	-

Interviews were conducted with seven producers at BBC Cymru Wales in Cardiff, in March 2010. While BBC Cymru Wales is a major producer of Welsh-language content for radio, TV (including S4C) and the web, it is recognised that the focus on one organisation may be perceived as a limitation of the study. I had informal conversations with producers from other production companies during the course of the research, however, who confirmed that the issues that arose in the interview data were similarly pertinent to them. The producers who took part in the research were all recommended to me by former BBC colleagues, who were supportive of the research and understood the aims of the preliminary study. While the sample was not designed to be fully representative of Welsh-language producers, I was careful to include producers of different levels of seniority, who had worked on different platforms and who had had greater and lesser degrees of contact with the audience. All were fluent speakers of Welsh and English and, at the time of the interview, were working on Welsh-language content for one or more platforms (TV, radio or web; see table 3.1), in several different genres and for a variety of target audiences. Participants varied in age, from 30s to 50s, and level of seniority, from Producer to Executive Producer. Interviews were conducted one-to-one in the workplace canteen or the participant's office and lasted around 30-45 minutes. As I cannot hold a conversation in Welsh, interviews were conducted in English. The language of the interview was not remarked upon by any of the producers, who are used to mixing with English-speaking colleagues at work. Six interviews were recorded on a digital audio recorder; one participant chose not to be recorded and instead notes were taken during the interview. Four of the producers had extensive, first-hand experience of eliciting audience participation, two were indirectly involved with audience participation elicited by other members of their team and one said she had no experience of

working with audience participation at all. As well as discussing audience engagement and participation, producers were asked about their language background, their experience of producing content for different platforms and moments when they had felt their work was especially worthwhile. All the producers spoke to me in a personal capacity and the views they expressed were not necessarily those of the BBC.

3.1.2 Thematic analysis

The study of producers' perceptions of audience participation was a preliminary step in the research, designed to shape the research questions to be tackled using other methods in later chapters. As such, my focus was on the *content* of producers' reported experiences of audience participation, and how this might enable me to generate testable hypotheses about audiences' willingness to participate. I was less interested in the linguistic *form* of the data, such as the construction of experience or identity through discourse. Common sociolinguistic methods of analysing qualitative data, such as discourse analysis and conversation analysis (Johnstone 2008, Schiffrin 1994), were considered inappropriate as they assume a constructionist approach. In contrast, Grounded Theory (Glaser & Strauss 1967) focuses on the content rather than the form of data. However, this approach is characterised by the explicit goal of generating theory from qualitative data (Dörnyei 2007: 259). Since the aim of the study was to generate hypotheses to be tested using other (largely quantitative) methods, rather than to generate theory directly from the interviews, Grounded Theory was not a good fit. Moreover, the specific coding process involved in Grounded Theory was considered unnecessarily detailed and excessively time-consuming for a preliminary study of this kind. Indeed, Titscher *et al* describe it as an "extravagant methodology" (Titscher *et al* 2000: 84) and Dörnyei warns that "to do grounded theory analysis well is a demanding and labour-intensive task" (Dörnyei 2007: 262). Unlike these other qualitative approaches, thematic analysis met the requirements of the study completely, being both straightforward to conduct and compatible with the aims of the investigation.

Thematic analysis is described by Braun and Clarke (2006) as a flexible, theory-independent method for "identifying, analysing, and reporting patterns (themes) within data" (Braun & Clarke 2006: 79). They identify six steps in a recursive analytical process: familiarising yourself with the data, generating initial codes, searching for potential themes, refining themes, naming themes and writing up the analysis. The method outlined by Braun and Clarke parallels the "generic analytical moves" described by Dörnyei (2007: 245), which, while divided into different stages, also entail an iterative process of coding for themes, looking for patterns and making interpretations. Dörnyei distinguishes between this generic approach and "specific methodologies" (*ibid*) for analysing qualitative data, but Braun and Clarke (2006) argue that the general procedures that Dörnyei describes are themselves a specific methodology: thematic

analysis. They acknowledge that, being “unbranded”, thematic analysis lacks much of the kudos enjoyed by other methodologies, but insist that that should not detract from its advantages over other methods, such as its simplicity and its compatibility with different epistemological stances. Indeed, in Dörnyei’s view, studies published in second language acquisition journals appear to favour an unbranded approach (Dörnyei 2007: 245). Whether it is labelled “thematic” or “generic”, the method described by Braun and Clarke and Dörnyei proved well-suited to the aims of the present research.

In this study, interviews were first transcribed and then thematic analysis was undertaken inductively, coding data without imposing pre-existing categories. Patterns were identified in the codes and interpreted as named themes. These steps were carried out recursively until a coherent interpretation was reached. The results of the analysis were then used to develop hypotheses to be tested in later chapters. It is difficult to identify studies that have approached qualitative analysis in the same way that I have here, since, as both Dörnyei (2007) and Braun and Clarke (2006) note, it is common (albeit not recommended) practice for researchers using a “generic” approach to omit an explicit statement of their analytic methods. Studies which employ thematic analysis to analyse interview or discussion data – and which refer to the method by name – include Dorn and Guzdial’s (2010) investigation of web designers’ perspectives on their work, Buchanan and Murray’s (2012) exploration of the potential of participatory video to challenge the stigma of mental illness and Hmensa’s (2010) examination of a Ghanaian radio advert, its producer and its audience.

3.2 Producers’ perspectives on Welsh-language media

In this section, I present the first part of the thematic analysis of interviews with Welsh media producers, which focuses on producers’ views of minority language media as a public service, the rationale behind audience participation and the tension producers experience between two language ideologies, linguistic authenticity and standardisation. The findings largely parallel my own experiences of producing English-language content at the BBC.

3.2.1 Motives for producing minority language media

As noted, it has been said that “most people working in minority language media have no doubt as to the usefulness of their work” in supporting language maintenance (Cormack 2007: 52). In the current study, producers working in Welsh media were proud of their work and agreed that Welsh-language media supports Welsh language and culture in a general sense. Gethin, for example, thought that Welsh media had helped change attitudes by showing that there was “a chance to make a good living” in Welsh, which was now considered a “professional language”. The provision of different kinds of content also helped demonstrate that Welsh could be used in

different contexts: “it’s just filtering into people’s psyche: oh my God, I can listen to this in Welsh, oh my God, they’ve got *this* in Welsh!” (Gethin). Nonetheless, producers were cautious not to overstate the role of the media in promoting the Welsh language; there was certainly no evidence in the interviews of the “fetishisation” of media’s role in language maintenance encountered among some practitioners in minority language media (Cormack 2004; see also Fishman 2001). None of the producers suggested that Welsh language maintenance or revitalisation was a specific goal of their work: language maintenance was, in their view, neither the responsibility of the media, nor a source of motivation in their work. Talking about the BBC’s role in supporting Welsh learners, for instance, Bethan commented:

I don’t think it’s our responsibility as an organisation to tell anybody what they should be doing – “you must learn Welsh if you live in Wales” – I mean, it’s not that, it’s just facilitating people who have made the decision themselves, so if they’ve decided to move to Wales and they want information about living in Wales bilingually, then the BBC as a public service therefore can offer the information that they need.

This theme of “public service” ran throughout the interviews and, unlike Welsh language maintenance, was portrayed as a major underlying principle of Welsh-language content production. The producers were clear that the BBC’s status as a public service broadcaster meant that “it should offer its content in Welsh as well as English” (Elis) because, as Sian and Marc pointed out, Welsh speakers pay the licence fee like any other audience in the UK,¹⁵ and therefore “deserve the same quality of service as they would have in any other language” (Bethan). Presumably, when she referred to “any other language”, Bethan was thinking of English, since most languages in the UK are less well catered for than Welsh. Marc commented on the disparity between Welsh and other minority languages and suggested that the public service argument was also applicable to other languages: “to be honest, in terms of accessibility for licence fee payers, I wish the BBC did more in non-indigenous languages, but that’s just my personal opinion”.

The public service ideal underpins much media production practice and has for many years been “valued by a broad swathe of television professionals” (Holland 2003: 4). However, “in the face of a powerful ideological challenge from free marketeers, the concept of public service has tended to become ossified. It now tends to be represented in public discourse as something that is worthy, staid and backward looking” (Holland 2003: 2). The interviews with Welsh producers suggest that, whatever the effect on public discourse, free market ideology has not dampened

¹⁵ Everyone who watches or records live television in the UK must be covered by a TV licence, which funds BBC television, radio, online and other services. See <http://www.bbc.co.uk/aboutthebbc/insidethebbc/whoware/licencefee/> [accessed August 2012].

producers' own passion for public service. For these media professionals, public service is inherently forward-thinking: it is their job to think up "new innovations for audiences" (Marc). Similarly, there is nothing staid about "push[ing] the boundaries with technical things, push[ing] the boundaries editorially" (Bethan).¹⁶

Competing with the mainstream media is a common challenge for minority language broadcasters (e.g. Browne 1992), but a firm focus on quality and innovation – rather than language maintenance *per se* – may help Welsh-language content compete with English-language content. This strategy is not only evident at BBC Cymru Wales, but is also an important part of S4C's commissioning: in their evaluation of S4C, Grin and Vaillancourt (1999) suggest that the channel's "insistence on quality, originality and relevance has encouraged local talent and seems (although observers indicate the evidence is not sufficiently clear) to have had a positive effect on language corpus and on the knowledge of Welsh" (Grin & Vaillancourt 1999: 33). High-quality output also helps ensure that Welsh media is taken seriously, which may benefit the image of the Welsh language among the wider public.

3.2.2 Motives for producing audience participation

When it came to audience participation, two perspectives were apparent in the interviews. According to one perspective, audience participation is a research or marketing activity, elicited to inform content or to bring in new audiences. According to the other perspective, audience participation is valuable in itself, both as a generator of content and as a public service to audiences who benefit from the experience. These two perspectives are not mutually exclusive, but are associated with different views of the producer's role in audience participation, as I suggest in this section.

Two of the TV producers, Gethin and Sian, saw participation as supplementary to the main business of programme making. Gethin talked about organising participative live events and hosting online forums as "part of the marketing campaign", a way of reaching out to new audiences and increasing viewing figures, or gaining "insight" into the audience. Sian, who does not work closely with audiences, also thought that participation, perhaps in the form of eliciting emails from the audience, would be a useful a way of gathering feedback and finding out who is actually watching the programme, a view endorsed in the literature by Jensen (2005: 90) and also by some of the instructional TV presenters interviewed by Evans (2005: 154). The third TV

¹⁶ In my personal experience of working at the BBC, the sense of providing a valuable public service for deserving licence fee payers is expressed just as strongly among English-language producers in London as it is among Welsh-language producers in Cardiff and, as here, is expressed in terms that challenge the negative connotations of worthiness that Holland has observed in public discourse on the subject. (In London, such conversations are often about reflecting ethnic diversity or different areas of the UK in media content.)

producer, Carys – whose experience of audience participation most closely matches my own – agreed with Gethin that going out into the community to gather audience contributions, such as vox pops, was a way of “raising our profile”, but also saw it as a core element of content production (“a programme without [audience contribution] is a crap programme”) and a way of giving “a voice” to the audience. The three producers who were the most experienced in working closely with audiences, Bethan, Marc and Rhian, subscribed more to the latter perspective: the purposes of eliciting audience participation, in their view, are to “generate good content” and give the audience “a platform”. Marc believed it was important to “encourage people to have their say; if the BBC isn’t for that, I don’t know what it’s for”. These comments suggest that producers see audience participation as a public service value, confirming the findings of previous research into the role of participation in public service broadcasting (Enli 2008). It was striking that producers who viewed participation in this way described themselves as facilitators, rather than producers, of content. Their role is to “facilitate opinion, facilitate discussion”. Rather than writing a news story, for example, it is more a matter of “collecting stuff, putting it all together and making it feel that it was the voice of the people, rather than an article about it”. Among these producers, it is the audience, rather than the production team, who are described as “producing content” and “creating media products”; Rhian emphasised that “the whole ethos of [our website] was supposed to be that this is a site for your stories, rather than us telling you your stories”.

These descriptions contrast with the view taken by BBC journalists working in the UGC Hub in the London newsroom, who encourage audiences to contact them with information. In the specialised context of news production, where material of varying quality arrives thick and fast, audience content is seen as “material to be processed, rather than as an opportunity for the public to retain creative control over their output, or a chance for journalists to truly collaborate with the public in jointly producing content” (Williams, Wardle & Wahl-Jorgensen 2009: 6). Since they are focused specifically on identifying news content, these journalists “perceive UGC in newsgathering terms first of all” (Wardle & Williams 2010: 783) and see audience material as just another source of stories, footage and case studies. Producers who work in news-related editorial content and non-news areas of output have more scope to work with alternative forms of audience participation, which may be more associated with such values as enabling public discussion, empowering the audience and strengthening the relationship between the media and the audience (see Wardle & Williams 2010: 789).

One potential motive for eliciting audience participation was notable for its absence in the present study: the monetisation of audience activity. Previous researchers have noted that

it is important to situate the soliciting of audience participation within a broader corporate context in which listener input via new media is not always encouraged in order to gain access to the 'voice' of the audience but instead feeds into a commercial strategy in which radio stations both aim to access personal data of their listeners as well as to attract revenue through premium-rated SMS messages and Facebook fanpage advertising. (Willems 2013: 230)

While Willems' observation relates specifically to radio in Zambia, the same may be said of commercial media in the UK. Media organisations (and many non-media brands) may be interested not only in the content of audiences' messages, but also in the ongoing circulation of audiences' measurable social media activity, such as page views, 'follows', 'likes', 'shares' and comments – regardless of their content – since these can be used to attract advertisers (Fletcher 2011). In addition, brands often employ interactivity both as a way of gathering audience contributions and as a way of building up a database of email addresses and mobile phone numbers that can be used for direct marketing in the future (e.g. Global Radio n.d.).

These functions of audience participation were not mentioned by the interviewees in the present study, probably because they are all employed by the BBC, a non-commercial public service corporation. It may therefore add to an understanding of audience participation in minority language media to investigate whether producers whose work relies directly on income from advertisers see themselves chiefly as facilitators of other people's stories, as in the present study, or whether commercial considerations are also motivating factors in their work with audiences.

3.2.3 Welsh language ideologies

The role of the producer as a facilitator of other people's stories, discussed above, is associated in the present study with an appreciation of 'authentic' language. In this section, I examine both 'linguistic authenticity' and 'standardisation', two language ideologies held by producers, both of which have implications for audiences' willingness to participate in Welsh-language media.

Language ideologies, or "shared bodies of commonsense notions about the nature of language in the world" (Rumsey 1990: 346), are important in understanding individuals' linguistic experiences because they underlie personal judgements about their own and others' language use. A person who judges whether their own command of a language is "good enough" to participate in a specific situation, for example, must first hold beliefs about what constitutes 'good' and 'bad' language. In this section, it is argued that two language ideologies, authenticity (Coupland 2003) and standardisation (Milroy & Milroy 1999), are integral to the producers' work and that both have implications for language use in audience participation. Producers value *both*

authenticity and standardisation – it is not a case of choosing one or the other. Usually, the two ideologies operate in complementary distribution: standardisation is particularly important when content is relatively formal and represents the voice of the broadcaster (such as in the case of news), while authenticity is important when content represents the voice of the audience or another contributor. However, as suggested below, in situations where audiences participate in writing, producers sometimes experience a tension between the two ideals.

Linguistic authenticity As facilitators of other people’s stories (section 3.2.2), the producers who work closely with audiences value linguistic authenticity highly. ‘Authenticity’ in this context can be taken to refer to an inclusive approach, in which all forms of Welsh are tolerated and access to participation is not controlled on the basis of language. Producers aim to publish the audience’s stories in their own words, both in speech and in writing. Bethan explained that producers try to reassure audience members that they want to capture ‘authentic’ Welsh: “you’d say, we just want to hear your story in your own voice, in your own language, in your own dialect”. In van Leeuwen’s terms, producers’ approach to authenticity in audience participation is that content should be “true to the essence” of the person’s contribution and its expression (van Leeuwen 2001: 393). Therefore, when producers find it necessary to edit an audience contribution (an issue I discuss below), they do so “without changing its feel and ethos” (Rhian). Linguistic authenticity is also endorsed in the BBC’s editorial guidelines; in online spaces, for example, “moderators will not normally edit contributions for grammar or spelling although they may edit for use of strong language” (BBC 2010).

Standardisation While linguistic authenticity is held up as an ideal by producers, there is another ideal evident in the producer interviews: standard Welsh. I use the term ‘standard’ in the abstract sense of “standardisation as an *ideology* and a standard language as an idea in the mind rather than a reality – a set of abstract norms to which actual usage may conform to a greater or lesser extent” (Milroy & Milroy 1999: 19, italics in original). None of the producers implied that their use of standard Welsh in programmes and on websites was dictated by explicit, top-down language policy. In practice, standardisation may mean avoiding “the slang” and “poetic language” as well as, in some contexts, words that are specific to a particular region of Wales: “we’ve only got one member of the team in north Wales and she will gogify something and we’ll say ohh they won’t know what that is, so we tend to go for general words” (Carys).¹⁷ Standardisation pertains especially to material that represents the voice of the broadcaster; more formal types of content, such as news, are expected to be written in standard Welsh, while presenters of light entertainment, actors and other contributors often use regional varieties. Although audiences are encouraged to use their own variety of Welsh, the standard Welsh

¹⁷ People from north Wales are often called “gogs”, from the Welsh word “gogledd”, meaning “north”.

ideology has implications for audience participation, especially written forms of participation, because it can influence how contributions are selected for inclusion in content, and how they are presented.

Whatever individual producers' own views on language diversity ("we can't all be purists" said Gethin), they recognise that "the public is ultrasensitive about broadcast language" (Bell 1983: 38). Standard Welsh is important to many of the audiences they serve, and also contributes to the prestige of Welsh and Welsh-language media. They are prepared to push the boundaries for the sake of making creative content, but also have a duty to respond when there are "lapses" (Gethin) that send "the purists [...] up in arms" (Marc): "we need to take notice of [the purists]. It isn't always possible to do as they say, but I think what they say is really important" (Marc). It is striking that "the purists" are singled out as a particular type of audience since, for the most part, the producers interviewed referred to audiences simply as "people".¹⁸ The turn of phrase is telling: the term "the purists" suggests that some members of the audience – a distinct, recognised subset of the audience – have a stricter notion of Welsh language standardisation than the producers. While the term distances producers from puristic views, Gethin also refers to "lapses" when those puristic standards were not upheld, implying that it is a mistake to fail to comply with prescriptivist norms. This is explained by Marc's insistence that public service broadcasters should serve all licence fee payers; this means that all audiences, prescriptivist or otherwise, should "have a voice and [...] get to hear a language they understand and that means something to them" (Marc).

The approach to language standards described by the producers is not primarily driven by affect (as it may be among some of the audience), but by rational considerations (Thomas 1991), partly as a result of the desire to serve audiences, but also with a view to helping consolidate the Welsh used in the media "as a communicative tool and to heighten its prestige in the estimation of the speech community" (Thomas 1991: 38). Rhian explained that using standard Welsh in the media is about "providing an environment where the Welsh language has dignity and is a modern language of communication". By highlighting these two functions, Rhian shows an understanding of the positive role of prestige in societal language maintenance (Dorian 1998) and a desire to demonstrate that Welsh is a language that is fully capable of expressing modern concepts (Cotter 2001). Saying that "the BBC has without a doubt been at the vanguard of upholding that Welsh language tradition" suggests that Gethin also recognises that the media in Wales is in a good position to "promote a consciousness of the standard and maintain its

¹⁸ Bethan's reference to "the expats" is an exception. This particular audience type, according to Bethan, is served by hyperlocal news, which allows those who have moved to another part of Wales to "keep in touch with their region".

position” (Milroy & Milroy 1999: 25). Producers’ suggestion that the media’s use of standard Welsh is beneficial to the language as a whole is supported by Moring (2007), who argues that the use of a standardised minority language in the media “has indisputably positive effects with regard to the status of the language itself” (Moring 2007: 21).

Balancing the two ideologies In the context of audience participation in writing, producers sometimes experience a tension between encouraging authentic Welsh and the desire to conform to standard Welsh. One producer described the challenge of balancing the authenticity ideal with the need to make minor edits to some of the written comments submitted by the audience online:

I felt it was important for it to appear as it was written but also [...] if it was *really* bad or bad spelling or grammar – just to make it kind of understandable and not embarrass the person – but without changing its feel and ethos. (Rhian)

The insistence that user-generated content should be “understandable” can be understood as part of the value typically placed on clarity in journalism (Cotter 2010), which is apparent in comments made by several of the other producers. When writing scripts, for example, Carys considers whether phrases are “easy to understand”. By using comprehensibility as a benchmark, Rhian finds she is able to strike an appropriate compromise between the principles of authenticity and standardisation.

When working with audience contributions to radio and web content, I have experienced some of the same struggles with competing language ideologies as the producers interviewed here, albeit in English rather than Welsh. I have agonised over content written by young children and L2 English speakers in particular, aware that, even though content may be presented in the audience’s voice (metaphorically or literally speaking), in many contexts it is still interpreted by the audience as implicitly endorsed by the broadcaster. I empathise with Carys when she describes the sense of responsibility she feels to an audience that expects all content to be accurate, both factually and linguistically: “we’re not an educational programme, but I’m aware that things we put online are used in exams”.

3.2.4 Discussion

The analysis in this section helps ensure that my interpretations (and, in chapter 7, recommendations) are built on an understanding of Welsh producers’ perspectives in particular, rather than on my experience alone. Using thematic analysis, I have identified common themes in the interviews, which offer an insight into producers’ values and concerns. While there is some diversity in producers’ views and priorities, it could be argued that media producers form an “occupational community”, that is, they “share with one another a set of values, norms and

perspectives that apply to but extend beyond work related matters” (Van Maanen & Barley 1984: 287). The broad themes discussed so far are familiar from my work in English-language non-news content and may be common to producers in many areas of public service broadcasting. This suggests that the occupational community extends across languages and encompasses both English- and Welsh-language media.

Next, I focus on issues that pertain more specifically to the Welsh situation and examine producers’ experiences of audiences’ willingness to participate in Welsh-language media.

3.3 Producers’ perceptions of audiences’ willingness to participate

All the producers who had direct or indirect experience of working with audience participation commented on Welsh audiences’ willingness to participate in media content. Rhian found that “it’s much more difficult for some reason to get Welsh speakers to talk to you freely than English speakers” and Elis’s impression was that “Welsh speakers are reluctant to interact”. Bethan was not sure the issue of unwillingness to participate was necessarily restricted to Welsh-language content: “I think even on the English sites they’ve found it quite difficult to get people to contribute on their own accord, unless they have something that they wanted to promote or whatever”. However, Marc had previously worked in both languages in parallel and found that “it was always easier to recruit participants for an English workshop than it was a Welsh-language workshop”. Gethin’s team also provided opportunities to interact in either Welsh or English, and they found that the quantity and quality of audience participation was linked to the language used: “the discussion on the website is predominantly English-language with more hits from non-Welsh speakers than from Welsh speakers. [...] We get a deeper insight, a better, perhaps, insight from the English-language discussion group than we do from the Welsh”. Comments like these underline how important it is to understand the factors behind audiences’ reluctance to use their Welsh in a media context. By gaining further insights into people’s feelings about using Welsh, and why they feel that way, producers (and others with an interest in supporting people to use Welsh) can try to accommodate or even combat this sense of unwillingness. In this section, I examine producers’ proposed explanations for their audiences’ unwillingness to participate in Welsh and highlight points that are investigated in later chapters (see section 3.4.1 for a list of specific hypotheses).

There was some disagreement among producers regarding spoken and written participation. Although Elis thought that “people will speak on the radio, it’s just the written Welsh, not the spoken Welsh” that makes audiences feel unwilling to take part, other producers had experienced difficulties eliciting participation in both modalities. In Marc’s experience, “it’s been quite difficult actually to get people – and that isn’t just with written Welsh, that’s also with

spoken Welsh". These comments beg the question, which view is right? Are audiences less willing to take part in content in writing? If so, what is it about writing in Welsh that makes people feel especially unwilling to take part in that way? The effect of modality of participation on audiences' WTP can be tested by comparing people's responses to written and oral means of participating; this test is conducted in chapter 5 (see hypothesis H2 in section 3.4.1). Individual differences in responses to oral and written scenarios are investigated in chapter 6.

Rhian had come up against audiences' unwillingness to participate in both speaking and writing, but suggested that the two issues stemmed from different factors; reluctance to write in Welsh was "probably more prevalent amongst middle aged people who haven't had their education in Welsh than the younger audience who would be much happier to write something that wasn't correct". This comment reflects the observation that many Welsh speakers who attended English-medium schools feel less able to write in Welsh than those who attended Welsh-medium schools, a theme which arose frequently in informal conversations during the preliminary study and throughout later fieldwork. This issue is formalised in hypothesis H5 (section 3.4.1) and tested in chapter 5. (The question of a difference between middle-aged and younger participants (hypothesis H4) is also examined in chapter 5. Possible reasons behind audiences' differing reactions to oral and written participation are discussed further in the analysis of individual differences in chapter 6.) The notion of linguistic "correctness" raised by Rhian was frequently mentioned by the other producers, who found that audiences often lacked confidence in their ability to speak and write "correct" Welsh (audience comments to this effect are discussed in chapter 6). Rather than putting their audiences' reticence down to a lack of actual competence in Welsh, as audiences themselves may do, the producers attributed it to a linguistic hang-up among some Welsh speakers: "there's this kind of complex about confidence in speaking Welsh" (Rhian). This complex, producers said, led some audiences to decline to take part in content, saying "'ooh I'm just not good enough'. Not 'I don't want to do it', it's just they didn't feel comfortable in doing it" (Bethan).

Producers linked audiences' discomfort to dialect differences in Welsh as well as to audiences' perceptions of their own competence. While trying to elicit audience participation, Bethan "had a lot of people saying, 'ooh my Welsh isn't good enough!' because maybe they spoke in a rich, strong dialect or something and they didn't see that as a formal, 'proper' Welsh". This was a common experience among the producers, and one that they found frustrating. The BBC's image does not always help producers to elicit participation: audiences tend to "think BBC equals proper Welsh" (Bethan), which makes them compare their own Welsh unfavourably with that used on the BBC, and thus feel uncomfortable taking part in media content:

It was frustrating because you'd say, well, we just want to hear your story in your own voice, in your own language, in your own dialect, but if you put one of those [points to microphone] in front of them, they'd automatically think it was for radio or something like that and they'd feel a bit of a distance straight away. (Bethan)

As suggested above, producers value standard Welsh because it gives Welsh media – and Welsh as a whole – prestige in the eyes of the audience. Yet they also recognise that with the prestige of standard Welsh comes the stigmatisation of non-standard Welsh, which is at odds with the values of linguistic authenticity and discourages audiences from participating. While the use of standard Welsh in broadcast media helps to bolster the prestige of the Welsh language, it is also noted that the disconnect between the standardised Welsh used in the media and audiences' typically non-standard language may work against Welsh language maintenance by making audiences feel bad about their own variety. This issue is discussed further in chapter 7. These are familiar, long-standing concerns among those who work in Welsh media. Rhodri Williams, whose later roles included Director of an independent TV production company, Chair of the Welsh Language Board and Director for Wales of the broadcasting regulator Ofcom, recalled:

For many years when working as a television current affairs journalist I was all too familiar with being told by prospective interviewees that their Welsh “wasn't good enough” or that they “didn't speak proper Welsh”. Our avowed aim was to include everyone who spoke or even only understood a little Welsh. There is no such thing in our vocabulary as not being able to speak the language well enough. (Williams 1998)

Some of the producers in the present study compared the relative formality of the BBC's website with the more informal atmosphere of the independent discussion website *maes-e*,¹⁹ which, at the time of the interviews, was highly successful in stimulating Welsh-language discussion among its users. According to the producers, the widespread perception of the BBC as “quite a formal organisation” (Elis) makes audiences more conscious of the language they use, and going on record heightens their nervousness: “as soon as I brought a microphone out they would go, ‘ahhhh no!’” (Rhian). Marc summed up the problem when he said:

People think that the Welsh they speak isn't the Welsh equivalent of the Queen's English. They think that they're not up to scratch and I think that's a big concern. Especially when it's the BBC as well, if you're putting something up for public display on the BBC, people are really nervous.

This observation summarises several issues which were raised frequently by producers. First, some audiences believe their Welsh is not “good enough”. In the present study, this belief is

¹⁹ <http://maes-e.com/> [accessed August 2012].

conceptualised in terms of self-perceived communicative competence (SPCC). Second, some audiences are “really nervous” about participating in the media. This nervousness is conceptualised in the thesis as communication apprehension (CA). These two issues are expected to be key factors in audiences’ willingness or unwillingness to take part in content (hypothesis H1). To test the relationship between these two psychological states and audiences’ WTP, they are incorporated into a model of the antecedents to WTP, which is tested in chapter 5. In order to limit the number of variables included in the quantitative study, other issues embedded in Marc’s comments – linguistic insecurity surrounding different varieties of Welsh, the public nature of media participation and the reputation of the BBC – are not actively investigated (see section 3.4.2), but are discussed in relation to some of the comments made by survey respondents (chapter 6).

Marc wondered whether a certain reticence may also be part of Welsh or Welsh-language culture. Some Welsh speakers, he suggested, did not feel

worthy of being a public spokesperson for a certain cause or a certain view. Quite often people would tell me one-to-one very eloquently, and they’d put a very well-argued case about why they think that such and such is important but if you ask them to put that on record they’d say, ‘I’m not the person you should speak to’, and they’d direct me to someone else. I found that more in Welsh-language workshops than in English-language workshops. I think I need more evidence – I’d need to look into it a bit more, but a feeling I’ve got is that it’s magnified when it’s in the Welsh language.

This sense of not being “worthy” is not examined as part of the audience survey (chapter 5), as a comparison of WTP in English and Welsh is beyond the scope of the thesis. Marc’s comment resonates, however, with a small number of comments made by survey respondents (chapter 6). Welsh culture is also invoked in the L2 acquisition literature as a possible factor in Welsh learners’ self-reported confidence: “it is certainly a feature of Welsh culture, particularly in past generations, not ‘to show off’ or ‘put yourself forward’” (Pritchard Newcombe 2007).

Despite the various obstacles to participation discussed here, producers also described considerable successes they had had with audience participation. Gethin, for instance, found that audiences at live events had no qualms approaching and talking to well-known actors in Welsh:

Some of our more established actors, if you took them to any community in Wales, they’d be known, they’d be liked, they’d be taken the mick out of. What’s great about Wales is it’s such a small community. They own a part of those actors; they are a bit more cheeky with them. They will go up to them, they will talk to them. There’s none of

this, establishing some kind of celebrity cult about them, they're part of them and they're part of their life, like brothers and sisters really.

This example may be interpreted as evidence that audiences' willingness to participate may be related to their perceptions of the participation context: in the context of a live event, where interlocutors were viewed "like brothers and sisters" rather than representatives of a formal organisation, Gethin encountered none of the reticence common in other participative situations. While many of the features of the participation context are controlled for or kept constant in the current study (see chapter 4), some contextual factors are discussed in relation to respondents' comments in chapter 6 and inform the recommendations made in chapter 7.

In sum, producers found that some audiences were unwilling to take part in content in Welsh, not because they were not interested in doing so, but because they felt nervous or uncomfortable, and believed either that they were not competent enough in Welsh, or that their variety of Welsh was not as "proper" as the Welsh used on the BBC. The public nature of some kinds of participation was also off-putting, although, given the right circumstances and interlocutors, audiences had the potential to feel completely comfortable interacting with the media. Ways of encouraging audiences to feel comfortable are examined in chapter 7, which includes recommendations for media production practice. In the next section, key points are translated into specific hypotheses to be tested in the intervening chapters.

3.4 The scope of the study

In chapter 2, I reviewed the existing literature on minority language media and audience participation and identified an overall research question to be investigated in this thesis:

What influences audiences' willingness to take up a specific opportunity to participate in the media using their minority language?

One of the aims of the preliminary study presented in this chapter is to generate a series of hypotheses related to this overarching question, which are founded in the theoretical framework discussed in chapter 2, but specific to the Welsh media context. The interviews with media producers revealed a multitude of variables that may potentially influence audiences' willingness to participate in media content in Welsh. In this section, some of the producers' observations are translated into testable hypotheses, which are summarised in a conceptual model of WTP (figure 3.1). I also summarise the factors that have been omitted from the study, in order to limit the scope of the study.

3.4.1 Hypotheses

Producers felt that audiences were often unwilling to take part in content in Welsh, and attributed this unwillingness to the audience's lack of confidence in using Welsh; more specifically, audiences appeared nervous or uncomfortable and said either that they were not competent enough in Welsh to take part, or that their variety of Welsh was not as "proper" as the Welsh used on the BBC. Two particular aspects of this issue are examined in detail in the thesis: self-perceptions of communicative competence and transient feelings of nervousness (or, more accurately, anxiety) were proposed by MacIntyre *et al* (1998) as two components of state communicative self-confidence and, as such, they provide a coherent focus for the investigation. In the present study, these factors are conceptualised as SPCC and CA (where the A stands for 'apprehension', rather than 'anxiety'; see chapter 2 for definitions and a review). The first hypothesis, then, is that two related psychological variables, state SPCC and state CA, are immediate antecedents to state WTP.

H1: State SPCC and state CA are immediate antecedents to state WTP.

To this hypothesis, I also add the question:

Q1: Do SPCC and CA influence WTP independently or does one determine the other?

According to the producers interviewed, various aspects of the media context are also relevant to WTP: the Welsh language skills required of audience participants, the choice of interlocutors, the perceived formality of the media organisation and the visibility of the audience's contribution were all mentioned. In this thesis, I focus particularly on the language skills required of audience participants: it is hypothesised that forms of participation that place a low level of demand on audiences' language skills will encourage greater WTP than more demanding forms. Given that some of the producers suggested that audiences were less inclined to participate in writing than orally, it is also hypothesised that oral modes of participation will encourage greater WTP than written modes. Other elements of context, such as the media organisation and the interlocutor, are controlled for in the audience survey (see chapter 4) but should be investigated in future research.

H2: Forms of participation that place a low level of demand on audiences' language skills will encourage greater WTP than more demanding forms.

H3: Oral modes of participation will encourage greater WTP than written modes.

In order to ascertain the relative importance of different factors, the following question is also addressed:

Q2: Does modality or demand play a greater role in predicting WTP?

Individuals' sociobiographical and language background data are typically examined in studies of bilingualism and second language acquisition, so it is desirable to include them in the present study. Producers suggested that the language(s) audiences used during their formal education might be relevant to their willingness to participate in Welsh, so questions on education and a range of other background variables, including self-reported Welsh language proficiency, current and historic use of Welsh relative to English, are included in the audience survey (chapter 4). It is hypothesised that these Welsh language background variables predict WTP indirectly through SPCC and CA.

H4: Welsh language background variables predict WTP indirectly through SPCC and CA.

One of the producers interviewed said that "middle-aged" people around the age of 40 appeared to be less willing to take part in Welsh-language content in writing than younger people. This suggestion is tested explicitly in chapter 5.

H5: Respondents aged 35-49 will report lower WTP than respondents aged 18-34 in scenarios that require them to write in Welsh.

It is also hypothesised on the basis of comments made by producers and other participants in the study that L1 Welsh speakers (defined in the present study as those who "always or almost always" used Welsh at age 0-3; see chapter 5) who had their formal education in English report lower levels of literacy in Welsh than those who were taught through the medium of Welsh. This hypothesis is tested in chapter 5.

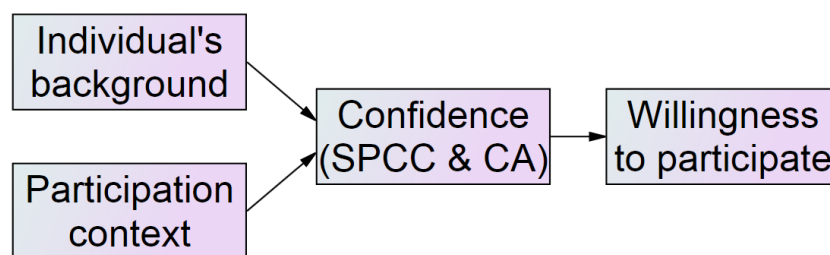
H6: L1 Welsh speakers educated through the medium of English will report lower ability to write Welsh than L1 Welsh speakers educated in Welsh.

The sex of the audience was not mentioned by the producers at all and is therefore hypothesised to have no association with CA, SPCC or WTP.

H7: Respondents' sex is not associated with CA, SPCC or WTP.

All these hypotheses are summarised in the conceptual model of WTP proposed in figure 3.1. In chapter 5, the model is translated into a more detailed structural model, which is tested using path analysis, a simple form of structural equation modelling (SEM).

Figure 3.1: Conceptual model of the factors hypothesised to explain willingness to participate.



3.4.2 Exclusions from the study

When they were asked about their experiences of eliciting audience participation, and about why some audiences are unwilling to take part in media content, none of the producers attempted to explain the reticence they encountered in terms of audiences' favourable or unfavourable attitudes towards the Welsh language, Welsh media or audience participation. It seems reasonable to imagine that these kinds of attitudes may be relevant to predicting audiences' willingness to participate in Welsh-language media, and it is recommended that they be investigated in future studies. However, as the present research aims specifically to test the relative importance of the predictive factors suggested by media producers, rather than any other factors, these attitudinal variables are not incorporated into the present model of WTP. Although audiences' attitudes were not measured quantitatively as part of the questionnaire, it is noted that some respondents made comments which reveal their orientations towards Welsh and these are discussed in chapter 6.

Producers' comments suggest that audiences' feelings about participating in media content may vary according to the particular variety or varieties of Welsh they speak. In view of the unreliability of self-report data on this topic, individuals' dialect differences are not investigated in the audience survey, although they are discussed in relation to the qualitative analysis of audience comments in chapters 6 and 7. I suggest they should be examined in future research.

There are numerous aspects of the participation context which may influence audiences' WTP, some of which – such as the reputation of the media organisation, the variety/standardness of Welsh used by presenters, the perceived status and likeability of the presenter/producer and the degree to which participation is perceived as public or private – were brought up by the producers interviewed. Naturally, not all of these can be examined in one study. In order to limit the number of variables included in the audience questionnaire, many of these variables are not tested explicitly, but, where possible, are controlled for (see chapter 4) or discussed as part of the qualitative analysis of audience comments (chapter 6).

3.5 Summary

In the first part of this chapter, a thematic analysis of interview data revealed insights into the values and viewpoints of Welsh-language media producers. Whether they work with audience participation or not, producers feel a strong sense of duty to the licence fee paying audience; the creation of high-quality content in Welsh is portrayed as a valuable public service. As facilitators of the audience's stories and comments, producers who work closely with audiences feel it is important that people tell their stories in their own words. But as highly literate Welsh speakers, who acknowledge and value the BBC's role in supporting the prestige of the Welsh language, producers also recognise that it is important to maintain the use of standard Welsh. In the context of audience participation, I argued that there is a tension between the two ideologies; producers find an appropriate balance by ensuring that content is comprehensible while remaining faithful to the essence of the audience's contribution.

In the second part of the chapter, producers' experiences of eliciting audience participation were investigated. Producers claimed that Welsh-speaking audiences were often reluctant to take part in media content in Welsh when offered the opportunity. They associated audiences' unwillingness to participate not with a lack of interest, but with audiences' lack of confidence in their spoken or written Welsh. Producers' explanations for their audiences' reticence were translated into hypotheses regarding the direct and indirect predictors of WTP. The variables predicted to influence WTP directly or indirectly fall into three groups: psychological, sociobiographical and contextual. It was hypothesised that two psychological states (communication apprehension and self-perceived communicative competence) were immediate antecedents to WTP, and that CA and SPCC were, in turn, predicted by sociobiographical and contextual factors. These hypotheses were combined to create a conceptual model of WTP.

The conceptual model of WTP is specified more precisely in chapter 5 as a structural equation model, which is then tested using path analysis. In order to test the model, of course, data must first be collected from a sample of the audience. In the following chapter I therefore describe the construction, piloting and administration of a questionnaire designed to elicit the data required.

Chapter 4: Design, administration and analysis of audience survey

This chapter describes the construction and administration of a questionnaire used to collect data from Welsh audiences, and the main statistical methods used to analyse the data. It begins with a discussion of self-report questionnaires (section 4.1), in which it is argued that self-report data, far from being a proxy for observational data, is the preferred way to gather information on individuals' subjective cognitive states (see chapter 2 for a definition of states and traits). In section 4.2, I describe the development of tools for the measurement of the three psychological states central to this study, namely communication apprehension (CA), self-perceived communicative competence (SPCC) and willingness to participate (WTP). I also describe the development of fictional participative media scenarios, designed to vary according to the level of demand they place on audiences' oral and written Welsh skills. Following a discussion of the format of the questionnaire, the chapter then turns to the administration of the survey (section 4.4), including information on the sampling procedure, the fieldwork sites and the return rate. Although it would have been desirable to produce a bilingual questionnaire, the questionnaire was eventually provided in English only; the rationale behind this decision, and its implications, are discussed in detail.

The limitations of the method are discussed in a post-hoc evaluation of the measurement tools used and the data collected (sections 4.6 and 4.7). While most of the questionnaire worked well, it was disappointing that the media scenarios designed to be direct equivalents elicited significantly different responses. Nonetheless, it was possible to overcome this issue by including only four of the scenarios in the quantitative analysis. The language of the questionnaire proved less problematic than had been anticipated, thanks to steps taken to alleviate respondents' concerns. Overall, the data was well-distributed and the dual format of the questionnaire (which was produced in both paper and online versions) was found to be effective, although it was observed that older women had to be dropped from the sample disproportionately often due to missing data in their questionnaires. Self-selection bias was also a challenge – as it is for any survey that cannot use more costly stratified sampling methods.

Mixed methods were used to analyse the survey data. The analysis in chapter 5 employs path analysis, a simple form of structural equation modelling (SEM), to examine the relationships among variables. This technique is introduced in section 4.8. The analysis in chapter 6 draws on both qualitative methods (namely, thematic analysis, discussed in chapter 3) and a statistical technique, cluster analysis, to segment the audience into 'types' and investigate individual

differences in willingness to participate. Audience segmentation and cluster analysis are introduced in section 4.9.

4.1 Self-report data

As discussed in chapter 2, the key variables of interest in this study relate to individuals' own feelings at specific moments in time (CA, WTP, SPCC) and to their own perceptions of their capabilities (self-reported proficiency in Welsh). Only the individuals themselves know how they feel; objective measures of any external manifestations of their CA, WTP or SPCC, for example, cannot adequately capture individuals' subjective cognitive states (McCroskey 1984, McCroskey & McCroskey 1988). As McCroskey (1984) puts it, "since CA is experienced internally, the only potentially valid indicant of CA is the individual's report of that experience" (McCroskey 1984: 34). It is clear, therefore, that self-reports are necessary to measure these variables in the present study. Other variables included in the study pertain to behaviour and experiences which it would be impractical or impossible to observe directly (Welsh language acquisition context, use of Welsh now and in the past, language(s) used at school); self-reports are therefore a sensible way of measuring these variables.

Given the clear need for self-report data, it was judged that a questionnaire would be the most appropriate way of collecting data from audiences. Self-administered questionnaires are very commonly used in second language acquisition (SLA) research (e.g. Dewaele 2008, 2010, Dewaele & Pavlenko 2002, Dewaele, Petrides & Furnham 2008, MacIntyre & Legatto 2010, Matsumura 2001, 2003, Mizumoto & Takeuchi 2009, Papi 2010, Yashima & Zenuk-Nishide 2008 *inter alia*). The use of such a questionnaire enables the researcher to gather data from relatively large numbers of participants in comparison to conducting structured interviews, for example, since multiple participants can work on the questionnaire at the same time. Moreover, the researcher does not necessarily need to be present while the survey is completed.

Questionnaires also have their limitations: respondents who are unmotivated or uninterested in the topic being investigated may provide less complete or less accurate data than those who are keen to help the researcher for one reason or another. Self-selection of the sample can also be a problem, since respondents can rarely be compelled to complete a survey.

The following section describes the development of the audience questionnaire. During the design of the survey, I found Dörnyei with Taguchi (2010) to be an invaluable guide to the use of questionnaires, and followed the methods and advice given in the book as closely as possible.

4.2 Development of measurement tools

The first step in the design of the survey was to select or develop questionnaire items to measure each of the variables under investigation. This section describes the development of these measurement tools.

4.2.1 Communication apprehension (CA)

As discussed in chapter 2, although people may talk about feeling “confident” or “unconfident” when using Welsh, linguistic confidence comprises two separate (but related) concepts: communication apprehension and self-perceived communicative competence. In order to understand exactly what audiences mean when they report how they feel about participating in media content, it is important to make a clear distinction between CA and SPCC, and to measure them independently of each other.

Communication apprehension refers, in the present study, to audiences’ imagined feelings of cognitive discomfort or nervousness at the prospect of participating in a particular media scenario. A multi-item scale was developed to measure CA, based on items from the Situational Communication Apprehension Measure (SCAM) (Richmond 1978). The SCAM is a 20-item scale designed to be used following a communication event to measure the state communication apprehension a person experienced during that event. Two modifications were necessary to adapt the items to the present context. First, the wording had to be changed to fit the situation, e.g. from the past tense to the conditional, since the scenarios were imagined, not recently experienced. Second, since the instrument was to be used for repeated measures (rather than in response to a single event), the scale needed to be shortened considerably, to keep the questionnaire to an acceptable length overall.

The first items to be discarded from the SCAM were those which appeared (in the view of the researcher) to be hardest to imagine in relation to the media scenarios (“I felt peaceful”, “I was loose”, “I was disturbed”); those that appeared to be better suited to the description of a past communicative event and its outcome than an imagined or future scenario were also discarded (“I felt satisfied”, “I felt dejected”). Three positive and three negative feelings were selected from the remaining items, reworded and included in the pilot questionnaire as follows:

I would feel apprehensive taking part in this in Welsh.

I would feel composed taking part in this in Welsh.

I would feel fearful taking part in this in Welsh.

I would feel self-assured taking part in this in Welsh.

I would feel flustered taking part in this in Welsh.

I would feel good taking part in this in Welsh.

To verify that items on the scale measure the same underlying construct (Dörnyei with Taguchi 2010: 94), tests were conducted for internal reliability of the scale using data from the pilot questionnaire and Cronbach’s alpha was computed for each scenario (see table 4.1).

Table 4.1: Internal consistency scores for the 6-item communication apprehension scale used in the pilot study.

Pilot scenario	N	Cronbach’s alpha
1	28	.856
2	28	.877
3	23	.974
4	23	.965
5	26	.933
6	27	.976
7	26	.963
8	25	.964

Communication apprehension is a narrow construct for which internal reliability estimates of .85 to .90 can be expected (Richmond 1978). Nonetheless, the very high degree of internal consistency found for the communication apprehension scale in the pilot survey (mean = .939) suggested that the 6-item scale may contain some redundant items, which could potentially be dropped in order to reduce the length of the scale. ‘Scale if item deleted’ scores were calculated and items dropped progressively from the scale. Most combinations of items tested this way produced high or acceptable reliability estimates on all scenarios, and dropping items rarely affected the alpha score very much. *Fearful* and *flustered* had the highest item-total correlation, so these were kept. Combinations including *I would feel good taking part in this in Welsh* were the least internally consistent, so this item was dropped from the scale. One participant in the pilot study had queried the meaning of *composed*, so, in the absence of stronger deciding factors, this item was also dropped. Since it is desirable to include a mix of positively and negatively worded items in a scale (Dörnyei with Taguchi 2010: 43), this meant that *self-assured* would remain in the scale and *apprehensive* would be dropped. In this way, the scale was reduced from six items to three. At the same time, the words “in Welsh” were dropped from the items and moved instead to the instructions above the grid, to avoid unnecessary repetition.

In addition to item redundancy, it appeared that a ‘halo effect’ (Nisbett & Wilson 1977) may have played some part in the high internal consistency of the communication apprehension scale. The halo effect is a common problem in questionnaire research and describes a phenomenon where a participant’s generally positive or negative affect overrides their more specific opinions about a person or subject. For example, if an employer has a generally positive

or negative impression of an employee, they may assess the employee on specific measures such as timekeeping, quality of work, presentation and so on, in line with their general affect, rather than on the basis of evidence of those specific qualities. Such an effect appeared to be present in the data obtained during the pilot phase of the study, as manual inspection of data suggested that participants' responses to the CA items matched their responses to the WTP questions very closely. Warning participants not to let their general affect cloud their judgement when making specific assessments does not solve the problem (Wetzel, Wilson & Kort 1981); instead, researchers usually try to minimise the halo effect in the questionnaire design. In the present study, it is suggested that the respondents' highly patterned answers may have been facilitated by the ordering of the questions following each scenario. If a participant wished to indicate generally negative affect towards a particular scenario, they could do so by ticking an easily memorised left-right-left-right pattern down the page. To indicate positive affect, the pattern could be reversed. In order to improve the validity of the study, it was considered important to make it more difficult for participants to tick responses in a pattern like this.

Following the pilot study, two changes were made to the questionnaire with the aim of reducing the unwanted halo effect. First, in order to encourage participants to think about WTP separately from their other feelings about the scenario, the WTP item was taken out of the grid and placed further down the page. The question still employed a five-point Likert scale but the scale was worded and formatted differently from the CA items.

Second, three filler questions were added to the communication apprehension scale:

I would find this memorable.

I would expect children to take part as well as adults.

I know other people who would enjoy taking part in this.

These filler questions were designed to be less closely related to the respondent's positive or negative feelings than the communication apprehension questions, and therefore were perhaps less likely to be coloured by the respondent's general affect. It was hoped that, by making participants suspend their own affect momentarily in order to think about these filler questions, the impetus to give overly patterned responses might be disrupted.

4.2.2 Self-perceived communicative competence (SPCC)

Self-perceived communicative competence (see chapter 2) is measured in order to gain an assessment of audiences' perceived ability to take part in a particular media scenario in Welsh. An existing measure of SPCC, McCroskey and McCroskey's (1988) Self-Perceived Communication Competence Scale, was not appropriate for the present purposes. McCroskey and McCroskey's scale was designed to measure trait-like SPCC, by asking people to rate their own communicative

competence in a range of different situations, which include talking to friends, acquaintances and strangers in dyadic, group and public contexts. The present research focuses not on trait-like SPCC, but on state SPCC in response to particular media scenarios, so the items on the existing scale are not relevant here. Nonetheless, the wording of McCroskey and McCroskey's directions was deemed suitable to be adapted for use in the present survey. The modified instructions read as follows:

People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

This questionnaire item was followed by a 5-point Likert scale presented vertically. In the pilot study, this scale ranged from "completely incompetent" to "completely competent". Some of the people who took part in the pilot gave implausible responses on this scale; inspection of the data gave rise to the suspicion that the wording of the scale could have contributed to measurement error on this item ("completely competent" and "completely incompetent" may have been mistaken for each other when the person was ticking items in a hurry). The option "completely incompetent" was therefore amended to read "not at all competent".

4.2.3 Willingness to participate (WTP)

In the pilot study, willingness to participate was measured using one item per scenario (*I would choose to participate in this*), presented as the first item in the grid directly below the description of the scenario. As discussed above, it was suspected that some of those who took part in the pilot may have responded to scenarios according to their general affect rather than by paying attention to the specifics of the questions being asked. In order to try to disrupt this process and gain more thoughtful and nuanced responses, the WTP item was separated from the communication apprehension items and reworded as follows:

In real life, would you choose to take part in this scenario?²⁰

The item was followed by a 5-point Likert scale, ranging from "no, definitely not" to "yes, definitely".

4.2.4 Linguistic demand of media content

In chapter 2, it was suggested that opportunities to participate in the media vary in terms of the level of demand placed on audiences' oral and written language skills. A measure of the

²⁰ The phrase "in real life" was added after the pilot study to encourage the person to imagine the situation more vividly. It is acknowledged however that the phrase is a little clumsy: how could the question refer to anything other than "real life"?

linguistic demand of media content was proposed, enabling ‘stronger’ (more linguistically demanding) and ‘weaker’ (less linguistically demanding) opportunities to participate to be identified. It was then hypothesised (chapter 3) that forms of participation that place a low level of demand on audiences’ language skills will encourage greater WTP than more demanding ones (H2) and that oral modes of participation will encourage greater WTP than written ones (H3).²¹

In order to test these hypotheses, eight fictional scenarios were developed to represent four maximally distinct participative conditions (with two scenarios each), each of which places demand on one modality only: (a) strong oral participation (no demand on written skills), (b) weak oral participation (no demand on written skills), (c) strong written participation (no demand on oral skills) and (d) weak written participation (no demand on oral skills). Table 4.2 (page 88) shows the level of linguistic demand of the eight scenarios using the scale introduced in chapter 2. The scenarios used in the questionnaire are described below; for the full text of each scenario, see appendix A. A critique can be found in section 4.6.1.

(a) Strong oral participation (no demand on written skills)

Scenarios 1 and 6 are examples of opportunities to participate which involve synchronous oral conversation, but no use of written Welsh. Scenario 1 is a phone-in programme, where the audience is given the opportunity to take part in a TV programme by calling the programme to share their views. If they take part, they have a telephone conversation with the producer of the programme. In scenario 6, the subject is invited to volunteer as a phone answerer during the live broadcast of a TV programme, interacting with viewers on the phone and passing their calls on to the presenter. In these two situations, the audience participant engages in oral conversation, but is not expected to read or write in Welsh.

(b) Weak oral participation (no demand on written skills)

Scenarios 2 and 5 involve reacting to spoken Welsh, but no production of spoken Welsh or use of skills in reading or writing. In scenario 2, the respondent is invited, verbally, to be part of a live studio audience. If they take part, they contribute to the programme by reacting to what they hear during the programme, i.e. laughing or clapping at the appropriate points. In scenario 5, the audience is asked, verbally, to vote on an issue by phone. If they call a number, read out by the presenter, they hear a recorded message thanking them for their vote. In both cases, the audience participant needs to understand and react to what is said in Welsh, but is not asked to produce language themselves.

²¹ Recall that ‘oral’ participation refers to scenarios that involve either speaking or understanding or both and ‘written’ participation refers to scenarios that involve either writing or reading or both; see footnote 4 on page 24.

Table 4.2: Level of linguistic demand involved in the eight scenarios. The eight scenarios correspond to four different conditions, which are illustrated using the scale introduced in chapter 2.

Scenarios (numbered as they appear in the questionnaire)				
	1 & 6	2 & 5	3 & 8	4 & 7
Oral	High demand	Low demand	No demand	No demand
Written	No demand	No demand	High demand	Low demand

(c) Strong written participation (no demand on oral skills)

Scenarios 3 and 8 involve synchronous (or near-synchronous) written conversation, but no oral language skills. In both scenarios, the participant is invited to take part in a TV programme by going online and engaging in conversation in a chat room. In both scenarios the audience participant is responding in writing to something they have read: in scenario 3 an on-screen caption provides the call to action, while in scenario 8, the audience member is handed a leaflet at a festival.

(d) Weak written participation (no demand on oral skills)

Scenarios 4 and 7 involve reacting to written Welsh, but no use of oral language skills. In scenario 4 the participant is given a leaflet which invites them to submit a photograph they have taken, for use in a future TV programme. In scenario 7, an on-screen caption invites the audience to take part in a vote by texting, emailing or sending a postcard to the programme with the word 'agree' or 'disagree'. In both scenarios, the audience participant needs to understand and react to what they have read in Welsh, but is not asked to produce language (beyond the repetition of a single word) themselves.

Since each of the scenarios included in the present study uses one modality only, the differences between scenarios may be framed in terms of two binary variables: 'literacy', i.e. whether participation requires the audience to be literate in Welsh or not, and 'demand', i.e. whether participation involves engaging in synchronous conversation (high demand) or simply reacting to others' oral or written Welsh (low demand). In a more complex study, two demand variables would be required (demand on oral skills and demand on written skills), with multiple values reflecting the full scale presented in chapter 2. However, in the present study, the two binary variables are sufficient for use in the quantitative analysis of the data (see chapter 5).

Ideally, the scenarios presented in the questionnaire would differ significantly only in terms of the level of linguistic demand they were designed to represent, but in practice it is impossible to write multiple narratives of this kind without introducing some additional sources of variation among the scenarios. Some forms of participation are more commonly used in certain types of programme than others, which may colour audiences' willingness to participate in them, even when the programme format is kept constant. For instance, some people may associate voting with populist talent shows, or phone-ins with parochial or old-fashioned programming, and such associations may influence how they respond to the different opportunities to participate. It also proved impossible to control for the amount of time each form of participation might be expected to take, which may be considered a limitation of the survey. Nevertheless, in order to come as close to the ideal as possible, certain elements were kept constant across the scenarios

(e.g. the media platform, the format of the programme) and other details were omitted from all the descriptions (e.g. information about the presenter, the subject matter of the discussion).

It was decided to include eight scenarios in the questionnaire, in order to obtain repeated measures of participants' response to each condition. Each scenario was designed to be a direct equivalent of its pair, e.g. scenario 1 was intended to be the direct equivalent of scenario 5; any small differences between paired items were intended not to make a significant difference to respondents' answers. Minor changes were made to the wording of the scenarios as a result of piloting the questionnaire, but insufficient data was available at the pilot stage to test whether pairs of scenarios elicited comparable responses.²²

4.2.5 Welsh language background variables

Given the wide potential variation in the language backgrounds of the respondents in the study, it was considered important to gather information on a number of different variables. This approach is common practice in bilingualism research, where it is acknowledged that single questions such as "What is your mother tongue?" fail to capture much of the range of language profiles within a bilingual society (Baker 2006: 21-41, Li, Sepanski & Zhao 2006).

The questionnaire included questions on (a) the context in which respondents acquired their Welsh, (b) the proportions of Welsh and English used at different stages throughout their life, (c) their self-reported proficiency in Welsh, (d) any change in their Welsh fluency and (e) the languages their teachers used as the medium of education. The survey items and their development are described here; a critique of these items can be found in section 4.6.5 below.

(a) Welsh language acquisition context

Respondents were asked to indicate their Welsh language acquisition context as follows:

Many people acquire Welsh 'naturally' as a first or second language by talking to parents, grandparents or friends, while others are taught Welsh as a second language at school or evening classes. How did you learn your Welsh?

Following Dewaele (2008), three categories of response were offered: "'naturally' with family or friends", "taught in the classroom" and "a mixture of both". An "other" option was also made available, with space to specify an alternative answer if necessary.

(b) Use of Welsh and English

The balance of use of Welsh and English was gauged at ages 0-3, 4-11, 12-17 and now, using questions like, "When you were 4-11 years old, how much Welsh and English did you use in your

²² See section 4.6.1 for a post-hoc analysis of the consistency of paired scenarios conducted using the final dataset.

daily life?” Respondents were presented with a 5-point Likert scale on which to give their answer, ranging from “I always or almost always used English”, through “I used English and Welsh equally often” to “I always or almost always used Welsh”. An “other” option was also given.

(c) Self-reported proficiency in Welsh

Respondents were asked to assess their overall proficiency in Welsh. Self-reported proficiency was chosen over SPCC as a more appropriate trait-level measure of self-perceived competence in Welsh, partly for theoretical reasons (see chapter 2), but also because of its methodological advantages. A measure of trait-like SPCC in the four skills would require the inclusion of a large number of items on the questionnaire as it would need to incorporate a wide range of situations in combination with the four different language skills. Self-perceived language proficiency, in contrast, is typically measured using as few as four items (Mackey 2000 [1962]) and therefore appeared to be a good choice for this study (see Berry *et al* (2006), Blair and Cobas (2006), Dewaele (2008) and Medvedeva (2010) for examples of questionnaires that take this approach).

Respondents were asked:

How do you rate your ability to **speak in Welsh**?

How do you rate your ability to **understand spoken Welsh**?

How do you rate your ability to **read Welsh**?

How do you rate your ability to **write in Welsh**?

A 5-point Likert scale was given for each item, ranging from “minimal” to “completely fluent”.

(d) Fluency in Welsh

In order to understand whether respondents considered their Welsh to be improving, stable or attriting, an item relating to fluency was included on the questionnaire: “Do you feel that your Welsh is more or less fluent than it was a few years ago?” A 5-point Likert scale was provided, ranging from “My Welsh is much less fluent than it was a few years ago” to “My Welsh is much more fluent now than it was a few years ago”.

(e) Language(s) of education

Respondents were asked to indicate which language(s) they used at school at various stages in their education (nursery, primary, early secondary, O-levels, A-levels and higher education). In the pilot questionnaire, the following directions were given:

It would be helpful for us to know which language(s) you used at school. Please indicate which language(s) you used with your teachers, *not including lessons in Welsh as a second language*. **Please tick ALL that apply**. E.g. if you studied GCSE History through

the medium of Welsh and other GCSEs through the medium of English, you would tick both Welsh and English in that row. Please give an answer for each level of education; if you have not undertaken education at a particular level, please tick 'not applicable' in that row.

Respondents were then able to tick “Welsh”, “English”, “Other language(s)” or “Not applicable” for each level of education as appropriate. The questionnaire was not expected to elicit a full picture of the languages used at school (e.g. Language A in assembly, with most teachers and with two particular friends, Language B in the playground, with one teacher and for two hours a week in the classroom), but rather it was intended that, by focusing the question on languages used “with your teachers”, respondents would report the language(s) officially sanctioned as the main medium of teaching. During the pilot stage, however, there was a tendency to over-report “other languages”. Nine out of 32 respondents in the pilot study indicated that they had used “other languages” at school or university. Two of these explained that they had grown up outside Britain and had attended schools where languages other than Welsh and English were spoken, four mentioned that they had studied foreign languages as school or university subjects, and three gave the names of languages without further explanation, which made interpretation of their circumstances difficult.

The amended version of the questionnaire, used in the main study, gave a simpler set of directions, which referred to the “sort of school” a person attended rather than the languages used:

It would be helpful for us to know **what sort of school(s)** you went to. Please give an answer for each level of education; if you have not undertaken education at a particular level, please mark 'not applicable' in that row.

Possible responses were: “Welsh-medium”, “English-medium”, “Bilingual English and Welsh”, “Other” and “Not applicable”.

4.2.6 Demographic variables

In order to enable hypotheses H5 and H7 to be tested (see chapter 3), and to ensure that a wide range of respondents was recruited, three demographic variables were elicited: sex (male or female), current hometown (“Where do you live? (name of city, town or village)”) and age (divided into groups). One of the producers interviewed for the study in chapter 3 suggested that “40 year olds” and “middle-aged people” seemed especially unwilling to take part in media content in Welsh, so an age group representing this stage of life was considered potentially useful. 35-49 year olds were therefore allotted to one age bracket and other age groups (18-34, 50-69 and 70+) were tailored to fit around this group. An “under 18” option was also included,

to help identify and eliminate any underage participants who might access the questionnaire in error. Specific measures of socioeconomic status were not included in the questionnaire (see section 4.6.6).

4.3 Description of the questionnaire

The questionnaire was produced in English (see section 4.4.4 for a discussion of the language of the questionnaire) in two formats: a paper booklet and an online survey. The paper booklet (reproduced in appendix A) was printed on white A3 paper, folded in two and stapled. The online survey was hosted by Kwik Surveys²³ and a paid subscription was taken out so that respondents would not see adverts while completing the survey. The wording of the scenarios, questions and instructions was identical in both formats. The layout was very similar, with each scenario and its corresponding questions given one page, and scales presented in the same orientation. The fonts used were closely matched and the same illustration was used on the first page of both formats. The numbering of the questions differed between the two formats: in the paper questionnaire, the item numbers reflected the section name and the scenario number (e.g. A3.2 indicated the second item on the third scenario in section A). The Kwik Surveys interface did not allow for this kind of custom numbering, so continuous numbering was used throughout the whole survey.

The first page of the questionnaire gave information about the research, assured respondents that their answers would be kept completely anonymous and provided instructions for completing the questionnaire. The remainder of the questionnaire was divided into three sections. Section A was the largest and tested participants' responses to the scenarios discussed above. Each scenario was described in a paragraph at the top of the page and followed by nine items relating to that scenario. The first six of these items were presented in a grid format; three of these measured the respondent's communication apprehension, while the other three were fillers. Below the grid, question Ax.7 gauged the respondent's willingness to participate in the scenario and question Ax.8 was an optional open question which allowed the respondent to comment further on their willingness to participate if they wished. Question Ax.9 measured self-perceived communicative competence in relation to the scenario. Eight scenarios were presented in this way, each given its own page for the sake of clarity. Section B solicited personal information about the respondent's own use of Welsh and English: the context in which they acquired their Welsh (B1), the balance of Welsh and English used now and during childhood (B2-B5), their self-rated abilities in four Welsh language skills (B6-B9) and their perceptions of any change in their fluency (B10). Information on the language(s) of the respondent's schooling was

²³ <http://www.kwiksurveys.com> [accessed January 2013].

obtained in questions B11-17 and an open question at the end of the section (B18) offered the respondent the opportunity to add any further information about their use of Welsh and English. On the final page of the questionnaire, section C captured basic demographic data, i.e. sex (C1), age (C2) and current hometown (C3). An optional open question (C4) was also provided to allow the participant to add anything else they thought might be relevant to the research project. Finally, a return address was given and space left for the respondent to provide contact details if they wished to volunteer to take part in future research.

4.4 Administration of the survey

Once the questionnaire items had been finalised, the sample was selected and fieldwork conducted. This section describes this data collection stage of the research.

4.4.1 The sample

The sample was restricted to people over the age of 18 who knew “some Welsh”. The term “Welsh speaker” could be interpreted as referring only to a fluent speaker, an L1 Welsh speaker or to those who self-identify as such, and was therefore avoided when recruiting participants. No formal minimum limit was placed on participants’ proficiency in Welsh; just those who said they recognised only a handful of individual words were excluded from the sample.²⁴ If pushed for a definition, I told potential participants that I was interested in anyone with “a smattering of Welsh upwards”. This approach was generally successful in eliciting data from people with a wide range of self-reported abilities and experiences in Welsh.

It goes without saying, perhaps, that the geographical area of interest was Wales and its environs. There was no reason to exclude residents of other parts of the UK and the Channel Islands from the sample, since they too are potential audiences for Welsh media. Indeed, Delamont (1987) argues that Welsh speakers living outside Wales may still consume Welsh-language media and should therefore be included in research of this kind. Welsh-speaking respondents in Patagonia and other parts of the world were not sought.

Structural equation modelling, the statistical technique used for the analysis presented in chapter 5 (see section 4.8), requires larger sample sizes than other kinds of statistical technique. It is recommended that researchers using maximum likelihood (ML) estimation obtain a minimum of 10 and ideally 20 observations per free parameter to be estimated (Kline 2011: 12). Studies that use SEM tend to have sample sizes of around 200-300. It was judged that a sample size of around 300 would be adequate to conduct SEM and the other statistical tests required to analyse the data collected. Within this figure, I aimed to gather data from a balanced sample of

²⁴ The present sampling frame matches that adopted by Beaufort Research (2006) in their study of motivations and barriers to participation in a wide range of Welsh-language activities (see chapter 6).

men and women, with higher or lower self-reported Welsh proficiency, in each of four age groups. As far as possible, I also tried to obtain data from both 'natural' speakers of Welsh, and those who had learnt Welsh in the classroom.

A purposeful, non-probability sampling strategy was employed (Dörnyei with Taguchi 2010: 60). The sample was therefore not representative of the population of adults with Welsh language skills. In order to achieve a spread of ages and abilities in the sample, respondents were solicited through workplaces, churches, Welsh classes for adults, choirs and other social groups and at Welsh-language events.

4.4.2 Fieldwork

The survey was conducted both online and on paper in order to obtain a better coverage of the population than either format would have achieved on its own. The paper questionnaire was expected to elicit data from older respondents, those who were less comfortable online and people who filled in the questionnaire at times when they had no access to a computer (e.g. while working in a non-office-based job or while attending an event); the online version was intended to elicit data from younger respondents, people for whom it was usual to use the Internet for most administrative tasks and individuals in more remote areas that I did not visit while conducting fieldwork.

Research ethics approval was obtained from Queen Mary, University of London before administering the questionnaire. Paper surveys were distributed in workplaces, churches, Welsh language classes, community centres and social groups during fieldwork visits to south Wales (Cardiff, Llanelli and villages near Swansea and Neath) and north Wales (Bangor, Caernarfon and villages in Anglesey). They were also distributed to stallholders at the Royal Welsh Show in Builth Wells (mid Wales) and the National Eisteddfod in Wrexham (north east Wales), as well as to members of Welsh-speaking social groups in London. Questionnaires were usually either left with participants and collected later the same day, or completed there and then, while the researcher was present. Further paper surveys were distributed to choirs and other social groups by post; these were not sent out 'cold', but following a conversation by phone or email in which an intermediary had agreed to take part in the research. Online participants took part remotely from various parts of Wales and, in a few cases, England, after receiving an email inviting them to take part. Potential online participants were found by referring to business directories to collate the email addresses of individuals who worked for Welsh-speaking companies, or companies in areas with a high proportion of Welsh speakers. Various social groups were also invited to take part online. The paper questionnaire took around 15-20 minutes to complete. The median length of time taken to complete the online questionnaire was 14½ minutes.

4.4.3 Return rate

It is not possible to give a definitive, overall return rate for the survey, due to the mixed sampling methods employed. Return rates for the paper and online versions of the questionnaire cannot be combined or compared directly with each other, because online invitations were usually the first contact I had had with a potential participant, whereas paper questionnaires were only distributed once a participant had agreed to take part. Some indicative figures can be given, however.

Approximately 520 paper surveys were printed and distributed; 266 (51%) were filled in, at least in part, and returned. The most frustrating 'loss' of paper participants occurred when individuals, who had agreed to complete a questionnaire during a fieldwork visit, asked if they could finish the survey at home and send it back later. Many people were given stamped addressed envelopes for this purpose; some of these were returned as promised, but most were not. It was not practicable to keep track of exactly how many participants were lost in this way.

Emails were sent to about 850 people inviting them to take part in the survey online; 148 people (17%) began the online survey and 105 (12%) completed it.²⁵ Return rates for the online survey are estimates only: it is not known, for example, how many of those who received invitations by email forwarded the survey link on to other Welsh speakers. It is also likely that some of the individuals contacted by email did not actually speak Welsh and ideally would not be included when calculating a return rate.

4.4.4 Language of the questionnaire

The questionnaire was produced in English only. This decision was not taken lightly, as it contrasted with the principle, formalised in the Welsh Language Act 1993, that public bodies such as universities should treat English and Welsh equally when providing services in Wales. Given the subject matter of the research, it would have been desirable to comply with this principle by producing the questionnaire in both languages. Moreover, forms are routinely produced bilingually in Wales and it was feared that some participants would refuse to take part, or that their responses would be influenced, if they could not complete the questionnaire in their preferred language.

However, two major factors militated against the use of a bilingual questionnaire. First, the researcher did not have sufficient Welsh language skills to be able to prepare a bilingual questionnaire without the aid of professional translators. The cost of having the questionnaire

²⁵ The figures for both the paper and online return rates include participants who were removed from the dataset during the analysis because it transpired they were not eligible to take part or because they had left too many questions unanswered. The number of people contacted by email excludes those whose email bounced.

professionally translated and then back-translated would have been substantial; participants' written responses would also have required professional translation. Second, providing the questionnaire in two languages would have meant adding an extra variable into the analysis, i.e. the language of the research instrument. Since the questionnaire relied on measuring responses to particular details of superficially very similar scenarios, it seemed likely that small differences in nuance associated with the wording in the two languages would influence participants' answers. Had the two versions indeed produced systematically different responses, in spite of the back-translation process, it may have been difficult to interpret the findings. Producing the questionnaire in one language only avoided this issue. It was therefore decided that the advantages of providing a questionnaire in both Welsh and English were outweighed by the disadvantages.

A conversation with the Welsh Language Board confirmed that this was an appropriate decision: in their view, it would have been beyond the scope of the PhD to ensure the Welsh and English versions were sufficiently similar in order to produce reliable responses.²⁶ They cited the 2011 referendum for the voting system in the UK in which voters were asked to respond 'yes' or 'no' to a single question: "At present, the UK uses the 'first past the post' system to elect MPs to the House of Commons. Should the 'alternative vote' system be used instead?" (Electoral Commission n.d.). In order to prepare ballot papers in Welsh as well as English, the Welsh Language Board engaged in a lengthy process of piloting and calibrating the Welsh translation to ensure that the choice of language did not affect responses. The time and resources required to calibrate just one question were such that it was apparent that it would not have been reasonably practicable to undertake the same process with the 12 page questionnaire used in the present research.

It was not believed that producing the questionnaire in English only would cause serious problems with comprehension, since the vast majority of adults who speak Welsh are also fluent in English (Dunbar 2004: 99). The English-only questionnaire was, however, expected to antagonise some of those who would have preferred to respond in Welsh, or at least to have the choice to do so. In order to mitigate any irritation caused by the language of the questionnaire, an explanatory paragraph was added to the information section on the first page:

Pam fod yr holiadur hwn yn y Saesneg?²⁷ We have produced this survey in one language only, to make sure that all the completed questionnaires can be compared directly with one another. English was chosen because we want to hear from a wide

²⁶ Personal communication, July 2011.

²⁷ "Why is this questionnaire in English?" Translation provided by the Welsh Language Board.

range of people, including those who speak but do not read Welsh, and those who have only learnt a little Welsh as a second language.

In section 4.6.7, I assess participants' reactions to the approach taken. Next, I describe how the survey data was processed in preparation for analysis.

4.5 Processing the data

In this section, I describe how the survey data was coded and how missing data were handled.

4.5.1 Coding responses

Responses were entered into a spreadsheet and quantitative data assigned numerical codes. Missing, invalid and contradictory data were coded with the value "99". A separate value of "0" was used where no answer was given to a non-compulsory question. Where two adjacent responses on a Likert scale were marked, the answer was recoded as the more moderate of the two responses. For example, if a participant responded to the item "I would feel flustered taking part in this," with both "strongly agree" and "agree", the response was coded as per "agree". Where two non-adjacent or three or more adjacent responses were marked, the response was coded as invalid.

4.5.2 Imputation of missing data

Missing values were imputed from non-missing data or cases dropped from the sample as appropriate. For the sake of simplicity, data were imputed manually rather than using statistical procedures. Table 4.3 (page 99) provides details of the algorithms used.

4.6 Evaluation of measurement tools

In this section, I evaluate the design of the questionnaire described above, beginning with a discussion of the fictional media scenarios.

4.6.1 Evaluation of scenarios

Are the pairs of 'matched' scenarios direct equivalents? As discussed above, two scenarios were presented for each test condition. In order to verify whether paired scenarios were true equivalents and could be entered into the analysis interchangeably, paired-samples t-tests (2-tailed) were conducted on the data.²⁸ 300 respondents completed all eight scenarios (either with no missing data, or where it was possible to impute data for missing values) and these questionnaires formed the dataset for the tests. Provisional values for communication apprehension were produced for the present purpose by taking the mean of *flustered*, *fearful*

²⁸ As the survey data were non-normally distributed in some respects (some of the scores for SPCC were skewed, for example), both parametric and non-parametric tests were conducted, and the outcomes compared. Since the results obtained using both methods were similar, the use of t-tests was regarded to be unproblematic (Howitt & Cramer 2011: 176).

Table 4.3: How missing data were imputed for the purposes of the quantitative analysis. The variable *fluency* does not appear in the table because it was not included in any of the analyses (see section 4.6.5).

Variable	Data partially missing	Data entirely missing
Communication apprehension, comprising: <ul style="list-style-type: none"> • Flustered • Fearful • Not self-assured 	Data imputed from the mean of the respondent's non-missing values for the same scenario, rounded if necessary towards the more conservative value (i.e. towards 3). E.g. flustered = 4; not-self-assured = 5; fearful (imputed) = 4.	Case dropped if any of the scenarios (1-4) lacked this data.
Self-perceived communicative competence	N/A	Case dropped if any of the scenarios (1-4) lacked this data.
Willingness to participate	N/A	Case dropped if any of the scenarios (1-4) lacked this data.
Ability to speak Welsh Ability to understand Welsh Ability to read Welsh Ability to write Welsh	Case dropped if any of these were missing.	Case dropped.
Use at age 0-3 Use at age 4-11 Use at age 12-17	Data imputed from the mean of the respondent's non-missing values, rounded if necessary towards the more conservative value (i.e. towards 3). E.g. Use 0-3 = 1; Use 4-11 = 3; Use 12-17 (imputed) = 2.	Case dropped.
Language(s) of education: Nursery O-levels A-levels Higher	Missing values were not imputed as these variables were not included in the main statistical analysis (see section 4.6.5).	
Language(s) of education: Primary	N/A	Data copied from early secondary if available, otherwise case dropped.
Language(s) of education: Early secondary	N/A	Data copied from O-levels if available, otherwise case dropped.
Use now Acquisition context Age Sex	N/A	Case dropped.

and *not-self-assured* (these values are produced differently for the main statistical analysis in chapter 5). The results are presented in table 4.4.

Table 4.4: Mean differences between paired scenarios identified using paired-samples t-tests. A significant figure indicates a difference between two matched scenarios. N = 300. *** p = significant at .001 level; ** p = significant at .01 level.

	CA	SPCC	WTP
Scenario 6 - Scenario 1	.038	-.123**	-.220***
Scenario 5 - Scenario 2	-.250***	.240***	-.020
Scenario 8 - Scenario 3	.048	.067	-.160**
Scenario 7 - Scenario 4	.011	-.053	-.257***

It was found that scenario 5 elicited significantly lower apprehension and higher SPCC than scenario 2 and that scenario 1 elicited significantly higher SPCC than scenario 6. Three out of four matched pairs of scenarios showed significant discrepancies in the WTP they elicited: respondents were significantly more willing to participate in scenario 1 than in scenario 6, in scenario 4 than in scenario 7 and in scenario 3 than in scenario 8. These results are disappointing as they suggest that respondents did not perceive each pair of scenarios as direct equivalents in terms of the three variables measured as had been intended.

An analysis of the comments made by respondents revealed four potentially confounding factors in the data, which could help explain the differences: a dislike of voting shows, context-dependent perceptions of anonymity, a reluctance to work without being paid and the varying likelihood of encountering different dialects.

The two voting scenarios – scenario 5, which invited the audience to take part in a phone vote, and scenario 7, which asked the audience to vote on an issue by text, email or postcard – provoked a large number of comments. While a small minority of respondents said they often took part in phone and text votes like those described in the questionnaire, many more people were critical of TV shows that involved audience voting of any kind. Respondents typically complained that their vote was “not going to impact on anything” (F18E042/3), and that the results of TV polls were usually unrepresentative of the audience (M35B253/1) or “inaccurate” (F18W063/4). Voting was therefore considered both a “waste of time” (M70W086/2) and a “waste of money” (M35W357/2).²⁹

²⁹ Each respondent in the audience survey has been allocated an ID code. The first four characters indicate the respondent’s sex (M = male, F = female, X = missing data), their age group (18 = 18-34, 35 = 35-49, 50 = 50-69, 70 = 70+, XX = missing data) and their L1 (W = Welsh, E = English, B = both, O = other, X = missing data). These are followed by a randomly allocated number from 001 to 358, which serves as a unique identifier. The character after the slash indicates the cluster to which the respondent has been allocated (1 = Enthusiasts, 2 = Avoiders, 3 = Optimists, 4 = Talkers) (see chapter 6). Where the cluster is marked as

Why should I spend money on ringing in an answer when in practice little will happen whether I vote yea or nay? (M70E152/4)

The widespread aversion to this kind of audience participation appears to be a confounding factor in the data, and might account for the significant difference in WTP between scenarios 4 and 7.

A dislike of voting shows does not appear to have provoked significantly less WTP in scenario 5 than in scenario 2, but this may be because respondents' willingness to take part in scenario 2 was reduced to a comparable level by relatively higher levels of CA and lower levels of SPCC in that scenario. These differences might be attributable to different perceptions of anonymity among the scenarios. Audiences were told that they would not have to give their name in any of the scenarios, and several respondents commented that this was a relevant factor in their willingness to participate in scenario 5. Nobody, however, commented on this issue in scenario 2, the studio audience, perhaps because audiences believed they would be visible on screen and therefore identifiable, even if they were not actually named.

Three respondents (all male, aged 18-35) commented that they would not be happy volunteering to answer the phone for a TV programme without being paid, but this objection did not apply to the phone-in scenario.

I wouldn't get paid. I have other things I would rather do with my spare time that would benefit me rather than a TV show or the studio. (M18W321/3)

This discrepancy could account for the difference in WTP between scenarios 1 and 6. The difference in SPCC between these two scenarios could be related to the variety of interlocutors participants expected to encounter: while a small number of respondents said that their competence to take part in the phone-in would depend on the "type and dialect of the Welsh" (M35E353/X), more participants were concerned that, in the volunteering scenario, they might not understand callers with different accents and dialects of Welsh:

My Welsh is not fluent, if people rang with strange accents I would feel silly if I couldn't understand them. (F18E316/3)

As scenarios 1, 2, 3 and 4 could not be considered direct equivalents of scenarios 6, 5, 8 and 7 respectively, only four scenarios – 1, 2, 3 and 4 – were incorporated in the model tested in chapter 5. Numbers 1-4 were chosen over numbers 5-8 for two reasons: (a) the first half of the scenarios had a slightly higher completion rate than the second, and (b) during data collection, it

missing (X), this means that the respondent was excluded from the quantitative analysis (the path analysis in chapter 5 and the cluster analysis in chapter 6) due to issues with missing data.

was observed that some participants rushed through the later scenarios; in some cases, the ticks they used to indicate their responses became larger and less distinctly tick-shaped towards the end of section A. It appeared that some participants read the later scenarios less carefully and may have given less accurate answers to those items as a result. This tendency could also be a contributory factor behind the significant differences in responses between the scenarios in table 4.4 (e.g. lower WTP in scenario 8 than in scenario 3). It would be interesting to obtain data for each pair of scenarios in isolation (such that each participant responds to two scenarios rather than all eight), in order to be able to test whether lessening the effects of fatigue produces a closer match between intended equivalents. This is, however, beyond the scope of the current project.

Evaluation of the content of the scenarios In order to ensure maximal distinction between the weak and strong scenarios, the two most distant points on the participative section of the participation scale proposed in chapter 2 – reactive and synchronous – were used to represent ‘weak’ and ‘strong’ participation (section 4.2.4). Thus all ‘weak’ scenarios were reactive in one modality and placed no linguistic demand on the other and all ‘strong’ scenarios involved synchronous (or near synchronous) conversation in one modality and placed no linguistic demand on the other. In practice, this meant that condition (c), strong written participation (no demand on oral skills), could only be operationalised as an opportunity to participate in an online chat room, as no other forms of media participation lend themselves readily to the use of synchronous written conversation. It was recognised that this was a limitation of the study, since some respondents, especially older people, might not be familiar with chat rooms or instant messaging. I was concerned that a lack of familiarity with or access to online communications might lead to an increased volume of missing data for these scenarios.

By looking at missing data for scenario 3, it is possible to estimate how many people were excluded from the sample because of their unfamiliarity with chat rooms. Nine participants were removed from the quantitative sample purely due to incomplete data for scenario 3 (compared to three, one and five participants whose exclusion was due to missing data for scenarios 1, 2 and 4 respectively). In three of the nine cases, participants’ comments and other responses suggested that the lack of data appeared to be attributable to unfamiliarity with or lack of access to the Internet. These three were all older women: one was aged 50-69 and two were 70+. In another four cases, it was clear from the participants’ other responses that the missing data for scenario 3 was not related to Internet access issues. In the other two cases there was no evidence either way. It appears, then, that the inclusion of a chat room scenario led to the exclusion of between three and five people from the quantitative analysis.

It is harder to establish the extent of invalid or suspect data related to Internet access issues. Respondents who did not use the Internet may nonetheless have completed scenario 3 (it is known from free text comments that at least eight people did so); their responses should be treated with caution, since their lack of experience with the Internet may have influenced their answers in unexpected or unmeasured ways. If this kind of scenario is to be included in future research, I suggest it would be advisable to obtain additional data concerning respondents' use of chat rooms and the Internet.

4.6.2 Evaluation of CA

Tests were conducted for internal consistency of the CA scale (table 4.5) and Cronbach's alpha was computed for each of the four scenarios to be used in the quantitative analysis (section 4.6.1 explains why only these scenarios were included).

Table 4.5: Internal consistency scores for the 3-item communication apprehension scale used in the main study. N = 313.

Scenario	Cronbach's alpha	Cronbach's alpha if <i>not-self-assured</i> deleted
1	.837	.872
2	.779	.895
3	.817	.917
4	.761	.887
Mean	.799	.893

The mean alpha score across all four scenarios was .799. *Not-self-assured* was found to have the lowest inter-item correlation for all scenarios. Cronbach's alpha if item deleted scores suggested that improvement could be made to the scale as a whole if *not-self-assured* were deleted from the scale, but as the mean alpha score was already respectable, albeit not within the bounds suggested by Richmond (1978), it was decided to reserve judgement on this item until the measurement model had been submitted to SEM (chapter 5).

4.6.3 Evaluation of SPCC

The SPCC item appeared to work well. During fieldwork, I became concerned that some participants may have reinterpreted the SPCC item to refer to other kinds of competence in addition to Welsh-language competence. Some respondents wrote comments about their inability to use a computer or type at speed (in scenario 3) or their lack of photography skills (scenario 4), for example. Fortunately, inspection of the data revealed no evidence that perceived abilities in other skills had been conflated with SPCC. Most of those who made such comments nonetheless indicated that they would be "completely competent" or "probably

competent enough” to take part in Welsh; others gave answers that were in keeping with their responses to the other SPCC and Welsh language proficiency questions.

4.6.4 Evaluation of WTP

The question regarding willingness to participate appeared to work well and did not pose problems for the respondents.

4.6.5 Evaluation of Welsh language background questions

Welsh language acquisition context The question about Welsh language acquisition context appeared to work well and no participants raised queries about it. The only participants who left this item blank were those who left many or most other items on the questionnaire blank. Some people ticked the “other” option and gave alternative answers. Almost all of these could be recoded as “naturally” (e.g. “listening to conversation around me over the last 40 years”), “classroom” (e.g. “Wlpan”³⁰) or “mixed” (e.g. “practice with daughter, book and TV”) although some could not (e.g. “tried to learn Welsh, not very good, dipyn bach”³¹).

Use of Welsh and English The questions regarding participants’ use of Welsh and English appeared to work well and missing data was not a problem for these items. A few respondents ticked “other” and gave alternative answers that could be recoded easily as a point on the Likert scale provided, e.g. “I use more English than Welsh due to my work” was recoded as “I use more English than Welsh”.

Self-perceived proficiency in Welsh Respondents appeared to have little difficulty with the proficiency scale and few people left these questions blank. I had been concerned that making ‘minimal’ the lowest point on the proficiency scale might have caused problems for some respondents who would have preferred to tick ‘none’; however, this fear did not appear to be founded. Four respondents completed only the first item in the grid (“How do you rate your ability to speak in Welsh?”) and left the other skills unanswered. Had these four all been ‘minimal’ speakers, it could have been argued that they had avoided giving any response for the skills that they believed they did not have. Looking at the data for these respondents’ self-perceived proficiency in speaking Welsh, however, two claim to be ‘completely fluent’. It seems unlikely that a speaker would claim to be completely fluent in speaking Welsh but utterly unable to understand spoken Welsh, so it was concluded these missing data were probably not caused by the lack of a ‘none’ option.

Fluency in Welsh There was more missing data for the question on fluency in Welsh than for the other language background variables discussed so far: six people who left this item

³⁰ Wlpan – sometimes spelt WLPAN – is a conversational Welsh course for adults.

³¹ “little bit”

unanswered had completed the questionnaire thoroughly in most other respects. With hindsight, the fluency question was somewhat ambiguous. It had been intended as a general measure of progress (e.g. in an L2 Welsh learner) or attrition (e.g. in an L1 Welsh speaker who no longer used the language), but, coming immediately after a question which separates proficiency into four skills, it was not sufficiently clear whether the fluency item related to Welsh generally (as intended) or to spoken fluency in particular. In any case, it would have been more interesting to know whether a person had gained or lost fluency in each of their four language skills, rather than in their overall Welsh ability. Since it could not be sure that this item measured what it was intended to measure – and since the concept it was intended to measure was deemed to be of relatively little interest to the study – this variable was omitted from the data analysis.

Language(s) of education The changes made to the language(s) of education question following the pilot study appeared justified in part. In the main study, no respondents used the “other languages” option to indicate that they had studied foreign languages at school or university, and there were no ambiguous, unexplained references to “other languages” as had happened during the pilot. Although this was an improvement, the amended wording unfortunately introduced a new problem into the data. As became apparent very quickly during data collection, the wording of the medium of education question did not adequately take into account schools which operate a streaming system, where, for example, one group of pupils is educated through the medium of English in an otherwise Welsh-speaking school (or vice versa). Respondents who had attended this kind of school were not always sure whether they should report the language(s) of their school in general, or of their stream in particular. On the two or three occasions when I was asked about this issue directly, I suggested that the respondent should give the language(s) of their own stream and also write an explanatory note in the free text box provided.

There was a relatively large proportion of missing data for the language(s) of education question. The compulsory levels of education (primary, early secondary and – for most of the sample – O-levels) were mostly completed, but the non-compulsory levels (nursery, A-levels and higher education) were left blank by many participants.³² Out of the 260 eligible respondents who returned paper questionnaires, 253 filled in answers for the primary and early secondary levels of education. But of those 253, 51 (20%) left one or more of the other levels blank.³³ This

³² Some of the oldest participants in the sample left school at 14. The minimum school leaving age in England and Wales was raised to 15 in 1947 and to 16 in 1972.

³³ Only the paper questionnaire is relevant here, since participants were unable to complete the online survey without giving a response for every line in the medium of education grid. Every person who

pattern suggests that most of the missing data for these questions may be attributable to missing “not applicable” responses. It seems likely that many participants overlooked the “not applicable” option when filling in the questionnaire. Responses to the language(s) of education questions are described in full in chapter 5, but in order to avoid problems stemming from missing data, only the primary and early secondary levels of education were incorporated into the main statistical analysis of the data.

4.6.6 Evaluation of demographic variables

No problems were encountered with the three demographic questions included in the questionnaire.

Socioeconomic status was not measured as it had not been hypothesised to be relevant to the study. With hindsight, it is noted that it may have been useful to collect this data to ensure the variable could be controlled for in the analyses. During fieldwork, however, efforts were made to reach a diverse selection of respondents. While it was easier to access those employed in office jobs or in educational settings, participants were also recruited through projects aimed at supporting deprived communities. Moreover, the distribution of respondents’ level of education (as elicited through the language(s) of education question) suggests that the sample included a fairly broad spread of socioeconomic levels.

4.6.7 Language of the questionnaire

In this section, I assess reactions to the monolingual English questionnaire from (a) individual potential participants and (b) potential intermediaries.

Reactions to the monolingual questionnaire by individuals Producing the questionnaire monolingually did not appear to discourage individuals from taking part in the survey as much as had been feared. In the case of paper questionnaires administered in person, the vast majority of participants made no comment regarding the language of the questionnaire. A handful of people asked if there was a Welsh version; when it was explained that there was not (and why), all of them were willing to complete the questionnaire in English.³⁴ In the case of the online questionnaire, it is harder to tell whether the language of the survey created problems of non-participation among individuals, since the vast majority of those contacted directly did not reply to the email inviting them to take part, whether they completed the questionnaire or not. Of the

submitted answers for the primary and early secondary levels of education in the online survey therefore also submitted responses for all the other levels too.

³⁴ I did not keep records of exactly how many people I approached in person, nor how many asked about a Welsh or bilingual version; the latter occurred on approximately 5 or 6 occasions. Where questionnaires were distributed and collected by an intermediary, it is not known whether any potential participants declined to take part due to the language of the survey; no comments were received from intermediaries to this effect.

850 people contacted by email individually, two or three queried the provision of the questionnaire in one language only. Two specific incidents are worth exploring, since they illustrate the apparent context-dependency of individuals' expectations of the language of the survey.

During the pilot phase, one respondent wrote several angry messages in English and Welsh on his paper questionnaire, complaining that there should have been a Welsh version.³⁵ It should be noted that, despite his apparent anger, the participant completed the pilot survey almost in full. It is not possible to tell whether his attitude towards the language of the survey coloured his responses to the scenarios (many of which were also heated), or vice versa.

This particular respondent was one of the few participants in the pilot who I had not spoken to in person about the research. It appeared from some of his comments that he believed the project to be larger and more generously resourced than a PhD project; this may have had a bearing on his expectations and therefore his annoyance. In section B, for example, he did not tick the appropriate answers, but wrote them out in Welsh, followed by the comment, "N.B. I assume that you have a Welsh-speaker on your team who will be able to read my comments above."

In the pilot phase, I had striven to give a professional impression of the research, e.g. by describing the researcher in the first person plural. This, it was hoped, would reassure potential respondents that the research was trustworthy, of importance and worth their time participating in. After the experience with the pilot respondent, however, I endeavoured to make the more limited nature of the project clearer when approaching potential participants, whether in person, on the phone, by email or via an intermediary. During the administration of the main survey I talked and wrote about the researcher in the first person singular and explicitly told people that I was an individual student, not part of a large team. I also emphasised that I was not a Welsh speaker, but was trying to learn. Where batches of questionnaires were sent out by post, I hand-wrote individual thank you letters to intermediaries, including a paragraph about my background:

When people fill in the questionnaire, they sometimes want to know a bit about me, so here goes... I'm a PhD student at Queen Mary, University of London, where I'm researching how people feel about taking part in Welsh-language TV and radio programmes. My background is in media production – I was a radio producer at the BBC before I started this project. For a little while I worked at BBC Cymru Wales in Cardiff,

³⁵ This respondent was one of five people whose questionnaire was returned too late to be included in the analysis of the pilot data, but whose views could be taken into account during the administration of the final questionnaire.

which is how I started to get interested in Welsh media. I'm not Welsh myself (my family live in Cambridgeshire) but I've been taking beginners' Welsh lessons at the London Welsh Centre.

Although it was not possible to ensure that intermediaries passed this information on to all participants, nor can it be known how participants reacted to this information, I did not receive any comments or complaints regarding the language of the survey from those who were contacted in this way.

A second incident regarding the language of the survey occurred during the main data collection phase, which supported my interpretation of the first event, and the tactics employed as a result. A man had agreed, via an intermediary, to complete a paper questionnaire and I went to collect it from him later in person. He explained that he had started to answer the questions, but then decided not to carry on because the questionnaire was not bilingual. When I told him why I had produced the form in English only, he exclaimed that, had he realised the survey was for a PhD, he would not have expected a Welsh translation. He had only objected, he said, because he had assumed it was large university research project, which could have been expected to provide all documentation bilingually. He apologised profusely and insisted on completing the questionnaire.

Reactions to the monolingual questionnaire by intermediaries Although only a small number of *individuals* refused to participate on grounds of the language of the survey, a larger number of people were excluded from the survey by potential *intermediaries* who were not willing or able to distribute English-only questionnaires to groups of people. As with the individual participants, most intermediaries made no comment about the language of the survey, and did not object to passing English-language questionnaires on to their groups. There were a few exceptions.³⁶ One member of a Welsh-speaking social organisation said she would be happy to fill in the questionnaire herself, but was not willing to pass it on to others in her organisation, as the group only engaged in Welsh-language activities.³⁷ Another potential intermediary said she was unable to distribute the questionnaire to the various Welsh language classes she co-ordinated, as her boss would only allow her to distribute bilingual materials. While the context of the research and the researcher appeared to be the deciding factor for individuals' expectations of the language of the survey, intermediaries' (negative) reactions to

³⁶ I did not keep records of exactly how many potential intermediaries I contacted, nor how many declined to pass questionnaires on due to the language of the questionnaire; the latter occurred on approximately three or four occasions.

³⁷ Due to her request to complete the questionnaire "later" and return it by post, coupled with the anonymity of the survey, it is not known whether this person eventually participated in the research or not.

the monolingual questionnaire appeared to be influenced less by the context of the research and more by the linguistic context of the organisation or group being approached. In other words, the impracticalities of using Welsh for the survey appeared to outweigh individuals' desire to use Welsh (Welsh speakers were happy to accommodate to the researcher's needs), but the expectations of a Welsh-speaking *group* trumped the needs of the researcher.

4.7 Evaluation of data collected

In this section, the data is examined, to establish the size and quality of the final dataset.

4.7.1 Final dataset

414 people contributed data to the survey; 11 respondents did not fit the sampling frame and their questionnaires were removed from the dataset. Of the 403 eligible participants, 314 supplied enough data to be included in both the quantitative and the qualitative analysis, that is, they filled in responses to scenarios 1-4 and the background sections fully enough that any missing data could be imputed for these items using the approach described in section 4.5.2.³⁸ A further 44 participants did not complete enough of the quantitative data, but were available for qualitative analysis, as they wrote one or more comments in the free text boxes provided on the questionnaire. The full sample for both types of analysis consisted of 358 participants. 45 respondents were not included in either analysis. Of these, 25 started the survey online, but did not complete it, so no sociobiographical data was available for these cases. The remaining 20 filled the survey in on paper, but left too much data missing to be used in either the quantitative or qualitative analysis.

4.7.2 Format of questionnaire: Paper vs. online

The full sample (N=358) included 118 respondents who took the survey online and 240 who filled it in on paper. As anticipated, the online sample was younger, on average, than the paper sample: all but one of the respondents in the 70+ age group completed the paper version of the questionnaire. Fewer respondents aged 35-49 filled in the paper version than other age groups. There were no significant differences between the online and on-paper respondents in terms of their sex, Welsh language acquisition context or self-reported proficiency in speaking, understanding, reading or writing Welsh.

Since the two subsamples were designed to reach two different parts of the population, it would be unsurprising if the two samples gave slightly different responses to the scenarios on average. When data from respondents under the age of 70 were compared, the differences found were minimal; only in one case did the difference reach significance: the group who took part on paper rated their CA in scenario 4 significantly higher, on average, than the group who took part

³⁸ See chapter 5 for details of an outlier removed from the dataset during the quantitative analysis.

online (see table 4.6). Relative familiarity with the Internet and other unmeasured differences between the two groups may have contributed to this slight difference between the two subsamples; however, given the number of comparisons undertaken, it is possible that these figures could simply be the result of chance.

Table 4.6: Mean differences between paper and online responses to scenarios 1-4 among participants under the age of 70 included in the quantitative analysis. Independent-sample t-tests, 2-tailed. Paper N = 163; online N = 102. ** p = significant at .01 level.

Online - paper	Scenario 1: phone-in (strong oral)	Scenario 2: studio audience (weak oral)	Scenario 3: online chat (strong written)	Scenario 4: photo (weak written)
CA ³⁹	.158	.055	-.227	-.246**
SPCC	-.025	.023	.135	.181
WTP	-.221	-.138	.183	.084

The dual format of the questionnaire was successful in eliciting data from a broader demographic (in terms of age and computer literacy) than could have been achieved with one format alone. The geographical spread of responses to the online survey was not as wide as had been hoped, however, as most of the respondents to the online survey gave hometowns in areas which were also covered by the paper survey. The most commonly given postcode areas for both the online and the paper survey were LL (paper N = 70; online N = 50), SA (paper N = 74; online N = 24) and CF (paper N = 59; online N = 10). This concentration of responses is perhaps unsurprising given that the highest densities of Welsh speakers can be found in north Wales (LL), while there are relatively large *absolute* numbers of speakers in the south east (CF and SA) (Welsh Government 2012a); nonetheless it is a little disappointing that more participants from mid-Wales were not reached using the online survey.

4.7.3 Older women in the sample

During the fieldwork visits I was able to observe respondents completing the paper questionnaire on numerous occasions. Older women appeared to experience markedly more difficulty filling in the survey than other demographic groups. Although some older women completed it without any trouble, others gave contradictory responses or left multiple items blank. The grid of communication apprehension and filler questions (Ax.1-Ax.6) seemed to present particular problems for these respondents. Several respondents ticked one response per grid, instead of one response per line. One woman marked all the items she agreed with (by ticking the item wording rather than using the Likert scales) and left those she disagreed with blank. Another complained that she was confused by the idea of agreeing or disagreeing with a

³⁹ As in section 4.6.1, CA was calculated here as the mean of the three indicator items. See chapter 5 for further discussion of this variable.

statement; she wished she could tick a simple “yes” or “no”. Some of the older women who found the questionnaire confusing successfully completed it with assistance from the researcher or another participant in the group, but others became exasperated or quietly gave up without asking for help.

Table 4.7: Respondents dropped from the quantitative analysis on the basis of insufficiently complete data, according to age and sex. N = observed cases; % = per cent of non-missing cases.

Age	Male		Female	
	N	%	N	%
18-34	2	5.3	2	3.2
35-49	3	4.9	3	7.0
50-69	3	6.7	11	18.3
70+	6	16.7	15	45.5

Following my informal observations, I wanted to know whether older women did indeed provide poorer data on average than other respondents, or whether age in general was associated with item non-response. Groups of different sexes and ages were compared, to see which respondents were most likely to be dropped from the quantitative analysis on the basis of missing data. Table 4.7 shows the drop-out rates according to age and sex. When data from over-50s and under-50s were submitted to Fisher’s exact test, it was shown that older age was significantly associated with increased drop-out for women but not for men. Women over 50 were significantly more likely to be excluded from the quantitative analysis on the basis of missing data than women aged 18-49 (2-tailed, $p < .001$), but the same was not true of men (2-tailed, $p = .403$; 1-tailed, $p = .215$). Women over 50 were also significantly more likely to be omitted than men over 50 (2-tailed, $p = .007$) but sex on its own had no significant effect on drop-out (2-tailed, $p = .117$; 1-tailed, $p = .071$). The loss of older women from the quantitative dataset did not appear to hinge on the online chat room scenario (discussed in section 4.6.1), since very similar results were obtained for all effects when this scenario was excluded from the analysis.

It is well-attested that older respondents tend to provide poorer quality survey data on a range of measures such as item non-response or inconsistency of responses (Andrews & Herzog 1986, Colsher & Wallace 1989, Elliot *et al* 2005, Sherbourne & Meredith 1992), but previous research does not suggest that the effect of age is greater among women than men. Further examination of the data did not reveal any good explanation for the discrepancy in the present study.

4.7.4 Self-selection and non-participation

While a broad spread of respondents was successfully included in the sample (see chapter 5), a degree of self-selection bias was inevitable since respondents could not be compelled to

complete the questionnaire. Specifically, it is likely that the sample suffered a little from the following:

- **Willingness bias:** Since participation in a survey requires a certain degree of willingness, those who took part in the survey may well have scored more highly on measures of trait-like willingness to participate than the rest of the population, had this construct been measured. In order to make sure this bias remained minimal, I turned down offers from participants to publicise the survey by posting adverts on noticeboards or websites. By approaching groups and individuals directly and asking them to complete the survey, rather than advertising more widely for volunteers to come forward, many people were included in the sample who, I believe, would not have responded to an advert.
- **Self-perceived proficiency bias:** Despite reassurances that the survey was targeted at every adult who knew “some Welsh”, those who knew some Welsh but did not consider their proficiency to be high “enough” may have self-selected themselves out of the sample, believing the survey was not relevant to them, or that their views would not be of interest to the researcher.
- **“Lost” speaker bias:** It was much easier to find and gain access to people who used Welsh regularly than people who no longer used their Welsh. Audience researchers at S4C consider many formerly fluent L2 Welsh speakers (particularly L1 English speakers who went to Welsh-medium schools) to be “lost” to the TV channel because they no longer use their Welsh or identify with the language (personal communication, August 2011); they may also have been lost to the present survey for the same reasons. During data collection, Welsh speakers recommended soliciting these “lost” respondents from English-language churches and social groups. Some respondents were gained in this way, but intermediaries in English-speaking groups frequently denied, or were unaware, that members of their group knew any Welsh.

Having described and evaluated the collection of the survey data, the chapter now moves on to introduce the methods used to analyse the data.

4.8 Methods of analysis: Structural equation modelling (SEM)

The analysis presented in chapter 5 uses path analysis, a simple form of SEM, to examine relationships among variables. In this section, SEM is introduced and its strengths and weaknesses are discussed.

4.8.1 Introduction

SEM is a statistical technique for exploring or confirming relationships among multiple variables, which may include multiple dependents. Multiple predictor (exogenous) variables are

hypothesised to influence outcome (endogenous) variables, which may, in turn, affect other endogenous variables.⁴⁰ Models are usually depicted graphically, with hypothesised effects shown as arrows leading from predictors to outcomes. These relationships are then tested using empirical data by estimating regression coefficients and assessing the fit of the model to the data entered. The main advantage of SEM over multiple regression is that all the relationships within a model can be tested together, as a whole system, rather than as a collection of separate regressions for each of the paths in the model (Garson 2011b). This approach is well suited to testing complex systems of psychological variables, such as that under investigation in the present study, since it enables potentially significant interdependencies among variables, including relationships between endogenous variables, to be tested. Unlike multiple regression, SEM can also model error terms (Garson 2011b). Error terms in SEM indicate not only measurement error, but also unexplained variance in the data, which can help draw the researcher's attention to areas of the model where important variables may be missing from the analysis.

SEM is particularly well-suited to models that include latent variables, that is, variables that have not been observed directly, but have been inferred within the model on the basis of multiple observations, called indicators (Kline 2011: 9). Many of the constructs used in language learning research – such as intended effort (Csizér & Dörnyei 2005a) or self-confidence in L2 communication (e.g. Yashima 2002, Yashima, Zenuk-Nishide & Shimizu 2004) – are latent variables, whose value can be inferred on the basis of multiple questionnaire items. An example of a latent variable unrelated to language is “risky sexual behaviour”, which Bazargan *et al* (2010) inferred from three indicators: the number of sexual partners the subject had had, whether they had ever had sex without a condom and the age at which they became sexually active. In the present study, communication apprehension can be described as a latent variable, which is measured using several questionnaire items targeting the same conceptual area.⁴¹

Although SEM usually involves latent variables like these, models that include only manifest variables can also be tested using the technique. This approach is called path analysis, and is the oldest form of SEM (Kline 2011: 103). The variables examined using path analysis might be observed variables in a literal sense, i.e. single, direct measurements of a phenomenon, such as a person's height or income, or they may be summations, means or factor scores obtained from

⁴⁰ The terms ‘independent’ and ‘dependent’ variable are not normally used in SEM, since there is often not one single dependent variable, and some variables may be both dependent and independent in the sense that they are both predicted and predictors within the model. Instead, all variables which have arrows pointing to them are considered ‘endogenous’, while all those which have no arrows pointing to them are considered ‘exogenous’.

⁴¹ In the final model of WTP, however, communication apprehension is not modelled as a latent variable, for reasons which become clear in chapter 5.

multiple measurements, such as a pupil's results in several spelling tests across a school term. Since exogenous variables used in path analysis do not have multiple indicators, measurement error cannot be estimated and is assumed to be zero (Garson 2011b). This makes path analysis less complex, but also less informative, than 'full' SEM.

A full structural equation model consists of two submodels: the measurement model and the structural model. The measurement model is the part of the model that depicts the intended relationships between the latent variables and their indicators. Validating the measurement model serves a similar purpose to computing Cronbach's alpha for a scale, that is, it establishes the internal consistency of the indicators intended to measure a particular latent. It can also take the place of, or support, a principal components analysis, as confirmatory factor analysis is used to ensure that indicators are appropriately grouped into latent variables. The structural model is the part of the model that depicts direct and indirect relationships among the latent and observed variables the researcher is interested in. Fitting the structural model means testing the research hypotheses contained within the model. The variables in a path analysis model do not have multiple indicators, so in path analysis there is no measurement model, only a structural model.

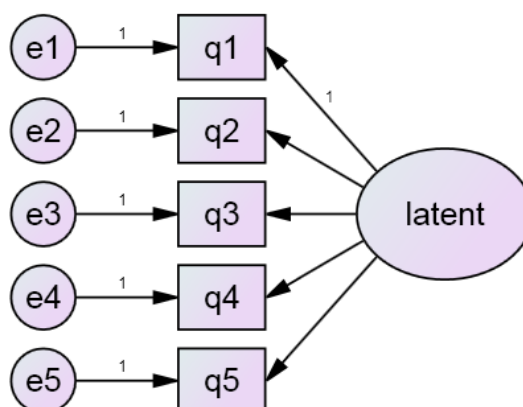
SEM has been used in willingness to communicate (WTC) and second language learning motivation research (e.g. Clément, Baker & MacIntyre 2003, Csizér & Dörnyei 2005a, Hashimoto 2002, MacIntyre, Babin & Clément 1999, Yashima 2002, Yashima, Zenuk-Nishide & Shimizu 2004). The present study marks the first use of SEM in the field of minority language media studies.

4.8.2 Limitations and cautions

SEM only tests for correlation among variables; it cannot test for causality (Garson 2011b). However, since most research that uses SEM is concerned with potentially causal relationships, it is usual practice for the hypothesised direction of effects to be indicated on the model by the use of arrow heads on the connectors between variables. SEM itself says nothing about the direction of these arrows; any of them might run in the opposite direction without affecting the model's goodness-of-fit significantly (Garson 2011b). Directionality in structural equation modelling is theory-driven: the researcher makes inferences about the direction in which effects occur, based on the chronology of effects, evidence from earlier research or as-yet untested hypotheses about the relationships among variables. Some of these inferences are based on relatively uncontroversial assumptions about the prior existence of latent variables: it is assumed, for example, that when a participant gives a particular response to a questionnaire item, their answer is influenced by an underlying characteristic of that person, rather than a

characteristic of that person being influenced by the act of choosing a particular response to the question. This explains why arrows usually run from a latent variable to its indicators rather than the other way round (figure 4.1).

Figure 4.1: An example of a simple measurement model. The latent variable is depicted as an oval, observed variables (indicators) as rectangles and error terms (see section 4.8.1) as circles. In this example, the indicators have been labelled q1, q2 etc. to represent five questionnaire items that, together, measure some underlying factor.



It is important to remember that SEM does not provide the correct or only solution to a problem; it enables the researcher to confirm or reject a particular model on the basis of whether it is a statistically plausible interpretation of the data that has been input. There may be many possible alternative models that would be an equally good fit to the data (Garson 2011a, 2011b, Thompson 2000: 269). Whether a model that fits the data is deemed plausible in a more general sense depends on employing existing theory, background knowledge and common sense in addition to statistical tests. In other words, “results should be theoretically sensible” (Klem 2000: 239).

4.8.3 Procedure

Full SEM is usually conducted as a two-step procedure (Garson 2011b). First the measurement model is validated; if the measurement model does not show a good fit, suspect indicators and/or variables may be omitted from the analysis and the test re-run. Only once the measurement model shows a good fit does the researcher go on to the second stage, which is to fit the structural model. Regression coefficients are estimated for the free parameters and indices of model fit are calculated, which lead the researcher to accept or reject the model as a plausible depiction of the data. In path analysis, since there is no measurement model, only the second step applies.

SEM may be considered a purely confirmatory technique, in the sense that it tests the goodness-of-fit of one particular model, on the basis of which the model is either rejected or accepted. It can also be used in a more exploratory fashion, however, either by comparing numerous alternative models and selecting as a preferred solution the model that best combines a high

level of goodness-of-fit with a high level of theoretical plausibility (as recommended by Thompson 2000), or by removing and/or adding parameters to the initial model, in order to improve its quality. My analysis adopts the latter of these approaches, following Clément, Baker & MacIntyre (2003), Hashimoto (2002) and Peng & Woodrow (2010) among others. Although model modification can be a powerful way of improving upon a hypothesised model, care must be taken not to over-fit the model. While the immediate aim of SEM is to fit the model to the available data, the larger goal behind the analysis is, of course, to adequately model real-world phenomena. A model that has been tailored to fit one particular dataset closely is unlikely to depict other data quite so well. Such a model is therefore not especially useful for understanding the underlying phenomena of interest to the researcher.

Related to the danger of over-fitting the model is the issue of parsimony. Mulaik *et al* (1989) remind us that “good fit can come about in two ways: (a) by a hypothesis that correctly constrains parameters of the model and (b) by estimating many parameters, which necessarily contributes to good fit no matter what the data are” (Mulaik *et al* 1989: 439). If a good fit can be obtained simply by estimating a large number of spurious parameters, it follows that a model that accounts for data well by estimating fewer parameters must be better quality than one which does so using more paths. In other words, “given two models with equally high goodness-of-fit indices in connection with the same data, the one to be preferred is the one with the higher parsimony ratio, because it has been subjected to more potentially disconfirming tests” (Mulaik *et al* 1989: 439).

Specialist software is required for SEM. The analysis presented in chapter 5 was conducted in Amos 20, which is part of the SPSS range. In the course of the analysis, a number of reference texts were consulted, including Byrne (2010), Hoyle (2011), Klem (2000), Kline (2011) and Thompson (2000). Particular use was made of the extensive *Statnotes* resources on SEM (Garson 2011b).

4.9 Methods of analysis: Audience segmentation

The previous section introduced SEM, the technique used to identify the relative influence of different variables on WTP across the sample as a whole. What SEM does not tell us, is whether the factors found to influence WTP have a universal influence across audiences, or whether they cluster in common patterns that characterise ‘types’ of audience. This question is therefore addressed in chapter 6 through an ‘audience segmentation’ exercise, conducted using a statistical technique called cluster analysis. The concepts of audience segmentation and cluster analysis are introduced in this section.

4.9.1 Introduction to audience segmentation

The analysis in chapter 6 draws on two seemingly unrelated fields: second language acquisition (SLA) and (media) market research. What both these areas have in common is the desire to target people's needs as closely as possible, with the aim of improving outcomes (e.g. L2 proficiency, audience ratings or sales) and/or efficiency. To better understand learners', customers' or audiences' different needs, researchers may wish to organise people into relevant types. In SLA research, learners might be classified according to their language aptitude, motivational type or learning strategy, for example (see section 4.9.3 for a review). Market researchers in the media and other industries often segment their customers according to their demography, consumption behaviours, attitudes or some other relevant property. A supermarket, for example, might use loyalty card data to segment its customers into six groups – “finer foods”, “healthy”, “traditional”, “convenience”, “mainstream” and “price-sensitive” – which it could then use to inform the launch of new product ranges (Morris 2004). One example which is particularly pertinent to the current study is an audience segmentation exercise commissioned in 2005 by the Welsh-language TV channel, S4C, together with the Welsh Language Board, BBC Wales and the Arts Council of Wales. The researchers, from the market research company Beaufort Research, drew on behavioural, attitudinal and demographic data from a survey of Welsh speakers' use of Welsh in different domains, participation in Welsh- and English-language activities and attitudes towards the Welsh language.⁴² They found that Welsh speakers could be grouped into six types, which they called “Embracers”, “Mainstreamers”, “Enrichers”, “Desirers”, “Apathetics” and “Strivers” (Beaufort Research 2006). By examining audiences' responses according to their type, the researchers were able to identify relevant barriers to living life through the medium of Welsh and make general recommendations for increasing participation in Welsh-language activities of all kinds. Although I use a similar methodology, my research does not attempt to replicate the Beaufort study. My goals, data and findings are quite independent, since, unlike the Beaufort study, I focus closely on media. I aim to segment my respondents using far fewer variables, in order to develop a classification of Welsh audiences which is specific to media participation, rather than to Welsh-speaking life more widely. Nonetheless, some interesting parallels and contrasts can be drawn between the results of the two studies, and these are discussed in chapter 6.

4.9.2 Cluster analysis: Background

Identifying language learner types and segmenting an audience or customer base are similar challenges, which can both be tackled using cluster analysis, an exploratory statistical technique

⁴² Welsh speakers are defined in the report as “adults who said they could speak some Welsh” (Beaufort Research 2006: 5), although those who knew only a handful of words were omitted from the sample. This aspect of their sampling frame matches the Welsh ability criteria used in the present study.

which divides data into clusters, where similar entities are grouped together and dissimilar entities are kept apart (Garson 2010). Various types of cluster analysis are available, which can be broken down into (a) hierarchical and (b) non-hierarchical or iterative partitioning methods (Punj & Stewart 1983). In hierarchical methods, the algorithm first works through the dataset, one case at a time, adding a case to a cluster if it has a particular level of similarity to one or more of the entities already assigned to that cluster, or beginning a new cluster if the entity is dissimilar to all the existing clusters. Then, these small clusters are then combined with other clusters that are most similar to them, to produce fewer, bigger clusters. The process continues automatically with increasingly dissimilar clusters being nested hierarchically inside larger clusters until all cases have been assigned to one cluster, representing the whole sample. The analysis may optionally generate a dendrogram, a tree-like structure that shows the relative similarity and dissimilarity of cases that have been grouped together or kept apart at different stages in the analysis (see appendix C). Providing natural clusters do actually exist in the data, an appropriate clustering solution can often be discerned by examining the dendrogram to identify the stage in the analysis at which especially unlike clusters have been combined, and using the solution immediately prior to that point. In iterative partitioning methods, the number of clusters is specified by the researcher in advance and cases are assigned and reassigned to clusters on an iterative basis until a pre-determined stopping point, such as a set number of iterations. Whatever clustering method is used, all cases are allocated to a cluster; no cases are excluded by the algorithm and no case can be allocated to more than one cluster. As a result of the analysis, each case effectively gains a new variable, “cluster membership”, which indicates which cluster the case belongs to.

In this study, a two-stage approach was used, which employed both hierarchical and non-hierarchical methods. An iterative partitioning method, *k*-means clustering, was used to cluster cases, with an appropriate number of clusters that were first identified using Ward’s method of hierarchical clustering. *K*-means clustering performs well with samples that are not too large (as in the present case), but, as stated above, requires the user to specify the number of clusters to be created. Ward’s method was therefore used first to derive an appropriate number of clusters (see Garson 2010). This two-stage approach is common in market segmentation (e.g. Cuadrado & Frasquet 1999, Geeroms, Verbeke & Van Kenhove 2008, John, Kerby & Landers 2004, Pieniak *et al* 2010).

K-means cluster analysis works by randomly assigning well-spaced initial cluster centres (one case per cluster that will serve as a kind of ‘prototype’ for that cluster) and assigning the rest of the cases to the nearest cluster (Garson 2010). Each subsequent iteration of the algorithm then reassigns all cases – including those used as initial cluster centres – to the nearest cluster, based

on the current mean of the cluster.⁴³ After each iteration, the centre of the cluster changes; clustering stops when the cluster centre becomes stable or a certain number of iterations has been reached.⁴⁴ When the cluster analysis is complete, final cluster centres reveal the patterns that have been found in the data. Cluster analysis will partition a dataset whether there are theoretically meaningful patterns in it or not; a reasonable solution will therefore be readily interpretable as well as mathematically accurate.

While some clustering solutions can be shown to be better than others on various measures such as information compression, identifiability and stability (Sheth-Voss & Carreras 2010), cluster analysis does not result in one correct or best answer, since the value of a solution depends in part on the aims of the exercise and the researcher's interpretation of the results. Punj and Stewart (1983) write that:

Classification is only useful if it assists in furthering an understanding of the phenomena of interest. Clusters, or classes, must have demonstrable implications for hypothesis generation, theory building, prediction, or management. The ultimate test of a set of clusters is its usefulness. (Punj & Stewart 1983: 146)

By showing how clusters obtained using WTP as the segmentation variable can be depicted using other variables from the dataset (chapter 6) and developing recommendations for media as a result (chapter 7), I demonstrate that the clustering solution obtained in the present study is indeed useful.

Next, I review uses of cluster analysis in relevant linguistics literature.

4.9.3 Cluster analysis: Examples of cluster analysis in the literature

Cluster analysis is a common tool in media research (e.g. Beaufort Research 2006, Heo & Cho 2009, Livingstone 2002: 91, Schultz, Block & Pilotta 2005, van Rees & van Eijck 2003), but has been relatively underused in some areas of sociolinguistics and applied linguistics. Although several authors comment that cluster analysis is rarely used in second language acquisition research (Csizér & Dörnyei 2005b, Rysiewicz 2008, Sparks, Patton & Ganschow 2012), a review of the literature revealed that cluster analysis is a much more common approach in SLA than in other areas of linguistics such as language maintenance and L1 attrition.

In 1986, Skehan introduced cluster analysis into SLA as a method for identifying different types of language learner. He felt that earlier work on language learning, which typically used multivariate statistical procedures like regression or factor analysis, "resulted in a concentration

⁴³ The "nearest" mean is based on Euclidean distance (see Garson 2010).

⁴⁴ The researcher can specify cut-off values or iteration limits if necessary; in the present study, SPSS default values were found to be sufficient.

on the hypothesized factors of aptitude at the expense of the actual learners” and wondered whether other kinds of analysis “might do more justice to the individuality of the language learner” (Skehan 1986: 81-82). In his cluster analysis of learners of Arabic, Skehan found that, while both memory and aptitude were related to language learning success, students with relatively low scores on one or other of these variables were still successful if these deficits were compensated for by other properties. While multivariate techniques would have been better than cluster analysis at revealing the relative importance of memory and aptitude in predicting success, multiple regression or SEM could not have uncovered the valuable insight that there are different routes to success. Skehan thus made a compelling case for using cluster analysis in addition to other statistical techniques in studies where individual differences are of interest. Nonetheless, it was more than a decade before other researchers started to publish cluster analyses of language learners. Since the late 1990s, learners have been clustered according to their learning strategies (Kojic-Sabo & Lightbown 1999, Mizumoto & Takeuchi 2009), language analytic ability (Ranta 2002), learning strategy, will to learn English and achievement (Yamamori *et al* 2003), motivational disposition (Csizér & Dörnyei 2005b), international posture and frequency of communication (Yashima & Zenuk-Nishide 2008) and aptitude and intelligence (Rysiewicz 2008).⁴⁵

Kojic-Sabo and Lightbown’s (1999) paper is of particular interest, as it takes a comparable approach to that used in the present study. Rather than entering both the predictor variables and the outcome variables into the analysis (as is the case in most of the SLA literature), the authors segmented their sample only according to learning strategies and then compared the emergent clusters’ relative success in language learning. This approach (or the reverse, segmenting data using only outcome variables), I would argue, ensures that the clustering solution is determined by the key variables of interest rather than by other variables which might fall more naturally into groups. Keeping the number of segmentation variables small also helps to minimise problems with “extraneous characteristics” which may “distort an otherwise useful cluster analysis” (Punj & Stewart 1983: 146).

Cluster analysis has been used very little in language shift and language maintenance research. Ehala and Niglas (2006) used *k*-means clustering to create sociodemographic and attitudinal profiles of young L1 Estonian speakers. Myers-Scotton (2007), who studied Xhosa-English

⁴⁵ Wells, Kanikini & McGee (2009) employed another statistical technique, latent class analysis, to classify speakers of Māori according to their self-reported proficiency. Other SLA researchers have not used quantitative methods of classification at all, but have instead worked with learner types identified by teachers in the classroom (e.g. Wesche 1981). It is noted, for the sake of completeness, that Priestly, McKinnie and Hunter (2009) and Sparks, Patton and Ganschow (2012) used cluster analysis to identify cases that were higher or lower on a single dimension, essentially turning an interval scale into an ordinal one. These examples are not directly relevant to the current research, however.

bilinguals' shift to English as their preferred public language, used cluster analysis to group her sample into clusters based on their use of English words within Xhosa grammatical frames. And Deumert (2010) clustered the 600 areas of Cape Town according to income, language use, ethnicity and so on to create a "neighbourhood typology" which would "distinguish different sociolinguistic spaces within the city" (Deumert 2010: 20).

It seems surprising that cluster analysis has been little used so far in studies of language shift and language maintenance. I suggest that the technique could be a very useful addition to the field, particularly in identifying behavioural and attitudinal patterns in studies of individual language choice and language maintenance. Cluster analysis could be used to identify patterns in people's responses to language revitalisation efforts, for example, or to identify appropriate language revitalisation campaigns to target different groups of people. As Deumert's (2010) study shows, it is not only individuals who can be clustered into groups: cluster analysis could be used to classify language communities or contexts around the world to identify typical patterns of societal language shift, or to uncover patterns in language policies, advertising sales or funding arrangements in minority language media.

My own approach to cluster analysis does not draw directly on the literature reviewed above, but is broadly modelled on Cuadrado and Frasquet (1999). They based their segmentation of young cinema audiences on one set of variables (benefits sought by the consumer) and then described the resultant clusters using other questionnaire items such as frequency of cinema attendance. As a result, they found that young cinema audiences fell into one of three types: "social", "apathetic" or "cinema buff". The advantages of this approach are described above, in relation to Kojic-Sabo and Lightbown (1999).

4.10 Summary

This chapter has described the construction and administration of a questionnaire used to gather self-report data from Welsh audiences. The survey drew on scales and instructions from previous research where appropriate and was administered on paper and online with adults who knew "some Welsh". The final sample included participants from a range of ages and self-reported proficiencies in Welsh, but suffered from some self-selection bias as well as an increased drop-out rate among older women due to missing data. The main statistical techniques used to analyse the data, SEM and cluster analysis, were also introduced. In the next chapter, I present the results of the survey.

Chapter 5: Contributory factors in audiences' willingness to participate in Welsh-language media

In this chapter, I present a description and quantitative analysis of the results of a survey of 358 Welsh-speaking audience members conducted in the summer and autumn of 2011. The first part of the chapter depicts the demographic make-up and language backgrounds of the sample. The remainder of the chapter examines the effect of certain psychological, social and contextual variables on audiences' willingness to participate (WTP) in Welsh-language media, as observed across the sample as a whole.

In describing the demographic and language background data from the survey (sections 5.1 and 5.2), I demonstrate that data has successfully been gathered from a wide range of participants. Some interesting findings emerge from the language background data: a third of those who attended Welsh-medium school do not consider themselves completely fluent in all four Welsh language skills, for example. In section 5.3, hypotheses put forward by participants in the study regarding Welsh language proficiency and use are tested and it is argued that L1 Welsh speakers educated through the medium of English report lower proficiency in written Welsh skills than those educated through Welsh.

Moving on to examine audiences' responses to the four media scenarios, I first summarise the data (section 5.4), before conducting the main analysis. In section 5.5, I prepare a structural equation model of state willingness to participate (WTP), based on the conceptual model hypothesised in chapter 3, then, in section 5.6, the core of this chapter, I test its fit to the survey data and make potential improvements to the model. A final model is obtained in which state WTP is predicted by state communication apprehension (CA) and state self-perceived communicative competence (SPCC). State CA is, in turn, predicted by state SPCC and by the particular properties of the scenario presented, namely 'literacy' (whether participation requires literacy in Welsh or not) and 'demand' (whether participation requires the audience to engage in synchronous conversation or simply to react to others' Welsh), while state SPCC is predicted largely by Welsh language ability, but also by the demand of the participation scenario. The need for Welsh literacy is shown to have little influence on respondents' self-perceived competence to participate in content, on average. Other aspects of a person's Welsh language background are found not to be good predictors of CA and SPCC once Welsh language ability has been taken into account. Responses to the different media scenarios are explored further in section 5.7, where the scenarios are ranked in order of the WTP, CA and SPCC they elicit.

Further analysis is conducted in section 5.8, which leads to some theoretically interesting findings. Previous research has not explicitly modelled the relationship between self-reported trait-like Welsh language ability and self-reported state SPCC. This chapter therefore makes a theoretical contribution to the literature by demonstrating that the relationship between the two may be linear. It is also tentatively suggested that audiences' take their individual language skills into account when rating their state SPCC, offering an insight into how audiences assess their own competence in specific contexts.

5.1 Results: Demographic patterns in the survey data

Demographic data was collected from survey respondents in order to be able to evaluate the effect of age, sex and Welsh language background variables on audiences' willingness to participate in media content in Welsh. However, these data also provide an interesting snapshot of the Welsh media audience, so these patterns are first described in detail, in this section and the next, before their relevance to WTP is examined.

As stated in chapter 4, I aimed to gather data from participants from sixteen subgroups within the population, comprising two sexes, four age groups and lower and higher self-reported proficiency in spoken Welsh. In addition, I wanted to include participants from a spread of geographical areas. The sex, age and hometown data presented in this section shows that the sample is well-distributed.

5.1.1 Sex

The sample consisted of 158 (46.2%) males and 184 (53.8%) females; 16 participants did not give their sex (table 5.1).⁴⁶

Table 5.1: Frequency of respondents' sex.

Sex	N	%
Male	158	46.2
Female	184	53.8
Total	342	100
Missing cases = 16		

5.1.2 Age

A spread of ages was obtained in the sample, from late teens to early nineties, although relatively fewer respondents aged 70+ were included in the analysis due to problems with

⁴⁶ Sections 5.1 and 5.2 describe the data gathered from the full sample of 358 participants, which includes participants who left some questionnaire items blank (see chapter 4). The number of missing cases is indicated in each table as appropriate.

missing data (see chapter 4). Table 5.2 provides information on the frequency of age groups in the sample.

Table 5.2: Frequency of respondents' age group.

Age group	N	%
18-34	98	28.8
35-49	82	24.1
50-69	97	28.5
70+	63	18.5
Total	340	100
Missing cases = 18		

5.1.3 Self-reported ability to speak Welsh

For the purposes of this tally, respondents who indicated they could speak Welsh completely fluently were deemed to have relatively higher proficiency, while respondents who said they had minimal, low, intermediate or high proficiency in speaking Welsh were deemed to have relatively lower proficiency. Usable responses were obtained from at least 10 people for all combinations of these variables (table 5.3), but respondents aged 70+ were somewhat underrepresented in the final dataset as discussed above. Overall, the data were well-distributed and there were no gaps.

Table 5.3: Breakdown of participants included in dataset according to age, sex and relative self-reported proficiency in Welsh. Missing cases = 19.

Age	Male		Female	
	Lower proficiency	Higher proficiency	Lower proficiency	Higher proficiency
18-34	17	21	26	34
35-49	23	17	19	23
50-69	22	22	26	27
70+	21	13	10	18

5.1.4 Hometown

Most respondents gave hometowns in Wales (92.7%) but a few lived in London (4.4%) or other parts of England (2.6%) and one respondent lived in the Channel Islands (0.3%). All areas of Wales were included in the sample to some extent. The modal area of residence was postcode area LL, which covers most of north Wales, and is where many of the traditional Welsh-speaking heartlands are found (see chapter 1). These results are summarised in table 5.4.

Table 5.4: Frequency of respondents' home area.

Area	Postcode/area	N	%	Total N	Total %
North Wales	LL	120	35.2	126	37.0
	CH	6	1.8		
Mid & West Wales	SY	11	3.2	112	32.8
	LD	3	0.9		
	SA	98	28.7		
South East Wales	CF	69	20.2	78	22.9
	NP	9	2.6		
Outside Wales	London	15	4.4	25	7.3
	England (other)	9	2.6		
	Channel Islands	1	0.3		
Total Missing cases = 17		341	100	341	100

Having established that a reasonable spread of responses has been obtained, I now describe the results of section B of the questionnaire, in which people were asked about their linguistic background.

5.2 Results: Welsh language background

In this section, I summarise and discuss responses to the survey items on Welsh language acquisition context, relative use of Welsh and English, ability to speak, understand, write and read Welsh and language(s) used in education.

5.2.1 Welsh language acquisition context

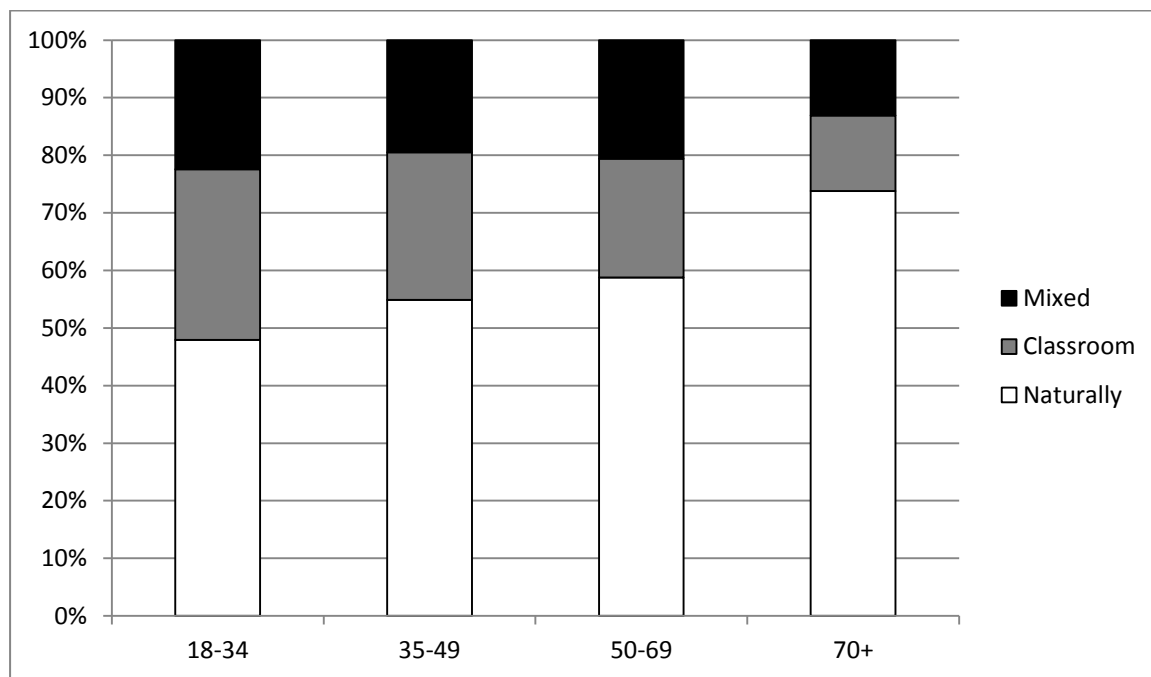
The majority (57.8%) of participants in the sample claimed to have acquired their Welsh 'naturally' with family or friends; the rest had learnt Welsh in the classroom, or through a mixture of formal teaching and naturalistic learning (table 5.5).

Table 5.5: Frequency of Welsh language acquisition context. Percentages do not add up to 100% exactly due to rounding.

Welsh language acquisition context	N	%
Naturally	197	57.8
Classroom	78	22.9
Mixed	66	19.4
Total Missing cases = 17	341	100.1

A significant association was found between age and Welsh language acquisition context,⁴⁷ with older respondents more likely to have acquired their Welsh naturally than younger respondents in the sample: 48.0% of 18-34 year olds, 54.9% of 35-49 year olds, 58.8% of 50-69 year olds and 73.8% of people aged 70+ acquired their Welsh naturally (figure 5.1).⁴⁸ The data are suggestive of a shift from naturalistic to classroom acquisition of Welsh from generation to generation, reflecting the trend across the population as a whole (chapter 1).

Figure 5.1: Breakdown of Welsh language acquisition context by age. N = 338; missing cases = 20.



5.2.2 Relative use of Welsh and English in daily life

There was a great deal of variation among respondents in their relative use of Welsh and English in daily life (table 5.6), which shows that the survey successfully accessed a balanced range of Welsh users for the purposes it was designed for. Most participants (64.4%) claimed to use both languages; 21.6% said they “always or almost always use English” and 14% said they “always or almost always use Welsh”.

⁴⁷ Point-biserial correlation, 2-tailed, $r_{pb}(336) = .169, p = .002$.

⁴⁸ At this point, the statistical analysis becomes inferential rather than merely descriptive, so the distribution of the data must be taken into consideration. As the survey data were non-normally distributed in various respects (some of the scores for CA and SPCC were moderately or highly skewed, for example), both parametric and non-parametric tests were conducted, and the outcomes compared. Since the results obtained using both methods were similar, the use of parametric techniques was regarded to be unproblematic (Howitt & Cramer 2011: 176) and the results of these tests are reported throughout the chapter.

Table 5.6: Frequency of current Welsh and English use among the sample as a whole.

Current use of Welsh & English	N	%
Always or almost always English	74	21.6
More English than Welsh	85	24.9
English and Welsh equally often	72	21.1
More Welsh than English	63	18.4
Always or almost always Welsh	48	14
Total	342	100
Missing cases = 16		

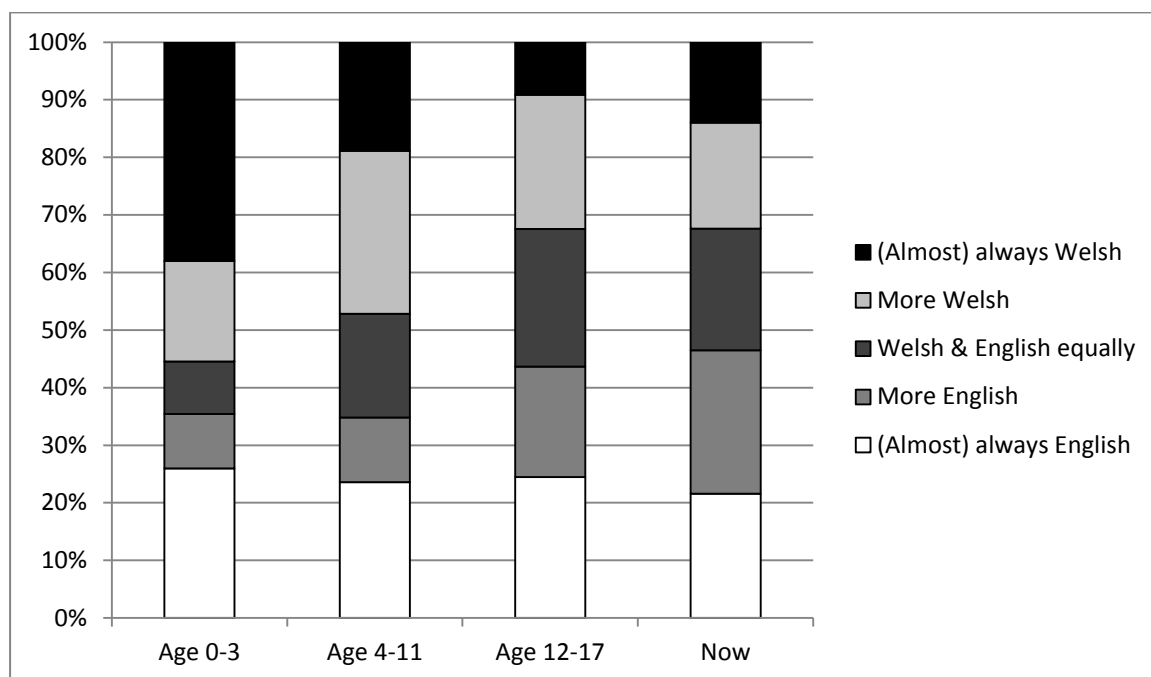
25.9% of respondents began life hearing English and 37.9% hearing Welsh “always or almost always”; less than 1 in 10 experienced balanced bilingualism in their early years (table 5.7 and figure 5.2). Many early Welsh speakers reported an increase in their use of English throughout childhood, so that by the age of 17, only 9.1% of participants always or almost always used Welsh.

Table 5.7: Frequency of Welsh and English use during childhood.

Use of Welsh & English	Age 0-3		Age 4-11		Age 12-17	
	N	%	N	%	N	%
Always or almost always English	88	25.9	80	23.5	83	24.4
More English than Welsh	32	9.4	38	11.2	65	19.1
English and Welsh equally often	31	9.1	61	17.9	81	23.8
More Welsh than English	59	17.4	96	28.2	79	23.2
Always or almost always Welsh	129	37.9	64	18.8	31	9.1
Other	1	0.3	1	0.3	1	0.3
Total	340	100	340	100	340	100
Missing cases = 18						

One participant grew up using neither English nor Welsh (their L1 was Italian). As an outlier who could not be placed somewhere on the English to Welsh spectrum of language use, their data was omitted from the quantitative analysis, but included in the sample for the purposes of the qualitative analysis (chapter 6).

Figure 5.2: Bar chart showing relative use of Welsh and English among all participants. N = 340; missing cases = 18.



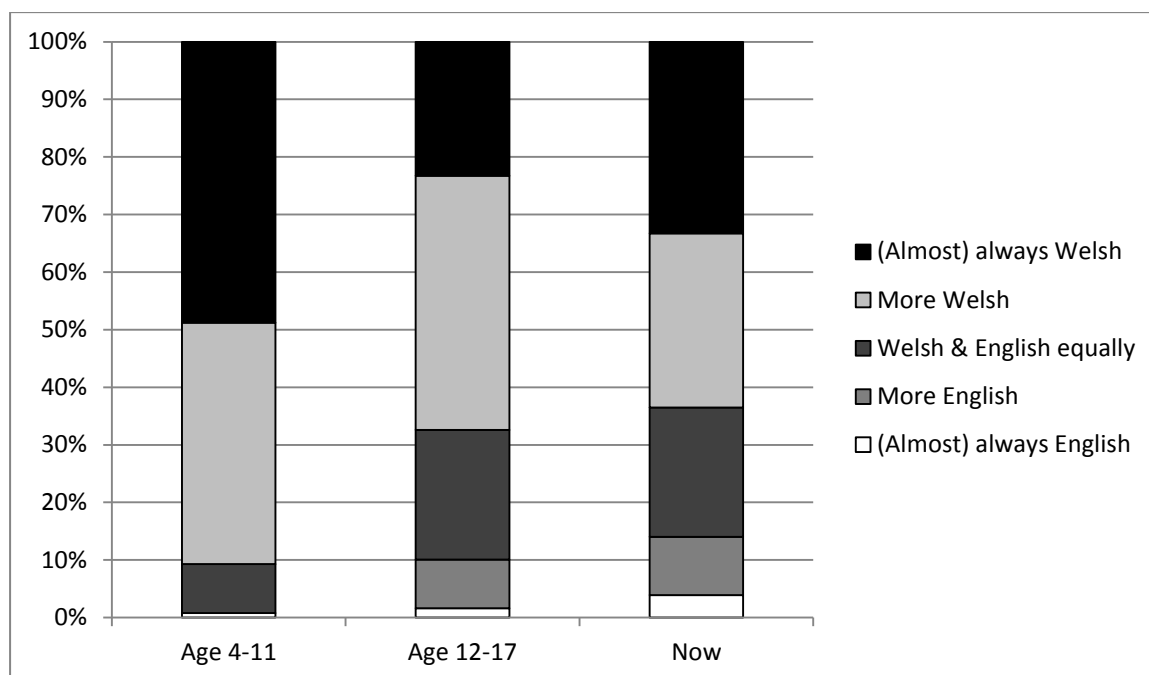
Those who “always or almost always” used Welsh at age 0-3 are interpreted here as “L1 Welsh” (N = 129), while those who “always or almost always” used English at age 0-3 are referred to as “L1 English” (N = 88). Respondents who gave some other answer (more English than Welsh, more Welsh than English, or both languages equally at age 0-3) are considered “L1 bilingual” (N = 122). Although the age of 3 may be considered a relatively early cut-off date for determining a person’s L1, this measure is a useful proxy for “first” or “native” language in the present case. On the whole, the sample did not give up their Welsh (or English) at the age of 4: just one respondent designated L1 Welsh claimed to “almost or almost always” use English at age 4-11, and no L1 Welsh speaker said they used more English than Welsh at that age, which suggests that this designation is robust for the current sample. Likewise, only one L1 English respondent reported that they used more Welsh than English at age 4-11 and no L1 English speaker claimed they almost or almost always used Welsh at that age. The use of Welsh at age 4-11 would, in contrast to use at age 0-3, be a poor proxy for a respondent’s L1, since most Welsh-speaking children are exposed to English from around the age of 4 onwards, and soon become fluent in the language (Gathercole & Thomas 2009).

Table 5.8: Frequency of Welsh and English use during later childhood and now among those who “always or almost always” used Welsh at age 0-3. Percentages do not add up to 100% exactly due to rounding.

Use of Welsh & English	Age 4-11		Age 12-17		Now	
	N	%	N	%	N	%
Always or almost always English	1	0.8	2	1.6	5	3.9
More English than Welsh	0	0	11	8.5	13	10.1
English and Welsh equally often	11	8.5	29	22.5	29	22.5
More Welsh than English	54	41.9	57	44.2	39	30.2
Always or almost always Welsh	63	48.8	30	23.3	43	33.3
Total Missing cases = 0	129	100	129	100.1	129	100

Let us focus briefly on the L1 Welsh speakers in the sample. Most participants who were brought up speaking Welsh as their first language increased their use of English as they got older (table 5.8 and figure 5.3). This is a very common pattern of language use among bilinguals in Wales (Gathercole & Thomas 2009). 129 people claimed that they “always or almost always” used Welsh at age 0-3. This number halved at age 4-11 (N = 63) and halved again at age 12-17 (N = 30). Although most L1 Welsh participants increased their use of English relative to their use of Welsh during their childhood and teens, it should be noted that they nonetheless continued to use their Welsh. Few participants shifted entirely, or almost entirely, to English. By age 12-17 only 2 of the 129 L1 Welsh speakers “always or almost always” used English and only 5 claimed they “always or almost always” used English nowadays. In other words, it could be argued that 96% of those in the sample who began life with Welsh as their L1 have maintained their use of Welsh, even if they also use English. In fact, more of these early Welsh speakers always or almost always use Welsh now (N = 43) than did at age 12-17 (N = 30); for some L1 speakers in the sample, their use of Welsh has increased in adulthood.

Figure 5.3: Bar chart showing relative use of Welsh and English among the respondents who “always or almost always” used Welsh at age 0-3. N = 129; missing cases = 0.



5.2.3 Ability to speak, understand, write and read Welsh

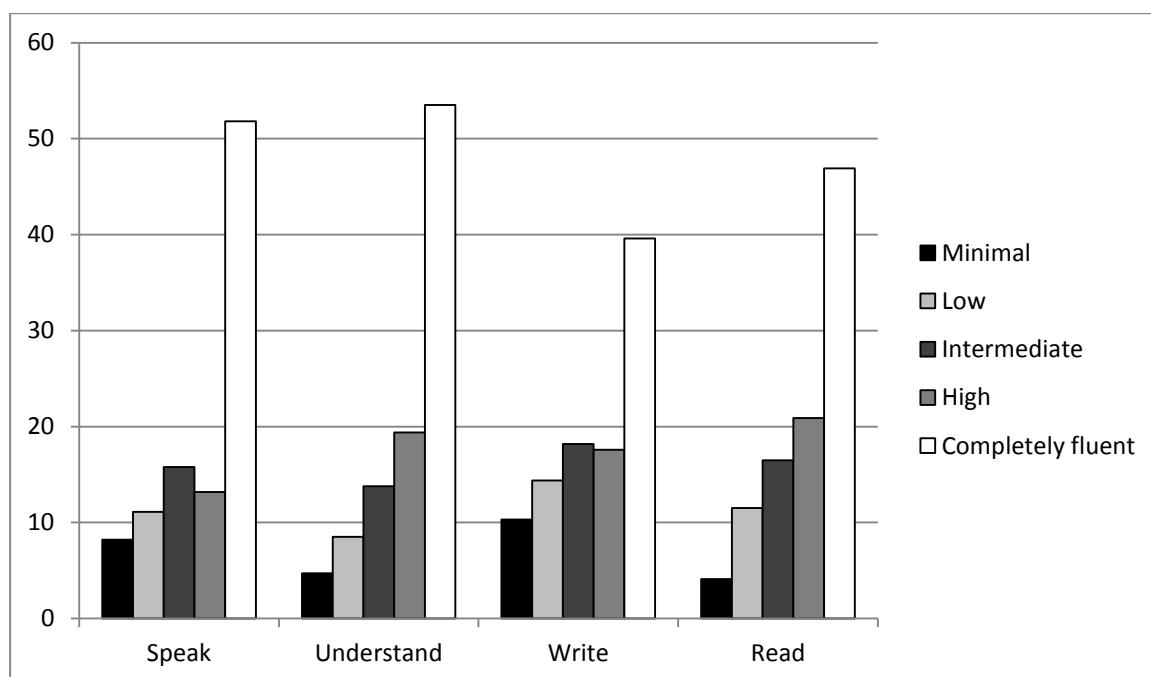
Table 5.9: Frequency of self-reported ability to speak, understand, write and read Welsh. Missing cases: speak = 16; understand = 18; write = 17; read = 19.

Ability	Speak		Understand		Write		Read	
	N	%	N	%	N	%	N	%
Minimal	28	8.2	16	4.7	35	10.3	14	4.1
Low	38	11.1	29	8.5	49	14.4	39	11.5
Intermediate	54	15.8	47	13.8	62	18.2	56	16.5
High	45	13.2	66	19.4	60	17.6	71	20.9
Completely fluent	177	51.8	182	53.5	135	39.6	159	46.9
Total	342	100	340	100	341	100	339	100

Direct comparisons cannot be made between the Welsh skills reported in the present study and in the 2011 census due to the use of different questions in the two surveys. The census asked “Can you understand, speak, read or write Welsh?” (Office for National Statistics 2011) but did not ask people to indicate their level of proficiency in each skill. It is therefore reasonable to assume that people with a low to intermediate level of ability in Welsh are more likely to be counted as having some knowledge of Welsh in the present study than in the census data. Despite not being able to compare the two directly, it is noted that both the census data and the present study reveal variation in Welsh skills among those who claim to have at least some knowledge of Welsh. In the census, 54.9% of those who reported some Welsh skills claimed to

be able to speak, read and write Welsh, while the remainder had some lesser combination of skills (Welsh Government 2012a: n.p.n.).⁴⁹ In the present study, the data on self-reported language proficiency were highly skewed (table 5.9 and figure 5.4). The most common response for each of the four Welsh language skills was “completely fluent”. 38.1% of the sample indicated that they were completely fluent in all four Welsh skills (these respondents will be termed ‘superfluent’).

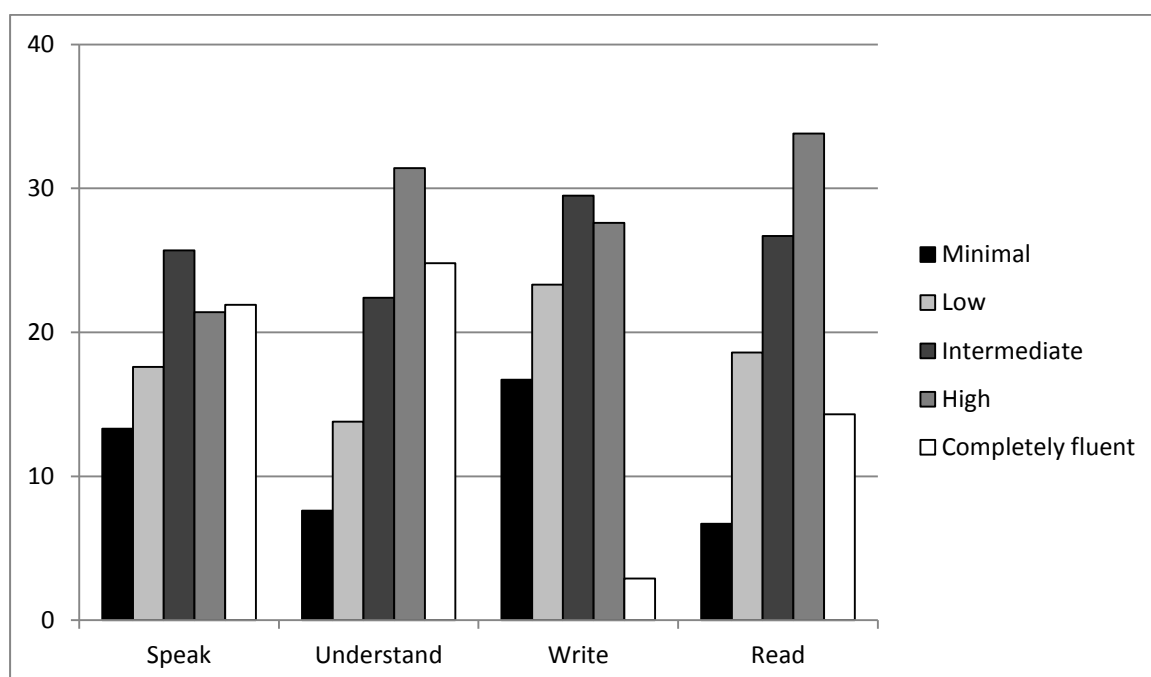
Figure 5.4: Bar chart showing ability to speak, understand, write and read Welsh among all participants, as a percentage of all non-missing cases. Total N=358; missing cases as previous table.



Most (89.1%) of those deemed superfluent acquired their Welsh naturally; however 40.1% of those who acquired their Welsh naturally said that they did not consider themselves completely fluent in all four skills. 60.3% of those who attended Welsh-medium primary school, and 63.0% of those who went to Welsh-medium early secondary school, considered themselves to be superfluent, which suggests that more than a third of those who were educated through the medium of Welsh believe they are not completely competent in all four language skills. 40.5% of those who went to bilingual primary school and 49.5% of those who went to bilingual secondary school reported that they were superfluent in Welsh, which implies that less than half of the bilingually-educated respondents in the sample believed they were completely fluent in all four Welsh skills. This finding is not investigated further in the thesis, but may be of interest to applied linguists and others who are concerned with the language proficiency outcomes of different forms of minority language education.

⁴⁹ The Welsh Government’s initial report highlights this particular combination of skills in order to facilitate comparison with previous censuses, in which the Welsh language question was worded differently.

Figure 5.5: Bar chart showing ability to speak, understand, write and read Welsh among respondents who did not claim to be completely fluent in all four language skills, as a percentage of all non-missing cases. N=210; missing cases = 19.



If the superfluent participants are filtered out of the sample, the data become less skewed and we can examine variation among the four language skills more easily (figure 5.5). Among the 210 participants who were not superfluent, respondents reported, on average, significantly higher ability to understand spoken Welsh than to speak it themselves and significantly higher ability to read Welsh than to write Welsh themselves.⁵⁰ Participants gave their oral skills a significantly higher rating, on average, than their written skills: the group reported that their listening skills were better than their reading skills and that their speaking skills were better than their writing skills.⁵¹ Again, no direct comparison with census data is possible, but, as in this survey, the 2011 census found that some people in Wales drew a distinction between their oral and written Welsh skills. 10.1% of those who indicated that they had some Welsh skills, for example, said they could speak Welsh but not read or write it (Welsh Government 2012a: n.p.n.).

It is important to note that the average patterns of Welsh language proficiency described above are not common to all non-superfluents, but are strongly associated with acquisition context. Most (82.3%) of the non-superfluents who acquired their Welsh naturally felt that they were less fluent in written skills than in oral skills; only one person in this group (1.3%) rated their written

⁵⁰ Ability to understand: $M = 3.52$, $SD = 1.219$; ability to speak: $M = 3.21$, $SD = 1.328$; difference: $t(209) = 5.898$, 2-tailed, $p < .001$. Ability to read: $M = 3.30$, $SD = 1.129$; ability to write: $M = 2.77$, $SD = 1.114$; difference: $t(209) = 11.151$, 2-tailed, $p < .001$.

⁵¹ Difference between ability to listen and ability to read: $t(209) = 3.776$, 2-tailed, $p < .001$; difference between speaking and writing: $t(209) = 7.078$, 2-tailed, $p < .001$.

skills higher.⁵² In contrast, only a third (33.1%) of those who acquired their Welsh in the classroom, or through a mixture of formal and informal learning, rated their oral Welsh skills more highly than their written skills; a quarter (25.4%) of the group thought that their written Welsh skills were better than their oral skills. These findings have implications for the measurement of (self-reported and actual) language proficiency, since they suggest that it is not always possible to assume that language proficiency can be measured with reference to only one skill. While, in the present study, the overall proficiency of L1 speakers of Welsh might reasonably be inferred from their ability to speak Welsh, the same cannot be said of second language learners. This issue is examined further in chapter 7.

5.2.4 Language(s) of education

Table 5.10 shows the proportion of the sample who used Welsh, English or both Welsh and English at school, at each level of education.⁵³ It is clear from visual inspection of the data that a pattern is present: of those who went to nursery, half (50%) reported using Welsh as the medium of education; this figure becomes smaller as educational level progresses through primary and secondary school to higher education.

Table 5.10: Frequency of language(s) of education at five educational levels. Percentages do not add up to 100% exactly due to rounding.

	Welsh		English		Bilingual		Other or N/A		Total	
	N	%	N	%	N	%	N	%	N	%
Nursery Missing cases = 42	116	36.7	85	26.9	31	9.8	84	26.6	316	100
Primary Missing cases = 18	146	42.9	116	34.1	75	22.1	3	0.9	340	100
Early secondary Missing cases = 17	92	27.0	147	43.1	99	29.0	3	0.9	341	100
O-Levels Missing cases = 24	80	24.0	156	46.7	84	25.1	14	4.2	334	100
A-Levels Missing cases = 31	65	19.9	158	48.3	60	18.3	44	13.4	327	99.9
Higher Missing cases = 46	34	10.9	173	55.4	37	11.8	68	21.8	312	99.9

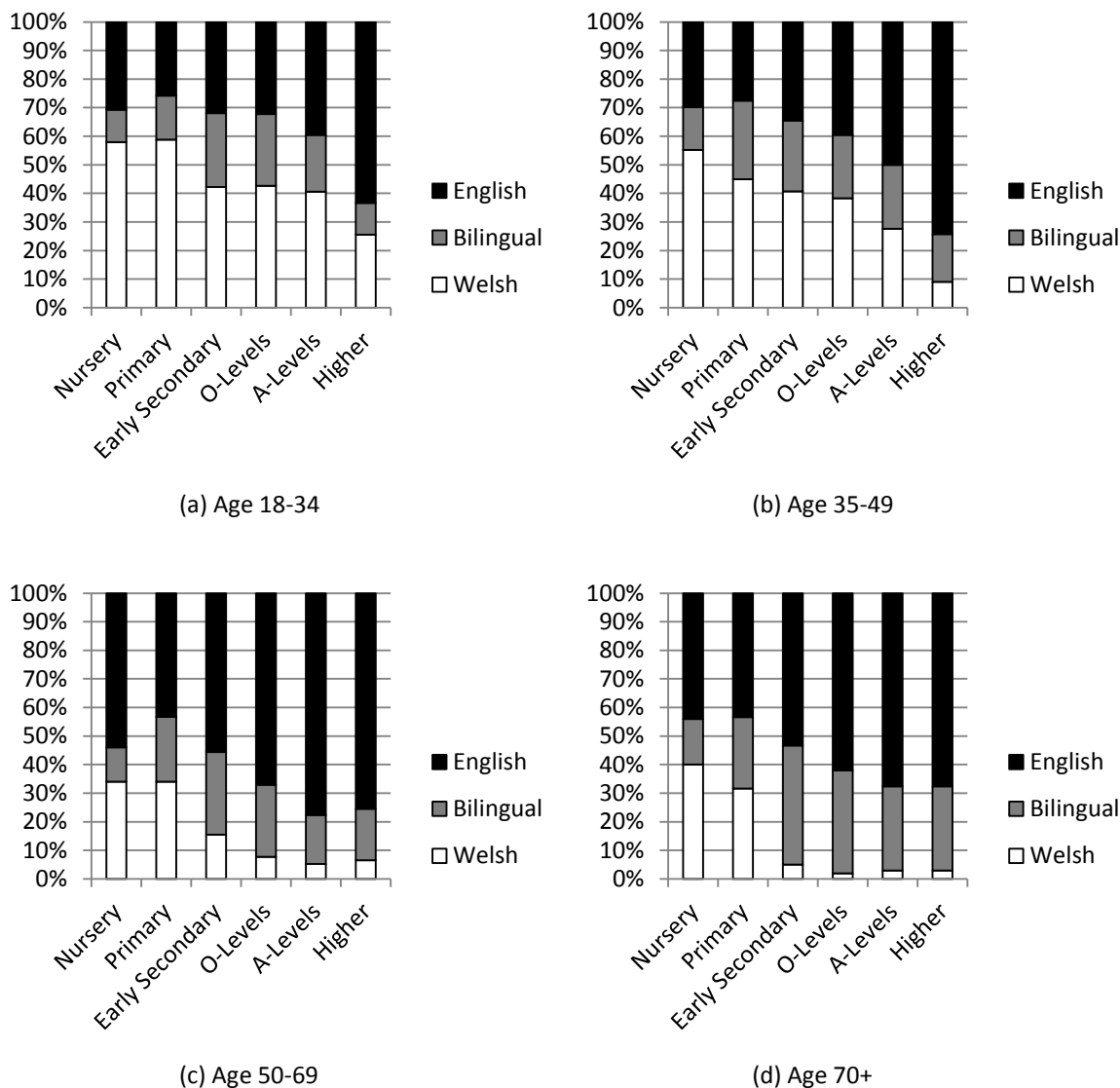
When these data are organised by age (figure 5.6), a similar pattern emerges for each group, with fewer people learning through Welsh as the level of education becomes higher. The differences among age groups are notable, however. The proportion of respondents who

⁵² Individual scores for reading and writing Welsh were added together to obtain a value for “written Welsh” for each respondent and scores for speaking and listening were added together to obtain a value for “oral Welsh” for each person. The two results were then compared.

⁵³ A small number of respondents who reported that they attended both a Welsh-medium and an English-medium school (e.g. due to moving house) at a given level were included in the bilingual group.

attended Welsh-medium schools is noticeably larger in the two younger age groups than the two older ones. It is particularly striking that a quarter of the 18-34 year olds in the sample who went to university studied through the medium of Welsh – more than double the proportion who did so in the previous generation. The findings reflect the increase in provision of Welsh-medium education from generation to generation (see chapter 1).

Figure 5.6: Bar charts showing the language(s) used at school among four age groups as a percentage of non-missing cases. Those who responded “not applicable” or “other” have been excluded for the sake of clarity.



In order to simplify the data for the medium of education question, and to avoid issues related to missing data (see chapter 4), only the primary and early secondary levels of education were used in the analysis presented in the remainder of this chapter.

5.2.5 Summary

358 respondents in total were included in the dataset for the survey. 313 questionnaires with no missing data were available for further quantitative analysis (sections 5.4 onwards in this chapter); the remaining 45 questionnaires, including the outlier identified above, were set aside and incorporated into the qualitative analysis (chapter 6). The sample included people from a range of age groups and was slightly biased in favour of female participants. Over half the sample (57.8%) acquired their Welsh naturally, without any formal tuition. 38.1% of the sample were judged 'superfluent' as they claimed to be fully fluent in all four language skills; the remainder had a spread of different language abilities. Overall, the data were well-distributed.

Some of the variables were examined more closely and it was found that respondents' answers broadly reflect the variation present in the wider population. Some interesting findings emerged. First, it was observed that a third of those educated through the medium of Welsh, and half of those educated bilingually, believe that they are not completely competent in all four Welsh language skills. This issue should be examined further in future research. Second, while most of those non-superfluents who acquired Welsh naturally reported that their oral skills were better than their written skills, the reverse was the case for those who learnt Welsh wholly or partly in the classroom. This finding becomes pertinent when individual differences are studied in chapter 6.

5.3 Results: Focus on L1 Welsh speakers

Welsh speakers I met during this research often commented on the perceived outcomes of English- or Welsh-medium education among L1 Welsh speakers.⁵⁴ Before moving on to look at the four media scenarios which lie at the heart of the quantitative analysis, I examine some of the views expressed by participants in the study.

5.3.1 Self-reported proficiency in Welsh among L1 Welsh speakers according to language of education

In the course of the fieldwork undertaken for this thesis, several Welsh speakers commented that they, or others they knew, were happier writing in English than in Welsh, because they had attended English-medium schools and had never been formally taught to write in Welsh. Similarly, one of the producers in the preliminary study suggested that reluctance to write in Welsh was "probably more prevalent amongst middle aged people who haven't had their education in Welsh than the younger audience who would be much happier to write something that wasn't correct" (chapter 3). In order to test the education aspect of this assertion, it was

⁵⁴ Note that L1 Welsh speakers are defined in the present study as those who "always or almost always" used Welsh at age 0-3 (see section 5.2.2).

hypothesised more specifically (hypothesis H6) that L1 Welsh speakers who had been educated through English would report lower proficiency in written Welsh skills than those who had been educated through Welsh. (No difference in self-reported oral Welsh skills was expected between the two groups.) Respondents who attended bilingual schools were omitted from this analysis.

Among L1 Welsh speakers, t-tests (2-tailed) suggested that there was no significant difference in self-reported ability to speak or understand Welsh between those who attended English-medium primary school and those who had their primary education in Welsh.⁵⁵ There were significant differences, however, when it came to reading and writing skills. L1 Welsh speakers who attended English-medium primary school (N = 10) reported lower ability in both reading and writing Welsh than their Welsh-educated counterparts (N = 84).⁵⁶ Similar results were found when L1 Welsh speakers were grouped by early secondary education: the 49 respondents who attended Welsh-medium secondary school reported higher proficiency in writing Welsh than the 26 who attended English-medium secondary school.⁵⁷ There was, however, no significant difference in self-reported ability to speak, understand or read Welsh between the two groups.⁵⁸ Means and standard deviations are presented in table 5.11.

Table 5.11: Mean self-reported ability in four language skills among L1 Welsh speakers, according to medium of education (bilingually-educated respondents are omitted from this analysis). Welsh-medium primary N = 84; English-medium primary N = 10; Welsh-medium early secondary N = 49; English-medium early secondary N = 26.

	Primary	M	SD	Early secondary	M	SD
Ability to speak Welsh	Welsh	4.81	.548	Welsh	4.73	.670
	English	4.60	.699	English	4.54	.859
Ability to understand spoken Welsh	Welsh	4.88	.361	Welsh	4.90	.368
	English	4.70	.483	English	4.54	.859
Ability to write Welsh	Welsh	4.57	.826	Welsh	4.59	.814
	English	4.00	.816	English	3.88	1.243
Ability to read Welsh	Welsh	4.75	.599	Welsh	4.69	.683
	English	4.30	.949	English	4.23	1.070

These results support the hypothesis (H6) that L1 Welsh speakers educated through English report lower proficiency in written Welsh skills than those educated through Welsh.

⁵⁵ Ability to speak: $t(92) = 1.109, p = .270$; ability to understand: $t(10.2) = 1.147, p = .277$.

⁵⁶ Ability to read: $t(92) = 2.097, p = .039$; ability to write: $t(92) = 2.071, p = .041$.

⁵⁷ $t(36.7) = 2.617, p = .013$.

⁵⁸ Ability to speak: $t(73) = 1.092, p = .317$; ability to understand: $t(29.9) = 2.037, p = .051$; ability to read: $t(36.1) = 2.001, p = .053$.

5.3.2 Use of Welsh among L1 Welsh speakers according to language of education

The link between L1 Welsh speakers' language of education and their use of Welsh was also investigated. Respondents who attended bilingual schools were again omitted from the analysis. The L1 Welsh speakers who attended an English-medium primary school reported using their Welsh significantly less nowadays, relative to their English, than those who went to a Welsh-medium primary school.⁵⁹ With regard to early secondary education, those who attended an English-medium school reported using relatively less Welsh nowadays than those who went to a Welsh-medium school.⁶⁰ Welsh-medium education may have influenced Welsh speakers' use of the language in adulthood, e.g. by opening up Welsh-speaking job opportunities and fostering Welsh-speaking relationships. Conversely, it may be those who already preferred speaking Welsh, and were most likely to continue speaking Welsh in adulthood, who chose (or whose parents chose) a Welsh-medium secondary school.

5.3.3 Summary

In this section, it has been shown that, as participants in the study suggested, L1 Welsh speakers educated through the medium of English report lower levels of proficiency in writing Welsh, and also use their Welsh less nowadays, than those L1 Welsh speakers educated in Welsh.

Having examined responses to parts B and C of the research questionnaire, in the remaining sections, I analyse the 313 complete responses to the scenarios presented in part A of the survey.

5.4 Results: Responses to the four scenarios

In chapter 4, I described the development of various fictional scenarios, in which audiences were offered the opportunity to take part in media content. Before summarising responses to these scenarios, I first present a recap of the four scenarios included in the analysis. (For the full wording of the four scenarios, see appendix A.)

The four scenarios differ in terms of the level of demand they place on audiences' (a) oral and (b) written skills (see chapter 2). Since each of the four scenarios included in the study uses one modality only, these differences may be framed in terms of two variables: 'literacy', i.e. whether participation requires the audience to be literate in Welsh or not, and 'demand', i.e. whether participation involves engaging in synchronous conversation (high demand) or simply reacting to others' oral or written Welsh (low demand).

⁵⁹ English-medium primary: $N = 10$, $M = 3.10$, $SD = 1.370$; Welsh-medium primary: $N = 84$, $M = 3.89$, $SD = 1.053$; difference: $t(92) = 2.178$, $p = .032$.

⁶⁰ English-medium early secondary: $N = 26$, $M = 3.15$, $SD = 1.317$; Welsh-medium early secondary: $N = 49$, $M = 3.96$, $SD = .978$; difference: $t(40.0) = 2.742$, $p = .009$.

In scenario 1 (the strong oral scenario), the audience is invited to take part in a TV programme by phoning in and talking to the show’s producer about their personal views or experiences. Scenario 2 (the weak oral scenario) invites respondents to take part in a TV programme by coming to sit in the studio audience. Scenario 3 (the strong written scenario) gives participants the chance to take part in an online discussion, by typing messages in real time. Finally, in scenario 4 (the weak written scenario), the audience is given a leaflet inviting them to send a photo in to a TV programme. Table 5.12 shows how the scenarios vary in terms of literacy and demand.

Table 5.12: Literacy and demand values for the four scenarios.

Scenario	Literacy	Demand
1 (phone-in: strong oral)	Not required	High
2 (studio audience: weak oral)	Not required	Low
3 (online chat: strong written)	Required	High
4 (photo: weak written)	Required	Low

An overview of 313 participants’ responses to these four scenarios is presented here as a prelude to the main quantitative analysis, that is, the preparation, specification and testing of a path model of willingness to participate (sections 5.5 to 5.6). Variation in responses according to scenario is examined further in section 5.7.

5.4.1 State self-perceived communicative competence

State self-perceived communicative competence (SPCC) refers to a person’s internal feeling of competence in the face of a specific communication situation at a specific time. It is related to self-reported language ability, which is an ongoing, trait-like property of a person (see chapter 2). Self-reported Welsh language ability is hypothesised to be a strong predictor of SPCC, but not a direct replication of it. Respondents indicated their state SPCC for each scenario using a 5-point Likert scale (see chapter 4).

A large proportion of the sample rated themselves as highly skilled in Welsh (figure 5.4) so it came as no surprise that the state SPCC data were skewed in the same direction. In each of the scenarios, more than half the respondents in the survey believed they were probably competent enough, or completely competent, to take part (table 5.13). Visual inspection of the data suggested that scenarios 1 and 3 were perceived, on average, as more taxing than scenarios 2 and 4.⁶¹

⁶¹ As the order of the scenarios was not randomised in administration, it was possible that the order of the scenarios could have affected respondents’ answers; fortunately, these data – which show a pattern

Table 5.13: Frequency of SPCC in the four scenarios. N = 313.

Scenario	Not at all competent		Probably not competent enough		Not sure		Probably competent enough		Completely competent	
	N	%	N	%	N	%	N	%	N	%
1 (strong oral)	36	11.5	61	19.5	21	6.7	91	29.1	104	33.2
2 (weak oral)	22	7.0	28	8.9	20	6.4	93	29.7	150	47.9
3 (strong written)	37	11.8	42	13.4	36	11.5	81	25.9	117	37.4
4 (weak written)	13	4.2	22	7.0	21	6.7	104	33.2	153	48.9

5.4.2 State communication apprehension

State communication apprehension (CA) refers to a person’s feelings of psychological discomfort when presented with a specific communication situation, at a specific moment in time (see chapter 2). Respondents indicated their state CA for each scenario using a 5-point Likert scale (see chapter 4).

In chapter 4, provisional values for state CA were calculated by taking the mean of the three indicator variables, *flustered*, *fearful* and *not-self-assured*. These values – which were not used in the main analysis (see section 5.5.4) – are summarised in table 5.14. Scenario 1 (the phone-in) appeared to provoke the greatest communication apprehension out of the four scenarios, as measured on this scale, and scenario 4 (taking a photo) the least.

Table 5.14: Mean CA in the four scenarios, with standard deviations. N = 313. Note that the values for CA used to produce this table were not the same as those used in the main analysis (see section 5.5.4).

Scenario	M	SD
1 (strong oral)	2.95	1.004
2 (weak oral)	2.27	.839
3 (strong written)	2.59	.952
4 (weak written)	2.15	.770

5.4.3 State willingness to participate

State willingness to participate (WTP) refers to a person’s internal feeling of willingness to take part in the scenario presented. Questionnaire respondents indicated their state WTP for each scenario using a 5-point Likert scale (see chapter 4).

The majority of the sample thought they would probably not (37.7%) or definitely not (18.2%) choose to take part in scenario 1, in which they were expected to hold a telephone conversation with a TV producer. Scenario 2 was more popular, as the majority of the sample thought they

consistent with the relative demand of the scenarios presented – suggest that an ordering effect is not present.

would probably (40.9%) or definitely (15.0%) choose to sit in a live studio audience. Respondents were divided over scenario 3: 97 people (31.0%) indicated that they would probably not take part in the online chat, while 99 (31.6%) thought they probably would do so. 7.0% said they would definitely choose to take part in the online chat, but 16.3% were sure that they would not take part. Scenario 4 received a relatively positive response, with more than half of the sample indicating they would probably (43.1%) or definitely (12.1%) participate in a discussion programme by submitting a photo they had taken. Full results are given in table 5.15.

Table 5.15: Frequency of willingness to participate in the four scenarios. N = 313.

Scenario	Would you choose to take part?									
	No, definitely not		No, probably not		Don't know		Yes, probably		Yes, definitely	
	N	%	N	%	N	%	N	%	N	%
1 (strong oral)	57	18.2	118	37.7	39	12.5	79	25.2	20	6.4
2 (weak oral)	32	10.2	74	23.6	32	10.2	128	40.9	47	15.0
3 (strong written)	51	16.3	97	31.0	44	14.1	99	31.6	22	7.0
4 (weak written)	28	8.9	57	18.2	55	17.6	135	43.1	38	12.1

5.4.4 WTP among middle-aged audiences

In chapter 3, it was hypothesised (H5) that respondents aged 35-49 would report lower WTP than respondents aged 18-34 in scenarios that require them to write in Welsh. In order to test this hypothesis, levels of state WTP in scenario 3, the online chat, were compared across the two age groups using an independent samples t-test (2-tailed). While the 35-49 year old age group did report slightly lower WTP (M = 2.87) than the 18-34 group (M = 3.04), the difference was not significant.⁶² The hypothesis was therefore not supported. This finding was surprising, as it contrasted with a producer's reported experiences of eliciting audience participation (chapter 3). Upon further examination, however, it was found that the lack of association between age group and WTP might be attributed to the limited age range examined. Welsh-medium education has expanded gradually, over generations, not just recent decades (see figure 5.6), so any effects related to changes in the education system, while non-significant between the two youngest age groups, might be observable across the span of the whole age range. Indeed, when age was correlated with WTP, increasing age was found to correlate negatively with WTP in the two written scenarios, but not in the two oral scenarios. This finding is consistent with the observation that older people in the sample are less likely to have been educated through the medium of Welsh than younger people and therefore may be less confident in their ability to read and write in Welsh (see also section 5.3.1). Further investigation revealed, however, that

⁶² $t(172) = .953, p = .342$.

respondents' language(s) of education and Welsh proficiency are better predictors of WTP than age; the effect of age was not significant in the chat room scenario, and was only small in the photo scenario, once other background variables had been taken into account. Age was therefore considered unimportant in explaining WTP and was not specified in the path model (section 5.6).

5.4.5 Sex

In chapter 3, it was hypothesised that respondents' sex is not associated with CA, SPCC or WTP (hypothesis H7). In order to test this, a series of independent samples t-tests was conducted. As anticipated, sex was found not to be significantly associated with CA, SPCC or WTP in any of the four scenarios; nor was it associated with Welsh language background or ability. The hypothesis was supported; therefore there were no grounds to specify sex as an exogenous variable in the path model of WTP (section 5.6).

This section has provided a simple summary of results, as well as an examination of hypotheses H5 and H7; differences among the four scenarios are tested for significance and discussed further in section 5.7. I now move on to the main analysis, in which a model of WTP is hypothesised and tested.

5.5 Modelling WTP: Preparatory work

The analysis that follows uses path analysis, a simple form of structural equation modelling (SEM), to examine relationships among variables (see chapter 4). In order to test the internal structure of WTP, it was necessary to translate the conceptual model presented in chapter 3 into a hypothetical structural equation model. Preparatory work was needed before the structural model could be specified, and this is described below.

5.5.1 Principal components analysis (PCA)

Although various items pertaining to Welsh language background were gathered in the audience survey, it was anticipated that some of them would be highly correlated and therefore not all would be needed, in order to depict the dataset. Multicollinearity is also a problem for SEM; it may not be possible to 'run' a model whose exogenous variables are too highly correlated. Therefore, it was important to reduce the Welsh background data to a small number of more discrete dimensions. To achieve this, a factor analysis (using the principal components analysis (PCA) method of extraction) was conducted on 11 Welsh language background variables: the four language abilities, use of Welsh at four life stages, medium of education at primary and early secondary levels and language acquisition context. Two factors were extracted with eigenvalues greater than 1.00. Since the factors were expected to correlate with each other, oblique (oblimin) rotation was used to interpret the factor structure (Howitt & Cramer 2011:

292).⁶³ The first factor accounted for 69.5% of the variance in the data and the second factor accounted for 9.1% (total = 78.6%). The second factor was interpretable as “Welsh language ability”, since the four language abilities loaded markedly more highly than any of the other variables on this factor. The first component, on which acquisition context, use at ages 0-3, 4-11 and 12-17 and the two education variables loaded more highly, was interpreted as “Welsh language background”. Current Welsh use loaded on both components. The variables contributing the most to each factor are listed in table 5.16 for reference. Since oblique rotation was used, the two factors were correlated ($r = .73$).

Table 5.16: Variables which loaded most highly on the two Welsh language background factors.

Welsh language background	Welsh language ability
Welsh language acquisition context	Ability to speak Welsh
Use at age 0-3	Ability to understand spoken Welsh
Use at age 4-11	Ability to write Welsh
Use at age 12-17	Ability to read Welsh
Medium of primary education	
Medium of early secondary education	

To check the stability of the factor structure, the PCA was repeated with several subsamples selected at random from the data. The two-factor solution was replicated in around half the analyses; in other cases, the data was found to be unidimensional. Unidimensional solutions accounted for a smaller proportion of the variance in the data than the two-factor structures. Although a two-dimensional structure was deemed appropriate for the current sample, the lack of stability across samples suggests that it cannot be assumed that future samples will have the same structure.

The PCA process deliberately obscures variation among the four language abilities, in order to enable a relatively simple model to be specified. As this variation is of interest in the present study, the four language skills are separated again for further analysis in section 5.8 and chapter 6.

⁶³ Howitt and Cramer argue that oblique rotations “may be more realistic than orthogonal rotations. One way of looking at this is to consider height and weight. These are distinct variables but they correlate to some degree” (Howitt & Cramer 2011: G5). In the present case, it was judged that uncorrelated components would be unrealistic in a context where all the language background items could be expected to correlate. An oblique rotation was therefore considered more appropriate than an orthogonal rotation (such as varimax) in this instance.

5.5.2 Specification of the measurement model

The audience questionnaire was designed with the requirements of general multivariate statistical techniques (such as multiple regression) in mind; it was not until data collection had begun that it became apparent that SEM in particular would be an appropriate way to test the conceptual model of WTP, due to the inclusion of multiple dependent variables (CA, SPCC and WTP) and the interdependencies expected to be found among them. Although the timing of this realisation meant that the sample size could be informed by the needs of SEM, it also meant that the gathering of multiple measures of SPCC and WTP was not prioritised in the survey design (chapter 4). This happens quite often, as Hoyle (2011) acknowledges: “when data to be analyzed using SEM were not collected with SEM in mind, it is not uncommon for one or more key constructs to be represented in the data set by a single observed variable” (Hoyle 2011: 21).

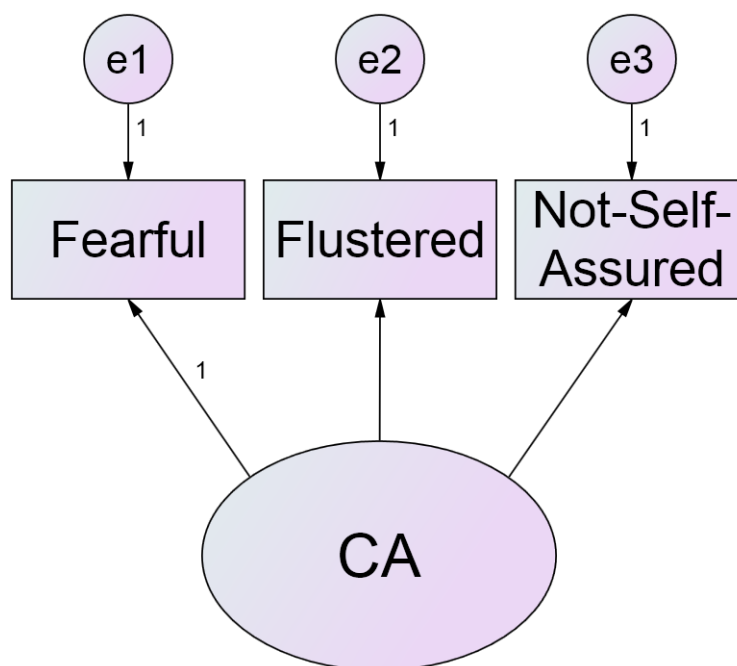
When some variables are measured using one questionnaire item, as in the present case, there are two common options open to researchers. One possibility is to treat the model as partially latent (Kline 2011: 276), with a mixture of latent and observed variables. Alternatively, a single-indicator latent variable can be specified with a fixed error term, based on an estimate of the reliability of the item (Hoyle 2011: 21, Kline 2011: 276). However, as Kline (2011: 276) says, “this alternative requires an a priori estimate of the proportion of variance in a single indicator that is due to measurement error (10%, 20%, etc.). This estimate may be based on the researcher’s experience or on results of previous studies”. For well-established survey items, researchers may be able to make an informed guess at the reliability of the item in their own questionnaire, but in the present study, where the relevant items had not already been tried and tested in this particular form, it was not at all clear what proportion of variance could be attributed to measurement error. Kline (2011: 278) suggests that in such instances, the researcher may try several different estimates and evaluate the effects of these. This appeared to be a reasonable approach in models where most variables are measured using multiple indicators, and one exceptional variable has only a single indicator. In the present case, however, the one latent variable (CA) was the exception in the model; all the other variables were single-indicator items. The decision was taken, therefore, to remain open-minded about the specification of the measurement of SPCC and WTP until confirmatory factor analysis had been conducted on CA and its indicators.

5.5.3 Confirmatory factor analysis (CFA)

Before beginning the confirmatory factor analysis (CFA), data pertaining to the four scenarios were combined (i.e. each participant in the survey became four cases, one per scenario, $N = 1252$), so that one CFA could be conducted across all data simultaneously. The measurement model was then specified (figure 5.7). Three indicators of communication apprehension, *not-*

self-assured, *fearful* and *flustered*, were specified, and error terms were associated with the observed variables. As is usual in CFA, the error regression weights were fixed to 1 for ‘identification’ purposes (Byrne 2010: 49).⁶⁴ One of the paths between CA and its indicators was fixed to 1; this is simply a scaling constant, i.e. a reference point from which the software can estimate higher or lower values for the other parameters (Kline 2011: 113). The selection of the path on which this constraint is placed is usually arbitrary (Byrne 2009: 45); in the present CFA, *fearful* was chosen as the reference item.

Figure 5.7: Measurement model to be tested. The latent variable, CA, is depicted as an oval, the manifest variables (indicators) are rectangles, and the measurement error terms associated with observed variables are drawn as circles.



Once the measurement model had been specified, its identification status was checked (by running the estimation calculation in Amos) and was found to be identified. This was as expected, since the “three indicator rule” (Kline 2011: 138) states that, “if a standard CFA model with a single factor has at least three indicators, the model is identified”. As the model was just-identified, estimates for the parameters could be computed; however, with zero degrees of freedom, the fit of the model could not be assessed (Garson 2011b).

The latent factor CA was found to account for 29.4% of the variance in *not-self-assured*, 85.7% of the variance in *fearful* and 79.3% of the variance in *flustered* (table 5.17). The remainder of the variance in the indicator values (i.e. the error variance) was unexplained by the latent variable

⁶⁴ Identification is a complex issue which I cannot do justice to here. Suffice it to say, in order for a model’s parameters to be estimated, a model must be identified, that is, there must be at least as many known (fixed) parameters as unknown (free) parameters in the model. For the fit of a model to be tested, a model must be over-identified, i.e. there must be more fixed parameters than free. A full discussion of identification can be found in Kline (2011: 124-149).

CA. Since a CFA model should ideally explain more than 50% of the variation in each indicator (Kline 2011: 231), *not-self-assured* was judged to be a poor measure of CA.

Table 5.17: Squared multiple correlations for indicators of communication apprehension.

Indicator	Estimate
<i>Not-self-assured</i>	.294
<i>Flustered</i>	.793
<i>Fearful</i>	.857

Factor score weights were also estimated (table 5.18). These can be interpreted as indications of how much each indicator contributes to the overall CA factor, e.g. when *fearful* increases by 1 unit, the predicted value for CA increases by 0.534 units. It can be seen that *not-self-assured* contributes very little to CA in the measurement model tested: when *not-self-assured* increases by 1 unit, the predicted value for CA increases by just 0.065 units. Since *not-self-assured* was found to be a poor indicator on three related measures (it had a relatively low Cronbach’s alpha (chapter 4), could not be explained well by the latent CA factor and contributed little to the CA factor), this indicator was omitted from the model and was not analysed further.

Table 5.18: Factor score weights for the three items intended to measure communication apprehension.

	<i>Not-self-assured</i>	<i>Flustered</i>	<i>Fearful</i>
Communication apprehension	.065	.345	.534

5.5.4 Opting for a non-latent approach

Having dropped the *not-self-assured* indicator, the one latent variable in the hypothesised model now had just two indicators, which is normally not recommended as “factors that have only two indicators are more prone to problems in the analysis” (Kline 2011: 137). As a result, it was decided that the specification of a full SEM model was not advisable, and a simpler path analysis model, better suited to the data, was hypothesised, where all the variables were modelled as single observed values and measurement error was assumed to be zero.

Despite using path analysis rather than full SEM for the analysis, it was still possible to take advantage of having more than one indicator of CA when recoding the data to render it appropriate to the non-latent model. Rather than taking an average value for the two more successful items, *fearful* and *flustered*, or adding them together, it was possible to obtain weighted values, called factor scores, which took into account the items’ relative contribution to the underlying latent factor. To do this, the data gathered for the first four scenarios for *fearful* and *flustered* were entered into a PCA (N = 313). A one-component solution with an eigenvalue of 1.825 was found, which accounted for 91.2% of the variance in the data. In the process of

conducting the PCA, factor scores were computed using the Bartlett method (DiStefano, Zhu & Mîndrilă 2009) and these were used as zero-centred values for a new, non-latent variable representing CA.⁶⁵

5.6 Modelling WTP: Path analysis

Recall that the aim of modelling WTP is to test the relative influence of several psychological, sociobiographical and contextual factors hypothesised to influence audiences' willingness to take part in media content. Specifically, the model should test the hypothesis (H1) that state SPCC and state CA are immediate antecedents to state WTP and provide answers to the following questions:

Q1: Do SPCC and CA influence WTP independently or does one determine the other?

Q2: Does modality or demand play a greater role in predicting WTP?

Before these questions may be addressed, the conceptual model proposed in chapter 3 needs to be translated into a structural model of WTP (section 5.6.1).

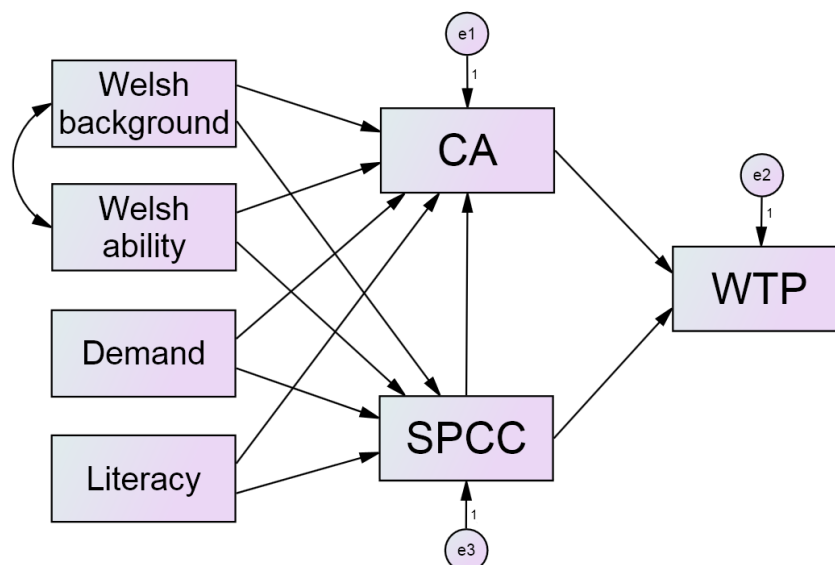
5.6.1 Specification of the structural model

The hypothesised structural model was specified as shown in figure 5.8, with paths from CA and SPCC to WTP and from SPCC to CA. The two predictor variables obtained through PCA (section 5.5.1), Welsh language background and Welsh language ability, were specified as covariants (by linking them with a curved, double-headed arrow) and paths were drawn from each of these variables to both CA and SPCC. It should be remembered that the endogenous psychological variables, CA, SPCC and WTP, are states, while the exogenous sociobiographical variables, Welsh language background and Welsh language ability, are trait-like (see chapter 2). It is expected that ongoing, trait-like properties of a person will predict their transitory feelings of CA, SPCC and WTP in specific situations, rather than the other way round, hence the arrows have been specified in this direction. The hypothesised effects of the four conditions (i.e. scenarios) were represented in the model using the two dimensions used to distinguish them in the present study, namely *demand* (high = 1, low = 0) and *literacy* (required = 1, not required = 0).⁶⁶ Paths were drawn from demand and literacy to CA and SPCC. Disturbance terms were associated with the endogenous variables (Garson 2011a).

⁶⁵ Note, therefore, that the values for CA used in the description of the sample (section 5.4.2) do not match those used in later analyses, and should not be assumed to be equivalent.

⁶⁶ It should be remembered that demand is two-dimensional, since it pertains to both modalities (see chapter 2), so, in a more complex study, two demand variables would be required: (1) demand on oral skills and (2) demand on written skills. In the present study, however, the test conditions are restricted to scenarios involving only one modality (either oral skills or written skills but not both) and only two levels of demand (high or low), hence demand can be described using just one dichotomous variable.

Figure 5.8: Initial input model for path analysis. “Welsh background” = Welsh language background; “Welsh ability” = Welsh language ability.



5.6.2 Estimation

Complete data was available from 313 participants; their responses to the four scenarios were combined into one analysis (N = 1252). The results of the estimation are shown in figure 5.9. The numbers that appear to the top right of the endogenous variables (CA, SPCC and WTP) can be interpreted as the total proportion of variance in the endogenous variables accounted for by their predictor variables (see also table 5.20). The numbers shown along the paths range from -1 to +1 and are denoted by the Greek letter β (see also table 5.19).⁶⁷ Figures for β can be understood as follows: if a path running from Y to Z has a β of .5 (for example), then whenever Y increases by 1 standard deviation, Z will increase by .5 of a standard deviation. Negative β figures imply a negative effect, e.g. if a path running from Y to Z has a β of -.5, then whenever Y increases by 1 standard deviation, Z will decrease by .5 standard deviations.

⁶⁷ When comparing figure 5.9 with table 5.19, be aware that Amos automatically rounds half *down* rather than up, e.g. -.105 is rounded to -.11 and .045 is rounded to .04.

Figure 5.9: Standardised output model showing standardised regression weights obtained after calculating maximum likelihood estimates.

** p = significant at .01 level; * p = significant at .05 level; () p = non-significant.

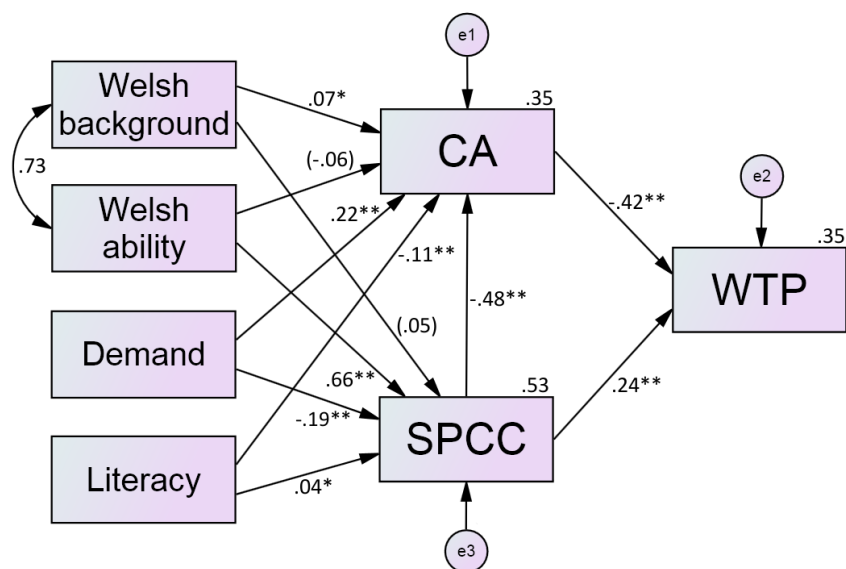


Table 5.19: Regression weights for free parameters in the output model.

	Unstandardised regression weight (b)	Standardised regression weight (β)	p
SPCC \leftarrow Demand	-.508	-.193	<.001
SPCC \leftarrow Welsh language ability	.870	.659	<.001
SPCC \leftarrow Welsh language background	.069	.052	.065
SPCC \leftarrow Literacy	.118	.045	.021
CA \leftarrow Welsh language ability	-.062	-.062	.117
CA \leftarrow Literacy	-.210	-.105	<.001
CA \leftarrow Demand	.436	.218	<.001
CA \leftarrow Welsh language background	.071	.071	.033
CA \leftarrow SPCC	-.368	-.485	<.001
WTP \leftarrow SPCC	.230	.242	<.001
WTP \leftarrow CA	-.529	-.422	<.001

Table 5.20: Squared multiple correlations for the endogenous variables.

	Squared multiple correlation (R^2)
SPCC	.526
CA	.347
WTP	.346

5.6.3 Results: Antecedents to state WTP

It was hypothesised in chapter 3 that state CA and state SPCC are immediate psychological antecedents of state WTP (hypothesis H1); hence the path model was specified with arrows running from CA and SPCC to WTP. The path analysis confirmed that this was indeed plausible. When audiences felt competent to take part, they were likely to be more willing to participate in media content. Audiences' feelings of apprehension were associated with lower willingness to participate. Together, CA and SPCC accounted for 34.6% of the variance in WTP (see section 5.6.6 for a discussion of this figure).

Research question Q1 asks whether SPCC and CA influence WTP independently or whether one determines the other. The direct paths to WTP from both SPCC and CA demonstrate that the two factors operate independently of each other to some extent. However, the presence of a path between SPCC and CA suggests that, to some degree, one factor determines the other. The model has been specified such that audiences' perceptions of competence contribute to their apprehension, rather than the other way round, but since path analysis cannot confirm or disconfirm the direction of arrows specified, it is possible that the relationship operates in the other direction (or potentially as some kind of feedback loop).

5.6.4 Results: Predictors of state SPCC

As expected, audiences' self-perceived competence was found to be closely associated with their underlying self-reported Welsh language ability. Although an individual's prior ability was the strongest predictor of SPCC, certain contextual differences among scenarios presented also influenced how competent audiences felt to take part. Specifically, demand exerted a negative influence on SPCC. Literacy had only a small effect on SPCC, but, interestingly, the effect was the opposite of that which might have been expected (see section 5.6.7). Overall, the model accounted for 52.6% of the variance in SPCC.

5.6.5 Results: Predictors of state CA

Audiences felt most apprehensive when they believed they were not very competent to take part in content and when scenarios placed a high level of demand on their Welsh language skills. Literacy was a negative predictor of CA, which suggested that the sample, on average, reported

slightly lower CA for the scenarios that required literacy in Welsh, than for those that invoked oral Welsh skills. This finding was a surprise and is discussed in section 5.6.7. Overall, the model accounted for 34.7% of the variance in state CA.

5.6.6 Results: Proportion of explained variance

In the previous sections, I have pointed out how much variance in each of the endogenous variables has been explained by the predictor variables in the model (see also table 5.20). The reader may be wondering how to interpret these figures. Should we be pleased with a model that accounts for 34.6% of the outcome variable? The answer to this question is that these figures are relative and should not usually be assessed in isolation. The amount of variance accounted for in an outcome variable may be relative to the complexity of a phenomenon and the maturity of the research field, for example: a very small percentage of variance explained may represent important progress in some fields. Proportions of variance explained are therefore better interpreted with reference to previous work on the same topic, in order to assess whether a new predictor variable, or set of variables, accounts for an outcome variable better than previous work. Yet in the present case, there are no previous models of WTP. Comparisons cannot be made to other work on CA or SPCC, either. Since much of the work on CA and SPCC is conceptualised at a trait-like level, and there is relatively little research pertaining to state CA and state SPCC, examples could not be found of comparable SEM, path analysis or multiple regression studies where the proportion of variance explained was reported. Without being able to make specific comparisons, and bearing in mind the above caveats, I would nonetheless argue that the predictors included in the model account for a respectable chunk of the variation in the three endogenous variables, since, in very general terms, “we usually find r s between $\pm .30$ to $\pm .50$. Squaring these translates into accounting for between only .09 and .25 of the variance. Therefore, .54 is *very large*” (Heiman 2011: 177, italics in original). Including additional relevant variables in the model may increase the amount of variance in WTP accounted for; potential candidates for inclusion in the model are discussed in chapters 6 and 7.

5.6.7 Results: Discussion

The results of the path analysis suggest that willingness to participate in media scenarios is largely predicted by the audience’s level of communication apprehension, as well as, to a lesser extent, their self-perceived competence to participate in each scenario. This supports hypothesis H1. It was also found that, while SPCC and CA are closely linked (it is suggested that a person’s self-perceived competence contributes to their feeling of apprehension), the two factors also operate independently of each other to some extent in predicting WTP (see research question Q1).

The results suggest that the level of demand placed on the audience's language skills influences WTP significantly, via the mediating variables, CA and SPCC, which confirms hypothesis H2. The implication that can be drawn from this finding is that, while an audience's WTP depends on its prior (self-perceived) ability in Welsh, WTP does not depend *entirely* on Welsh language ability. Rather, media producers are able to influence WTP negatively or positively by providing opportunities that place greater or lesser degrees of demand on the audience. This finding is explored further in chapter 7.

In chapter 3, it was hypothesised that oral modes of participation would encourage greater WTP than written modes (H3). This hypothesis is tested explicitly in section 5.7. In the meantime, it is noted that the results of the path model are not consistent with what the hypothesis leads us to expect. If people are more willing to take part in oral scenarios, we might expect them to feel less apprehensive and/or more competent in those situations. Yet, the positive paths between literacy and SPCC/CA demonstrate that it is not oral scenarios, but written ones, which are associated with slightly lower CA and higher SPCC. This surprising finding is explored further in section 5.7.

In research question Q2, I asked whether modality or demand plays a greater role in predicting WTP. The output model (figure 5.9) offers a clear answer to this question: demand is more important than modality in predicting the endogenous variables in the model. Analysis of the variation in responses to the four scenarios, presented in section 5.7, confirm this finding.

While the audience's state CA and SPCC are largely predicted by their self-reported Welsh language ability (partly confirming hypothesis H4), other aspects of their Welsh language background make little, if any, difference to CA and SPCC once language ability is taken into account (partly disconfirming hypothesis H4). Taken together with the findings presented in section 5.3.1, where it was shown that L1 Welsh speakers educated through English reported lower proficiency in written Welsh skills than those educated through Welsh, it appears that factors such as Welsh language acquisition context and the medium of education may only be influential in predicting CA and SPCC insofar as they correlate with Welsh language ability; once a person has high or low ability in Welsh, it is no longer important how that level of ability was attained. This finding is explored further in chapter 6.

5.6.8 Assessment of model fit

The model was tested for goodness-of-fit using a variety of fit measures, in order to establish how well the output model accounts for the dataset and the extent to which there is room for improvement. The first statistic examined was the chi-square test, which is very commonly reported in SEM and path analysis studies as a measure of model fit (e.g. Ferrer-Caja & Weiss

2002, Gaudet & Clément 2008, MacIntyre & Doucette 2010, Tian 2011; cf. Csizér & Dörnyei 2005a who opted not to use the chi-square statistic due to large sample size). Chi-square can be thought of as a measure of the discrepancy between the data and the model, so it is technically a measure of badness- rather than goodness-of-fit. For a well-fitting model, chi-square should not be significant. However, as various authors have reported, “when large samples are used, or when the model includes many observed variables it is easy to fail this test and end up with a significant chi-square” (Ayearst & Bagby 2011). Kenny (2011) suggests that the chi-square test is only reliable for samples with 75 to 200 cases and that “for models with more cases (400 or more), the chi square is almost always statistically significant”. The over-sensitivity of the chi-square test has led to the development of many other indices of model fit, a selection of which is usually reported. Indeed, models may fail the chi-square test while fitting the data very well according to numerous other fit indices (e.g. Papi 2010, whose sample size was 1011). The present analysis had a sample size of 1252 cases (313 participants x 4 scenarios), so it was unsurprising that chi-square was found to be significant (chi-square(9) = 24.675, $p = .003$).

Many alternative fit indices are available; a selection of these is presented in table 5.21. The Bentler-Bonett Index or Normed Fit Index (NFI), Tucker-Lewis Index (TLI) and root mean square error of approximation (RMSEA) are measures of goodness-of-fit that can be evaluated with reference to generally accepted cut-off levels (Hu & Bentler 1999, Kenny 2011). The model was found to be a good fit to the data according to all three of these measures. Hoelter is a measure that can be referred to when the sample size is over 200 and the chi-square statistic is significant (as in this case); it indicates how small the sample size would have to be, for chi-square to become non-significant, and should be over 200 (Kenny 2011). The present model exceeded this threshold. In summary, the model fits the data well according to all the indices inspected.

Table 5.21: Selected fit measures for the output model.

Fit index	Current level	Level of good fit	Evaluation
NFI	.992	>.95 ^a	Good
TLI	.988	>.95 ^b	Good
RMSEA	.037	<.06 ^b	Good
Hoelter .05	858	>200 ^a	Good

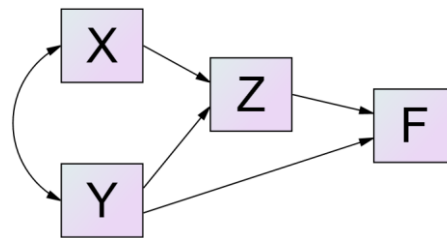
^a Kenny (2011); ^b Hu & Bentler (1999)

5.6.9 Model modification

As discussed in chapter 4, goodness-of-fit should not be the only consideration when accepting or rejecting a model, or selecting a superior model from a number of alternatives; the relative parsimony of the models should also be taken into account. Although the original model of WTP fit the data well, the estimation of non-significant paths in the output model (figure 5.9) suggested that a more parsimonious solution might be found, that would account for the data

comparably well. Two of the paths in the output model ($SPCC \leftarrow$ Welsh language background and $CA \leftarrow$ Welsh language ability) were non-significant; another two ($SPCC \leftarrow$ Literacy and $CA \leftarrow$ Welsh language background) were significant at the .05 level, but not at the .01 level. In order to test whether the model could be improved by dropping some or all of these parameters, a specification search was run (Arbuckle 2011), with all paths from the exogenous variables made optional.

Figure 5.10: Example of a simple input model with four manifest variables.



The specification search feature in Amos calculates model fit for multiple models by testing each potential combination of optional paths and then identifies the best-fitting model for each possible number of parameters. For instance, if paths $Z \leftarrow X$, $Z \leftarrow Y$ and $F \leftarrow Y$ were made optional in the simple model given in figure 5.10, there would be eight possible configurations of the model (figure 5.11 on page 154) in addition to the original input model. Specification search tests each of these possible models in turn and identifies the best-fitting solution with 6 parameters (no optional paths), 7 parameters (one optional path), 8 parameters (two optional paths) and 9 parameters (three optional paths). Within this shortlist of models, the one with the smallest number of parameters is the most parsimonious, but may not fit the data very well. The researcher's job is to identify the model which achieves a balance between fit and parsimony.

In the present study, the eight arrows leading from the four exogenous variables were made optional, which meant that 256 possible models were tested, with 18-26 parameters retained. Scree plots were obtained, which plotted the number of parameters against various fit measures (see Arbuckle 2011 appendix E for details). Inspection of the scree plots revealed that a 22-parameter model offered the best trade-off between parsimony and model fit. The specification search shortlist indicated that the best-fitting 22-parameter model retained the paths from Welsh language ability and demand to SPCC, and from literacy and demand to CA, and omitted the paths from literacy and Welsh language background to SPCC and from Welsh language background and Welsh language ability to CA. These omitted paths corresponded to the four regression weights found to be non-significant at the .01 level in the original output model (figure 5.9). Since a model which omitted these paths was still consistent with the conceptual model, in which unspecified personal background variables and an undeconstructed notion of

participation context influence CA and SPCC (chapter 3), it was considered theoretically justifiable to omit these paths. The four paths were therefore dropped from the model and standardised regression weights and squared multiple correlations were calculated for the modified model (figure 5.12 on page 155).

Figure 5.11: Eight possible configurations of the example model above, with three paths made optional.

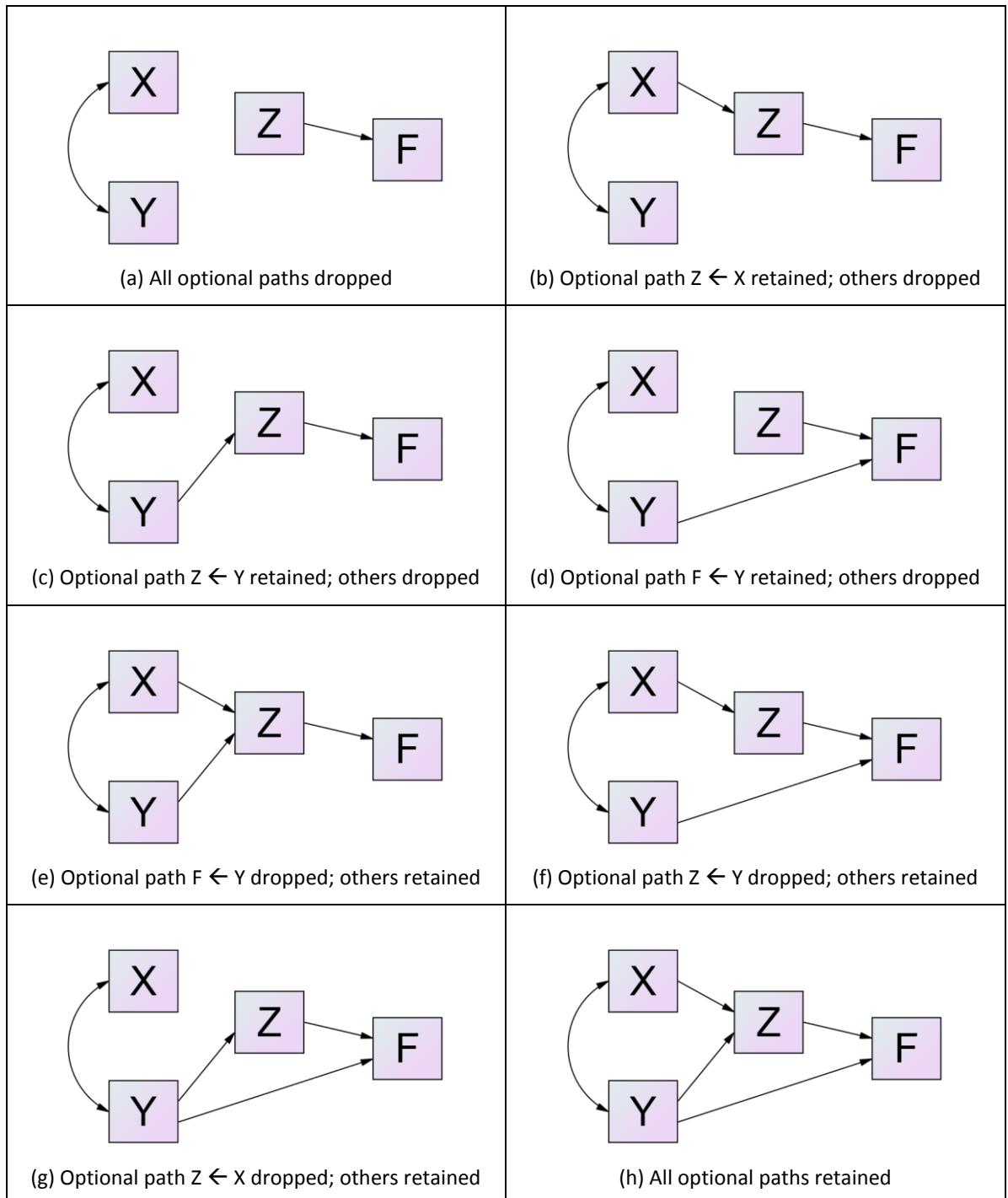
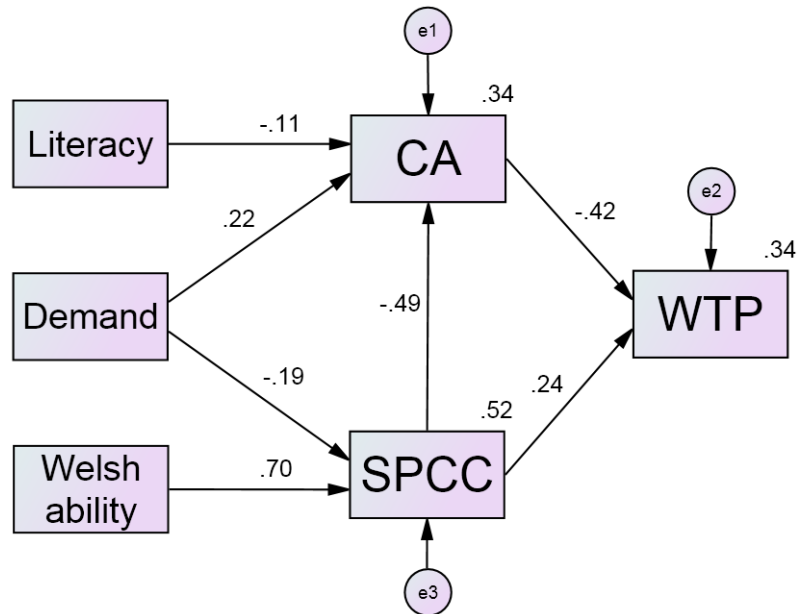


Figure 5.12: Output model with standardised estimates following modification.



All paths in the modified model were significant, as expected. The proportions of variance in the endogenous variables accounted for by their predictor variables was only very slightly lower than in the model originally hypothesised (table 5.22), suggesting that the four paths that were dropped contributed little to the overall model and, accordingly, that little was lost when they were removed. These observations were confirmed when fit indices for the modified model were obtained and compared to those for the original input model (table 5.23).⁶⁸ An additional fit index, the Akaike Information Criterion (AIC), was also calculated for the two models in order to facilitate comparison between them.⁶⁹ The original model scored lower on AIC than the modified model, confirming that the modified model delivered a slightly poorer fit to the data than the original model. Nonetheless, the fit was still good according to the various indices used; the two models were therefore judged to be of similar explanatory value.

Table 5.22: Squared multiple correlations for the original and modified models.

	Original model	Modified model
SPCC	.526	.523
CA	.347	.342
WTP	.346	.345

⁶⁸ Chi-square was, as for the original model, significant (chi-square(13) = 38.076, $p < .001$).

⁶⁹ AIC is a comparative fit index, which cannot be evaluated on its own, but can be used to compare the fit of alternative models (Kenny 2011).

Table 5.23: Selected fit indices for the original and modified models.

Fit index	Level (original model)	Level (modified model)	Evaluation
NFI	.992	.987	Both models fit well
TLI	.988	.986	Both models fit well
RMSEA	.037	.039	Both models fit well
Hoelter .05	858	735	Level exceeds 200 for both models
AIC	76.675	82.076	Original model fits better than modified model
PNFI	.425	.611	Modified model is more parsimonious than original model

In order to conduct a formal comparison of the relative parsimony of the original and modified models, the Parsimonious Normed Fit Index (PNFI) was calculated for each. PNFI is related to NFI, but penalises good fit that has been achieved at the expense of parsimonious model specification (Mulaik *et al* 1989). There are no generally accepted cut-off points for good or poor fit according to PNFI, but by identifying the model with the highest PNFI, the index can be a useful way of selecting a preferred solution among models whose fit is similar on other measures. The PNFI scores for the two models were inspected and found to favour the modified model (table 5.23). The modified model was therefore deemed the better model and was retained.

5.6.10 Evaluation of path analysis

Path analysis was found to be an effective technique for identifying relationships among the variables in the model. Besides the advantages of SEM/path analysis described in chapter 4, modelling the data graphically enabled the hypothesised relationships to be visualised more easily, a benefit also appreciated by Hajek *et al* (2008), who noted that SEM provided “a pictorially clearer conceptualization of the theory underlying our research” (Hajek *et al* 2008: 7).

Although path analysis worked well here, it is nonetheless acknowledged that the phenomena under investigation were better suited to latent variable modelling, as they were not directly observable; the use of observed variables alone was a limitation in the present study. As discussed in chapter 4, the survey design prioritised repeated measures of the test conditions over repeated measures of individual variables. Since there were eight different scenarios to respond to, it was not considered feasible to collect data on multiple measures of SPCC and WTP, as these would have rendered the questionnaire unacceptably long. Having collected only one measure of SPCC and WTP per scenario (and only three measures of CA) for this reason, it was disappointing that scenarios 5-8 were then omitted from the analysis on the grounds that they elicited significantly different responses from the supposedly equivalent scenarios 1-4

(chapter 4). While perfectly matched scenarios were not achieved and, perhaps, not achievable, the inclusion of multiple indicators, on the other hand, would arguably have been straightforward to accomplish, and would have improved the analysis by enabling a full structural equation model to be specified. Were this study to be repeated, then, it might be more profitable to prioritise multiple indicators over multiple scenarios. As an additional benefit of this approach, a questionnaire that included more items about SPCC and WTP might not require filler items to break up the CA questions (chapter 4), which would help with the overall length of the questionnaire.

5.7 Variation in responses to the four scenarios

Conducting the path analysis above enabled me to identify antecedents to WTP, including the effects of manipulating two aspects of the participation context: literacy and demand. In this section, the influence of the participation context on CA, SPCC and WTP is investigated further, by looking at the four scenarios as units in themselves, rather than through their distinguishing features. This enables me to test hypothesis H2 and H3 directly and to address research question Q2. Responses to the four scenarios are examined across the sample as a whole, as in the path analysis above; individual differences are considered in chapter 6.

5.7.1 Results

A repeated-measures ANOVA with Greenhouse-Geisser correction (Garson 2008) conducted on the complete sample (N = 313) showed that audiences' feelings of apprehension, competence and willingness to participate differed significantly from scenario to scenario.⁷⁰ Means and standard deviations are presented in table 5.24.

Table 5.24: Means and standard deviations for CA, SPCC and WTP across scenarios (N = 313). Scores for SPCC and WTP range from 1 to 5. CA is represented by a factor score centred on zero. Note that the values used to produce this table were not the same as those used in the descriptive statistics above (see section 5.5.4).

	Scenario 1 (phone-in: strong oral)		Scenario 2 (studio audience: weak oral)		Scenario 3 (online chat: strong written)		Scenario 4 (photo: weak written)	
	M	SD	M	SD	M	SD	M	SD
CA	.51	1.06	-.26	.87	.11	1.00	-.37	.80
SPCC	3.53	1.41	4.03	1.24	3.64	1.40	4.16	1.09
WTP	2.64	1.22	3.27	1.26	2.82	1.24	3.31	1.17

Willingness to participate (WTP)

Post-hoc tests with Bonferroni adjustment for multiple comparisons (Howitt & Cramer 2011: 216) indicated that respondents were more

⁷⁰ CA: $F(2.87, 894.77) = 94.66, p < .001$, partial eta-squared = .233; SPCC: $F(2.72, 848.13) = 53.99, p < .001$, partial eta-squared = .148; WTP: $F(2.92, 910.10) = 44.18, p < .001$, partial eta-squared = .124.

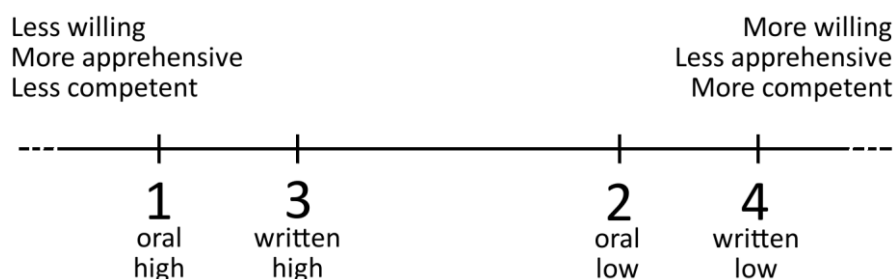
willing to participate in scenarios 2 (oral, low demand) and 4 (written, low demand) than in scenarios 3 (written, high demand) and 1 (oral, high demand) ($p < .001$).

Communication apprehension (CA) Scenario 1 (oral, high demand) provoked more CA in the sample, on average, than scenario 3 (written, high demand) ($p < .001$). Scenario 3 provoked more CA than scenarios 2 (oral, low demand) and 4 (written, low demand) ($p < .001$).

Self-perceived communicative competence (SPCC) The sample reported higher SPCC, on average, for scenarios 4 (written, low demand) and 2 (oral, low demand) than for scenarios 3 (written, high demand) and 1 (oral, high demand) ($p < .001$).

These findings are schematised in figure 5.13.

Figure 5.13: Schematised summary of variation in responses according to scenario.



In summary, the sample were most willing, on average, to take part in scenario 4, the scenario in which they received a leaflet inviting them to take a photo and submit it to a television programme, and scenario 2, in which they were invited to take part in a discussion programme by sitting in the studio audience. Respondents also found that these scenarios caused them the least apprehension and made them feel most competent to take part. The sample were least willing, on average, to take part in scenario 1, where they were asked to have an off-air phone conversation with a TV producer, and scenario 3, the real-time online chat. Participants also reported the highest levels of apprehension and the lowest SPCC scores for these scenarios. Those scenarios that required the audience to engage in synchronous conversation were significantly more off-putting than those that required only reactive use of Welsh.

5.7.2 Discussion

The above findings support hypothesis H2, which predicted that forms of participation that place a low level of demand on audiences' language skills would encourage greater WTP than more demanding forms, and confirm the results of the path analysis (section 5.6.7). Related research question Q2 asked whether modality or demand plays a greater role in predicting WTP. These findings answer this question by demonstrating that, although the modality used has a slight association with WTP, the level of demand placed on Welsh language skills has a stronger

influence on audiences' WTP. This finding also tallies with the structure of the path model obtained above.

The slight preference for written scenarios over oral ones, which disconfirms hypothesis H3, is noteworthy, especially as respondents were more likely to report higher ability in oral skills than in written ones (section 5.2.3). How can this apparent discrepancy be accounted for? The solution lies in the path analysis above, where it was found that CA is a better predictor of WTP than SPCC. This implies that, when audiences feel highly competent to participate in media content but also highly apprehensive of doing so, it is their apprehension which will prove the stronger factor of the two in their willingness to take part. It was shown above that the phone-in scenario (oral, high demand) provoked significantly more CA than the online chat (written, high demand). Participants' written comments about the things that affect their WTP indicate that many people in the sample were very apprehensive of participating in the phone-in scenario in particular, whether they believed they were competent in spoken Welsh or not:

I get nervous speaking in public and therefore would stumble over my words especially when speaking Welsh. (F18B235/3)⁷¹

Too terrified – in English or Welsh. (F50E198/2)

Nerves, but would feel more confident in Welsh than English. (F18W130/1)

The sample's preference, on average, for written scenarios may therefore be attributed to especially high levels of communication apprehension when faced with the prospect of conducting a conversation over the phone in Welsh. This issue is examined in more detail in chapter 6.

5.8 Further analysis

In this section, the quantitative data from the audience survey are analysed further. In doing so, I uncover relationships between variables that have theoretical, as well as empirical, implications.

⁷¹ Each respondent in the audience survey has been allocated an ID code. The first four characters indicate the respondent's sex (M = male, F = female, X = missing data), their age group (18 = 18-34, 35 = 35-49, 50 = 50-69, 70 = 70+, XX = missing data) and their L1 (W = Welsh, E = English, B = both, O = other, X = missing data). These are followed by a randomly allocated number from 001 to 358, which serves as a unique identifier. The character after the slash indicates the cluster to which the respondent has been allocated (1 = Enthusiasts, 2 = Avoiders, 3 = Optimists, 4 = Talkers) (see chapter 6). Where the cluster is marked as missing (X), this means that the respondent was excluded from the quantitative analysis (the path analysis in chapter 5 and the cluster analysis in chapter 6) due to issues with missing data (see chapter 4).

5.8.1 Relationship between trait-like Welsh language proficiency and state SPCC

Research into willingness to communicate (WTC) and other aspects of second language acquisition has tended to focus either on trait-level or state-level phenomena, but rarely has one concept been modelled at two levels of conceptualisation. I begin to address this gap by investigating the nature of the relationship between trait-like self-reported language proficiency and state-level self-perceived communicative competence.

Multivariate statistical techniques like SEM assume that relationships between exogenous and endogenous variables are linear, that is, if an exogenous variable changes, an endogenous variable will change by a predictable amount. If the relationship between variables is nonlinear, this assumption is violated and the results of the analysis are not robust (Garson 2011b). Yet it is conceivable that the relationship between trait-like proficiency and SPCC would not be linear but exponential or some other nonlinear shape. It could be, for example, that SPCC remains consistently low until proficiency reaches a particular threshold, at which point SPCC rises sharply. In other words, individuals may feel that there is little practical difference between “minimal”, “low” and “intermediate” ability in Welsh; they may continue to believe they are “not at all competent” to use their Welsh in a given situation unless their Welsh proficiency is at least “high” or perhaps even “completely fluent”. The relationship between trait-like Welsh language proficiency and state SPCC is therefore important in the present research for methodological reasons, as well as being of theoretical interest as described above.

In order to test the shape of the relationship between ability and SPCC, Welsh language ability was plotted against mean SPCC and straight, quadratic and cubic lines were fitted to the data. Visual inspection of the plots, as well as R^2 values (all close to .66), suggested that the quadratic and cubic equations provided no better fit than the linear model. Similar results were found when SPCC was plotted for each of the scenarios separately. The relationship between trait-like Welsh language ability and state SPCC was therefore deemed to be a linear one. This finding is important because it confirms that the assumption of linearity has not been violated in the analysis above.

The finding is also theoretically interesting because it suggests that an increase in a person’s self-perceived proficiency in Welsh will, on average, be accompanied by a rise in their belief in their competence to use the Welsh they have learnt, regardless of whether they are a beginner or a more advanced learner. There is no existing research, to my knowledge, that explicitly models the connection between individuals’ trait-like self-perceived proficiency or communicative competence in a language and their self-perceived competence in specific situations (researchers in WTC have conceptualised SPCC as either trait-like or situational, but have not

examined both within the same study), so these results contribute to the literature by offering a first glimpse into the relationship between the two levels. It would be interesting to know whether this linearity holds for other samples and other languages, or whether other factors, perhaps related to language ideologies, intergroup relations or methods of language instruction, might influence the relationship.

The relationship between trait-like language proficiency and state SPCC is explored further in the next chapter, where it is shown that the strength of the association between state-SPCC and trait-like proficiency is subject to individual differences.

5.8.2 Interaction between Welsh language skills and participation context in ratings of state SPCC

In preparation for the path analysis above, overall values for respondents' Welsh language ability were obtained using a principal components analysis (section 5.5.1). While the PCA effectively reduced the number of variables to be included in the analysis, it necessarily obscured some of the finer distinctions among individuals' language skills. In this section, these details are restored, in order to examine the contribution that the four language skills each make to audiences' SPCC.

It seems reasonable to assume that individuals' particular strengths and weaknesses in Welsh – e.g. high ability in oral skills but lower ability in reading and writing – would influence their self-perceived communicative competence in scenarios which draw on these different skills. In order to test this assumption, the association between ability to speak, understand, write and read Welsh and the outcome variable, state SPCC, was investigated using a series of simple linear regressions; multiple regression was not used due to issues with multicollinearity.⁷² Only non-

⁷² In the first regression conducted, unexpected negative associations were found between ability to read Welsh and SPCC in the four scenarios. While three of these were not significant, the association was significant for scenario 2 ($\beta = -.234, p = .015$). In order to identify whether this negative association represented an interesting or spurious finding, a simple regression was conducted using only the ability to read variable ($N = 190$). This regression suggested that ability to read Welsh positively predicted state SPCC in scenario 2 ($\beta = .527, p < .001$). Significant positive associations were also found between the ability to read Welsh and SPCC in the other three scenarios. In multiple regression, associations which appear to be in the reverse direction can be a symptom of multicollinearity (Howitt & Cramer 2011: 323), yet in this case, the collinearity diagnostics did not indicate a problem: all the VIF (variance inflation factor) statistics were less than 10 (Field 2000: 201, Howitt & Cramer 2011: 323). Tu et al (2005) suggest that multicollinearity may still explain the finding, as, "although VIF > 10 is the criterion most often suggested by the textbooks, this is not, in our opinion, the only criterion to be used. The unexpected direction of associations between the outcome and explanatory variables is an important sign of collinearity and multicollinearity" (Tu et al 2005: 460). It was judged, therefore, that the four language ability variables suffered from problems with multicollinearity, and that the results of the multiple regression should not be interpreted. In such situations, it is often advised to remove one or more of the predictor variables from the multiple regression (Howitt & Cramer 2011: 324, Tu et al 2005: 460); however, since all four language ability variables were highly correlated in this instance, it was decided to conduct a series of sixteen simple regressions instead.

superfluent participants were included in the analysis, in order to lessen the skew of the data (N = 190).

Table 5.25: Association between SPCC and the four Welsh language skills. Standardised regression weights obtained via a series of simple regressions (N = 190). All results are significant at .001 level.

Scenario	Ability to speak	Ability to understand	Ability to write	Ability to read
1 (strong oral)	.789	.700	.690	.618
2 (weak oral)	.662	.675	.625	.527
3 (strong written)	.555	.558	.657	.538
4 (weak written)	.381	.351	.421	.342

The results of these regressions are presented in table 5.25. Since the four variables are correlated, and the standardised regression weights are therefore very similar within each scenario, it is important not to read too much into the small differences among the four skills. It is also not known how much of the variation accounted for is unique to each variable. However, it is noticeable from table 5.25 that ability to speak Welsh is the best predictor of SPCC in scenario 1 (in which the audience member has a conversation on the phone), ability to understand spoken Welsh is the best predictor of SPCC in scenario 2 (in which the person responds non-verbally to spoken Welsh) and ability to write Welsh is the best predictor of SPCC in scenario 3 (in which the person holds a conversation in writing).

This pattern does not quite hold for scenario 4 (in which the audience member responds to a leaflet written in Welsh), where it might be expected that ability to read would be the best predictor of SPCC, although it is still a written skill (as opposed to an oral skill) that is the best predictor in this case. The association between self-reported Welsh ability and state SPCC is somewhat weaker across the board in scenario 4 than in the other scenarios; some participants appeared to construe this scenario as requiring no Welsh skills at all, which may account for the difference. One participant commented, for example, that “not needing to use Welsh at all would give me confidence as I wouldn’t ‘fail’” (F18E042/3). This interpretation of responses to scenario 4 appears adequate for now, but is questioned in chapter 6, where it is found that responses vary according to audience ‘type’.

These findings can be tentatively interpreted as weak evidence that respondents took their specific balance of language skills into account to some extent when assessing their competence to participate in each scenario, rather than drawing entirely on a generalised idea of their overall Welsh language ability. As such, the findings offer a further insight into how state SPCC maps on

to trait-like language proficiency. It is noted that other factors may moderate the link between SPCC and language proficiency; these are discussed in chapter 7.

On a more pragmatic note, if audiences do indeed consider their specific abilities, this suggests that producers may find that a wider range of their audience feel able to participate in content if they create diverse opportunities to participate – some of which involve one skill, some of which involve others – rather than offering just one means of taking part. This observation is explored further in chapters 6 and 7.

5.9 Summary

In this chapter, I presented the findings of a survey of audiences' willingness to participate in Welsh-language media. First, audiences' Welsh language backgrounds were investigated and patterns in the data were found to reflect trends observable in the population as a whole. The data showed a shift across the generations from natural to classroom acquisition of Welsh, for example, the tendency for many people who attend Welsh-medium primary schools to switch to English-medium schooling at later stages in their education, and L1 Welsh speakers' inclination to increase their use of English as they go through childhood and into adolescence.

Some interesting findings emerged from the examination of respondents' Welsh language backgrounds: natural Welsh speakers reported that they were more proficient in oral Welsh than written Welsh, but the same was not true of those who acquired their Welsh in the classroom. It was also found that L1 Welsh speakers who were educated through Welsh reported higher levels of proficiency in writing Welsh, and used their Welsh more nowadays, than those L1 Welsh educated through English, supporting hypothesis H6. The hypothesis that respondents aged 35-49 would report lower WTP than respondents aged 18-34 in the chat room scenario (H5) was not supported. As predicted (H7), no association was found between respondents' sex and their CA, SPCC or WTP.

At the core of the chapter was the path analysis of willingness to participate. A hypothesised structural model of WTP was specified, tested and modified. State CA and state SPCC were proposed to be immediate psychological antecedents of WTP (H1) and the results of the path analysis confirmed that this structure was plausible. Audiences' communication apprehension was the most important factor in predicting their willingness to participate. Both CA and SPCC helped account for variance in WTP, which suggests that the two factors influence WTP somewhat independently (Q1); a significant path was also confirmed, however, between SPCC and CA, which suggests that one of the factors influences the other.

While the audience's state CA and SPCC were largely predicted by their self-reported Welsh language ability (partly confirming hypothesis H4), other aspects of their Welsh language background were found to make little, if any, difference to CA and SPCC once language ability had been taken into account (partly disconfirming hypothesis H4).

The results of the path analysis confirmed that forms of participation that place a low level of demand on audiences' language skills encourage greater WTP than more demanding ones (H2). It was also found that written modes of participation encouraged greater WTP than oral ones, disconfirming hypothesis H3. Demand was more important than literacy in predicting WTP (Q2).

Responses to the four scenarios were compared directly and it was shown that low-demand scenarios elicited lower CA, higher SPCC and higher WTP than the high-demand scenarios (offering further support to hypothesis H2). The sample also expressed a slight preference for written scenarios over oral ones, which means that hypothesis H3 was again disconfirmed. This surprising finding was attributed to lower levels of CA in written scenarios.

Previous research has not explicitly modelled the relationship between self-reported trait-like Welsh language ability and self-reported state SPCC. This chapter therefore makes a theoretical contribution to the literature by demonstrating that the relationship between the two is linear. It was also tentatively suggested that audiences' took their individual language skills into account when rating their state SPCC, offering an insight into how audiences assess their own competence in specific contexts.

This chapter focused on the factors that contribute to audiences' willingness to participate in Welsh-language media; in chapter 6, in contrast, I take a person-centred approach, investigating individual differences that characterise certain segments of the audience.

Chapter 6: Profiling the audience: Types of Welsh-language media audience

In the previous chapter, I investigated some of the variables that contribute to audiences' willingness to participate (WTP) in Welsh-language media by examining the global effect of variables on the respondents as a group. This shed light on the relative importance of various predictive factors, including sociobiographical factors (Welsh language ability and Welsh language background), psychological states (communication apprehension (CA) and self-perceived communicative competence (SPCC)) and contextual factors (the level of demand placed on audiences' oral and written language skills). It was argued that state CA and state SPCC are antecedents to WTP, CA being the stronger predictor of the two. Trait-like Welsh language ability was shown to be a strong predictor of SPCC, in contrast to other aspects of Welsh language background, which added little to the model of WTP. Furthermore, it was demonstrated that the demand of the situation influenced both CA and SPCC and was more important than the modality used.

What remains unclear is the degree of homogeneity among respondents with respect to these patterns. The investigation in the previous chapter was designed for an overall assessment of factors affecting the group as a whole. It was not designed to reveal, however, how such factors combine in individuals to create common patterns of response, or whether there are systematic clusterings of factors that give rise to a set of 'types' of respondent. Following Woodrow (2006), I consider it important to test my proposed model both from a variable- and a person-centred approach, in order to gain a more complete picture of audiences' willingness to participate in media content (see also Csizér & Dörnyei 2005b). In this chapter, therefore, the investigation moves away from the key variables that predict audiences' WTP and focuses instead on individuals' own perceptions and profiles. The first part of the chapter (section 6.1) focuses on differences among individuals, highlighting the diversity of experiences across the sample, while section 6.2 onwards demonstrates that similarities can be found within subsets of the audience.

In section 6.1, respondents' comments are analysed qualitatively, in order to support and illustrate the statistical tendencies (chapter 5) with individuals' own words, and to facilitate comparison with other studies of minority language maintenance and use. Then an audience segmentation exercise is performed, using cluster analysis to identify groups of individuals who responded to the four scenarios in similar ways (section 6.2). This approach allows the analysis to go beyond the system of factors believed to predict WTP and see how the factors form patterns that characterise specific types of audience. Four such clusters are identified and dubbed Enthusiasts, Avoiders, Optimists and Talkers. A quantitative analysis of the clusters is

conducted (section 6.3) to confirm the clustering solution and to verify elements of the proposed model of WTP, including the nature of the relationship between trait-like language proficiency and state SPCC. In section 6.4, each audience type is described in detail by combining respondents' comments with the quantitative findings to create images of prototypical cluster members. Profiling the audience in this way translates a complex collection of quantitative and qualitative findings into a simpler set of insights, with implications for content production (discussed in chapter 7). Additional explanations given by audience members regarding their willingness or unwillingness to participate, above and beyond those discussed elsewhere in the thesis, are presented as suggestions for future research in section 6.5. Theoretical implications are examined in section 6.6.

6.1 Individual experiences of Welsh-English bilingualism

Respondents were invited to enter free text on the questionnaire (questions B18 and C4; see appendix A), and many used these (and other) spaces to comment further on the context in which they acquired their Welsh, their use of Welsh and English in daily life, their Welsh language abilities and the language(s) they used at school or university. The comments made by respondents support the quantitative results described in chapter 5 and illustrate the diversity of experience of Welsh-English bilingualism evident in the sample. The analysis is necessarily descriptive rather than inferential due to the optional, open-ended nature of the data, but is valuable as it enables me to compare the findings in the study with other qualitative studies of minority language maintenance and use. This analysis draws on the full sample of 358 participants.⁷³

6.1.1 Methods of qualitative data analysis

The qualitative data analysis methods used in this chapter were very similar to those used to analyse interviews with media producers in chapter 3. An inductive, iterative thematic analysis (Braun & Clarke 2006) approach was employed, using the "generic analytical moves" described by Dörnyei (2007: 245). Comments were first coded for themes and then patterns were identified in the data. Comments were also related to respondents' other answers on the questionnaire, in order to assist in interpreting the patterns found.

Although the methods used to analyse the data in this chapter were very similar to those used in chapter 3, the aims of the analysis were different: while the producer interviews were semi-structured, and intended to uncover unexpected themes in rich data, the questionnaire was designed to be more structured, in order to test specific hypotheses. Respondents' comments

⁷³ Of the 358 participants included in the full sample, three quarters (N = 267) entered at least one comment somewhere on the questionnaire.

were expected to be limited to certain topics as a result. Since the comments fields were all optional, and responses were likely to be skewed as a result, the comments were not used to build theory directly, but to illustrate, help account for and confirm patterns found in the quantitative data.

Data organisation and analysis was carried out in the open-source personal database program, Jreepad.⁷⁴

6.1.2 Welsh language acquisition context

Question B1 on the questionnaire asked respondents whether they acquired their Welsh naturally with family or friends, in the classroom or through a mixture of both. In chapter 5, it was seen that 57.8% of participants in the sample claimed to have acquired their Welsh naturally and that older respondents were significantly more likely to have acquired their Welsh naturally than younger respondents in the sample. Behind these figures lie various experiences of Welsh language acquisition, as the respondents' comments show. Many commented that they had grown up in monolingual Welsh or bilingual homes, while others wrote that they learnt their first Welsh at nursery or primary school. Some of the classroom/mixed group of respondents, especially the younger ones, made comments about learning Welsh as a second language at school, but others, including those who migrated to Wales from England, said that they learnt Welsh as adults. A few – such as one respondent who went to live with his Welsh grandmother during the war (M70B149/2),⁷⁵ and another whose parents “both spoke Welsh but only in front of us as kids when they wanted to hide something” (F50E341/X) – were exposed to Welsh during their childhood and then returned to the classroom later in life to revive or improve their language skills. Some adult learners had received lessons through their place of work, taken beginners' classes at university or attended evening classes or summer courses. Wlpan, an intensive Welsh language course for adults, was frequently mentioned. Not all Welsh classes took place in Wales: two respondents reported attending classes in London. Several respondents were self-taught, drawing on various strategies such as working through textbooks and novels, frequenting language-learning websites, watching Welsh-language television with English subtitles, attending local Welsh-language groups and events and practising with a Welsh-

⁷⁴ <http://jreepad.sourceforge.net/> [accessed May 2012].

⁷⁵ Each respondent in the audience survey has been allocated an ID code. The first four characters indicate the respondent's sex (M = male, F = female, X = missing data), their age group (18 = 18-34, 35 = 35-49, 50 = 50-69, 70 = 70+, XX = missing data) and their L1 (W = Welsh, E = English, B = both, O = other, X = missing data). These are followed by a randomly allocated number from 001 to 358, which serves as a unique identifier. The character after the slash indicates the cluster to which the respondent has been allocated (1 = Enthusiasts, 2 = Avoiders, 3 = Optimists, 4 = Talkers). Where the cluster is marked as missing (X), this means that the respondent was excluded from the quantitative analysis (the path analysis in chapter 5 and the cluster analysis in chapter 6) due to issues with missing data (see chapter 4).

speaking child or grandchild. A small number of respondents claimed to have simply “picked up” (F50E115/3) the language after moving to a predominantly Welsh-speaking area in adulthood.

These findings parallel other reports of the complexity and diversity of Welsh language acquisition. Fitzpatrick (2009), for example, describes a participant who acquired Welsh as a small child, then spoke only English from the age of three until after retirement, when he relearnt Welsh. The author comments that “this kind of complicated personal linguistic history was not uncommon among participants in the study” (Fitzpatrick 2009: 46). As such, the inclusion of multiple linguistic background items on the audience questionnaire for the present study was justified, since it is apparent that a single item, such as “first language”, would not be very informative in the present sample.

Like Welsh language acquisition context, respondents’ relative use of Welsh and English also varied widely across the sample; this is discussed in the next section.

6.1.3 Relative use of Welsh and English in daily life

In chapter 5, it was seen that 64.4% of the sample claimed to use both English and Welsh regularly, 21.5% said they “always or almost always” used English and 14% said they always or almost always used Welsh. Although the particular contexts in which Welsh and English were used were not considered of direct importance to the present study, the language use patterns described in respondents’ comments are nonetheless interesting because of their diversity. Comments made by respondents pertained largely to different domains of use (home, work, friends, social activities, media and religion), or referred to specific people who were always addressed in one language or the other. The comments illustrate the wide variety in patterns of language use. For instance, some reported that they use English at home and Welsh at work, while others use Welsh at home and English at work. Respondents who work in Welsh include those in typical bilingual professions, such as teaching, translation or civil service, but also people in private sector roles such as shop assistants, designers and photographers, the latter suggesting that the use of Welsh was good for “attracting Welsh-speaking clients” (M50B157/3). Although many individuals found that their language use was divided according to domains of use, it was interesting to note that there was no prevailing pattern evident in the comments, which suggests that Welsh is not restricted to specific domains; rather, all domains can potentially make use of either Welsh or English. This illustrates the progress that has been made in Wales to normalise the language and introduce it into domains where English was previously dominant (Jones 1998).

Many of the respondents in the present study explained why Welsh or English was the main language within their family and described how their home language practices had changed at

certain points in their life. These descriptions offer an insight into Welsh families' language planning practices, a topic of particular interest within current language policy research (Curdt-Christiansen 2013). Many reported that they lived in linguistically mixed families, where they would speak English to some relatives and Welsh to others. As in other studies of minority language use (e.g. Sallabank 2010), a partner's preferred language was frequently cited as an influence on respondents' relative use of Welsh and English:

My wife is English so very little Welsh spoken at home! (M50B157/3)

Indeed, moving in with a new partner was frequently associated with changes in patterns of language use:

Eventually married a Welsh girl and Welsh language became the primary one at home although English at work. (M70W092/1)

I now live in Wales with Welsh partner as opposed to almost 30 years in England with English partner. (F50W245/4)

Other major life events, such as the arrival of children, moving to or from Wales (or an anglicised area of Wales), or the loss of a family member through divorce or death, were also described as triggers for changes in patterns of language use:

Was quite "anti-Welsh" during teens but when I had family of my own – sent them to Welsh-medium schools. Subsequently speak Welsh and English to my children and grandchildren (who go to Welsh-medium schools). (F50B185/3)

I have used Welsh (spoken and written) much less since adulthood than when I was growing up (I moved to a more anglicised area in my early 20s). (M50B064/3)

Changes in language use not associated with such events were rare, and considered strange:

My mother (who'd spoken Welsh to me up till then) decided – when I was 9 years of age – to switch to English as she wanted to improve my use of English. So I ended up speaking English to her and Welsh to my father in a hitherto Welsh home. Bizarre!
(F50W348/4)

Not having the opportunity to use Welsh regularly was a common cause for regret among native speakers and learners alike. One respondent in north-west Wales commented rather bluntly that he "meet[s] too many English speakers" (M70W294/4). A lack of opportunity to use Welsh is a common complaint in Wales (e.g. Pritchard Newcombe 2007). It must be said, however, that while Welsh speakers are often forced to use English where Welsh would be more appropriate (Irvine *et al* 2006, Thomas 2010), their position is quite different to that of other minority

language speakers. Although moving house or losing a close family member meant that some participants in the present study changed their typical patterns of language use, most were able to continue speaking both their languages to some extent. This contrasts with the experience of speakers of smaller languages, such as Guernesiais, who may have very few opportunities to continue using their minority language when a key interlocutor is gone (Sallabank 2010). These results are discussed further in chapter 7, where it is argued that each major life event offers speakers a licence to change their relationship with the Welsh language, a finding that has important implications for language planning.

6.1.4 Ability to speak, understand, write and read Welsh

38.1% of the survey sample indicated that they were superfluent in Welsh, that is, they claimed to be completely fluent in speaking, understanding, writing and reading Welsh. This was reinforced by comments that Welsh was their “first choice of language” (M50W028/3) and that they felt “much more confident and articulate when speaking Welsh” (F50W088/3).

The comments made by some respondents demonstrate, in contrast to the quantitative survey items on self-reported language ability, that a person’s language skills are not fixed at a certain level, but may be perceived as improving or diminishing. A few respondents – including some who already considered themselves to be superfluent – commented that their knowledge of Welsh was “increasing” (M35B217/1) as a result of using the language more often or in new domains. Many more respondents, however, commented that their Welsh was becoming less fluent through a lack of use; both native speakers and learners felt this way:

I’ve never lost the ability to understand/listen to Welsh as my parents still speak Welsh to me. However work/friends all speak English so it feels I have lost the fluency I once had. (M35W074/3)

Since moving to England for university study I have barely used Welsh at all except on a couple of return visits home. As a result, I feel my knowledge of Welsh (which at age 16, I would consider to have been intermediate level) has diminished to an elementary level. (M18E298/2)

Across the Welsh population as a whole, the loss of Welsh proficiency is a common experience, but not as common as its acquisition. A paired comparison of census data, where individuals’ responses in 2001 were compared to their answers from 1991, showed that “although there was attrition among Welsh speakers, the gains in 2001, i.e. the numbers saying they could speak Welsh among those who had not been able to speak Welsh ten years earlier, were more

substantial in every age group studied, except for the oldest group” (Jones 2012: 63).⁷⁶ Jones’s report does not address the issue of *reacquisition*, but it was interesting to observe that, in the current sample, language attrition was not a one-way street, as some respondents reported making an effort to regain the Welsh they felt they had lost:

Welsh-language education up to O-levels, then went to uni in London and stayed for 17 years, with minimal use of Welsh. Rusty on my return 6 years ago but sending children to Welsh schools and using Welsh in my business has brought most of the “forgotten” Welsh back. (M35B253/1)

I married into a Welsh-speaking family and could follow most of the conversation, but was reluctant to join in. I then lived out of Wales for 40 years but have attempted to regain my Welsh since my return 14 years ago with some success. (F70E121/1)

6.1.5 Language(s) of education

In chapter 5, it was seen that younger people in the sample were more likely to have attended bilingual or Welsh-medium schools than the older people in the sample. There were relatively few comments about languages used at school, although some of the remarks made by older participants reflect the complex history of the Welsh education system (see chapter 1). After World War 2, the spread of Welsh-medium education was gradual, with some local education authorities establishing Welsh-medium and bilingual schools more rapidly than others. This means that, while some respondents in the 50-69 age group attended Welsh-medium schools, Welsh-medium education was “not available” (F50W356/4) to others of the same age. Some respondents recalled that children in rural areas were often taught in Welsh or bilingually before Welsh-medium education was officially introduced:

My primary and secondary education was at schools where the everyday language used was Welsh but most texts presented were in English. Not even sure that this was classed as bilingual! (F50W245/4)

The development of Welsh-medium education was praised by some of the older respondents in the sample, many of whom now had grandchildren of school age:

I’m glad that my grandchildren go to a Welsh-medium secondary school and are completely fluent in Welsh. I wish I’d had the same opportunity. (F50W348/4)

⁷⁶ At the time of writing, comparable analysis is not yet available for the 2011 census data. Given the overall drop in the number of people in Wales able to speak Welsh (Welsh Government 2012a), it is possible that the pattern may have been reversed in the intervening decade.

I went to school in the early 1950s when Welsh-medium education was just beginning. I received most of my primary education in Welsh. My secondary education was entirely in English. Quite a cultural shock. Thank goodness we've moved on! (M50W352/1)

This section has presented respondents' comments about their linguistic background, drawing attention to some of the differences among individuals' personal experiences. These findings are, by their nature, hard to systematise. In the following sections, by way of contrast, I highlight measurable similarities among respondents by showing how their responses to participative media scenarios fall into four common patterns.

6.2 Audience segmentation: Cluster analysis

In this section, I use cluster analysis to identify groups of participants who respond to the scenarios in similar ways. In media research and other market research contexts, this process is known as 'audience segmentation' (see chapter 4). Four segments of the audience are found, and referred to as Enthusiasts, Avoiders, Optimists and Talkers. The rationale behind these labels may not be apparent to the reader at first, but will become clear in section 6.4 when the results of a quantitative analysis of the clusters (section 6.3) is combined with insights from the qualitative analysis of audience comments.

6.2.1 Procedure and results

In order to identify different patterns of state willingness to participate among the sample, a cluster analysis was conducted on the 313 cases in the quantitative dataset, using WTP in each of the four scenarios as the segmentation variables. Since the classification was to be based purely on WTP – and not on other factors such as Welsh language background – respondents' WTP in the four scenarios were the only variables to be included in the cluster analysis. Following Cuadrado and Frassetto (1999), a two-stage approach was taken. As discussed in chapter 4, a preliminary cluster analysis was conducted using Ward's method in order to identify the optimum number of clusters. Visual inspection of the dendrogram (appendix C) suggested that a four cluster solution would be optimum. The agglomeration schedule confirmed this: small, steady increases in coefficient occurred as clusters were merged, until four clusters became three, at which point there was a relatively large jump in coefficient. A *k*-means cluster analysis was then conducted to assign cases to four clusters. Since the results of *k*-means clustering are influenced by the order of the cases in the dataset, the order of the data was randomised and the analysis re-run several times, in order to verify the solution (IBM 2011). Most of the runs produced four clear clusters that could be defined in the same way (i.e. one cluster had relatively high WTP in every scenario, one in the less demanding scenarios, one in the phone-in in particular and one in none of the scenarios), demonstrating that the patterns found in the data were robust. Of these runs, the solution which clustered cases most tightly (i.e.

which had the lowest average distance from the cluster centre) was selected as the most appropriate depiction of the data out of those available. The results are presented in table 6.1. Individuals reported their WTP in the four scenarios on a scale of 1 (definitely not willing to participate) to 5 (definitely willing to participate); the final cluster centres shown in the table correspond, therefore, to points on this scale.⁷⁷

The *k*-means cluster analysis identified four clusters of cases, as requested, representing four patterns of willingness to participate. The four clusters are labelled ‘Enthusiasts’, ‘Avoiders’, ‘Optimists’ and ‘Talkers,’ based on insights from both the quantitative and qualitative results; why these particular names were chosen will become clear in section 6.4.

Table 6.1: Cluster sizes, final cluster centres and mean distance of cluster members from cluster centre. Total N = 313. The WTP scale runs from 1 to 5: 1 = “no, definitely not”, 2 = “no, probably not”, 3 = “I don’t know”, 4 = “yes, probably”, 5 = “yes, definitely”.

	N	Final cluster centres (level of WTP)				Mean distance from centre
		Scenario 1 (phone-in: strong oral)	Scenario 2 (studio audience: weak oral)	Scenario 3 (online chat: strong written)	Scenario 4 (photo: weak written)	
Enthusiasts	81	4	4	4	4	1.129
Avoiders	90	2	2	2	2	1.452
Optimists	96	2	4	3	4	1.454
Talkers	46	4	3	2	3	1.761

The Enthusiasts cluster centred on cases who said they would “probably” choose to take part in all four scenarios (N = 81; 25.9% of the sample), while Avoiders centred on people who said they would “probably not” choose to take part in any of the scenarios (N = 90; 28.8%). Optimists was the largest cluster (N = 96; 30.7%) and centred on respondents who would be most willing to participate in the two less linguistically-demanding scenarios (sitting in the studio audience and taking a photo). Talkers was the smallest cluster (N = 46; 14.7%) and centred on those who would be most willing to participate in scenario 1 (the phone-in).

It is also informative to look at mean values of WTP for each cluster. These are given in table 6.2.

⁷⁷ As detailed in chapter 4, *k*-means analysis initially assigns one case to be the “centre” of each cluster; all cases are then iteratively assigned and reassigned to the nearest cluster. Once the process is finished, each cluster has a “final cluster centre”, which represents its most typical member. Since the cluster centre is one particular respondent (or several people who gave identical responses on the four segmentation variables) their WTP scores for each scenario do not necessarily coincide with the median values for that cluster.

Table 6.2: Means and standard deviations for state willingness to participate in each of the four scenarios, according to cluster. The WTP scale runs from 1 to 5: 1 = “no, definitely not”, 2 = “no, probably not”, 3 = “I don’t know”, 4 = “yes, probably”, 5 = “yes, definitely”.

	Scenario 1 (phone-in: strong oral)		Scenario 2 (studio audience: weak oral)		Scenario 3 (online chat: strong written)		Scenario 4 (photo: weak written)	
	M	SD	M	SD	M	SD	M	SD
Enthusiasts	4.00	.632	4.42	.589	4.21	.518	4.15	.726
Avoiders	1.57	.520	1.76	.624	1.80	.782	2.37	1.086
Optimists	1.93	.528	3.69	.715	2.87	1.029	3.69	.812
Talkers	3.83	.570	3.33	1.097	2.26	.905	2.91	1.132

Multiple comparisons with Bonferroni corrections applied showed that Enthusiasts’ WTP was not significantly different to Talkers’ WTP in scenario 1; however, all other differences among clusters were significant, indicating that, even when two clusters appear to respond in the same way to a particular scenario, there are actually small but significant differences between them. For example, Avoiders and Talkers are both centred on a response of “2” (probably not willing to take part) in scenario 3, the online chat, but a significant difference between the mean values indicates that Talkers are in fact more willing to participate than Avoiders.

Recall that, in chapter 5, it was found that audiences were more willing to take part in low-demand scenarios than in high-demand ones (confirming hypothesis H2), and expressed a slight preference for written forms of participation over oral ones (disconfirming hypothesis H3). While these tendencies are true of the sample as a whole, the results of the cluster analysis show that the preference for low-demand and written participation does not hold for all sectors of the audience. This point is explored in section 6.3.8.

The results of the cluster analysis indicate that four distinct patterns of willingness to participate can be observed in the data, but they do not tell us anything about the people who responded to the scenarios in those ways. As Punj and Stewart (1983) write:

the user of cluster analysis should provide a demonstration that clusters are related to variables other than those used to generate the solution. Ideally, only a small number of variables should be required to classify individuals. This classification should then have implications beyond the narrow set of classification variables. The task of classifications is not finished until these broader implications have been demonstrated. (Punj & Stewart 1983: 146)

In the next section, therefore, a quantitative analysis of the clusters is conducted, in order to begin to understand the sociobiographical make-up of each cluster and verify that these are meaningful, and hence useful.

6.3 Audience segmentation: Quantitative analysis of clusters

In this section, I start building up profiles of the four audience clusters identified above, this time using quantitative methods. Cluster membership (i.e. whether a respondent is assigned to cluster 1, 2, 3 or 4) is cross-tabulated with the various demographic and language background variables included on the audience questionnaire, as well as with the two composite factors, Welsh language ability and Welsh language background (see chapter 5) and the two psychological variables, state CA and state SPCC (see chapter 2 for definitions). Associations between cluster membership and these variables are then tested for significant effects. After presenting these results, I discuss the relative importance of the psychological and sociobiographical variables in cluster membership. This analysis enables me to identify differences among the clusters, validate the clustering solution, and test certain aspects of the model of WTP presented in chapter 5, such as the relationship between Welsh language ability and SPCC.

6.3.1 Age and sex

Neither age nor sex was found to be important in cluster membership. An independent-samples ANOVA revealed there were no significant differences in age among the four clusters ($F(3,309) = 1.515, p = .211$). Sex was also found to be unrelated to respondents' cluster membership ($\chi^2(3) = 2.137, p = .544$). In the previous chapter, age was significantly associated with Welsh language acquisition context and with language(s) of education; it was not a significant predictor of WTP, however, as its effect was outweighed by other factors. The results of the cluster analysis therefore support the final model presented in chapter 5, which included neither age nor sex as predictors of WTP. Age is discussed further in section 6.4.6, when the findings of the present study are compared to those obtained in a previous study by Beaufort Research (2006).

6.3.2 Welsh language ability

Enthusiasts and Talkers scored the most highly on the Welsh language ability factor – comprising self-reported abilities to speak, understand, write and read Welsh – and Avoiders and Optimists the lowest (mean Welsh language ability scores for each cluster are shown in table 6.3).

Table 6.3: Means and standard deviations for Welsh language ability, according to cluster. Welsh language ability is represented by a factor score centred on zero, where a negative value indicates below-average ability and a positive value indicates above-average ability.

	M	SD	N
Enthusiasts	.586	.573	81
Avoiders	-.415	1.143	90
Optimists	-.200	.975	96
Talkers	.197	.818	46
Total	.000	1.000	313

An independent-samples ANOVA showed a moderate association between cluster membership and Welsh language ability.⁷⁸ Post hoc tests with Bonferroni corrections applied for multiple comparisons showed that there were significant differences in Welsh language ability between Enthusiasts and Avoiders/Optimists ($p < .001$), and a significant difference between Avoiders and Talkers ($p = .002$). The other differences did not reach acceptable significance levels. Of all the sociobiographical variables, Welsh language ability was the strongest predictor of cluster membership (see section 6.3.4).

The four Welsh language skills were also cross-tabulated separately with cluster membership. Both Enthusiasts and Talkers scored very highly on ability to speak and understand Welsh (table 6.4).

Table 6.4: Mean self-reported ability to speak, understand, write and read Welsh according to cluster. Standard deviations are also given. Each skill is measured on a scale from 1 to 5: 1 = “minimal”, 2 = “low”, 3 = “intermediate”, 4 = “high”, 5 = “completely fluent”.

	Ability to speak		Ability to understand		Ability to write		Ability to read	
	M	SD	M	SD	M	SD	M	SD
Enthusiasts	4.63	.782	4.65	.692	4.52	.792	4.68	.629
Avoiders	3.38	1.562	3.59	1.429	3.13	1.515	3.52	1.351
Optimists	3.57	1.328	3.98	1.170	3.38	1.371	3.76	1.194
Talkers	4.37	1.062	4.48	.781	3.78	1.246	4.11	1.059
Total	3.91	1.354	4.12	1.179	3.66	1.382	3.98	1.193

Talkers scored significantly lower than Enthusiasts, however, on ability to write ($p = .012$) and read Welsh ($p = .034$). Avoiders had relatively low ability, scoring lower than Talkers on all four skills ($p \leq .032$). Optimists fell in the middle of the range on all four skills, and could not be clearly distinguished from the other clusters. These results indicate that the four clusters do not simply correspond to four different levels of ability: while Enthusiasts and Talkers are more competent overall than Avoiders and Optimists (table 6.3), the two pairs of clusters display qualitatively different abilities, which can be better understood by inspecting the data on the four separate Welsh language skills.

6.3.3 Welsh language background

Enthusiasts and Talkers scored most highly on the Welsh language background factor – which incorporated questionnaire items about Welsh language acquisition context, the language(s)

⁷⁸ ($F(3,309) = 19.185, p < .001$; partial eta-squared = .157). Note that Levene’s test was found to be significant here ($p < .001$), indicating that the error variance of the dependent variable was not equal across groups. However, as the ratio of the largest standard deviation (1.143) to the smallest (.573) was less than 2:1, this was not considered problematic, and it was not deemed necessary to use a Welch correction or to resort to non-parametric tests such as the Kruskal-Wallis test (Griffiths 2012).

used at school and Welsh language use through childhood (see chapter 5) – and Avoiders and Optimists scored the lowest. Mean Welsh language background scores for each cluster are shown in table 6.5.

Table 6.5: Means and standard deviations for Welsh language background according to cluster. Welsh language background is represented by a factor score centred on zero.

	M	SD	N
Enthusiasts	.481	.818	81
Avoiders	-.353	1.031	90
Optimists	-.195	.998	96
Talkers	.252	.854	46
Total	.000	1.000	313

An independent-samples ANOVA showed a moderate association between cluster membership and Welsh language background.⁷⁹ Post hoc tests with Bonferroni corrections applied showed that Enthusiasts scored more highly than Avoiders/Optimists ($p < .001$) and Talkers scored more highly than Avoiders ($p = .003$). Other differences did not reach significance.

The various Welsh language background variables were also cross-tabulated with cluster membership separately; results of these analyses are summarised later in this chapter, in table 6.15 (see appendix D for full details).

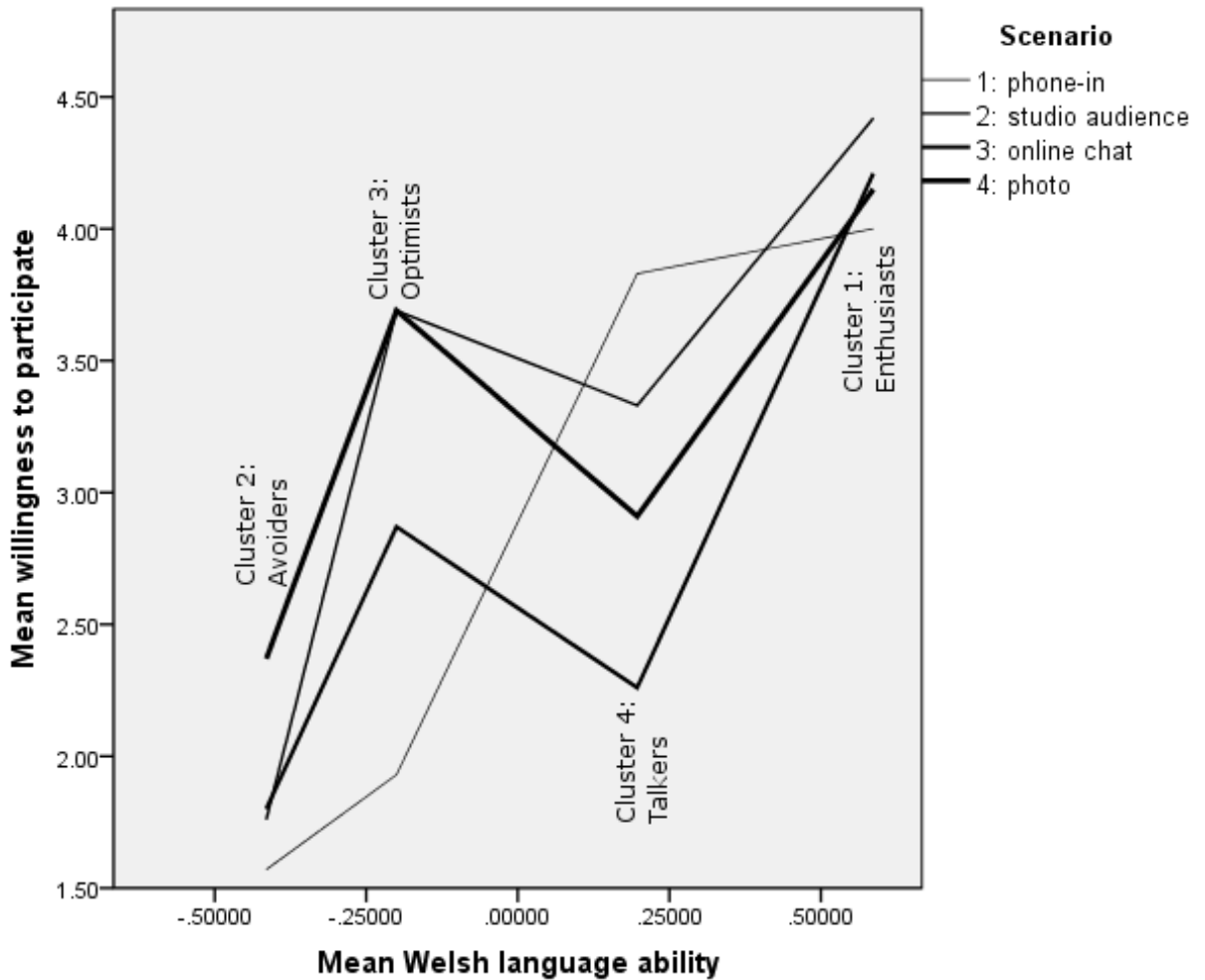
6.3.4 Discussion of sociobiographical variables

Of the sociobiographical variables significantly associated with cluster membership, Welsh language ability (the composite factor obtained through PCA in chapter 5) was the best predictor of cluster membership.⁸⁰ The four separate Welsh language skills were also moderately associated with cluster membership, and predicted cluster membership almost as well as the composite factor. This parallels the finding that Welsh language ability is a good indirect predictor of WTP (chapter 5) and supports the use of the composite factor in the path model of WTP. Welsh language background was also moderately associated with cluster membership, although the effect size was not as large as that for ability (partial eta-squared = .117). This confirms the earlier finding that Welsh language background is not as important as self-reported Welsh language ability in predicting WTP (chapter 5).

⁷⁹ $F(3,309) = 13.655, p < .001$; partial eta-squared = .117. Note that the ANOVA shows associations between variables, but does not control for other effects, as occurred in the path analysis in chapter 5. The relative strength of association between cluster membership and other sociobiographical variables is examined in section 6.3.4.

⁸⁰ $F(309) = 19.185, p < .001$; partial eta-squared = .157.

Figure 6.1: Clusters' mean willingness to participate plotted against mean Welsh language ability. Note that, in three scenarios out of four, Optimists are more willing to participate than Talkers, despite Talkers' higher level of ability.



However, a much more interesting and unexpected discovery can be made if the Welsh language ability and WTP of the four clusters are examined together (see figure 6.1). If audiences' patterns of WTP were determined entirely by their relative ability to use Welsh, then we would expect to see a linear correspondence between mean Welsh language ability and mean willingness to participate. In contrast, it is clear from this plot that Optimists are more willing to participate, on average, than Talkers in three scenarios out of four (see also table 6.2), despite Talkers' higher level of ability (see also table 6.3). The lack of a simple linear correspondence between Welsh language ability and WTP means that ability does not determine cluster membership – or WTP – and cannot be said to be a proxy for either. The discovery that a group of respondents with relatively low self-reported Welsh ability is more willing to participate (in three of the scenarios) than a group with relatively high self-reported Welsh ability is both unexpected and very interesting. This finding is explored further in section 6.4, where I suggest that trait-like WTP, personality traits, expectations of fluent/non-fluent speakers and orientations to Welsh may help to account for different patterns of WTP.

The focus now moves to the two psychological antecedents to WTP included in the study, CA and SPCC. As above, the results of the cross-tabulations with cluster membership are presented first, followed by a discussion of the associations between clusters and psychological states.

6.3.5 State communication apprehension

In this section, levels of state communication apprehension are compared across clusters, in order to establish whether the four clusters have differing levels of CA in some or all of the scenarios. It is already known, from the analysis in chapter 5, that CA is a strong predictor of WTP across the sample as a whole; the analysis in this section shows that CA also helps explain individual differences in WTP. The four scenarios are examined in turn. In each case, independent-samples ANOVAs were conducted to detect associations between cluster membership and CA; these were followed by post hoc tests with Bonferroni adjustments made.

(a) State communication apprehension in scenario 1, the phone-in (CA1)

Table 6.6: Means and standard deviations for state communication apprehension in scenario 1 according to cluster. CA is represented by a factor score centred on zero; negative values indicate below-average CA while positive values indicate above-average CA.

	M	SD	N
Enthusiasts	-.130	.919	81
Avoiders	.898	1.096	90
Optimists	1.003	.849	96
Talkers	-.150	.581	46
Total	.510	1.057	313

There was a strong association between cluster membership and state communication apprehension in the phone-in scenario (henceforth CA1).⁸¹ Enthusiasts and Talkers reported lower CA1, on average, than Avoiders and Optimists ($p < .001$) (table 6.6). Note that the Talkers cluster has a relatively low standard deviation for CA1, which indicates that members of this cluster were fairly consistent in their response on this variable.

⁸¹ $F(3,309) = 35.954, p < .001$; partial eta-squared = .259.

(b) State communication apprehension in scenario 2, the studio audience (CA2)

Table 6.7: Means and standard deviations for state communication apprehension in scenario 2 according to cluster.

	M	SD	N
Enthusiasts	-.639	.638	81
Avoiders	.273	1.017	90
Optimists	-.363	.730	96
Talkers	-.394	.725	46
Total	-.256	.873	313

There was a moderate association between cluster membership and state communication apprehension in the studio audience scenario (CA2).⁸² Enthusiasts, Optimists and Talkers reported similar levels of CA2, on average, while those in the Avoiders cluster reported significantly higher CA2 than the other three groups ($p < .001$) (table 6.7).

(c) State communication apprehension in scenario 3, the online chat (CA3)

Table 6.8: Means and standard deviations for state communication apprehension in scenario 3 according to cluster.

	M	SD	N
Enthusiasts	-.441	.840	81
Avoiders	.467	1.017	90
Optimists	.222	.977	96
Talkers	.167	.923	46
Total	.113	1.005	313

A moderate association was found between cluster membership and state communication apprehension in the online chat (CA3).⁸³ Avoiders, Optimists and Talkers reported similar levels of CA3, on average, while Enthusiasts reported significantly lower CA3 than the other three groups ($p \leq .003$) (table 6.8).

⁸² $F(3,309) = 20.227, p < .001$; partial eta-squared = .164.

⁸³ $F(3,309) = 13.892, p < .001$; partial eta-squared = .119.

(d) State communication apprehension in scenario 4, taking a photo (CA4)

Table 6.9: Means and standard deviations for state communication apprehension in scenario 4 according to cluster.

	M	SD	N
Enthusiasts	-.662	.681	81
Avoiders	-.003	.830	90
Optimists	-.563	.665	96
Talkers	-.149	.899	46
Total	-.367	.804	313

There was a moderate association between cluster membership and state communication apprehension in the photo scenario (CA4).⁸⁴ Enthusiasts and Optimists were lower in CA4, on average, than Avoiders and Talkers ($p \leq .015$) (table 6.9).

The variation in CA across scenarios and clusters supports Cheng, Horwitz and Schallert's (1999) finding that some people feel more anxious about speaking than writing a language while others feel more anxious about writing than speaking.

6.3.6 State self-perceived communicative competence

In this section, levels of state self-perceived communicative competence are compared across clusters. As above, independent-samples ANOVAs were conducted for each scenario in turn, to detect associations between cluster membership and SPCC (except where stated otherwise); these were followed by post hoc tests with Bonferroni adjustments applied.

(a) State self-perceived communicative competence in scenario 1, the phone-in (SPCC1)

Table 6.10: Means and standard deviations for state self-perceived communicative competence in scenario 1 according to cluster.

	M	SD	N
Enthusiasts	4.35	.964	81
Avoiders	3.00	1.642	90
Optimists	3.12	1.324	96
Talkers	3.98	.931	46
Total	3.53	1.414	313

A moderate association was identified between cluster membership and SPCC1.⁸⁵ Enthusiasts and Talkers had higher SPCC in the phone-in scenario (SPCC1) than Avoiders and Optimists ($p \leq .002$). Table 6.10 provides mean values for SPCC1 according to cluster.

⁸⁴ $F(3,309) = 14.499, p < .001$; partial eta-squared = .123.

(b) State self-perceived communicative competence in scenario 2, the studio audience (SPCC2)

Table 6.11: Means and standard deviations for state self-perceived communicative competence in scenario 2 according to cluster.

	M	SD	N
Enthusiasts	4.68	.520	81
Avoiders	3.38	1.540	90
Optimists	3.96	1.151	96
Talkers	4.28	1.004	46
Total	4.03	1.240	313

An association was found between cluster membership and state self-perceived communicative competence in the studio audience scenario (SPCC2).⁸⁶ Enthusiasts and Talkers had the highest SPCC2, on average, while Avoiders had the lowest (table 6.11). The difference between Enthusiasts and Avoiders/Optimists was significant ($p < .001$), as was the difference between Avoiders and each of the other clusters ($p \leq .004$).

(c) State self-perceived communicative competence in scenario 3, the online chat (SPCC3)

Table 6.12: Means and standard deviations for state self-perceived communicative competence in scenario 3 according to cluster.

	M	SD	N
Enthusiasts	4.46	.822	81
Avoiders	3.07	1.592	90
Optimists	3.50	1.314	96
Talkers	3.59	1.359	46
Total	3.64	1.401	313

A moderate association was found between cluster membership and SPCC in the online chat scenario (SPCC3).⁸⁷ Enthusiasts reported higher SPCC3, on average, than did Avoiders, Optimists and Talkers ($p \leq .002$) (table 6.12).

⁸⁵ $F(3,309) = 34.721, p < .001$; partial eta-squared = .167.

⁸⁶ $Welch(3,137.6) = 25.613, p < .001$; partial eta-squared = .158. An independent-samples ANOVA was conducted first. However, as Levene's test was found to be significant and the ratio of the largest standard deviation to the smallest was greater than 2:1 (see table 6.11), a Welch test was used instead (Griffiths 2012).

⁸⁷ $F(3,309) = 16.740, p < .001$; partial eta-squared = .140.

(d) State self-perceived communicative competence in scenario 4, taking a photo (SPCC4)

Table 6.13: Means and standard deviations for state self-perceived communicative competence in scenario 4 according to cluster.

	M	SD	N
Enthusiasts	4.62	.681	81
Avoiders	3.68	1.356	90
Optimists	4.27	.912	96
Talkers	4.04	1.074	46
Total	4.16	1.091	313

There was a moderate association between cluster membership and self-perceived communicative competence in scenario 4 (SPCC4).⁸⁸ Enthusiasts had the highest SPCC4, on average, and significantly more than Avoiders ($p < .001$) and Talkers ($p = .018$) (table 6.13). Avoiders had the lowest SPCC4, on average, and significantly less than Enthusiasts (as above) and Optimists ($p = .001$). Other differences were not significant.

In all four scenarios, the Avoiders cluster had relatively high standard deviations for SPCC, suggesting that the cluster's responses on these items vary somewhat. This is to be expected, as the cluster is also fairly heterogeneous in its Welsh language ability (table 6.3).

6.3.7 Discussion of psychological variables

Although Welsh language ability was a fairly good predictor of cluster membership (section 6.3.4), some of the psychological states elicited through the questionnaire were better predictors. CA1 (communication apprehension in scenario 1) had a large effect on cluster, and SPCC1 a moderate effect.⁸⁹ This suggests that the phone-in was an especially divisive scenario, making it particularly useful for segmenting the sample into types; indeed, this observation is confirmed by the standard deviations for mean WTP (table 6.2), which are smaller in scenario 1 than in the other scenarios. CA2 and SPCC2 also outstripped Welsh language ability in terms of effect size. These findings support my conjecture that sociobiographical variables only tell half the story: understanding the psychological traits and states involved in individuals' willingness to use a minority language may be an important explanatory bridge between language background and intended behaviour.

In three scenarios out of four, CA has a stronger effect than SPCC on cluster membership. This matches the findings of the path analysis in chapter 5, where CA was shown to be a stronger

⁸⁸ $F(3,309) = 12.319, p < .001$; partial eta-squared = .107.

⁸⁹ CA1: $F(309) = 35.954, p < .001$; partial eta-squared = .259; SPCC1: $F(309) = 20.640, p < .001$; partial eta-squared = .167.

predictor of WTP than SPCC. Curiously, in scenario 3, the scenario which places a high level of demand on participants' written Welsh skills, the converse is true: SPCC is more strongly associated with cluster membership than is CA. The difference between effect sizes is not large, and may be down to chance, but could potentially be suggestive of an interaction effect between one (or both) of the contextual factors in the model (literacy and demand) and one (or both) of the psychological factors. This possibility is not explored here, but should be investigated in future research.

6.3.8 Literacy and demand

In chapter 5, it was reported that the respondents were more willing to participate, on average, in low-demand scenarios than in high-demand scenarios, and that written scenarios were slightly preferred over oral ones. Given this finding, it would be interesting to know whether those tendencies are driven by one or two clusters with a strong preference for low-demand, written scenarios, or whether there is evidence of a general preference across the sample.

A glance at the cluster centres (table 6.1) shows that the Optimists cluster is defined by its strong preference for the low-demand scenarios over the high-demand ones. Evidence of a preference for low-demand scenarios is also present among Enthusiasts, who were most willing to participate in the studio audience scenario, and Avoiders, who were most willing to participate in the photo scenario (table 6.2). The Talkers cluster shows a pattern which is contrary to the general tendency, being most willing to participate in the highly-demanding phone-in scenario.⁹⁰ Talkers' preference is linked to CA: they were significantly more apprehensive in the online chat than in the phone-in.⁹¹ This may be related to the discrepancy in Talkers' Welsh language ability: although they are highly proficient in spoken Welsh, they report slightly lower levels of ability in reading and writing (table 6.4). Talkers may feel that, as fluent speakers of Welsh, their written Welsh does not live up to their own expectations, which may cause them embarrassment or nervousness in situations which place demand on their writing skills. This accounts for the group's higher CA in scenario 3 but does not explain their relatively low levels of CA in scenario 1. Possible reasons for Talkers' unusual response to the phone-in scenario are discussed in section 6.4.4.

There is no cluster which is specifically characterised by higher willingness to participate in the written scenarios in particular (i.e. there is no cluster with the pattern "2, 2, 4, 4" or similar in table 6.1). Looking at the mean values of WTP (table 6.2), the preference for written scenarios appears to be driven by the two lower-ability clusters, Avoiders and Optimists. Avoiders were

⁹⁰ These clusters' "favourite" scenarios are all significantly preferred over the clusters' second-preference scenarios ($p \leq .007$).

⁹¹ $t(45) = 2.271, p = .028$.

more willing to participate by taking a photo than by sitting in the studio audience⁹² and more willing to participate in the online chat than in the phone-in.⁹³ Optimists were more willing to participate in the online chat than in the phone-in,⁹⁴ but rated their WTP exactly the same in the photo and studio audience scenarios, on average.

It seems, then, that the two lower-ability clusters tend to prefer the written scenarios over the oral ones, probably due to experiencing higher levels of CA in the oral scenarios. The Optimists cluster displays a notable exception in the low-demand condition, however. Qualitative analysis of the comments made by respondents assigned to the Avoiders and Optimists clusters suggests that Optimists expect the studio recording to be an enjoyable experience, whereas Avoiders assume it would not be (see section 6.4). This difference in perception may be related to trait optimism, or alternatively to individuals' orientation towards Welsh: while Optimists strive towards greater proficiency and inclusion in Welsh-speaking society, Avoiders keep the language more at arm's length. I expand on this interpretation and support it with evidence from audience comments in section 6.4.

In summary, while the audiences surveyed in this research prefer low-demand and written scenarios, on average, over high-demand and oral scenarios, some people in the sample prefer the exact opposite. This finding supports the use of both path analysis (to uncover general tendencies) and cluster analysis (to uncover individual differences) in the study of WTP. The discovery of divergent patterns of response to different participation contexts has important implications for the design of audience participation opportunities and suggests that a one-size-fits-all approach may cater for the majority, but will not maximise the appeal and benefit to the audience as a whole. These implications are discussed in chapter 7.

6.3.9 State SPCC relative to trait-like Welsh language proficiency

In chapter 5, it was shown that self-reported trait-like Welsh proficiency is strongly predictive of state SPCC in the four scenarios. In this section it will be shown that the strength of the relationship between the two variables is subject to individual differences, and that these interesting differences help to characterise the four clusters.

Paired samples t-tests (2-tailed) were conducted on the data from each cluster separately, to find out whether mean SPCC in scenarios 1, 2, 3 and 4 differed from mean self-reported ability to speak, understand, write and read Welsh respectively. This analysis relies on two assumptions. First, although both sets of variables were elicited using five-point Likert scales, the

⁹² $t(89) = 4.600, p < .001.$

⁹³ $t(89) = 2.740, p = .007.$

⁹⁴ $t(95) = 8.041, p < .001.$

wording of the questions and possible responses differed between ability and SPCC (see appendix A). Nonetheless, it is assumed that the two scales are directly comparable, e.g. point 4 (“high” ability) on the language ability scale is equivalent to point 4 (“probably competent enough”) on the SPCC scale. The second assumption is that it is appropriate to compare SPCC with different skills in each scenario, i.e. in scenario 1, which involves conversing in spoken Welsh, SPCC is compared with trait-like ability to speak, in scenario 2, which involves understanding spoken Welsh, SPCC is compared with trait-like ability to understand Welsh, and so on. Findings presented in chapter 5 suggest that this approach is appropriate for three skills out of four, but ability to write was found to be a better predictor of SPCC4 than ability to read. However, as the difference was fairly small, and ability to read was highly correlated with ability to write, it was decided to relate SPCC4 to ability to read for the sake of symmetry.

The results of the analysis (table 6.14) reveal three interesting findings.

Table 6.14: Summary of clusters’ state SPCC in each scenario, relative to trait-like Welsh language proficiency.

	SPCC1 relative to ability to speak	SPCC2 relative to ability to understand	SPCC3 relative to ability to write	SPCC4 relative to ability to read
Enthusiasts	SPCC < ability ($t(80) = 3.785$, $p < .001$)	SPCC = ability	SPCC = ability	SPCC = ability
Avoiders	SPCC < ability ($t(89) = 4.189$, $p < .001$)	SPCC < ability ($t(89) = 2.026$, $p = .046$)	SPCC = ability	SPCC = ability
Optimists	SPCC < ability ($t(95) = 5.050$ $p < .001$)	SPCC = ability	SPCC = ability	SPCC > ability ($t(95) = -4.062$, $p < .001$)
Talkers	SPCC < ability ($t(45) = 3.429$ $p = .001$)	SPCC = ability	SPCC = ability	SPCC = ability

First, all four clusters rated their competence to take part in scenario 1 (the phone-in) significantly lower than their ability to speak Welsh, on average. Fluctuations in SPCC from scenario to scenario are to be expected, of course, since it is *state* SPCC that is being measured. This particular down-rating could occur because people consider talking on the phone, talking to the media, or talking to people with different accents, to be more taxing than speaking Welsh “generally”. Looked at from the opposite direction, it suggests that when people report their trait-like ability to speak Welsh in general, with no guidance as to context, their assessment is measured against some standard of proficiency that is less demanding than the phone-in scenario.

Second, Avoiders rated their ability to understand what was going on in the studio recording scenario lower, on average, than might have been anticipated from their self-reported Welsh ability. It could be that the respondents in the Avoiders cluster, who are typically L2 Welsh learners, recognise that the kind of Welsh they hear in their classes (and on which they base their assessment of their overall ability to understand Welsh) is not the same as the Welsh that would be used in a TV recording. If this were the case, a similar pattern might have been found in the Optimists cluster, the other predominantly L2 cluster, but that cluster's SPCC ratings were, on average, consistent with their self-reported ability to understand Welsh. How else, then, might this difference be interpreted? Avoiders reported higher CA in scenario 2 than the Optimists, which raises the question of whether CA might influence SPCC (remember that the directions of the paths in the model of WTP in chapter 5 have not been tested). Alternatively, both CA and SPCC could be influenced by a third factor. I believe that the presence of another factor is plausible in this instance: taking other observations about the cluster into account – many Avoiders feel uncomfortable in Welsh-language environments or dislike audience participation in general (see section 6.4) – it may be fair to say that, in comparison to Optimists, Avoiders have less of the “will to understand” – to borrow a phrase from Haugen (1966: 280) – necessary to overcome partial unintelligibility.⁹⁵

Third, in one case a cluster's SPCC was actually *higher*, on average, than their self-reported ability. Optimists reported relatively higher competence in scenario 4, the photo scenario, than their ability to read might suggest. In chapter 5, it was proposed that some of the sample perceived the photography scenario as non-linguistic; yet it seems unlikely that this perception would be concentrated in one cluster, rather than being seen in both of the less-proficient clusters. It may be more appropriate to attribute Optimists' relatively high SPCC4 to the group's confidence that they would be able to take part in this scenario without a high level of reading ability. Taking the leaflet away with them, they would have time to work out what it said, or to get someone to help them read it. Again, this cluster's “will to understand” may play a part in their perception of the scenario. This interpretation is supported with evidence from audience comments in section 6.4.3.

In this section, it has been shown that, far from state SPCC operating simply as a function of trait-like language proficiency in context, the association between the two actually varies according to cluster membership; this may mean that the relationship between them is subject to other individual differences, perhaps in personality or orientation (see section 6.6.3). The

⁹⁵ Haugen's phrase, which he used to refer to the good will needed for speakers of related languages to communicate using their own languages, seems especially apt in the present case. From a psychological perspective, however, this observation might be investigated further in future research by reframing it in terms of orientations or motivation.

finding also suggests that the model of WTP proposed in chapter 5 could be improved with the addition of some as yet unmeasured predictor variable or variables associated with cluster membership. In section 6.4.6, I consider potential candidates for future investigation.

6.3.10 WTP relative to SPCC and CA

Closer inspection of the clusters revealed other systematic discrepancies in the clusters' willingness to participate, which cannot be explained by the variables modelled in chapter 5. When Avoiders' and Optimists' responses to scenario 3 were examined, for example, no significant difference was found between the two groups' SPCC or CA. Even so, the Optimists expressed significantly more willingness to participate than the Avoiders ($p < .001$; $r = .51$).⁹⁶ The same was true for scenario 4 ($p < .001$; $r = .57$). In both scenarios, the effect was large. In scenario 2, the Optimists again expressed more WTP than the Avoiders ($p < .001$; $r = .82$). In this instance, greater WTP was accompanied by a higher level of SPCC among the Optimists (see section 6.3.9), which helps to account for the very large effect size.

Optimists were also found to express relatively high levels of WTP in scenarios 2-4 when compared to Talkers. In scenarios 2 and 3, both clusters were indistinguishable in terms of both SPCC and CA, but the Optimists were somewhat more willing to participate than the Talkers.⁹⁷ In scenario 4, Optimists and Talkers reported the same levels of SPCC, but the Optimists were both more willing to participate and less apprehensive than the Talkers.⁹⁸

These results may be interpreted as suggestive of differing levels of trait-like WTP among the clusters. More specifically, since in several cases, the Optimists' reported levels of state WTP are not attributable to other predictor variables, it appears that Optimists in particular might have higher levels of trait-like WTP than Avoiders and Talkers. Trait-like WTP was not measured in the present study, and tools for its measurement have not yet been created, but it is recommended that this variable be included in future research, to test whether it should be included in the model of state WTP (see section 6.4.6 for further discussion). Other interpretations are possible: Optimists may be keen to improve their Welsh and integrate further into Welsh-speaking society (see section 6.4.3), which may drive them to push themselves beyond their current means.

⁹⁶ Here, the correlation coefficient, r , indicates the effect size, where .10 is small, .30 is moderate and .50 is large (Cohen 1988: 79-80).

⁹⁷ Scenario 2: $p = .037$; $r = .19$; scenario 3: $p < .001$; $r = .30$.

⁹⁸ WTP: $p < .001$; $r = .37$; CA: $p = .015$; $r = .25$.

Table 6.15: Summary of the attributes of each audience segment. Significant effects should not be inferred.

		Enthusiasts	Avoiders	Optimists	Talkers
	% of sample in the cluster	25.9	28.8	30.7	14.7
Segmentation variables State WTP	WTP in the phone-in (WTP1)	High	Low	Low	High
	WTP in the studio audience (WTP2)	High	Low	High	Mid
	WTP in the online chat (WTP3)	High	Low	Mid	Low
	WTP in the photo scenario (WTP4)	High	Low	High	Mid
Ability	Ability to speak Welsh	High	Low	Low	High
	Ability to understand Welsh	High	Low	Mid	High
	Ability to write Welsh	High	Low	Low	Mid
	Ability to read Welsh	High	Low	Mid	Mid
Background	Classroom/mixed learners of Welsh	Low	High	High	Low
	Welsh/bilingual education	High	Low	Low	High
	Current Welsh use relative to English	High	Low	Low	Mid
State CA	CA in the phone-in (CA1)	Mid	Very high	Very high	Mid
	CA in the studio audience (CA2)	Very low	Mid	Low	Low
	CA in the online chat (CA3)	Low	High	Mid	Mid
	CA in the photo scenario (CA4)	Very low	Mid	Low	Mid
State SPCC	SPCC in the phone-in (SPCC1)	High	Low	Low	High
	SPCC in the studio audience (SPCC2)	High	Low	Mid	High
	SPCC in the online chat (SPCC3)	High	Low	Low	Mid
	SPCC in the photo scenario (SPCC4)	High	Mid	High	High

6.3.11 Summary

The first aim of section 6.3 was to begin to characterise four audience types through a quantitative analysis of the clusters identified above. It was found that:

- Cluster 1 (Enthusiasts) was centred on those who were willing to take part in all four scenarios and was strongly associated with a very high level of proficiency in all four Welsh language skills.
- Cluster 2 (Avoiders) was centred on those who were not willing to take part in any of the scenarios and was associated with a somewhat lower level of proficiency in Welsh.
- Cluster 3 (Optimists) was centred on those who were willing to take part in the less demanding scenarios but not in the highly demanding ones, and was associated with a low level of proficiency in comparison to Enthusiasts and Talkers. Unlike other clusters, Optimists rated their SPCC in scenario 4 higher, on average, than their general ability to read, and were also highly willing to participate, relative to their levels of CA and SPCC. This suggests that the cluster cannot be depicted using the data analysed in this section alone; indeed, findings from the qualitative analysis (section 6.4) are especially informative in this case.
- Cluster 4 (Talkers) was centred on those who preferred to take part in the phone-in scenario in particular, and was associated with a high degree of self-reported proficiency in speaking and understanding Welsh, coupled with a relatively lower degree of proficiency in reading and writing Welsh.

These characterisations are expanded and explored when the results of the qualitative analysis of audience comments are integrated into profiles of the four audience segments in section 6.4. A summary of the attributes of each cluster is presented in table 6.15. The labels 'high', 'mid' and 'low' are provided simply to give a rough guide to the clusters at a glance, and do not necessarily imply significant differences among clusters. Information on the significance of associations can be found in the previous sections. Since this summary table may be useful for media practitioners, it is included, in edited form, in the executive summary (appendix B).

The second aim of this section was to validate the clustering solution. As stated above, one of the tests of a clustering solution is its ability to be depicted using variables from the dataset that were not used to segment the cases. This cannot be taken for granted: it is possible to cluster cases into groups that are statistically sound, but theoretically uninterpretable. The significant associations described here confirm that the segmentation has indeed produced meaningful results.

The third aim of this section was to verify certain aspects of the final path model (chapter 5). Several elements of the model have been successfully confirmed: it was found that age and sex were not associated with cluster membership, for instance, while self-reported Welsh language ability, state communication apprehension and state self-perceived communicative competence were all found to be good predictors of cluster. Of the sociobiographical variables included in the study, self-reported Welsh language ability was the strongest predictor of cluster; it is important to note that ability does not determine cluster membership, or WTP, however, since in three scenarios, a highly proficient cluster actually had lower WTP than a less proficient cluster (section 6.3.4). In several cases, psychological states were better predictors of cluster than language proficiency. It was argued that this suggests that psychological states provide an important link between individuals' background and their intended behaviour.

In the next section, profiles of the clusters are elaborated using qualitative data to help interpret the findings above.

6.4 Audience segmentation: Segment profiles

In the interviews with producers conducted for the preliminary study presented in chapter 3, one of the interviewees described how she visualised a particular person known to her when writing Welsh-language content; she found this helped her write in a way that was suitable for that person's preferences and expectations.

I had a definite person in sight, which was a woman who lived two doors down from me. She was a single parent, worked in a bank, from the area I lived in in north Wales at the time and [a] natural Welsh speaker but probably didn't have a high level of Welsh-language education. She was my target audience. (Rhian)

Producers and presenters do not always have real people in mind when they are working; sometimes fictional audience profiles serve that purpose. Audience profiles are typically the result of a market segmentation exercise (see chapter 4). Following a cluster analysis or similar procedure, each audience segment is described, sometimes as if they were a real person, with a name and photo, so that producers and presenters can visualise their target audience vividly (Kinsey 2009: 35). A well-known example within the BBC is the imaginary couple, Dave and Sue, a self-employed plumber and school secretary in their fifties who, in the mid-2000s, were the key target audience for BBC local radio (Kelner 2011). Learner types in the second language acquisition (SLA) literature tend not to be described so colourfully, perhaps because they are created in order to contribute to the ongoing development of the academic field, rather than for immediate use by education practitioners. Rysiewicz (2008) calls his groups 'High', 'Mid' and

'Low', for example, while Kojic-Sabo and Lightbown (1999) simply number their clusters from 1 to 7.

Although highly personalised profiles like Dave and Sue are not appropriate here – the clusters are not distinguishable by age or gender, for example – general descriptions of the clusters are presented in this section, which I believe are much more informative than those typically provided in the SLA literature. The information and insights in them are intended to be potentially useful to media practitioners who produce Welsh-language content, or are working on ideas for new programmes or services. They may also prove useful to researchers and activists in the field of language maintenance, and to teachers of advanced learners of Welsh. Edited (i.e. more user-friendly) versions of these profiles appear, therefore, in the executive summary aimed at media practitioners (appendix B).

The profiles below depict the clusters by focusing on common characteristics and experiences of some of the most typical members of the cluster. They should not, of course, be taken as accurate descriptions of all the people in each cluster. The profiles draw on the quantitative analysis in section 6.3 and also incorporate findings from the qualitative analysis of audience comments.

6.4.1 Cluster 1: Enthusiasts

Enthusiasts feel at home in Welsh. Typical members of the cluster are happy to take part in any of the scenarios, regardless of the Welsh language skills involved or the level of demand placed on them. What Enthusiasts have in common is their facility with the Welsh language. Typical members of the cluster acquired their Welsh naturally, grew up speaking Welsh and continue to use Welsh regularly nowadays. Core Enthusiasts “prefer to use Welsh first in all situations” (M50E349/1). Enthusiasts are likely to have attended Welsh-medium or bilingual schools and are confident at both speaking and writing Welsh. Enthusiasts are the most statistically homogenous of the four clusters when it comes to Welsh language ability (table 6.3). Nearly two-thirds of Enthusiasts are completely fluent in all four Welsh skills, making this the most superfluent cluster. High levels of ability in Welsh are reflected in the cluster’s SPCC: Enthusiasts are confident they can probably or definitely handle the Welsh use required of them in any scenario. Besides their high levels of competence, Enthusiasts also display relatively low levels of communication apprehension; they are fairly relaxed about speaking Welsh on the telephone and “enjoy participating in Welsh events” (F50W258/1). Even Enthusiasts feel nervous or lack confidence in their Welsh at times, but they are still prepared to “give it a go” (M50E164/1), as it’s just a case of “having the confidence and not worrying I guess” (F18W225/1). After all,

they're sure they "would be helped by [the] presenter if such language stumbles occurred" (M35B253/1).

Enthusiasts might have different motivations for their willingness to take part – some may be keen to "publicise many defective aspects of Welsh life" (F70W017/1), while others may want to take advantage of a rare "opportunity" to use their "mother tongue" (M35B217/1). Whatever their motivation, they are enthusiastic about Welsh-language TV and may "follow Welsh programmes" (F70E161/1). Enthusiasts are active members of the Welsh-speaking community and are fully engaged with Welsh-language media. Perhaps their position in Welsh-speaking society means that they are "very often asked by S4C/BBC Wales to take part in interviews" (M50B350/1), they may have been "an ardent campaigner for S4C in the 1970s" (M50W352/1) or perhaps they even "work as a researcher/reporter on a Welsh-language TV programme that is broadcast on S4C" (F18B101/1).

It would be interesting to measure aspects of respondents' engagement with Welsh-speaking society, as it appears that this might account for some of the cluster's distinguishing features. The cluster's responses might also be explained further by relatively high levels of trait-like WTP or trait optimism.

6.4.2 Cluster 2: Avoiders

Avoiders feel uncomfortable in Welsh. They are typically unwilling to take part in any of the scenarios on offer, regardless of the Welsh language skills involved or the level of demand placed on them. Many Avoiders were educated at English-medium schools, where they learnt their Welsh as a second language; others acquired their Welsh naturally or attended evening classes after moving to Wales as an adult. The cluster is characterised by a lack of fluency and confidence in both oral and written Welsh; this is the cluster with the lowest self-reported ability to speak, understand, write and read Welsh, although it is also the least homogenous cluster in terms of Welsh language ability (table 6.3). This lack of ability is reflected in Avoiders' perceptions of the four scenarios: they believe they are incapable of taking part in any of them. In fact, they "wouldn't be watching the programme in the first place because it would be like trying to communicate with aliens" (M70E219/2). Remarkably, Avoiders rated their SPCC to understand what was going on in the studio audience scenario even lower than their general ability to understand Welsh. Unlike members of other clusters, Avoiders said they would feel apprehensive in the studio audience scenario, perhaps because, as non-native speakers of Welsh, they would "probably feel a stranger in my own country" (F50E289/2). Their lack of identity or engagement with Welsh may account for their apparent lack of "will to understand" (section 6.3.9). Naturally, then, it seems likely that Avoiders avoid Welsh-language media

entirely and some may even believe that there are “too much Welsh-Welsh programmes on TV” (M70W086/2).

While some Avoiders consider themselves simply unable to take part in Welsh, others link their reticence to a dislike of audience participation, which is described as “the bane of the media”, since “the views and reactions of the mob are to be despised” (M70E143/2). One Avoider, who had already “said no” to joining a studio audience and “avoided” taking part in a vox pop, wrote that, “there is an underlying assumption in the scenarios that everybody wants to be on TV (on-screen or behind the scenes) – I would dislike involvement in any activity like this” (M35E313/2). Besides “not really [being] one for pushing myself forward in this way” (M35E183/2), Avoiders do not want to “compete with attention seekers” or associate with the “idiots [who] ring in to such discussion programmes” (F50E182/2). Some are cynical or mistrustful of the media and suspect that, as audience participants, their “services would mainly be required to make the programme appear interesting or popular” or that the presenter would “deconstruct my views on national television, possibly making me appear foolish” (F18W090/2).

Trust in the media has been associated with interpersonal trust (Jackob 2012); low levels of one or both of these variables might account, in part, for the differences between this cluster and others. This interpretation is supported by Chung’s (2008) study of interactivity in online news media, in which it was reported that people who found online news to be credible were also “most likely to engage in dynamic human-to-human interaction online” (Chung 2008: 674). Trait optimism or trait-like WTP might also be low in this cluster and should be measured in future research.

6.4.3 Cluster 3: Optimists

Optimists may not be highly fluent in Welsh, but they are willing to make the most of the Welsh they have. The cluster is skewed slightly in favour of those who acquired their Welsh in the classroom and who attended English-medium schools, although many natural acquirers of Welsh and Welsh-medium educated respondents are also included in the cluster.

This group distinguishes between the high-demand and low-demand scenarios and has a clear preference for the latter: they are more willing to sit in a studio audience or to send a photo in to a programme than they are to talk to a TV producer on the phone or chat to other audience members online. Optimists “don’t know enough Welsh” (F50E115/3) to take part in highly demanding scenarios, but they are nonetheless willing to participate in the media when they are not asked to speak or write Welsh themselves. In fact, in most scenarios, Optimists are more willing to participate than Talkers, despite Optimists’ lower level of Welsh proficiency. Perhaps,

as non-fluent speakers of Welsh, Optimists are less worried than Talkers about losing face: unlike Talkers, Optimists are expected to make mistakes.

Although there was no significant difference between Optimists and Avoiders in overall Welsh ability, or in any of the four Welsh skills, Optimists rated their SPCC significantly higher than the Avoiders in the studio audience and photo scenarios. Most notably, they rated their ability to take part in the photo scenario higher than would have been expected from their ability to read Welsh. In other words, Optimists appear to be more optimistic than Avoiders when considering how their receptive Welsh skills would translate to the scenarios in the questionnaire. Similarly, although Optimists do not necessarily “feel confident to use [their] Welsh whilst away from the classroom” (F35E054/3), and may be “very fearful” (F50B185/3) of taking part in the high-demand scenarios, they are significantly less apprehensive than the Avoiders in the low-demand scenarios. Optimists trust that they would feel “comfortable” (F50B185/3) in the “relaxed atmosphere” (F18E316/3) of the Welsh-language studio audience, because they “would not have to speak” (M18E058/3).

Unlike Avoiders, Optimists describe their lack of fluency in Welsh as a temporary condition, and expect their Welsh to improve in the future. Their Welsh is not fluent “yet” (F18E029/3) or “at the moment” (F18E049/3), but “if, in a few years, I can speak more Welsh and understand people talking to me in Welsh better, then I would feel more comfortable [taking part]” (M18E215/3). They have a clear “will to understand” (see section 6.3.9). While Optimists use more English than Welsh on a daily basis, and are not closely involved in Welsh-speaking society, they are positive about the Welsh language (“since moving to Anglesey it has been a privilege to hear Welsh spoken so much” (F50E102/3)) and are ready to be nurtured as future Welsh speakers: “The older I have got the more prominent the language has become in my life. The language is growing and I am with it” (M18B145/3).

Optimists focus less on the barriers to participation and more on the pleasure they would get from taking part in media content: they expect to “enjoy being an audience member” (F18B342/3) since they “enjoy seeing how shows are put together” (M18B262/3). Many Optimists “like taking photos” (F50W088/3), so the photography scenario “sounds like fun!” (M18E058/3). Optimists would like to engage with Welsh-language media, and would welcome forms of participation that either “open up the discussion to those who are not competent Welsh speakers” (F18E029/3), or allow them to “contribute through a medium other than speech” (M50E034/3). This cluster is therefore an important segment of the audience for producers to consider when designing audience participation, because, despite their relatively

low ability in Welsh, Optimists can be enticed to take part in media content, providing they are given opportunities to participate that are appropriate to their needs (see chapter 7).

Trait optimism, interpersonal trust and trait-like WTP could all help account for the difference between this cluster and others. It would also be interesting to measure aspects of the cluster's engagement with Welsh-language society.

6.4.4 Cluster 4: Talkers

Talkers buck the trend by being more willing to participate in the phone-in than in any of the other scenarios. This cluster is the smallest of the four, and the most diffuse in terms of mean distance from the cluster centre (table 6.1). This suggests it may be the hardest group to characterise, as the number of cases at the cluster centre is small. Talkers typically have high levels of ability in speaking and understanding Welsh coupled with somewhat lower competence in reading and especially writing Welsh, which makes literacy a key factor in their willingness to participate. They typically acquired their Welsh naturally and attended Welsh-medium or bilingual primary schools, but took their secondary and/or higher education through the medium of English. Some Talkers believe that their lack of confidence in writing Welsh stems from their English-medium education (cf. chapter 5):

I am aged 58 years – few people of my age were educated through the medium of Welsh after 11 years of age (and many didn't have primary education through the medium of Welsh either). That's why people like me are more confident when speaking than writing Welsh. (F50W348/4)

I enjoy speaking Welsh, it's just that since my higher education was in English, I have had much more experience with formal English and so feel more comfortable writing in formal English than in formal Welsh. (F18B188/4)

Talkers are less keen on taking part in the studio audience than in the phone-in scenario, which is surprising, as the sample as a whole prefer the low-demand scenarios on average. With a relatively small number of comments to draw on, the reasons for this can only be tentatively inferred, however. Some Talkers suspect that sitting in the audience would be "quite boring and frustrating" (F18W154/4), while others, who have been to watch a studio recording before, did not enjoy the experience.⁹⁹ This might be because they would expect or prefer to share their opinions rather than sit quietly: one Talker claims to be "rather opinionated" (F18W063/4) and another previously "took part and spoke" (F50E257/4) when she attended the recording of a TV programme.

⁹⁹ Audiences' previous experiences of taking part in media content are examined in section 6.5.1.

Curiously, some Talkers think that their “keyboard skills aren’t good enough to type ‘real time’ in any language” (F18W063/4), are “not used to typing/chat rooms” (F35W189/4) or have “no website facility” (F50W099/4). Nonetheless, this cluster is not significantly older than the others; in fact, these comments came from younger participants as well as older ones. If this cluster is relatively uncomfortable with using computers, perhaps it follows that they rely more than other clusters on talking on the telephone, rather than going online to communicate or obtain information. If so, this may help account for their general preference for the phone-in scenario. This interpretation is supported by a high degree of consistency in communication apprehension in the phone-in scenario (note the cluster’s low standard deviation for scenario 1 in table 6.6): while the cluster is relatively heterogeneous in some respects, one thing the group agree on is their relative lack of communication apprehension in the phone-in scenario.

Talkers are intriguing. Their written Welsh is less proficient than their spoken Welsh *and* they are more comfortable using the telephone than the other clusters. This pattern might have been explained easily had Talkers been significantly older than the other clusters – but they’re not. More research is needed to understand this cluster better, but it is suggested that a good starting point for investigation would be the cluster’s usage of different forms of communication (email, phone etc.), compared to other clusters.

6.4.5 Linguistic themes common across clusters

The qualitative analysis of audience comments revealed that respondents in all four clusters suffered to some extent from a lack of confidence in their Welsh. Some worried about the breadth of their vocabulary, and thought that they “may not remember all of the appropriate words” (F18B269/1). Some doubted their ability to understand “strange accents” (F18E147/1), “regional or local vocabularies” (M70E152/4) or people who speak Welsh “very quickly and colloquially” (M18B250/4). Several thought their Welsh had become “a bit rusty” (M35B051/3), and had lost confidence as a result.

People were frightened of being put “under pressure” (F50E182/2) or “on the spot” (F18E147/1) in the oral scenarios, but were happier when they were allowed “time to think on a response and make coherent statements and amend any mistakes” (M70E152/4). In a few cases, people were reluctant to take part in linguistically undemanding scenarios, for fear that they would be taken by surprise: “I would probably fear the idea of being asked something in Welsh that I would not understand (despite being told that audience members would not speak on-air)” (M18E298/2). There was also a concern that “if my photo was of interest [...] I would then be

expected to be part of a more extensive piece. Which might stretch my Welsh beyond its limits!” (M35E216/3).¹⁰⁰

When it came to the written scenario, the online chat, Enthusiasts, Avoiders and Optimists were frequently concerned about whether their written Welsh was “correct” (F35W304/2). There was a perception that writing meant “having to write sentences” (F18E316/3), and this made people “conscious of grammatical or spelling mistakes” (F18E069/3) and feel a “need to improve my knowledge of Welsh mutations” (F70E121/1).

6.4.6 Discussion

While the segmentation of Welsh audiences presented in this chapter is original, in part because it classifies respondents specifically according to their willingness to take part in media content, these profiles of Welsh speakers can be compared to those developed by the market research company Beaufort Research (2006), in a study commissioned by S4C, the Welsh Language Board, BBC Wales and the Arts Council of Wales. Their work aimed to understand motivations and barriers to participation in a wide range of Welsh-language activities (including, but not limited to, consumption of Welsh media) and to translate these into recommendations for policy. The researchers were also concerned with comparing respondents’ use of English with their use of Welsh in relation to the same activities, which fell outside the scope of the current project. While the Beaufort study differed from the present study in many ways, certain parallels and contrasts can be drawn between the two.¹⁰¹

The present research confirms the findings of the Beaufort study in several respects. First, in the Beaufort study, communication apprehension and self-reported fluency in Welsh were found to be relevant in explaining the extent to which Welsh speakers aged 22-45 live their lives through the medium of Welsh, just as CA and self-reported Welsh language ability were found to be important predictors of WTP in the present study.

Second, respondents in both studies frequently cited their lack of confidence in speaking or writing Welsh as a barrier to participation in Welsh-language activities, particularly when the

¹⁰⁰ This respondent’s concern may be justified. A producer interviewed for the study in chapter 3 described how participation, while always voluntary and never “expected” of audiences, sometimes starts small and grows into something more substantial:

hopefully somebody would contact us – maybe not with a story – they might contact us with an email about something and then we’d contact them back to say thanks for your email, would you be interested in contributing more, sending in your pictures and so on, and then kind of get a two-way conversation with someone and we’d go from there.
(Bethan)

¹⁰¹ Whilst I was aware of the Beaufort study prior to conducting my cluster analysis, I postponed reading the results of the Beaufort study until after the analysis presented in this chapter had been completed, in order to avoid unintentionally influencing the judgements I made during the clustering process.

context was perceived to be a formal one. In both studies, fluent respondents suggested that Welsh-language media use very “proper” Welsh and expressed insecurities about their own grammar and vocabulary.

Third, there are clear parallels between the cluster profiles described in both studies. Since the two studies segmented Welsh speakers on quite different grounds (see chapter 4), the two studies cannot be expected to produce the same clustering solution (indeed, the cluster analysis in the Beaufort study produced six clusters, as opposed to the four identified in the present study); this makes the similarities between the two solutions all the more striking. Beaufort’s Embracers have much in common with my Enthusiasts: both clusters typically started speaking Welsh as a small child, both are highly literate in Welsh and both express positive engagement with Welsh-speaking society. Beaufort’s Mainstreamers resemble my Talkers: while they are highly fluent in spoken Welsh, they report slightly lower ability in reading and writing the language. Beaufort’s Apathetics appear to correspond to my Avoiders: both groups are unlikely to be fluent in Welsh and have little interest in taking part in Welsh-language activities. Beaufort’s Strivers are similar to my Optimists: while they are not fluent in Welsh and are not immersed in Welsh-speaking culture, they are positive about Welsh and would like to use it more in the future.

The most striking contrast between the findings of the two studies relates to the age of the informants. The Beaufort study focused particularly on the 22-45 year old age group (who would have been aged 28-51 at the time of the fieldwork conducted for this thesis). It was found that this group reported lower levels of fluency in Welsh and lower participation in Welsh-medium activities than the 16-21 and 46+ age groups surveyed. The present study did not confirm these results: in contrast, no significant relationship was found between age group and self-reported Welsh language ability or relative use of English and Welsh. The different findings may be attributable to the studies’ different measures of Welsh language use and ability. Alternatively, sample size may be relevant. The Beaufort report gives no explicit information about the significance or size of the age effect found; if such an effect is present but small, it may be detectable in their sample (N = 861) but not in mine (N = 313). Finally, the different age range boundaries used in the two studies may also help explain the different results. In the light of the findings in section 6.1.3, my youngest age group (18-34) could be argued to subsume an important life juncture, i.e. the point at which people move away from their childhood home/education networks and set up their own homes. By conflating two life stages in one

group, my choice of age group may have obscured age-related differences among respondents (see chapter 7 for a discussion of the potential importance of life stages).¹⁰²

6.4.7 Future research

One limitation of the clustering solution is that the four clusters appear static. Membership of one cluster or another need not be a permanent attribute of a person, however: since it has been argued that individuals' use of Welsh can vary from one life stage to another, it seems likely that their patterns of WTP in Welsh may also vary. It would be interesting to follow respondents and find out whether they move between clusters throughout the course of their life. In particular, will those who are currently Optimists convert into Enthusiasts at a later stage, as their comments suggest they may? Might some Talkers become Avoiders? And could Avoiders become Optimists, or even Enthusiasts? These questions should be addressed in future research.

6.4.8 Summary

In this section, I have presented profiles of four audience segments, based on patterns of willingness to participate in specific media scenarios: Enthusiasts, Avoiders, Optimists and Talkers. The differences among the four clusters have been depicted as far as possible using other variables elicited in the questionnaire; it has been shown, for instance, that the clusters can be distinguished by inspecting their members' Welsh language skills. Where differences between clusters could not be accounted for using the existing quantitative data, other possible explanations for differing patterns of WTP were identified as a result of the qualitative analysis of comments. In particular, it has been hypothesised that Enthusiasts and Optimists may be higher in trait-level WTP than Avoiders, and that Optimists may be higher in trait optimism and/or interpersonal trust than Avoiders and Talkers. Relative familiarity with different means of communication and orientation to Welsh-speaking society also appear to vary among clusters. These factors should be considered potential candidates for inclusion in an improved model of WTP. Other possible avenues for future research are suggested in the next section.

Creating profiles of the audience has brought a valuable person-centred perspective to the study, but it is important to note that it has not superseded the analysis in chapter 5. Modelling WTP using path analysis provided answers that the cluster analysis could not. Unlike the cluster analysis, the path analysis showed indirect as well as direct relationships among variables. Unlike the cluster analysis, the path analysis showed precisely how much variation in WTP was accounted for by the predictor variables, and how much there was left to explain. And, unlike

¹⁰² In common with many studies that use cluster analysis, the Beaufort report does not list the specific variables used to segment their data, but simply says that the analysis "took into account attitudinal, behavioural and demographic data" (Beaufort Research 2006: 5); if age was one of the variables used to create the clusters, the age effect may be spurious (see Punj & Stewart 1983: 146). Explicitly stating the segmentation variables would help with the avoidance of doubt in such instances.

the cluster analysis, the path analysis showed that the variation explained by Welsh language background actually overlapped with that explained by Welsh language ability. The two approaches should therefore be seen as complementary, as both contribute to the overall picture of WTP gained so far.

6.5 Additional explanations for willingness to participate

Although this study has focused closely on individuals' experiences of and feelings about Welsh language use in relation to participation in the media, many other factors must play a part in audiences' willingness to participate in any given situation. Indeed, the final model of WTP in chapter 5 suggests that nearly two-thirds of the variation in state WTP remains unexplained by the variables under investigation. Several important contextual factors, which may help account for those two-thirds, were either kept constant across the scenarios or deliberately omitted from the descriptions on the questionnaire (see chapter 4) and should be examined in future research. While the presenter was not specified in the scenarios in the questionnaire, for example, it should be recalled that friendly, familiar actors, presenters and others in the media have the potential to put audiences at their ease and make them feel comfortable (chapter 3); their role is therefore expected to be important in accounting for WTP. The cluster analysis above helped uncover several other potential influences on WTP, which were summarised in the previous section.

In order to identify additional variables that may be potentially relevant to WTP, respondents were invited to comment on anything else they took into consideration when deciding whether or not they would choose to take part in each scenario. In this section, I highlight factors that respondents offered as explanations for their willingness or unwillingness to take part in content, which have not been discussed elsewhere in the thesis. As in the analyses above, this qualitative analysis draws on the full dataset (N = 358).

Since the free-text comments sections on the questionnaire were all optional, and came after multiple questions about the Welsh language, responses were assumed to be skewed towards certain issues as a result. It was judged important, therefore, to identify and record not only the most common explanations for WTP (section 6.5.1), but also less common answers (section 6.5.2), as they could be of potential importance to future research into WTP.

6.5.1 Common explanations for WTP

- **Self-confidence** While linguistic confidence was a common theme in audience comments, so was confidence more generally. Numerous respondents said that they were "not a very confident public speaker" (XXXX176/X), "quite shy" (XXXX047/X) or just did not have "enough confidence to put [their] ideas forward and get [their] points and

opinions across" (F18W160/1), regardless of the language involved, although some "would certainly feel more comfortable doing so in Welsh rather than in English" (F18B055/3). The scenarios in the questionnaire did not ask people to talk on-air or appear on-screen, and these were important caveats for many respondents, who "would rather not speak on-air but would happily give my opinion to be read out" (F18B237/4).

- **Previous experience** Previous experiences of participating in content were cited as both positive and negative explanations for WTP, especially in the studio audience scenario. Some respondents found participation "boring" (F18B188/4), perhaps because they had not been involved enough in the programme: "I remember feeling as if we were the spare parts – just there to fill the venue!" (M18W358/4). English-language experiences were also relevant to respondents' WTP: "I've been to English-speaking TV shows and thoroughly enjoyed it, so I would assume I'd enjoy the Welsh version" (M35B051/3).
- **Time** Enthusiasts, Avoiders, Optimists and Talkers all complained that "time constraints" (F35W304/2) or "diary commitments" (M35E018/1) limited their willingness to take part in media content, as participation involved "having to do something in [their] spare time – which is short!" (F18W038/3).
- **Topic** The scenarios all reassured participants that the programme they were being invited to take part in was on "a subject you feel strongly about". Respondents confirmed that this was a "very important" (F50W356/4) consideration in their willingness to participate. For some, "a subject you feel strongly about" was not necessarily enough: "I would have to feel very, very strongly about the topic" (M50E349/1) and even then, people were only happy to take part if they were "knowledgeable about the topic" (M50B350/1) or "had personal experience" (F35W189/4) of the issue at hand. The particular topic was also important to those who foresaw a potential conflict of interest: several people said they would "feel uneasy at expressing [their] personal views in public" (M18B261/3), because their job was "deemed politically sensitive" (M50W028/3). Language-related concerns (e.g. the lack of subject-specific vocabulary) may also be relevant to those who said that the topic of the programme was important to them, although no comments were made to that effect.
- **Cost** The perceived financial costs of participation were frequently mentioned: "most of the phone-ins charge you for making the call, which would deter me and others from taking part" (M50W144/3). It was clear that many people "would not pay for a premium rate phone call!" (M35W204/3).

6.5.2 Less common explanations for WTP

- **Celebrity** Respondents were much more likely to identify barriers to participation than factors that would encourage them to take part. However, one respondent offered a positive explanation for their WTP, suggesting that they would take part in the studio audience scenario because a “star or celeb” might be present (M35W204/3).
- **Feeling “not worthy”** In chapter 3, one of the producers interviewed talked about audience members who seemed to feel that they were not “worthy of being a public spokesperson” (Marc). A few of the comments made by respondents resonated with this observation: “why should people be interested in my opinion?” (F50E257/4) asked one and “I would maybe feel my views were unimportant” (F70E168/3) said another.
- **Disability** A few people had disabilities that they believed would affect their decision to participate in particular scenarios, including dyslexia (“it affects my speech, therefore I wouldn’t take part in many activities where speech is important” (F18B342/3)), dementia (“causes my short memory span to struggle for words and names” (M70B271/4)) and hearing loss (e.g. F50E329/3). A handful of respondents did not want to travel to a studio for a recording; one thought that her friends might not want to come with her to such an event, because although she was “completely mobile, others might have difficulties” (F70W127/X).
- **Passive viewing** One participant in the survey commented that they watched TV “to relax” (F35W338/2) rather than become actively involved in content. Although this point was barely mentioned in the audience comments, I would predict it to be a significant explanatory factor in individuals’ levels of WTP. It may be particularly relevant to the respondents who made very general or ambiguous comments about audience participation, such as “it just doesn’t interest me” (M35E183/2) and “not the sort of thing I would do usually” (F50E011/2). Future research into willingness to participate should take this potential factor into account.

6.6 Theoretical implications

The findings in this chapter have theoretical implications for our understandings of psychological effects in sociolinguistic research, the construct of self-reported trait-like language proficiency and the relationship between trait-like language proficiency and state SPCC, all of which are discussed in this section.

6.6.1 Bridging the divide between social and psychological factors

It is rare for sociolinguistic studies to bridge the gap between social and psychological factors; in this regard the research in this chapter makes an important theoretical contribution to the literature. In particular, the invocation of participants’ personality traits to explain the results of

qualitative research is highly unusual in the sociolinguistics literature, which tends to focus on social rather than psychological aspects of language use. Only two such examples could be found. First, Cheshire *et al* (2008) suggested in the discussion of their findings that personality may play a part in the diffusion of linguistic innovations; this interpretation was not explored further, however. Second, Stuart-Smith and Timmins (2010) assigned participants to different adopter categories based, in part, on their “observed personality traits” (Stuart-Smith & Timmins 2010: 46), including empathy, dogmatism, fatalism and others (see Rogers 2003: 289). The latter approach, albeit the first study I know of to attempt to incorporate psychological variables into a sociolinguistic investigation, may be criticised on grounds of observer unreliability, since, “it is not sufficient to “intuit” the pattern of Bill or Betty. All of their friends do this much, with greater or less success. A science [...] should be made of sterner stuff” (Allport 1998 [1962]: 278). I am not aware of any studies within sociolinguistics in which participants’ personality traits have been inferred quantitatively using self-report questionnaires or other standardised tests.

The findings presented in this chapter point towards the potential importance of personality in individuals’ language use and linguistic choices. In section 6.3.7, I suggested that psychological traits (and states) may help explain variability in the link between language background and intended behaviour. In the audience profiles (section 6.4), I suggested that people’s willingness to use their Welsh to participate in the media may be related to traits such as optimism or interpersonal trust. And in section 6.5.1, I highlighted claims made by respondents that they are not confident enough or too shy to take part. Given the relevance of these kinds of individual differences in the present research, I would argue that sociolinguists should pay greater attention to personality variables, in order to gain a more complete picture of the factors at play in sociolinguistic variation and identity construction.

6.6.2 Theoretical implications for self-reported trait-like language proficiency

The closely-related concepts of trait-like communicative competence, language proficiency and self-reported language proficiency have been theorised and operationalised in many different ways (see chapter 2). Most authors agree that language proficiency comprises multiple aspects, although there is little consensus on which elements should be considered a “dimension” of proficiency and which should not (Schachter 1990). There are few studies that address the dimensionality of self-reported language proficiency, which also use a definition and measure of the construct directly comparable to those used in the present research. Those which do, reach different conclusions.

Medvedeva (2010) obtained self-reports of proficiency in the four skill areas, of which two were judged to be enough to characterise her data: “because of strong positive correlation between

self-reported listening comprehension and speaking abilities ($r = 0.75$, $p < 0.001$ for English and $r = 0.75$, $p < .001$ for non-English language) and between reading and writing skills ($r = 0.77$, $p < 0.001$ for English and $r = 0.88$, $p < 0.001$ for a non-English language) the current analysis focuses only on speaking and reading abilities” (Medvedeva 2010: 944). Her observation hints at a two-dimensional concept of self-reported language proficiency, perhaps representing perceptions of oral and written skills, although a factor analysis would have been helpful to confirm this. Medvedeva’s own view is that self-reported language proficiency comprises one dimension representing general language competence, and another consisting of “personal comfort”. She claims that researchers tend to place an “emphasis on one dimension of self-reported language proficiency as an indicator of objective language competence [...] while its second dimension as a measure of personal comfort with one’s languages is frequently overlooked” (Medvedeva 2010: 941). Medvedeva did not measure personal comfort explicitly as a dimension of self-reported proficiency, however, making it difficult to establish whether this should indeed be considered a separate dimension.

Self-reported language proficiency appears to be one-dimensional in some instances – or one dimension of language proficiency may prove sufficient to capture almost the full range of variation. Wells, Kanikingi and McGee (2009) used latent class analysis to investigate self-reported proficiency in speaking, understanding, reading and writing Māori and found that respondents’ self-reported proficiencies lay on a continuum, suggesting that there “appeared to be one underlying dimension of language proficiency” (Wells, Kanikingi & McGee 2009: 187). The authors attributed this finding to universal (English-language) education in New Zealand combined with the nature of Māori orthography: “because Māori is written more or less phonetically in the alphabetical language of English [...] anyone with oral proficiency in Māori and literacy in English has skills to attempt to read in Māori and, perhaps with limited additional instruction, to write in Māori” (Wells, Kanikingi & McGee 2009: 187). This suggests that the dimensionality of self-reported language proficiency is context-dependent.

In the context of Welsh, then, is self-reported language proficiency one-dimensional or multidimensional? Since the English and Welsh systems of orthography are different (Gruffudd 2005), someone who speaks Welsh will not find it easy to read and write the language just because they are already literate in English; they will also need to learn how Welsh is written. As Welsh literacy is not universal among Welsh speakers, it is hypothesised that self-reported proficiency in Welsh must be composed of at least two dimensions: oral and written skills. The results of the current study both support and disconfirm the hypothesis. In chapter 5, factor analysis was conducted and it was found that the four language skills all loaded on one factor, suggesting that self-reported proficiency was one-dimensional. This factor, labelled “Welsh

language ability”, was entered into the path analysis as a single variable in place of the four skills, without sacrificing much of the information in the data. The cluster analysis in this chapter suggests, in contrast, that self-reported Welsh language proficiency may be multidimensional, as the four clusters show significantly different patterns in their skills and cannot easily be ranked on a single dimension from ‘low’ to ‘high’. While Enthusiasts say they are highly able in all four skills and Avoiders are typically not highly proficient in any of the four skills, Talkers claim to be more proficient in speaking and understanding than in reading and writing Welsh, while Optimists are more proficient in receptive skills than in producing Welsh.

How can these two apparently contradictory findings be reconciled? I suggest that the ‘preferred’ answer depends on the level of simplification required for any given purpose. If universals in willingness to participate are being sought (as in chapter 5), then a simple model of Welsh language proficiency, in which ability is reduced to one dimension, is a perfectly adequate means of uncovering such patterns. If the focus is on individual differences (as in chapter 6), then a more nuanced (possibly multidimensional) conceptualisation of language ability is useful. As other authors have argued, both approaches have their pros and cons, and both may be needed, depending on the nature of the language community being studied and the theoretical focus of the research; in the end it is “the researchers or the test constructors who decide on what they wish to label as a dimension” (de Jong & Verhoeven 1992: 10).

My work is unusual in that, by conducting both path analysis and cluster analysis, I have shown that both solutions are relevant and supportable; had I only used one approach to the data, I would not have gained this insight. In the present case, media producers who are concerned with increasing headline audience figures (like Gethin in chapter 3) are likely to find that a single dimension approach to language ability is the most useful to them, as it can help them to plan simple, broad-brush strategies to attract as many people as possible. Media producers who are concerned with giving a voice to diverse and underserved sections of their existing audience (like Marc in chapter 3) would probably find the multidimensional approach more useful, as it can help them to target specific subsections of the Welsh-speaking population more precisely.

6.6.3 Theoretical implications for the relationship between self-reported trait-like language proficiency and state SPCC

In chapter 5, I pointed out that this research is the first, to my knowledge, that explicitly models the connection between individuals’ trait-like self-perceived proficiency and their self-perceived competence in specific situations. I showed that self-reported trait-like Welsh proficiency is strongly predictive of state SPCC in the four scenarios and that the relationship between the two is a linear one, suggesting that an increase in a person’s self-perceived proficiency in Welsh

should, on average, be accompanied by an increase in their self-perceived competence to use Welsh in specific situations. The findings in this chapter contribute further insights into the relationship between the two levels of self-perceived competence.

In section 6.3.9, the SPCC of the various clusters relative to their trait-like Welsh language skills was examined and it was found that respondents rated their state SPCC, on the whole, in line with their trait-like ability. There was some variability among scenarios (on average, the sample rated their SPCC in scenario 1, the phone-in, lower than their ability to speak Welsh), which demonstrates the situation-specific nature of state SPCC. However, I also found interesting differences among clusters. Specifically, I found that, (a) unlike other clusters, Avoiders rated their SPCC in scenario 2 (the studio audience) lower than their ability to understand Welsh and (b) unlike other clusters, Optimists rated their SPCC in scenario 4 (the photo) higher than their ability to read Welsh. These interesting findings have theoretical implications for the relationship between state SPCC and self-reported trait-like language proficiency, as they suggest that the relationship is subject to individual differences. It was hypothesised that the two clusters concerned may be distinguished with reference to personality traits (e.g. optimism or interpersonal trust) and orientations to Welsh-speaking society. Perhaps, then, the fluctuating association between self-perceptions of trait-like and state competence may also be explained, in part, by these factors. A fuller understanding of these issues would be valuable to both applied linguistics and sociolinguistics; it is recommended therefore, that these findings be explored further in future research.

6.7 Summary

In this chapter, the analysis moved beyond the variable-centred approach taken in chapter 5, and instead took a person-centred approach, focusing on individual differences that characterise certain segments of the audience.

In the first part of the chapter, a qualitative analysis of individual experiences of Welsh-English bilingualism was presented, which highlighted the diversity of circumstances in which people acquired and use their Welsh and exhibited parallels with other studies of minority language maintenance and use. It was argued that major life junctures such as marriage, the birth of a child, migration, divorce and bereavement can be turning points in individuals' patterns of Welsh language use and should therefore be considered windows of opportunity to adopt, maintain or reassert Welsh speaker status.

In the second part of the chapter, a cluster analysis was conducted, based on individuals' willingness to participate in each of the four scenarios on the questionnaire. A quantitative analysis of the resultant clusters verified that the clustering solution was meaningful.

By combining the quantitative analysis of the clusters with qualitative analysis of audience comments, four types of audience were profiled, as follows:

- **Enthusiasts:** Highly competent speakers of Welsh, who are willing to take part in any of the scenarios and are highly engaged with Welsh-speaking society;
- **Avoiders:** Less competent users of Welsh, who are not very engaged with Welsh-speaking society and are not willing to take part in anything. The cluster appear to be low in trait-level WTP and some may lack trust in the media;
- **Optimists:** Less competent users of Welsh, who are positive about the language and keen to take part if they can. The cluster are more willing to participate than might be expected from their levels of CA and SPCC, perhaps due to relatively high trait-level WTP or a desire to become integrated into Welsh-speaking society;
- **Talkers:** Highly competent Welsh speakers, who lack confidence in their reading and writing, may not be used to the Internet and prefer to participate over the phone.

One limitation of the clustering solution is that the four clusters appear static; there is no sense of whether respondents may move from one cluster to another at different life stages. Future research should investigate this issue.

It was stated above that one of the goals of this chapter was to validate the model of WTP presented in chapter 5. Several aspects of the model have successfully been confirmed:

- Trait-like Welsh language ability was found to be an important predictor of cluster membership, just as it was an important (indirect) predictor of WTP in chapter 5. (Crucially, however, while ability predicts cluster membership, it does not *determine* it and cannot be treated as a proxy for cluster.)
- Welsh language background was found to be less important than language proficiency in predicting cluster membership, paralleling the structural model of WTP.
- State communication apprehension and state self-perceived communicative competence were found to predict cluster membership. In three scenarios out of four, CA was a stronger predictor of cluster than SPCC, reflecting the coefficients in the path model. (It was also noted that, in some scenarios, these factors were better predictors of cluster than language proficiency, suggesting that psychological states provide a valuable explanatory bridge between sociobiographical variables and intended linguistic behaviour.)
- Age and sex were found to be unrelated to cluster membership, just as they were found to be unrelated to WTP in chapter 5 (lending further support to hypothesis H7 and again disconfirming hypothesis H5).

Various other factors were also identified, which may be relevant to WTP but are not currently specified in the proposed model of WTP. These include trait-level WTP, trait optimism, interpersonal trust, relative use of different means of communication, engagement with and orientation towards Welsh-speaking society and media use preferences. Some of these may provide fruitful avenues for future research.

The theoretical implications of the findings were considered in section 6.6. First, it was argued that sociolinguists should pay greater attention to personality traits when investigating influences on language use. Second, it was shown that self-reported trait-like language proficiency may legitimately be treated as either one-dimensional or multidimensional, depending on the aims of the researcher and the nature of the language(s) and population(s) under investigation. Third, it was argued that state SPCC is not a simple function of trait-like proficiency and contextual factors, but is also subject to individual differences, such as personality traits.

As for methodological contributions, the use of a novel analytic approach – combining cluster analysis with qualitative analysis of respondents' comments – offers a new methodological resource to the SLA and language maintenance literature. I also demonstrated that the creation of vivid profiles of audience segments (a technique already commonly used by market researchers in media organisations) can be more informative, and practically useful, than the dry labels often attached to clusters in the existing SLA and language maintenance literature.

Finally, one of the most important contributions of this chapter is its practical application: unlike the analysis in chapter 5, the findings and interpretations in this chapter are expected to be directly useful to media production practice. User-friendly versions of the audience profiles are included in the executive summary in appendix B and implications for content production are discussed in the next chapter.

Chapter 7: Summary and implications for theory and practice

This chapter draws together the findings from the previous chapters to establish what the research has achieved and how it contributes to theory and practice. I begin by summarising the hypotheses tested and the results obtained (section 7.1). Since this is the first study that has aimed to document empirically the individual psychology of minority language media audiences, it has been necessary to develop the new theoretical concept of willingness to participate (WTP) and a scale to measure the linguistic demand of media content in order to help frame and focus the research questions. The thesis also marks the first use of structural equation modelling (SEM) within the field of minority language media studies. These empirical, theoretical and methodological contributions to minority language media studies are discussed in section 7.2.

In section 7.3, I turn to other fields of research. First, I consider the implications of the research findings for language maintenance and revitalisation and argue that efforts to encourage Welsh use might best be targeted at adults as they undergo major life events such as marriage, the birth of a child or the death of a family member. Second, I argue that the research findings support the incorporation of psychological variables into sociolinguistics. It is claimed that the examination of psychological states, such as communication apprehension (CA) and personality traits, such as optimism, may help sociolinguists to gain a more complete picture of the factors involved in sociolinguistic variation. Third, I argue that the thesis makes a theoretical contribution to applied linguistics by modelling the relationship between self-reported trait-like language ability and state level self-perceived communicative competence (SPCC) for the first time.

One of the main aims of the thesis is to generate recommendations for Welsh-language media producers and this is addressed in section 7.4. Recommendations for media production practice relate primarily to aspects of the design of opportunities to participate, but also to the handling of audience members who have agreed to participate and to the development of Welsh-language websites. Language policy issues are also discussed in this section.

Section 7.5 addresses some of the limitations of the study and section 7.6 covers possible directions for future research.

7.1 Hypothesis testing: Summary of results

In chapter 3, I made a series of specific hypotheses and related research questions, based on the results of a preliminary study of Welsh-language media producers. These hypotheses and questions were tested in chapters 5 and 6 and the findings are summarised here. In the course

of the thesis, I also investigated the wider question of how various social and psychological factors drive minority language speakers' language practices. A number of interesting discoveries were made, which had not been formally hypothesised in advance; those which have implications for theory and practice are discussed in sections 7.2 to 7.4.

H1: State SPCC and state CA are immediate antecedents to state WTP.

H1 was supported. The path analysis conducted in chapter 5 confirmed that state WTP is predicted by state CA and also to a lesser extent by state SPCC. Although the path analysis does not strictly establish directionality (see chapter 4), the analysis suggested that the hypothesis was plausible. The results of the cluster analysis in chapter 6 confirmed that SPCC and CA were associated with patterns of WTP.

Q1: Do SPCC and CA influence WTP independently or does one determine the other?

It was found that SPCC and CA both exert their own influence on WTP independently, but that one factor also contributes to the other. The model of WTP (chapter 5) suggests that audiences' perceptions of their competence to take part in media content influence the apprehension they feel, but since path analysis cannot confirm or disconfirm the direction of arrows specified, it is noted that the relationship could operate in the other direction. This finding is of theoretical importance, as it shows that, although the two psychological states are closely related, they are nonetheless distinct constructs. Both are needed, therefore, in order to understand where audiences' sense of willingness or unwillingness to participate come from.

H2: Forms of participation that place a low level of demand on audiences' language skills will encourage greater WTP than more demanding forms.

H2 was broadly supported. An examination of the effect of demand across the sample as a whole indicated that audiences were more willing to participate in less demanding scenarios than in more demanding ones (chapter 5). However, the cluster analysis presented in chapter 6 revealed considerable variation across different segments of the audience. While Optimists showed a clear preference for less demanding forms of participation, Enthusiasts were keen to take part in any kind of media content, regardless of demand, and Talkers expressed a definite preference for the highly demanding phone-in scenario. Possible explanations for these differences were discussed in chapter 6.

H3: Oral modes of participation will encourage greater WTP than written modes.

H3 was disconfirmed. Even though the sample, on average, reported a higher level of proficiency in oral skills (speaking and understanding) than in written skills (reading and writing), there was

actually a slight preference, on average, for the written scenarios (chapter 5). This was put down to the effect of CA – audiences tended to find the oral scenarios more apprehension-inducing than the written ones. Nonetheless, when I drilled down to the level of individual differences (chapter 6), I found that the picture was more complex: while the two lower-ability clusters (Optimists and Avoiders) tended to prefer the written scenarios over the oral ones, Talkers favoured the oral scenarios over the written ones, on average, and Enthusiasts exhibited no particular preference at all, being equally keen to take part in any of the scenarios.

Recall that, in chapter 3, producers disagreed with each other about whether audiences seemed particularly unwilling to take part in content in writing, or whether the unwillingness they encountered applied equally to oral and written participation. These results suggest that there is a particular segment of the audience that is, indeed, relatively unwilling to take part in content in writing, but that the tendency does not extend to the audience as a whole. Given Enthusiasts' and Talkers' fluency in Welsh and their relative involvement with Welsh-speaking society, it is likely that producers of Welsh-language media come across more Talkers and Enthusiasts than Avoiders and Optimists while eliciting content. If that is the case, then Talkers – those who do not want to take part in writing – may be more salient to producers than they are in the present sample.

Q2: Does modality or demand play a greater role in predicting WTP?

The results of the path analysis (chapter 5), the examination of variation from scenario to scenario (chapter 5) and the cluster analysis (chapter 6) all indicate that demand is more important than modality in predicting WTP.

H4: Welsh language background variables predict WTP indirectly through SPCC and CA.

H4 was confirmed in part. In chapter 5, Welsh language background variables were subjected to a factor analysis and operationalised as two dimensions: 'Welsh language ability' and 'Welsh language background'. It was found that Welsh language ability predicts WTP indirectly through SPCC and CA, but that other aspects of Welsh language background are not important once ability has been taken into account. This finding can be explained, in part, because Welsh language ability and background are correlated: those who have a high level of proficiency in spoken Welsh, for example, tend to be the same people as those who acquired their Welsh naturally, attended Welsh medium schools, continue to use their Welsh nowadays and so on. However, it also suggests that, once a particular level of Welsh proficiency has been reached, it may no longer matter – for WTP – how that proficiency was attained; learners and natural Welsh speakers are similarly willing to take part in content, providing they report the same level of proficiency.

H5: Respondents aged 35-49 will report lower WTP than respondents aged 18-34 in scenarios that require them to write in Welsh.

H5 was based on a producer's observation (chapter 3) that "middle-aged" people around the age of 40 appeared to be less willing to take part in Welsh-language content in writing than younger people. The hypothesis was not supported. In contrast to the producer's suggestion, no significant difference was found in WTP between the 35-49s and the 18-34s in the online chat scenario (chapter 5). This finding was attributed to the pace of change in the Welsh education system. Welsh-medium education has expanded gradually, over generations, not just recent decades, as the hypothesis suggests. Any effects related to changes in the education system, while non-significant between the two youngest age groups, might thus be observable across the span of the whole age range. Indeed, it was found that there is a slight trend, in the written scenarios, for younger participants to express greater WTP than older participants. This finding is consistent with the observation that older people in the sample are less likely to have been educated through the medium of Welsh than younger people and therefore may be less confident in their ability to read and write in Welsh. However, these age effects are of minimal importance once other variables have been taken into account.

H6: L1 Welsh speakers educated through the medium of English will report lower ability to write Welsh than L1 Welsh speakers educated in Welsh.

H6 was based on producers' suggestion that some L1 Welsh audiences lack confidence in their written Welsh because they were educated through the medium of English. The hypothesis was confirmed: L1 Welsh speakers educated through the medium of English reported lower levels of proficiency in writing Welsh, and also claimed to use their Welsh less, than those L1 Welsh speakers educated in Welsh.

H7: Respondents' sex is not associated with CA, SPCC or WTP.

H7 was confirmed. In the preliminary study of producers' experiences of eliciting audience participation (chapter 3), producers did not mention audiences' sex or gender as a perceived factor in their WTP, so it was hypothesised that sex is not relevant to WTP. The analysis presented in chapter 5 confirmed this: sex is not significantly associated with CA, SPCC or WTP in the present study; nor is sex associated with the typical patterns of WTP uncovered in chapter 6.

The results summarised above confirm that, broadly speaking, producers' perceptions of the factors underlying audiences' WTP match audiences' self-reports (H5 excepted). The present study has gone further, however, and gained detailed insights into different 'types' of audience, which the producers did not predict (chapter 6). These insights have enabled me to develop new

recommendations for minority language media production practice that build on producers' existing approaches (section 7.4). The questions posed in the thesis are also worth investigating for their wider applicability to theories of minority language media studies, language maintenance, sociolinguistics, applied linguistics and language policy. In chapters 5 and 6, interesting findings with implications for these areas were highlighted; these are discussed further in sections 7.2 to 7.4.

7.2 Contributions to minority language media studies

As discussed in chapter 2, Cormack (2007) has called for researchers to abandon the search for simple answers to broad questions regarding the social effects of minority language media. Instead, he advocates an ecological approach to minority language media, which focuses on the complexity of specific situations. Such an approach encompasses multiple interrelated causes and effects, concerning not only the media, but also the specific contexts and wider ecology in which media use is embedded. In this thesis, I have investigated, controlled for or otherwise taken into consideration numerous interrelated variables associated with the media, the audience and the context in which participation occurs. While the thesis is far from a comprehensive ecology of participative Welsh-language media, I have followed Cormack's recommendation to focus closely on a very specific situation and, in doing so, have arguably restored much of the complexity of minority language media participation that was previously absent from the minority language media studies literature.

Investigating minority language media at such a micro level requires new tools and methods not previously employed in minority language media studies. The thesis has therefore made substantial methodological contributions to the field. First, having found that existing tools for the measurement of media participation were inadequate for capturing key dimensions of language use in the minority language context (chapter 2), I created a new instrument for measuring the level of demand media content places on audiences' language skills (see section 7.5.1). Second, I noted that SEM is ideally suited to modelling complex, dynamic systems of interrelated causes and effects (chapter 4). SEM indeed proved effective in uncovering general patterns of response in the present study (chapter 5). Third, while cluster analysis is a commonly used method of segmenting media audiences for market research purposes (e.g. Beaufort Research 2006), this is the first academic study which uses the technique to examine the composition of minority language media audiences (chapter 6). The thesis therefore marks the introduction of these methods into minority language media studies.

None of the existing research in minority language media studies takes the individual psychology of media users into account (see chapter 2). The empirical contribution of the thesis to minority

language media studies is therefore straightforward: this is the first study that has aimed to document aspects of the individual psychology of minority language media audiences. The thesis offers insights into Welsh media producers' experiences of eliciting participation from audiences (chapter 3), identifies some of the social and psychological factors behind audiences' willingness to take part in Welsh-language media content (chapter 5) and describes four segments of the audience who respond to participative media in particular ways (chapter 6). By identifying some of the many common and less common explanations for individuals' willingness or unwillingness to take part in media content (chapter 6), this study also builds on Cunliffe and Harries' (2005) observation that, when designing opportunities to participate in Welsh, one size does not fit all, since "language use will vary considerably between different bilingual users" (Cunliffe & Harries 2005: 174). The results of the present study suggest that this may be a fruitful area of research for the future.

The thesis also presents new theoretical work conducted to clarify and operationalise key concepts. In chapter 2, I discussed the concept of willingness to communicate (WTC), commonly studied in the field of second language acquisition (SLA), and found that it did not suit the media context very well. Adapting WTC to the needs of the present research, I introduced the new concept of willingness to participate (WTP) and argued that it could be conceptualised at different levels, as a relatively stable, trait-like variable, as a factor that varies across situations and as a psychological state, the immediate precursor to participation. A major difference between state WTC and state WTP concerns potential interlocutors. In contrast to MacIntyre *et al* (1998), whose model of state WTC "refers to situations in which there is a specific person with whom to communicate" (MacIntyre *et al* 2001: 371), I cannot claim that potential participants are considering communicating with a specific person. When audiences consider participating in media content, they may expect to communicate with a specific person, or they may not. In many cases, it may not even be appropriate to describe participation as interpersonal communication at all. Crucially, therefore, while WTC entails willingness to use language (whether productively or receptively), WTP does not necessarily imply willingness to use language; participation may, in principle, be entirely non-linguistic. By carefully defining the new concept of willingness to participate and how it may be measured, I was able to formulate precise hypotheses (chapter 3), which were then tested in chapters 5 and 6. It is this detailed theoretical work that has produced such clear confirmation of most of the hypotheses, as summarised in section 7.1. While the WTP construct was developed to help frame questions about audiences' willingness to take part in media content, there is nothing in its definition or conceptualisation that confines its applicability to media contexts; the construct may be useful to those studying individuals' willingness to engage in all kinds of activities. The concept of WTP

may therefore prove a valuable theoretical contribution not just to minority language media, but also to mainstream media studies and market researchers, as well as to researchers working in SLA who find the WTC construct too restrictive for their needs.

7.3 Implications for neighbouring fields

The findings of the thesis have a number of additional theoretical and methodological implications, which I address in this section. Since the research is interdisciplinary, its outcomes are relevant to several fields; for simplicity, implications and recommendations are organised according to the field in which they may be most applicable: language revitalisation and maintenance, sociolinguistics or applied linguistics. Implications for language policy and language planning are addressed in section 7.4.7, where I consider how to tackle audiences' linguistic insecurity online.

7.3.1 Language revitalisation and maintenance

In chapter 6, it was found that changes in individuals' patterns of Welsh use tend to be associated with important life junctures, such as marriage, migration, the birth of a child or the death of a close family member. When people try to change their language use at more stable periods in their life, such attempts are described by respondents as "bizarre" (F50W348/4). Respondents' comments suggested that each major life event offers speakers a licence to change their relationship with the Welsh language and to renegotiate the role of Welsh in their social identity. These windows of opportunity – or compulsion – to take up, drop, maintain or reconfirm the use of Welsh are not gradual, like the steady accumulation of years in chronological age, but occur at discrete points in time. Eckert (1998), too, found that "progress through the life course involves changes in family status, gender relations, employment status, social networks, place of residence, community participation, institutional participation, engagement in the marketplace – all of which have implications for patterns of variation" (Eckert 1998: 152). The findings of the present study thus support her argument for a 'life course' perspective on linguistic behaviour, which takes account not only of biological age, but also of "the life experiences that give age meaning" (Eckert 1998: 167).

The present findings also resonate with Woolard's (2011) account of L1 Castilian speakers' use of Catalan in adulthood. She found several "social junctures" (Woolard 2011: 621) which acted as triggers for change in participants' language use repertoire:

Specifically, entrance into higher education, the labor market, romance, and parenthood all proved to be consequential turning points for increased use of Catalan. This is not necessarily because these contexts demanded new linguistic skills or brought exposure to new linguistic varieties that informants had not encountered before. Rather, these

were critical junctures because they altered speakers' social environments in ways that led them to mobilize linguistic resources that had been at least theoretically available to them earlier. (Woolard 2011: 621-622)

Other authors have argued that “multilingualism is not what individuals have or lack, but what the environment, as structured determination and interactional emergence, enables and disables them to deploy” (Blommaert, Collins & Slembrouck 2005: 213). Framed in this way, I would argue that major life events act as switches that enable and disable the deployment of multilinguals' existing resources. This suggests that efforts to encourage Welsh use (as opposed to acquisition) might be best targeted at adults who are undergoing, or about to undergo, major life events. To some extent, this is already the case: the Twf campaign encourages new parents to use Welsh at home as part of a strategy to give babies two languages from day one,¹⁰³ and some universities in Wales provide designated Welsh-language halls of residence for Welsh-speaking undergraduates who want to join or remain in a Welsh-speaking environment when they leave home for the first time (e.g. Bangor University n.d.).

As discussed above, leaving home and becoming a parent are not the only points at which people are susceptible to a shift in their linguistic repertoire, however. There should be greater institutional recognition of the opportunity to influence language use during other life events. I would argue that it may be worth exploring the possibility of language maintenance schemes targeted (with due tact and sensitivity) at newly engaged, married, divorced or bereaved speakers of Welsh, for example. New grandparents could also be offered advice on how to support their grandchildren's bilingualism, whether they are Welsh speakers themselves or not. Most people come into contact with public services at major life junctures, at which point they could be offered support and guidance to maintain or reassert their use of the Welsh language.

The present research also has methodological implications for language maintenance and revitalisation. As discussed in chapter 4, it seems surprising that cluster analysis has been so little used in studies of language shift and language maintenance (cf. Ehala & Niglas 2006, Myers-Scotton 2007, Deumert 2010). The present research has, I believe, demonstrated that audience segmentation techniques can be highly illuminating when individual differences are of interest. Researchers may find cluster analysis particularly useful in identifying behavioural and attitudinal patterns in studies of individual language choice and language maintenance. The statistical method used to create the model of WTP in chapter 5, SEM, also has potential as a tool for exploring the complex dynamic ecologies in which individuals and groups make decisions

¹⁰³ <http://twfcymru.com> [accessed January 2013].

about language use and language shift. I would argue that future research into language maintenance should make more use of both techniques.

7.3.2 Sociolinguistics

In both chapters 5 and 6, Welsh language ability was found to be the best sociobiographical predictor of WTP. Two psychological states, CA and SPCC, were, however, even better predictors of WTP. It was suggested, therefore, that psychological states provide an important link between individuals' background and their intended communicative behaviour. In chapter 6, it was also proposed that personality traits, such as optimism and trust (not measured in the present study), may interact with other factors and help account for individual differences in patterns of WTP. As discussed in chapter 6, psychological factors are rarely taken into consideration in sociolinguistic research. In a literature search, only two examples were found: Cheshire *et al* (2008) suggested that personality may play a part in the diffusion of linguistic innovations and Stuart-Smith and Timmins (2010) incorporated personality traits into a typology of adopters of new linguistic features (see chapter 6 for a critique). Yet, if the results of the present study are indicative of wider patterns, psychological factors could potentially exert a stronger influence on language variation than variables more commonly included in sociolinguistic studies, such as context of acquisition, home language use, educational background and so on. I would argue therefore that sociolinguists should pay much greater attention to psychological variables, in order to gain a more complete picture of the factors at play in sociolinguistic variation and identity construction.

This view is supported by research into the psychology of bilingualism, which suggests that personality and language use can be connected in interesting but as yet poorly understood ways. Using the Myers-Briggs Type Indicator (MBTI) to establish female students' psychological preferences, for instance, Francis and Craig (2010) found that Welsh-English bilingual respondents preferred Extraversion and Sensing significantly more frequently than monolingual English-speaking respondents.¹⁰⁴ The reasons for this difference in personality between the two groups are not clear, and may be due to secondary cultural factors; in any case, their results suggest that the interaction between personality traits and language use would merit further investigation. The closer integration of social and psychological factors in sociolinguistic research would enable these relationships to be examined more fully.

7.3.3 Applied linguistics

Previous SLA research has not explicitly modelled the relationship between trait-like and state-level self-perceived language proficiency; in fact, the SLA literature in general lacks studies which

¹⁰⁴ The MBTI instrument elicits preferences for Extraversion versus Introversion, Sensing versus Intuition, Thinking versus Feeling and Judging versus Perceiving (Francis & Craig 2010: 115).

integrate both trait- and state-level constructs.¹⁰⁵ This thesis makes a contribution to the field of applied linguistics by modelling self-perceived competence in Welsh at two levels of conceptualisation, namely trait-like ability to speak, understand, write and read Welsh and state-level self-perceived communicative competence. The relationship between the two was examined and four key findings, summarised here, may be of interest to applied linguists.

First, it was shown that the link between state SPCC and trait-like proficiency is linear (chapter 5). This finding is important for language teaching because it suggests that an increase in a person's self-perceived proficiency in Welsh will, on average, be accompanied by a rise in their belief in their competence to use the Welsh they have learnt, regardless of whether they are a beginner or a more advanced learner. In other words, there is no evidence to suggest that SPCC remains at or near zero until some critical level of perceived proficiency is reached. It is important to remember, however, that this result applies to the sample *on average* and more research is needed to investigate to what extent it applies to individual learners.

Second, it was demonstrated that the link between state SPCC and trait-like proficiency is indeed subject to individual differences (chapter 6). Previous research has revealed that individual differences, not directly related to knowledge of the language in question, moderate the relationship between general self-reported proficiency and SPCC in context. People who stutter, for example, may report a high level of ability to speak a particular language, but rate their ability to participate lower than other people in certain situations that involve speaking the language (Blood *et al* 2001). Knowledge of additional languages may also strengthen self-perceptions of communicative competence in some situations, specifically among those at an intermediate level of proficiency (Dewaele 2010). In the present study, I added to this body of knowledge by demonstrating that SPCC relative to trait-like proficiency varies according to cluster: Avoiders rated their SPCC in the studio audience scenario lower than might have been expected (judging by their self-reported ability to understand Welsh) and Optimists rated their SPCC in the photo scenario higher than might have been expected (judging by their self-reported ability to read Welsh). Drawing on insights gained while profiling the clusters, it was proposed that the relationship between self-perceptions of trait-like and state competence may be influenced, in part, by personality traits (e.g. optimism or interpersonal trust) and orientations to Welsh-speaking society. In practice, this means that optimistic people might be expected to rate their SPCC higher than pessimistic people, even when the two groups rate their underlying

¹⁰⁵ One relevant study has been conducted in the field of communication studies, however: Cupach and Spitzberg (1983) compared dispositional and situational measures of competence in conversational interaction and found that, while state-level self-rated competence was moderately related to trait-level self-rated competence due to "shared method variance and conceptual linkage" (Cupach & Spitzberg 1983: 371), other state-level measures of competence were not strongly linked to their trait-level equivalents.

Welsh proficiency equally. Likewise, those who believe that using 'bad' Welsh is better than not using any Welsh at all may also rate their SPCC higher than those who believe that only 'good' Welsh speakers should use their Welsh in public. It is important, therefore that these personality and attitudinal factors be examined in future research (see section 7.6).

Third, it was observed that, on average, the most demanding skill of those required was the one that best predicted SPCC. For example, in the phone-in scenario, the audience would be required to speak and understand Welsh, speaking being the more demanding of the two skills. In that scenario, ability to speak Welsh was a better predictor of SPCC than ability to understand, write or read Welsh. This pattern held in three scenarios out of four. Based on this finding, it was tentatively suggested (chapter 5) that respondents took their specific balance of trait-level language skills into account when assessing their competence to participate in each scenario. This interpretation is of theoretical interest because it implies that Welsh speakers' self-perceived communicative competence is not entirely driven by a generalised notion of language proficiency, but is more nuanced in nature.

Finally, I noted in chapter 6 that applied linguists tend to treat language proficiency as if it is either one-dimensional or multidimensional, but not both. In contrast, I argued that, in the present study, both solutions are supportable. In the model of WTP presented in chapter 5, a one-dimensional concept of language ability was adopted, as the four language skills were highly correlated and did not add useful information to the model, above and beyond an overall language ability score (this approach also helped avoid the problem of multicollinearity in the structural model). In contrast, when individual differences were under scrutiny in chapter 6, a multidimensional solution was considered more suitable, as it enabled distinctions to be made between different types of Welsh user, which were not studied as part of the model in chapter 5. Applied linguists may find that – providing both solutions can be supported in their particular research context – this flexible approach offers greater insights into language proficiency than can be gained from one solution alone.

The findings described here lend support to efforts in SLA and bilingualism research to gather multiple measures of participants' language 'status', such as language learning history, proficiency, usage and so on (e.g. Li, Sepanski & Zhao 2006). While an individual's generalised self-assessment of their language status may be adequate for some research purposes, as discussed above, the present study highlights the extent to which individuals' language profiles can vary. It is noted, in particular, that individual differences in the relationship between measures of self-reported trait-like language proficiency and state SPCC may undermine inferences made entirely on the basis of generalised measures of language proficiency.

Measures which take a range of different language use contexts into account, such as the self-perceived communication competence scale (McCroskey & McCroskey 1988), may suffer less from this issue, and are recommended whenever a fuller picture of participants' multilingualism is needed – although they may still omit aspects of context that are important to understanding some individuals' linguistic repertoires.

The work in this thesis has further methodological implications for applied linguistics. It was stated in chapter 6 that language learner profiles produced using cluster analysis are frequently given bland labels which make them difficult to imagine vividly (e.g. Kojic-Sabo and Lightbown 1999, Rysiewicz 2008). I have taken a different approach to profiling by drawing on audience research: researchers working in media organisations often give their audience segments informative names and/or lively descriptions (e.g. Kinsey 2009: 35, Kelner 2011). It was argued (chapter 6) that more colourful depictions of learners may be beneficial to applied linguistics, as they may help translate the findings of SLA research into useful tools for teachers. There is always a danger that the depiction of 'types' may encourage teachers (or media producers) to pigeonhole learners (or audiences) and make overgeneralisations, but I suggest that this risk may be mitigated somewhat by the incorporation of learners' own comments into profiles of learner types, as was done in the present study. Including direct quotes can help bring profiles alive, while reminding teachers of learners' individuality and idiosyncrasies.

7.4 Implications and recommendations for minority language media production practice

One of the major aims of the research is to generate recommendations for Welsh-language media producers. In chapters 5 and 6, it was shown that audiences' WTP varies according to the media context; this implies that producers influence audiences' willingness to take part in content, both positively and negatively, through the choices they make when designing opportunities to participate. In this section, I consider the applications of the research findings for media production practice. Implications for language policy and planning are addressed in section 7.4.7.

It has often been said that the main reason why most people do not participate in media content is that it simply does not occur to them to do so.¹⁰⁶ It is important to remember that the present study investigated audiences' *willingness* to participate, not their actual behaviour; therefore this issue has not been directly examined in the present research. It should also be borne in mind that I make no claims about which approaches to participation make for good content or are the most interesting or engaging for the non-participating audience. Nor do I suggest that it

¹⁰⁶ Claire Wardle, personal communication, February 2013.

is always necessary or desirable to increase audiences' WTP. From both an editorial and a language maintenance viewpoint, it may often be preferable to elicit a small amount of high-quality participative content from one or two exceptionally highly motivated members of the audience, rather than attempting to raise WTP among the wider audience. And, of course, I do not suggest that all minority language media content should be participative. For producers who want audiences to take part in the Welsh-language content they produce, some of the ideas presented in this section may be useful things to think about and incorporate into their existing practices. However, the recommendations should not be considered 'best practice' in themselves; their efficacy has not been tested empirically and, in any case, will depend on many more factors than have been examined in this research.

7.4.1 Encouraging WTP among a large audience

In chapter 5, it was found that audiences are more willing, on average, to take part in "low-demand" scenarios (that involve responding to content non-linguistically) than in "high-demand" scenarios (that involve engaging in synchronous conversation in Welsh). This suggests that producers whose priority is to elicit participation from a very large number of people should focus on designing simple opportunities to participate that place little demand on audiences' Welsh language skills. This much is, perhaps, obvious. It is common sense that more people will choose to take part in "easy" tasks than in relatively taxing ones. Magazine shows like *Heno* and *Prynhawn Da* (both on S4C) take this approach. They offer prize competitions which require audience members to select the answer to a simple multiple choice question by pressing buttons on their phone. Reactive forms of participation like this enable thousands of entrants to take part.

7.4.2 Encouraging WTP among Enthusiasts, Avoiders, Optimists and Talkers

As discussed in chapter 6, four audience types were identified in the present study, based on their WTP in different media scenarios: Enthusiasts (highly competent speakers of Welsh who are highly engaged with Welsh-speaking society), Avoiders (less competent users of Welsh who are not very engaged with Welsh-speaking society and appear to be generally unwilling to participate), Optimists (less competent users of Welsh who are nonetheless keen to take part in Welsh media when they can) and Talkers (highly competent Welsh speakers who lack confidence in their reading and writing). Producers may find it useful to consider the different preferences of these four types when designing opportunities to participate in content.

Enthusiasts Enthusiasts can be considered the core of the participating audience. They are arguably the easiest to cater for, as they are generally keen to take part in Welsh content, given the opportunity, and are not limited by their Welsh language skills or their sense of belonging in

Welsh. As they feel part of Welsh-speaking society, Enthusiasts may be particularly motivated to attend events where they can meet other Welsh speakers, such as the long-running current affairs discussion programme, *Pawb a'i Farn*.

Avoiders Avoiders are, by definition those who are unwilling to participate in Welsh-language media, whatever opportunities are presented. Some of this group have no interest in Welsh-language media at all; others are passive consumers of Welsh media, who would be better served by focusing on producing high-quality content than trying to encourage them to participate. Some Avoiders are cynical about audience participation *per se*, and find familiar forms of participation (such as voting or sharing opinions) intolerable. However, if they do not recognise audience participation as one of the activities they already dislike, it might be possible to catch their cynicism off-guard. I suggest, therefore, that, while Avoiders may not take part themselves, new, surprising forms of participation have the potential to increase Avoiders' willingness to consume participative media passively.

R1: Consider innovative formats that Avoiders may not recognise as audience participation.

As suggested in chapter 6, while the clusters appear static, it is possible that individuals may move between clusters at different points in their life. Bearing in mind the finding that individuals' use of Welsh can change at major life junctures, more research is needed to confirm whether audiences' patterns of WTP also undergo such shifts and, if they do, to understand the circumstances and drivers behind them. In the longer term, broadcasters should consider how they might help Avoiders convert into Optimists – or even Enthusiasts. As Avoiders' responses to participative media may be shaped, in part, by their orientations towards Welsh (see chapter 6), a long-term strategy may be to increase sceptics' tolerance of, or interest in, Welsh-language content. Some minority language broadcasters already think along these lines: S4C has tried to win over non-Welsh-speakers with its bilingual rugby coverage, for example.¹⁰⁷ Similarly, the Scottish Gaelic TV channel, BBC Alba, hopes to “convert audiences upwards” (Lang 2010): their aim is to turn “Gaelic-rejecters” into “Gaelic-apatheatics” (e.g. by enticing them to watch the sport on the channel), apatheatics into “Gaelic-valuers” and valuers into Gaelic speakers. This kind of strategy goes beyond the day-to-day work of media producers, but should be incorporated into commissioning and scheduling decisions.

Optimists Optimists are typically willing to take part in media content if their limited Welsh skills are not taxed too much. As Optimists are more confident in their receptive skills than in

¹⁰⁷ Keith Jones, Head of Welsh Language Programmes & Interactive, BBC Cymru Wales, personal communication, March 2010.

their productive skills, reactive forms of participation, such as voting, ‘liking’ a story on Facebook, sitting in a studio audience or submitting a photo, are likely to be the best ways of engaging them. While audiences did not raise this point explicitly, I would also argue that it is important to ensure that Optimists are made to feel that their contribution is welcome. If media content is too Welsh-Welsh-centric (for want of a better word) in its tone, Optimists, as relative outsiders to Welsh-speaking society, could feel excluded from participation. Since Optimists are not core Welsh media users, producers may need to purposely seek out these audiences; being invited to take part in content for a Welsh-language media outlet could lead to Optimists consuming Welsh-language media they would otherwise not have encountered.

R2: Consider actively seeking out Optimists and inviting them to participate in low-demand activities.

As discussed in relation to Avoiders, broadcasters should also consider how their longer-term content strategies can help convert Optimists into Enthusiasts; commissioning content which actively seeks out Optimists as part of its remit may help with this.

Talkers While Talkers’ preferences proved difficult to explain (chapter 6), designing participative media for them is relatively simple: they prefer to take part in content orally, over the phone. Some Talkers appear to be unfamiliar with the Internet, so this group may be excluded from interacting with content that only lets audiences participate online. This does not imply, of course, that producers should avoid inviting users to participate online, since “watering down technology to the lowest common denominator deprives those with better access from taking advantage of those solutions” (Holton 2011: 373). In any case, as this is the smallest cluster, and the most internally varied in its preferences, I would recommend that the needs of other groups (especially Optimists) be prioritised. Nonetheless, it is recommended that producers consider offering a phone-in option when this is appropriate.

R3: Consider whether it is appropriate to enable audiences to take part over the phone as well as online.

7.4.3 Encouraging WTP among different social groups

While the four audience types discussed above are useful for understanding the diverse needs and preferences of audiences, producers may wonder what recommendations can be made for other specific groups of people. To address this question, I turn briefly to men, women, older people, younger people, natural Welsh speakers and learners.

No substantial differences in WTP were found among the four age groups studied in the present research. It is very likely that older and younger audiences do differ in their preferences (perhaps

relating to the technology involved, the subject matter or the cost of participating), but any differences do not extend to the variables examined in the present research. No significant differences were found at all between male and female respondents.

R4: Do not assume that audiences' willingness to take part in media content will vary according to age or gender, *per se*.

As a broad generalisation, it was found that, in the current study, natural speakers of Welsh are typically more willing to take part orally, either over the phone or face-to-face, while Welsh learners prefer to participate in writing (chapter 5). Having said that, the context of Welsh acquisition is not the best predictor of WTP; respondents' self-reported Welsh language ability is a better predictor. In other words, while learners appear to be an obvious, self-contained audience sector at which to target participative content, advanced learners may have more in common (when it comes to audience participation in the media) with fluent natural speakers of Welsh than with other learners. Likewise, non-fluent natural speakers of Welsh may have more in common with intermediate learners, in some respects, than with other natural speakers. It may, therefore, sometimes be more profitable to design opportunities to participate that take into consideration audiences' level of Welsh proficiency, rather than their native/learner status. This does not imply that participation aimed specifically at learners is redundant – on the contrary – but simply that non-fluent native speakers of Welsh should not be forgotten.

R5: Consider the needs of non-fluent native speakers of Welsh. They may have much in common with Welsh learners – but feel that content “for learners” is not for them.

7.4.4 Maximising enjoyment to encourage audiences to participate again in the future

Many respondents commented on previous experience of participating in media content – mostly by being part of a studio audience – and these experiences, both positive and negative, were cited as explanations for their level of willingness to take part in some of the scenarios posed in the questionnaire (chapter 6). This finding suggests that producers, particularly those who work with live audiences, should be mindful of the influence single events can have on audiences' willingness to take part in media content again in the future.

R6: When audiences agree to participate, make sure the experience is enjoyable for them!

This means making sure the audience is fully involved in proceedings so that they do not feel like “spare parts – just there to fill the venue!” (M18W358/4) or, in my experience, it may be as simple as making sure they have easy access to drinking water and toilets during a long

recording. It could be argued that ensuring that audiences enjoy participating is especially important in a minority language media context, where the pool of potential participants is relatively limited and broadcasters may rely on repeat visits from the same members of the audience.

7.4.5 Reducing audiences' communication apprehension

Producers interviewed for the present study (chapter 3) said that they found audiences' apprehension to be a major issue in eliciting audience participation. In the present study, communication apprehension was found to be the biggest barrier to WTP; all types of people become apprehensive in certain participative situations. In face-to-face situations, producers already try to put people at their ease by chatting informally and building rapport before broaching the subject of participating in media content (see chapter 3). What more can producers do to help reduce audiences' apprehension?

In view of respondents' comments about their fear of being put on the spot (chapter 6), I suggest that there is one simple, practical thing that producers can do to alleviate audiences' apprehension:

R7: Let audience participants know exactly what to expect of their role – and stick to it.

Letting participants know what to expect means that producers should be mindful of the information that audiences need in order to make an informed decision about their willingness to participate: whether they will appear on-air or on camera, whether they will be addressed directly, whether they will need to read or write anything, how long their participation will last, at what point they can relax knowing that their contribution is over, and so on.¹⁰⁸ In particular, producers must be aware that, for many audience members, particularly those who lack linguistic confidence, there is a substantial difference between reacting non-verbally and being asked to speak. Producers should bear in mind that unconfident Welsh speakers may require more detailed information than other audiences.

Once the role of the audience participant has been made clear, adhering to participants' expectations is important, as apprehensive audience participants do not like it when the goalposts move:

¹⁰⁸ In recommending that producers ensure the demands of participation are transparent to potential audience participants, I am not suggesting that producers shy away from making participation challenging. Some content relies on the element of surprise for its humour or energy. The entertainment show *Sioe Tudur Owen* is lively and funny, for example, because members of the studio audience are constantly on edge: they have agreed to participate, knowing that they could be singled out, talked to, teased or scared at any moment. As the presenter, Tudur Owen, joked in a recent edition, "They think they're safe. No-one's safe here" (S4C, 22 September 2012; translation taken from programme subtitles).

I have quite often participated on Radio Cymru phone-ins, am always quite nervous beforehand but it generally works out OK. The only time it wasn't so good was when the on-air talk went on for about 15 minutes rather than the 2-3 minutes I had planned for.
(M50E322/1)

In a live TV and radio production context, things change, of course – guests are late, phone lines go down – and producers and presenters are used to making snap decisions to accommodate such issues. Audience participants, in contrast, are not usually used to ever-changing expectations and demands and may feel very apprehensive under these conditions. Producers should therefore do all they can to protect audience participants from last-minute changes to their contributions.

7.4.6 Maximising audiences' Welsh language use

It was suggested above that the best way to attract large numbers of audience participants is to offer linguistically undemanding opportunities to participate (section 7.4.1). However, if one of the aims of minority language media is to encourage the audience to use their language, then eliciting participation in linguistically undemanding activities only may not be considered a great achievement, when audiences are often capable of more. I would argue, therefore, that it is important to maximise audiences' Welsh language use by encouraging them to take part in the most demanding forms of participation they would be willing to take part in. For some, this means offering reactive forms of participation such as sitting in a studio audience, voting or taking a photo, but for others, this may mean inviting them to take part in productive forms such as vox pops, phone-ins or extended pieces of writing. There is no evidence in the present study to suggest that, presented with both opportunities to participate, audiences would always choose the simpler option; on the contrary, Talkers tend to prefer the highly demanding phone-in over the other scenarios (chapter 6). Enthusiasts may also gain satisfaction from getting stuck into something relatively demanding, in order to make the most of an "opportunity of communicating in [their] mother tongue" (M35B217/1).

It is recommended, therefore, that producers offer alternative ways of taking part in content that, crucially, differ in the level of demand they place on audiences' oral and/or written skills.¹⁰⁹ For instance, if the producer of a consumer programme wants to gather audiences' views of a contested public service, they could invite audiences to register a vote, e.g. "Is service X a good

¹⁰⁹ Many programmes offer audiences alternative means of taking part that do *not* differ in terms of the demand they place on audiences' oral and written skills. Some programmes invite audiences to contribute brief written comments or queries either via Twitter or on Facebook, for example. Twitter and Facebook may, of course, differ in terms of etiquette, style and the relative likelihood of receiving a reply, all of which factors have implications for the level of demand placed on audiences' language skills; within the present framework, however, posting a message on one site is the equivalent of posting one on another.

use of taxpayers' money? Yes or no?", or alternatively write in with an extended account of their personal experience of dealing with the service. The S4C show for learners, *Hwb*, has previously taken this approach by asking audiences to submit a video, written message or photo depicting their response to an item on the programme, thus leaving the complexity of any contribution up to the audience to decide. I suggest that other programmes may find this strategy worth considering.

R8: When targeting a diverse audience, particularly in terms of Welsh language proficiency, consider offering *both* less demanding and more demanding opportunities to participate.

7.4.7 Tackling audiences' linguistic insecurity

My final recommendations are not directly related to content production, but to language policy and website development.

In the thematic analysis of interviews with media producers (chapter 3), I argued that Welsh-language media producers place a high value on both standard and non-standard Welsh: producers aim to reflect the diversity of 'authentic' language use in Wales while also upholding a variety of standard Welsh that allows both the language and the media content to be held in high regard by audiences. While the standardisation of Welsh may lend the language greater prestige, it must be acknowledged that the media's use of standardised Welsh may simultaneously lead to "a sense of dislocation among the audience it is intended to serve and a devaluing of the linguistic capital of certain speakers" (Kelly-Holmes, Moriarty & Pietikäinen 2009: 231). Indeed, BBC Cymru producers commented that audiences tend to "think BBC equals proper Welsh" (Bethan), which, it was claimed, leads some audiences to feel that their own variety of Welsh is "not good enough" (Bethan). This kind of linguistic insecurity is a long-standing concern in Wales: just five years after the launch of S4C, Delamont warned that, "the potentially negative impact of a standard received pronunciation form of Welsh legitimated by S4C on those who feel the Welsh they learnt in childhood to be inferior [...] may be the final factor causing abandonment of the Welsh language" (Delamont 1987: 102).

Language policy research suggests that similar processes may be at work in other minority language contexts, such as the Basque Country, where *Batua* has become the standard variety of Basque used in the media. Adopting *Batua* as the voice of the media has helped render the dialect recognisable and prestigious among Basque speakers (Díaz Noci 2002); however, the increased prestige of *Batua* has brought with it greater linguistic insecurity among those who speak other varieties of Basque. Moriarty found, for example, that some Basque speakers "did not like to watch [Basque language TV channel] ETB-1 because it made them feel that they speak

bad Basque, as Batua is not the variety they speak” (Kelly-Holmes, Moriarty and Pietikäinen 2009: 231). Although Batua is used by newsreaders and the like, there is no restriction on the language variety used by guests and other contributors to ETB-1; the broadcaster’s style guide explicitly states that, “of course, the guest themselves will choose the language variety they will use, which can be any dialect” (cited in Díaz Noci 2002: 177, my translation).¹¹⁰ Nonetheless, as found in both Moriarty’s research and in the present study, adopting an approach that combines standard and authentic ideologies does not necessarily succeed in reassuring audiences that all varieties of a language are equally welcome in the media.

What, therefore, can the media do to encourage audiences to feel more comfortable interacting with Welsh content? One option is to relax language standards – or to adopt a more overtly ‘polynomic’ (Jaffe 2003) approach to language use, which acknowledges multiple norms which are equally tolerated. Regional, English-influenced and ‘incorrect’ forms of Welsh are already welcome in user-generated content, but if these forms were also more salient in staff-produced and commissioned content, linguistically insecure speakers might feel less intimidated and more willing to respond to content in Welsh. Broadcasters could experiment further with presenters who use heavily accented learner varieties of Welsh, for example. This approach has been successful at promoting the use of Irish among radio station volunteers in Dublin (Cotter 1999).

R9: Look for new ways of including diverse varieties of Welsh, including learner Welsh, in mainstream media content.

Although it may be desirable, incorporating greater linguistic diversity into media content is not straightforward. The issue of linguistic insecurity seems to be particularly problematic in written Welsh, and it is in written Welsh that some audiences and critics are especially intolerant of non-standard forms. Some of the producers in the present study, for example, recalled a previous attempt at using non-standard Welsh in professionally-produced content, when an online cartoon written in ‘teenage’ Welsh attracted a large number of angry complaints. In the long term, a polynomic Welsh-language media could help Welsh speakers to find “unity in diversity” (Jaffe 2003: 515) and experience less linguistic insecurity. In the shorter term, however, if Welsh media organisations decide to open up their platforms to a greater diversity of language use, potential gains must be weighed against the likely loss of standing and support among purists (Dorian 1994) as well as those learners who see the media as a ‘good’ role model for their own Welsh.

¹¹⁰ Original: “claro está, el propio invitado elegirá la variedad lingüística que va a utilizar, que puede ser cualquier dialecto”.

I suggest that, while media organisations should increase their linguistic diversity, they could simultaneously offer additional support to those who want to write in standard Welsh. One idea, which arose in the producer interviews, is to embed optional proofing tools (e.g. a spellchecker and grammar checker) in participatory websites. Just as the BBC VOCAB dictionary tool already helps users read Welsh texts online by allowing them to hover over unfamiliar words and see a definition (Davies 2006), so new tools could help users write Welsh online. A standalone spellchecker and mutation checker were previously available on the BBC's Learn Welsh site (although they have since been replaced by a dictionary and conjugation guide)¹¹¹ and these could be developed further and embedded into comment submission forms, chat features and other web forms. A technical solution of this kind has the potential to increase individuals' confidence in their ability to participate in media content in writing and would certainly merit investigation.¹¹²

R10: Consider developing proofing tools that can be embedded in Welsh-language websites.

In fact, a system already exists that could be used in this way. Chan, Jones and East (2009) describe how they integrated Cysill, a Welsh-language proofing system developed by Bangor University, into a school's online system for writing pupils' bilingual school reports. As the authors point out, the system has potential to be used in many other contexts: "the entire proofing subsystem is independent [...] and could in principle be used to provide language proofing tools for virtually any HTML forms" (Chan, Jones & East 2009: 53).

7.4.8 Discussion and summary

The results of the present research suggest that there are various aspects of the audience participation context which lie within the control of the producer and which make participation appear more or less appealing to those considering taking part. It is recommended, therefore, that participative media producers pay attention to those contextual factors that influence people's WTP directly or indirectly.

Ideally, Welsh-language media should include something for everyone: opportunities to engage with other Welsh speakers, plenty of scope to react non-linguistically, a choice between taking part on the phone or online and, where possible, fresh and innovative forms of participation. Whatever opportunities for participation are offered, it is recommended that producers ensure

¹¹¹ <http://www.bbc.co.uk/wales/learnwelsh/> [accessed September 2012]. The mutation checker is still online and functional, although it is no longer linked to from the main Learn Welsh site: http://www.bbc.co.uk/cgi-bin/wales/learnwelsh/welsh_mutations.pl [accessed September 2012].

¹¹² See Prys (2009) for a discussion of the impact of Welsh-language electronic resources on language revitalisation.

that potential participants have all the information they need to make an informed decision about participation. By making the audience's role clear and enjoyable, producers may help reduce audiences' communication apprehension and increase their willingness to participate in content in the future.

A summary of recommendations for media production practice is included in the executive summary (appendix B).

Some of the recommendations made here may have wider implications beyond audiences' state willingness to take part in specific media scenarios. In his study of bilingual website design, Cunliffe suggests that "by providing a more supportive language environment it may be possible to encourage the use of minority language both when using the site and in other contexts as well" (Cunliffe 2004: 3). To translate this hypothesis into the terms used in the present study, if a person's state WTP can be enhanced in specific media contexts, whether through the provision of proofing tools (section 7.4.7) or some other means, their situational – or perhaps even trait-like – WTP might also increase as a result. Given the observation that previous experience of participating in media content informs people's expectations of future opportunities to participate (chapter 6), it appears plausible that state-level WTP may influence WTP at a trait-like level to some extent. Further work is needed, however, to develop a clear conceptualisation of trait-like WTP (section 7.6.3) and to investigate how each of the psychological states examined in this thesis relates to its trait-level equivalent (section 7.6.4).

7.5 Limitations of the thesis

Many of the difficulties encountered during the research were addressed and overcome in the course of the study. I conducted a thorough pilot of the audience survey, which included statistical analysis of the pilot data, and this enabled me to identify and address several issues before beginning the main data collection phase. Having received angry comments about the lack of a Welsh-language questionnaire, for example, I was able to alter my approach to potential respondents, explicitly telling people that I was an individual student, not part of a large team and emphasising that I was not a Welsh speaker, but was trying to learn. This appeared to satisfy most of those respondents who might otherwise have expected to receive a Welsh-language or bilingual version (see chapter 4). Despite piloting the survey, the thesis has several remaining limitations, which I address in this section.

7.5.1 Key theoretical concepts and their measurement

No significant problems were encountered in the conceptualisation or measurement of WTP, SPCC or Welsh language proficiency. Some limitations were noted, however, in the

conceptualisation and measurement of the linguistic demand of media content and in the measurement of CA, as follows.

Linguistic demand of media content The linguistic demand scale proposed in chapter 2 is able, in principle, to distinguish between six levels of demand on two modalities (i.e. 36 potential conditions in total). In order to limit the scope of the thesis, the present research was restricted to just four conditions; no scenario involving non-conversational language production was included in the study, for example, nor a scenario which was participative in terms of both modalities. This means that, as well as leaving many common forms of participation (e.g. commenting on webpages) unexplored, the usefulness of the linguistic demand scale also remains largely untested. Certain questions remain unanswered; e.g. is it reasonable for the scale to suggest that non-conversational or asynchronous conversational writing is less demanding than a synchronous conversation in writing? Situation-specific norms may play a part. People may be more forgiving of errors in a synchronous written conversation, for example, than they are when people have time to take more care over their writing.

As far as it has been tested, it is apparent that the linguistic demand scale is fairly limited. While it distinguishes between different levels of demand, it captures no information about the quantity of language use required. As respondents' comments suggest (see section 7.4.5), there is a critical distinction to be made between a conversation that lasts 2-3 minutes and one that lasts 15 minutes, for instance. It is recommended that the scale be developed further in future research.

State communication apprehension The scale used to measure state CA was piloted thoroughly before data collection began. The six-item scale used in the pilot was found to be highly internally consistent and some items were therefore judged to be redundant. Given the care taken to reduce the length of the CA scale to three items, it was disappointing that the item "I would feel self-assured taking part in this" turned out to be a poor measure of CA in the main study (chapter 5) and had to be excluded from the analysis. The exclusion of *not-self-assured* meant that CA was not modelled as a latent variable, but as a straightforward manifest variable. Future research into state CA should focus on developing a valid, reliable measure of state CA which consists of around 4-5 items. Unlike the measure used in the present study, such a scale would enable CA to be modelled as a latent variable, while, in contrast to the 20-item scale developed by Richmond (1978), also being short enough to include in a multi-scenario questionnaire of the kind designed for this thesis.

7.5.2 Data collection methods

A sufficiently large dataset was obtained for the present purpose and was found to be well-distributed. Some limitations in the data collection methods were noted, however. These were discussed comprehensively in chapter 4; key points are reiterated here.

Sampling bias The sample probably suffered from a degree of self-selection bias. To minimise this bias, I turned down offers from participants to publicise the survey by posting adverts on noticeboards or websites. By only approaching groups and individuals directly and asking them to complete the survey, it is likely that many people were included in the sample who would not have responded to an advert. Although I approached potential respondents through a variety of channels and reassured them that I was interested in obtaining data from anyone with “a smattering of Welsh upwards”, it was notably easier to access individuals who self-identified as Welsh speakers than those with a lower level of proficiency in Welsh. This means the sample was probably somewhat biased in favour of those who were relatively fluent and involved in Welsh-speaking society – although the presence of Avoiders in the dataset (chapter 6) indicates that many non-fluent and disengaged speakers were successfully included in the sample. The sample also suffered from an increased drop-out rate among older women due to missing data. However, the sampling strategy achieved a good spread of respondents, on the whole, with respondents from all demographic groups and regions of Wales included in the sample. It is envisaged that the results may generalise to the wider Welsh-speaking population.

Questionnaire design The audience questionnaire included eight scenarios, two pertaining to each of four test conditions. The paired scenarios were designed to be as similar as possible in all important ways, in order to obtain repeated measures of each condition, but it proved impossible to create non-identical duplicate scenarios without introducing unintentional sources of variation. Once the data had been collected and analysed, the paired scenarios were found not to be direct equivalents as had been intended (chapter 4); in three pairs out of four, one scenario elicited significantly higher WTP than the other. An analysis of the comments made by respondents revealed four potentially confounding factors in the data, which could help explain the differences: a widespread dislike of voting shows, context-dependent perceptions of anonymity, a reluctance to work without being paid and the varying likelihood of encountering different dialects. It was noted in chapter 5 that, given the difficulty inherent in designing equivalent scenarios, it would have been preferable to prioritise multi-item measures of predictor variables over the inclusion of two measures of each condition. As well as enabling a latent variable model to be specified (rather than a simple path model), this approach would also have had the advantage of shortening the questionnaire.

7.6 Future research

This thesis has thrown up a number of new questions about audience participation in minority language media and minority language use more generally. In this section, I suggest four directions in which future research might profitably go. First is the question of how generalisable the findings of the thesis are to other minority language situations. The second point relates to the many additional explanations for WTP identified in chapter 6 and how they may help improve the model of WTP presented in chapter 5. Third, the WTP construct itself should be investigated further, to examine whether the present conceptualisation and measurement of the construct may be improved upon. Finally, I suggest that future research should address the tricky question of how micro effects aggregate to produce effects at a macro level.

7.6.1 Other minority languages

While the experiences described in chapter 6 are common to speakers of many minority languages, Welsh speakers are in a stronger position than speakers of other languages; the Welsh-language media industry is also more highly developed than most other minority language media. It is therefore not clear whether the results obtained in this thesis are specific to Welsh-language media, or whether they are generalisable to other minority language media contexts. Future research should therefore consider other minority languages, including heritage languages and sign languages. Given that similar issues of linguistic insecurity have been observed among Welsh- (chapter 3) and Basque-speaking audiences (Kelly-Holmes, Moriarty & Pietikäinen 2009), it would be particularly interesting to investigate audiences' willingness to participate in Basque-language media, in order to compare and contrast findings with the Welsh context. It may also be informative to compare Welsh and Basque producers' approaches to putting audiences at their ease, and the relative success of different approaches in encouraging audience participation in different contexts.

Work also needs to be done to establish the extent to which the concepts and measures used in the thesis are applicable to other language contexts. As discussed in section 7.5.1, the scale created to assess the linguistic demand of media content is limited and needs work to develop it further. In order to maximise the transferability of the scale to other languages, the concept of oral and written dimensions of demand needs to be examined carefully. What are the implications of the inclusion of a written dimension in a British Sign Language context, for example? Does it matter that the dimension would probably refer, in such a context, to literacy in another language (i.e. English)? Issues like this should be considered in future research.

7.6.2 Other explanations for WTP

Willingness to participate is part of a complex, dynamic system of social and psychological variables and, as such, it was necessary to limit the scope of the research to specific areas of interest. In doing so, many potentially interesting variables had to be controlled for or omitted from the study. The final model of state WTP, presented in chapter 5, accounted for about a third of the variation in state WTP, which implies that two-thirds of the variation in the data remains unexplained. Some of the variables that were omitted from the study may help explain that variation. Future studies should therefore focus on improving the model's explanatory powers by investigating how additional factors relate to, or interact with, existing parts of the model. Throughout the course of the analysis, numerous aspects of context, pertaining to audiences, producers, content and the spaces in between, were identified as candidates for future research (see especially chapter 6). These include audiences' trust in the media, the image of specific media brands or organisations, how media and forms of communication are embedded in audiences' lives, ideologies of "proper" Welsh, dialect differences, orientations towards Welsh-speaking society (which may include intergroup attitudes and issues of identity) and individual personality traits such as self-confidence. In this section, I discuss those variables which, as a result of the analysis, appear to be the most important.

Psychological factors Variation in trait-level psychological variables has been cited as a potential explanation for various findings in the thesis. Following an analysis of audiences' comments, for example, it was proposed that trait-like optimism and/or interpersonal trust could help distinguish Avoiders from Optimists (chapter 6). It has also been suggested that Optimists – who tend to be higher in state WTP than Talkers, despite reporting lower proficiency in Welsh – may be higher in trait-like WTP than Talkers (chapter 6). Although trait-like self-confidence did not appear to vary from cluster to cluster, low self-confidence was frequently referred to by respondents and may help account for low levels of state WTP in certain scenarios, perhaps indirectly through state CA and state SPCC. All these trait-level psychological variables should be examined in future research as they may provide important insights into audiences' willingness to use their minority language in a media context. Furthermore, an investigation of audiences' underlying personality traits (openness, conscientiousness, extraversion, agreeableness and neuroticism), despite being a further step removed from state WTP, may help build a more complete model of the factors that predict individual differences in WTP.

Attitudinal factors Producers did not talk about audiences' attitudes as potential predictors of WTP (chapter 3). For that reason, attitudinal factors, such as orientations to Welsh-speaking society and views on Welsh-language media were not included in the proposed model of state

WTP and therefore not measured as part of the audience survey. Nonetheless, such factors may help account for variation in WTP in some contexts and should be examined in future research. Some of the results of the present study hint at areas where orientations may be relevant to WTP: a small number of participants in the study suggested, for example, that they would be inclined to participate in order to show support for Welsh-language media, or in order to take advantage of a rare opportunity to use their Welsh (chapter 6). These comments imply that those who are not only positively oriented towards Welsh, but also place a high value on its public use, may experience increased levels of WTP in some contexts. Attitudinal factors may also influence WTP indirectly, through other psychological states. It has been proposed, for instance, that SPCC might tend to be higher among those who believe it is better to use ‘bad’ Welsh than not to use Welsh at all, than among those who believe the opposite, even when underlying self-reported proficiency is kept constant (section 7.3.3). I suggest that a study of the interaction between psychological and attitudinal factors would therefore be particularly informative and should be a priority for future research.

Habitual factors The way that audiences use media and other communications appears to influence their willingness to take part in media content. One participant in the survey commented that they watched TV “to relax” (F35W338/2) rather than become actively involved in content; it was suggested (chapter 6) that this view of television may lie behind some of the very general comments respondents made about audience participation, such as “it just doesn’t interest me” (M35E183/2) and “not the sort of thing I would do usually” (F50E011/2). Similarly, several Talkers – who were distinguished from other clusters by their relative willingness to participate over the phone – commented that they were “not used to typing” (F35W189/4) or had “no website facility” (F50W099/4), suggesting that this cluster tends to use the telephone in situations where other clusters may go online. Such habits, preferences and experiences appear to inform audiences’ WTP in media content and, as part of the wider ecology of minority language media, should be taken into account in future studies.

Other media-related factors In addition to the factors discussed here, state WTP may also be influenced by aspects of the media context that were controlled for during the present study, such as the programme genre, topic and format, the media platform (e.g. radio, TV, mobile) and the character and appearance of the presenter. These elements should also be examined in future research, as they may offer producers welcome insights into why their existing content attracts, or does not attract, audience participation.

7.6.3 Conceptualisation and measurement of state WTP

The WTP construct itself should be investigated further. The present research treats state WTP as a single reaction to an opportunity to participate, but it may prove more appropriate to measure participants' affect on a moment-by-moment basis. MacIntyre and Legatto (2010) take this approach to willingness to communicate and find that L2 speakers' self-ratings of state WTC fluctuate over time, including while they are using the language, in response to internal and external conditions. Measuring WTC on an ongoing basis reveals that "the moment-to-moment relationship between language anxiety and WTC appears to be complex – at different times the variables seem positively related, negatively related, or even independent" (MacIntyre & Legatto 2010: 16). If WTP operates in a similar way, then this raises new questions about the relationship between WTP and its antecedents and potential behavioural outcomes. A theoretical distinction may need to be made between audiences' WTP at the moment they agree to participate (which may influence actual participation) and ongoing affect (which may influence the quality of audience participation as well as audiences' experience of that participation). The way that state WTP is modelled and measured is therefore not only a theoretical and methodological issue, but also has implications for media production practice.

As discussed above, trait-like WTP may also help explain individual differences in state WTP and should be examined in future research. In order to conduct such a study, however, further work needs to be done on the theoretical conceptualisation and measurement of WTP at a trait level. It is not clear, for example, whether trait WTP would be more usefully constructed as a propensity to feel willing to participate in media content specifically, or as a general readiness to take up opportunities of any kind. (Note that WTP, unlike WTC, is not conceptualised as language-specific since it can apply to non-linguistic participation; the language(s) used during participation may instead be thought of as a predictive factor, influencing WTP in context.) It should be borne in mind that the conceptualisation and measurement of trait WTP will have implications for the construct's applicability to other fields.

7.6.4 The micro-macro connection

Finally, a recurring theme in the thesis is the distinction between different levels of abstraction: states and traits, immediate language use and long-term language maintenance, individuals and society. Previous research in minority language media, language maintenance and applied linguistics tends to focus on one scale-level (Blommaert 2006) or another, rather than on the links between relatively micro and relatively macro phenomena. As discussed above, this thesis begins to address this gap (insofar as it relates to intrapersonal constructs used in SLA) by integrating two levels of one construct, self-perceived language ability, into the same model, thus enabling the nature of the relationship between the two levels to be tested. There is,

however, much more work to be done to understand how general tendencies (whether at a personal, societal or universal level) relate to individual occurrences. In any complex dynamic system, large changes in one part of the system may produce a minimal effect in other areas, while small changes may produce a large effect elsewhere (de Bot, Lowie & Verspoor 2007). With regard to the main topic of this thesis, willingness to use a minority language, it may seem reasonable to hypothesise that encouraging a person to feel willing to take part in one particular scenario would have little effect on their willingness to communicate in other situations. Yet the opposite may also be true, as exemplified by a comment made by one respondent in the present study, cited at the start of the thesis:

I found that taking part in [a] TV recording refreshed my conversational Welsh and I came back to being confident as I was in school years. (M70B116/1)

A major challenge for future researchers is therefore to understand how these micro effects aggregate to produce effects at a macro level.

Appendix A: Audience questionnaire

Research questionnaire: How do audiences prefer to interact with the media in Wales?

Important information

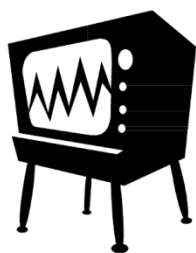
This survey is being conducted at the University of London to better understand how people in Wales prefer to use and interact with Welsh language media. You don't have to watch S4C or listen to Radio Cymru to take part in the survey. You don't need to be fluent in Welsh either: we need responses from people with every level of Welsh language ability.

In this questionnaire there are three sections. Please read the instructions carefully and answer each question as honestly as you can. The survey should take about 20 minutes to complete. Your answers will be kept completely anonymous and you do not have to give your name.

Your participation in this research is entirely voluntary. Please get in touch if there is anything that is not clear or if you would like more information. Contact details can be found on the final page of this questionnaire.

Pam fod yr holiadur hwn yn y Saesneg? We have produced this survey in one language only, to make sure that all the completed questionnaires can be compared directly with one another. English was chosen because we want to hear from a wide range of people, including those who speak but do not read Welsh, and those who have only learnt a little Welsh as a second language.

Thank you very much for your help!



SECTION A: Interacting with the media

In this section you will be presented with eight scenarios. Each scenario describes an opportunity for you to participate in a Welsh-language TV programme, using Welsh. Please read each scenario carefully and imagine how you would feel about each one. It doesn't matter whether you usually watch Welsh-language TV or not; we still want to know what you think.

Read and imagine scenario 1...

Scenario 1 You are at home, watching an interesting discussion programme on S4C. You are invited to take part in the programme, on a subject you feel strongly about, by phoning the programme to share your views and experiences of the topic. The TV presenter reads out the phone number for you to call. If you take part, you have a brief conversation with the TV producer in Welsh. The presenter will incorporate the audience's views into the studio discussion later in the programme. (You can still take part, even if you don't want to give your name or speak on-air yourself.)

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A1.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A1.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A1.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A1.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A1.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A1.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A1.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A1.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A1.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

- Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

Read and imagine scenario 2...

Scenario 2 You are at home, watching an interesting discussion programme on S4C. The TV presenter invites you to take part in a future programme, which is going to be on a subject you feel strongly about, by coming to a nearby television studio and sitting in the audience during the live broadcast, which will be in Welsh. If you take part, you contribute to the programme by clapping, laughing and cheering in response to the studio discussion. (The studio audience are not asked to speak on-air themselves.)

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A2.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A2.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A2.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A2.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A2.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A2.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A2.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A2.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A2.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

- Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

Read and imagine scenario 3...

Scenario 3 You are at home, watching an interesting discussion programme on S4C. A caption on the screen, in Welsh, invites you to take part in next week's programme, by going to the programme's website and discussing a subject that you feel strongly about. If you take part, you have a short conversation, in real time, by typing messages in Welsh which other users can read. The TV presenter will quote from the audience's conversations on-air the following week. (You don't have to use your real name if you don't want to.)

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A3.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A3.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A3.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A3.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A3.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A3.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A3.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A3.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A3.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

Read and imagine scenario 4...

Scenario 4 You are enjoying a day out at a local festival. An S4C discussion programme, which you often watch at home and find very interesting, has set up a tent. The TV presenter is there and hands you a leaflet, which is in Welsh. The leaflet invites you to take part by taking a photo of something in your local area that you feel strongly about. The leaflet gives the email and postal addresses for the show and invites you to send in your photo. (You're not expected to write anything, and you don't have to give your name if you don't want to.) Many of the audience's photos will be shown on TV next week, and incorporated into the studio discussion.

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A4.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A4.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A4.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A4.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

- Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

Read and imagine scenario 5...

Scenario 5 You are at home, watching an interesting discussion programme on S4C. You are invited to take part in the programme, which is on a subject you feel strongly about, by voting for whether you agree or disagree with a given statement. The TV presenter reads out the statement and two phone numbers. You can phone one number to vote 'agree' or the other to vote 'disagree'. If you phone one of the numbers, you hear a recorded message in Welsh thanking you for your vote. The presenter will give the results of the vote on-air later in the programme, and incorporate them into the studio discussion.

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A5.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A5.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A5.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A5.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

- Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

Read and imagine scenario 6...

Scenario 6 You are at home, watching an interesting discussion programme on S4C. The TV presenter invites you to take part in a future programme, which is going to be on a subject you feel strongly about, by coming to a nearby television studio and volunteering as a phone answerer during the live broadcast. If you take part, you contribute to the programme by answering the phone in the studio, chatting to callers in Welsh and putting their calls through to the presenter. (Phone answerers are not asked to appear on-air themselves.)

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A6.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A6.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A6.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A6.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A6.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A6.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A6.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A6.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A6.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

- Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

Read and imagine scenario 7...

Scenario 7 You are at home, watching an interesting discussion programme on S4C. You are invited to take part in next week's programme, on a subject you feel strongly about, by voting for whether you agree or disagree with a given statement. The presenter does not read out the details of the vote, but instead the statement is shown on the screen (in Welsh) along with the programme's contact details. You can text, email or send a postcard to the programme with the word 'agree' or 'disagree' to register your vote. The presenter will give the results of the vote on-air next week, and incorporate them into the studio discussion.

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A7.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A7.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A7.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A7.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A7.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A7.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A7.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A7.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A7.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

- Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

Read and imagine scenario 8...

Scenario 8 You are enjoying a day out at a local festival. An S4C discussion programme, which you often watch at home and find very interesting, has set up a tent. The TV presenter is there and hands you a leaflet, which is in Welsh. The leaflet invites you to take part in next week's programme by going to the programme's website and discussing something in your local area that you feel strongly about. If you take part, you have a conversation, in real time, by typing messages in Welsh which other users can read. The TV presenter will quote from the audience's conversations on-air the following week. (You don't have to use your real name if you don't want to.)

Imagine that you are taking part in this scenario, in Welsh. Please indicate how far you agree or disagree with each statement by marking the appropriate response.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
A8.1	I would find this memorable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A8.2	I would feel flustered taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A8.3	I would feel fearful taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A8.4	I would expect children to take part as well as adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A8.5	I would feel self-assured taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A8.6	I know other people who would enjoy taking part in this.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A8.7 In real life, would you choose to take part in this scenario?

No, definitely not No, probably not I don't know Yes, probably Yes, definitely

A8.8 Is there anything in particular about this scenario that makes you feel willing or unwilling to take part?

A8.9 People's abilities to communicate effectively in Welsh vary a lot, and sometimes the same person is more competent to communicate in Welsh in one situation than in another. Please indicate how competent you believe you would be to participate in this situation by marking the appropriate response.

- Not at all competent
 Probably not competent enough
 I'm not sure
 Probably competent enough
 Completely competent

SECTION B: The Welsh language

In this section we would like you to tell us about your experiences of using Welsh. This information will help us to interpret your responses to the scenarios in section A. Your answers will be kept completely anonymous.

B1 Many people acquire Welsh 'naturally' as a first or second language by talking to parents, grandparents or friends, while others are taught Welsh as a second language at school or evening classes. **How did you learn your Welsh?**

- 'Naturally' with family or friends
- Taught in the classroom
- A mixture of both
- Other (please specify) _____

B2 **These days**, how much Welsh and English do you use in your daily life?

- I always or almost always use English
- I use more English than Welsh
- I use English and Welsh equally often
- I use more Welsh than English
- I always or almost always use Welsh
- Other (please specify) _____

B3 When you were **0-3 years old**, how much Welsh and English did you hear/use in your daily life?

- I always or almost always heard/used English
- I heard/used more English than Welsh
- I heard/used English and Welsh equally often
- I heard/used more Welsh than English
- I always or almost always heard/used Welsh
- Other (please specify) _____

B4 When you were **4-11 years old**, how much Welsh and English did you use in your daily life?

- I always or almost always used English
- I used more English than Welsh
- I used English and Welsh equally often
- I used more Welsh than English
- I always or almost always used Welsh
- Other (please specify) _____

B5 When you were **12-17 years old**, how much Welsh and English did you use in your daily life?

- I always or almost always used English
- I used more English than Welsh
- I used English and Welsh equally often
- I used more Welsh than English
- I always or almost always used Welsh
- Other (please specify) _____

Whether they are native speakers or second language learners, some people find that their language proficiency varies across different skills. We would like you to tell us **how you rate your own abilities in Welsh**. Please indicate how you rate your own proficiency by marking the appropriate response.

		Minimal	Low	Intermediate	High	Completely fluent
B6	How do you rate your ability to speak in Welsh?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B7	How do you rate your ability to understand spoken Welsh?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B8	How do you rate your ability to read Welsh?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B9	How do you rate your ability to write in Welsh?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B10 Do you feel that your Welsh is **more or less fluent** than it was a few years ago?

- My Welsh is much less fluent than it was a few years ago
 My Welsh is a little less fluent than it was a few years ago
 My fluency in Welsh is about the same as it was a few years ago
 My Welsh is a little more fluent than it was a few years ago
 My Welsh is much more fluent now than it was a few years ago

It would be helpful for us to know **what sort of school(s)** you went to. Please give an answer for each level of education; if you have not undertaken education at a particular level, please mark 'not applicable' in that row.

		Welsh-medium	English-medium	Bilingual English and Welsh	Other	Not applicable
B11	Nursery or playschool (age 0-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B12	Primary education (age 4-11)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B13	Early secondary education (age 11-14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B14	O-levels, GCSEs or equivalent (age 14-16)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B15	A-levels or equivalent (age 16-18)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B16	Higher education (e.g. BA, BSc, MA, PhD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B17	If you have marked 'other' for any rows, please explain here.					

B18 Is there anything else you would like to tell us about your use of Welsh and English?

SECTION C: About you

We would be grateful if you could tell us a bit about yourself. This information will help us to interpret your responses to the scenarios in section A. Your answers will be kept completely anonymous.

C1 Sex:
 Male
 Female

C2 Age group:
 Under 18
 18-34
 35-49
 50-69
 70+

C3 Where do you live? _____ (name of city, town or village)

C4 Is there anything else you think we should know, that might be relevant to our research?

Please return your completed survey to: Philippa Law, School of Languages, Linguistics & Film, Queen Mary, University of London, Mile End Road, London, E1 4NS. For more information, please contact p.j.law@qmul.ac.uk.

If you would like to volunteer to take part in future research, please add your contact details here. We will keep your personal information completely confidential and will not contact you for any other purpose.

Appendix B: Executive summary

Audiences' willingness to participate in Welsh-language media

Executive summary

Philippa Law
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Queen Mary, University of London
February 2013

About the research

Encouraging audiences to interact with media content, for instance by phoning or emailing a programme, commenting on a blog post or submitting user-generated content, has many benefits for broadcasters and other media creators. TV, radio and online content producers in Wales say that engaging with users in this way enables them to find out more about their audience, incorporate a greater range of voices and opinions into their content and, ultimately, to serve their audiences better. Yet producers also find that some Welsh speakers can be reluctant to interact with content, in part because they do not feel confident enough in their Welsh to use it in public contexts.

This research project, 'Audiences' willingness to participate in Welsh-language media', investigated both producers' and users' views of audience participation and identified some of the things that producers can do to make audiences feel more comfortable interacting with media content in Welsh. This report summarises key findings of the research and presents recommendations for media production.

About the author

The report's author, Philippa Law, is a former BBC radio producer, with substantial experience of interacting with audiences. She currently leads a user-generated video project at The Guardian.

Acknowledgements

The research was conducted independently at Queen Mary, University of London, and was funded by a grant from the Arts and Humanities Research Council (www.ahrc.ac.uk).

Many individuals contributed to the research; thanks are due in particular to the producers and execs at the BBC, S4C and indies in Wales who took the time to reflect on their work with audiences, whether as part of a research interview, or more informally.

Aims of the research

The research project sought to establish:

- (a) some of the reasons why audiences feel willing or unwilling to take part in media content in Welsh;
- (b) ‘types’ of audience, who respond to opportunities to participate in distinct ways;
- (c) what media producers can do to help audiences feel more comfortable taking part in media content.

It is important to note that the project investigated audiences’ *willingness* to participate, not their actual behaviour. It has been said that the main reason why most people do not participate in media content is that it simply does not occur to them to do so. This barrier to participation can be tackled in two ways: (1) by framing clear calls to action, which let the audience know exactly what is wanted from them, and (2) by approaching individuals and groups directly to invite them to take part. These two approaches are key to encouraging participation; the recommendations in this report should be seen as additional strategies for increasing audiences’ willingness to take up the opportunities they are given.

Methodology

Producer interviews Background interviews were first conducted with Welsh-speaking TV, radio and web producers, to understand their experiences of audience participation. Producers discussed various factors that they believed may influence audiences’ willingness to take part in media content; these views were collated and used to inform the design of the main study.

Audience survey A questionnaire was designed to elicit audiences’ reactions to different opportunities to interact with media content in Welsh. Audiences were presented with detailed descriptions of four scenarios, in which they were invited to (1) take part in a phone-in, (2) join a studio audience, (3) take part in an online chat and (4) submit a photo they had taken. Respondents were asked how **willing**, how **competent** and how **apprehensive** they would be in those situations, and to indicate any factors that would affect their decision to participate.

Audience questionnaires were distributed on paper and online in the summer and autumn of 2011. The sample consisted of 358 adults who agreed that they “know some Welsh” and breaks down as follows:

- **Sex:** 46.2% of respondents were male and 53.8% female.
- **Age:** 28.8% were 18-34, 24.1% were 35-49, 28.5% were 50-69 and 18.5% were over 70.
- **Location:** 37.0% lived in north Wales, 32.8% in mid or west Wales, 22.9% in south east Wales and 7.3% outside Wales, e.g. in London.
- **Welsh language proficiency:** 51.6% claimed they were able to speak Welsh completely fluently; 48.4% claimed their spoken Welsh was not completely fluent.

Data analysis Responses from the audience survey were analysed both quantitatively and qualitatively. In order to identify audience types, a cluster analysis was conducted, in which respondents were segmented on the basis of their relative willingness to interact with media content in a variety of scenarios.

Summary of findings

All the producers who had direct or indirect experience of working with audience participation commented on audiences' willingness to take part in media content. While some of the producers interviewed reported considerable success at encouraging audiences to take part in content, most felt that it was more difficult to get audiences to interact in Welsh than in English. Producers found that some audiences were unwilling to take part in Welsh-language content, not because they were not interested in doing so, but because they felt nervous or uncomfortable, and believed either that they were not competent enough in Welsh, or that their variety of Welsh was not as "proper" as the Welsh used by the media.

The audience survey confirmed Welsh-speaking producers' observations that many of their audiences lack confidence in their Welsh. Some of those surveyed thought that their Welsh was not fluent enough to take part in media content, while others felt that the variety of Welsh they spoke was not 'good' enough compared to the Welsh they heard in the media. Even those who reported that they were fluent in Welsh were still prone to occasional dips in confidence, when presented with opportunities to participate in media content. Audiences' apprehension was found to be a major barrier to participation – and was more important than their perceived lack of competence in Welsh.

Respondents cited numerous other factors that impact on their willingness to interact with media content, including: shyness or a lack of self-confidence, a lack of time, the cost of phoning or texting, their previous experiences of contributing to the media (whether positive or negative) and the strength of their feeling about the subject matter.

Welsh-speaking audiences were found to fall into four types:

- **Enthusiasts**, who are relatively confident in their Welsh and willing to interact with media content in various different ways.
- **Avoiders**, who are generally unwilling or unable to take part in any media content in Welsh.
- **Optimists**, who welcome the opportunity to interact with Welsh-language content in undemanding ways.
- **Talkers**, who are happy to take part in phone-ins, but not in other kinds of interactive media.

Enthusiasts, Avoiders, Optimists and Talkers are described in more detail overleaf.

Enthusiasts

"I prefer to use Welsh first in all situations."

Enthusiasts feel at home in Welsh. They're engaged with Welsh-speaking society and are happy to take part in all kinds of Welsh media content.

"If it was a subject I feel strongly about I would willingly take part."

"I'm very often asked by S4C/BBC Wales to take part in interviews."

Typical Enthusiasts acquired their Welsh naturally, grew up speaking Welsh and continue to use Welsh regularly nowadays. Two-thirds are fluent in both spoken and written Welsh and most are relaxed about using Welsh on the telephone.

"I enjoy participating in Welsh events."

Like anyone else, Enthusiasts feel nervous or lack confidence in their Welsh at times, but when it comes to interacting with media content, they're still prepared to "give it a go".

Avoiders

"I wouldn't be watching the programme in the first place because it would be like trying to communicate with aliens."

Avoiders feel uncomfortable in Welsh. They lack fluency in both spoken and written Welsh and are generally unwilling to take part in any kind of media content in Welsh.

"I would probably feel a stranger in my own country."

"Too much Welsh-Welsh programmes on TV."

Although Avoiders understand some Welsh, they feel unable to use their Welsh in public and are apprehensive in situations where they are surrounded by Welsh speakers.

Avoiders are disengaged from Welsh-language society and are unlikely to consume Welsh-language media.

"Audience participation is the bane of the media. Interaction often means the exchange of trivialities."

Some Avoiders are also distrustful of the media or object to participative media formats in principle.

Optimists

“Giving the option to text is far less intimidating than having to converse in Welsh on the phone.”

Optimists may not be highly fluent in Welsh, but they’re keen to make the most of the Welsh they have.

“As I would not have to speak, I would be more than willing to listen and respond appropriately.”

Optimists focus less on the barriers to participation and more on the pleasure they would get from taking part in media content. So, although they don’t know enough Welsh to talk or write in the media themselves, Optimists would welcome the opportunity to interact with Welsh-language content in less demanding ways.

“Since moving to Anglesey it has been a privilege to hear Welsh spoken so much.”

While Optimists are not engaged in Welsh-speaking society at the moment, they hope to improve their Welsh proficiency and are ready to be nurtured as future speakers.

“The older I have got, the more prominent the language has become in my life.”

Talkers

“I’m not used to use typing/chat rooms.”

Talkers are very capable of speaking and understanding Welsh, but are less confident in reading and writing the language. Talkers are typically native speakers of Welsh who attended English-medium schools.

“I am aged 58 years – few people of my age were educated through the medium of Welsh after 11 years of age. That’s why people like me are more confident when speaking than writing Welsh.”

Going online takes “effort and time”.

Some Talkers feel uncomfortable using a computer or the Internet and would not want to interact with media content online. Talkers generally prefer to use the telephone and are happy to take part in phone-ins in Welsh, if they have something to say.

(Although these characteristics are often associated with older generations, Talkers span all age groups and are no older than other audience types, on average.)

Table 1: Summary of the relative attributes of the four audience types.

		Enthusiasts	Avoiders	Optimists	Talkers
	% of sample that falls into each audience type	25.9	28.8	30.7	14.7
Audiences were asked to imagine their willingness to take part in specific media scenarios in Welsh	Willingness to take part in a phone-in	High	Low	Low	High
	Willingness to be part of a studio audience	High	Low	High	Mid
	Willingness to join an online chat	High	Low	Mid	Low
	Willingness to send a photo to a TV show	High	Low	High	Mid
Audiences were asked to imagine their sense of apprehension in specific Welsh-language situations	Apprehension at the prospect of taking part in a phone-in	Mid	Very high	Very high	Mid
	Apprehension at the prospect of being part of a studio audience	Very low	Mid	Low	Low
	Apprehension at the prospect of joining an online chat	Low	High	Mid	Mid
	Apprehension at the prospect of sending a photo to a TV show	Very low	Mid	Low	Mid
Audiences were asked how able they felt to take part in each situation in Welsh	Ability to take part in a phone-in	High	Low	Low	High
	Ability to be part of a studio audience	High	Low	Mid	High
	Ability to take part in an online chat	High	Low	Low	Mid
	Ability to send a photo to a TV show	High	Mid	High	High
Self-reported proficiency in Welsh	Ability to speak Welsh	High	Low	Low	High
	Ability to understand Welsh	High	Low	Mid	High
	Ability to write Welsh	High	Low	Low	Mid
	Ability to read Welsh	High	Low	Mid	Mid
Welsh language background	Proportion who learnt Welsh in the classroom	Low	High	High	Low
	Proportion who attended Welsh or bilingual education	High	Low	Low	High
	Current use of Welsh relative to English	High	Low	Low	Mid

Summary of recommendations

1. Consider innovative formats that Avoiders may not recognise as audience participation.

Some Avoiders are cynical about interactivity, and find familiar forms of participation, such as voting or sharing opinions, intolerable. However, it might be possible to catch their cynicism off-guard by providing innovative kinds of interactivity that Avoiders do not immediately recognise as 'audience participation'. While Avoiders may still not want to take part themselves, new, innovative forms of participation have the potential to increase Avoiders' willingness to consume participative media passively.

2. Consider actively seeking out Optimists and inviting them to participate in low-demand activities.

Optimists are typically willing to take part in media content if their limited Welsh skills are not taxed too much. As Optimists are more confident in their receptive skills than in their productive skills, forms of participation that do not involve speaking or writing, such as voting, 'liking' a story on Facebook, sitting in a studio audience or uploading a photo, are likely to be the best ways of engaging them.

It is also important to ensure that Optimists are made to feel that their contribution is welcome. If media content is too Welsh-Welsh-centric (for want of a better word) in its tone, Optimists, as relative outsiders to Welsh-speaking society, could feel excluded from participation. Since Optimists are not core Welsh media users, producers may need to purposely seek out these audiences; being invited to take part in content for a Welsh-language media outlet could lead to Optimists consuming Welsh-language media they would otherwise not have encountered.

3. Consider whether it is appropriate to enable audiences to take part over the phone as well as online.

Designing participative media for Talkers is relatively simple: they prefer to take part in content over the phone. As this is the smallest audience segment, and the most varied in its preferences, the needs of other groups (especially Optimists) may be prioritised. Nonetheless, it is recommended that producers consider offering a phone-in option when this is appropriate.

4. Do not assume that audiences' willingness to take part in media content will vary according to age or gender, *per se*.

No substantial differences in willingness were found among the four age groups studied in the present research. It is very likely that older and younger audiences do differ in their preferences (perhaps relating to the technology involved, the subject matter or the cost of participating), but any such differences were not evident in the present research. No significant differences were found at all between male and female respondents.

5. Consider the needs of non-fluent native speakers of Welsh.

When it comes to interacting with media content, non-fluent natural speakers of Welsh may have more in common with intermediate learners, in terms of their needs and preferences, than with other natural speakers of Welsh. However, they may well feel that content "for learners" is

not for them. Producers should therefore consider how to enable this group to consume, enjoy and contribute to content.

6. When audiences agree to participate, make sure the experience is enjoyable for them!

Many respondents commented on previous experience of participating in media content – mostly by being part of a studio audience – and these experiences, both positive and negative, were cited as explanations for their level of willingness to take part in some of the scenarios posed in the questionnaire. This suggests that producers, particularly those who work with live audiences, should be mindful of the influence single events can have on audiences’ willingness to take part in media content again in the future. This means making sure the audience is fully involved in proceedings so that they do not feel like “spare parts – just there to fill the venue!”, as one respondent put it.

7. Let audience participants know exactly what to expect of their role – and stick to it.

Apprehension was found to be a major barrier to audiences’ willingness to take part in media content. All types of people – even Enthusiasts – reported feeling apprehensive in certain participative situations.

The results of the research project indicate that producers can help alleviate audiences’ apprehension by clearly communicating what is expected of them and not springing surprises on them. Producers should be mindful of the information that audiences need in order to make an informed decision about their willingness to participate: whether they will appear on-air or on camera, whether they will be addressed directly, whether they will need to read or write anything, how long their participation will last, at what point they can relax knowing that their contribution is over, and so on. In particular, producers should be aware that, for many audience members, there is a substantial difference between reacting non-verbally and being asked to speak. Producers should bear in mind that unconfident Welsh speakers may require more detailed information than other audiences.

In a live TV and radio production context, things change, of course – guests are late, phone lines go down – and producers and presenters are used to making snap decisions to accommodate such issues. Audiences, in contrast, are not usually used to ever-changing expectations and demands and may feel very apprehensive under these conditions. Producers should therefore do all they can to protect audience participants from last-minute changes to their contributions.

8. When targeting a diverse audience, particularly in terms of Welsh language proficiency, consider offering *both* less demanding and more demanding opportunities to participate.

While less linguistically demanding forms of interactivity may appeal to Optimists, Enthusiasts may gain more satisfaction from getting stuck into something relatively demanding. It is recommended, therefore, that producers offer alternative ways of taking part in content that, crucially, differ in the degree to which they tax audiences’ oral and/or written Welsh skills. For instance, if the producer of a consumer programme wants to gather audiences’ views of a contested public service, they could invite audiences to either register a vote (e.g. “Is X a good use of taxpayers’ money? Yes or no?”), or write in with an extended account of their personal experience.

9. Look for new ways of including diverse varieties of Welsh, including learner Welsh, in mainstream media content.

Some audience members feel uncomfortable interacting with content in Welsh because they think that the media only uses ‘posh’ Welsh. Audiences might feel more confident if they heard regional, English-influenced and non-standard varieties of Welsh on-air more often. Some ‘purist’ members of the audience may object loudly to the use of non-standard varieties of Welsh, but producers are nonetheless urged to continue looking for opportunities to increase the linguistic diversity of the content they produce.

10. Consider developing proofing tools that can be embedded in Welsh-language websites.

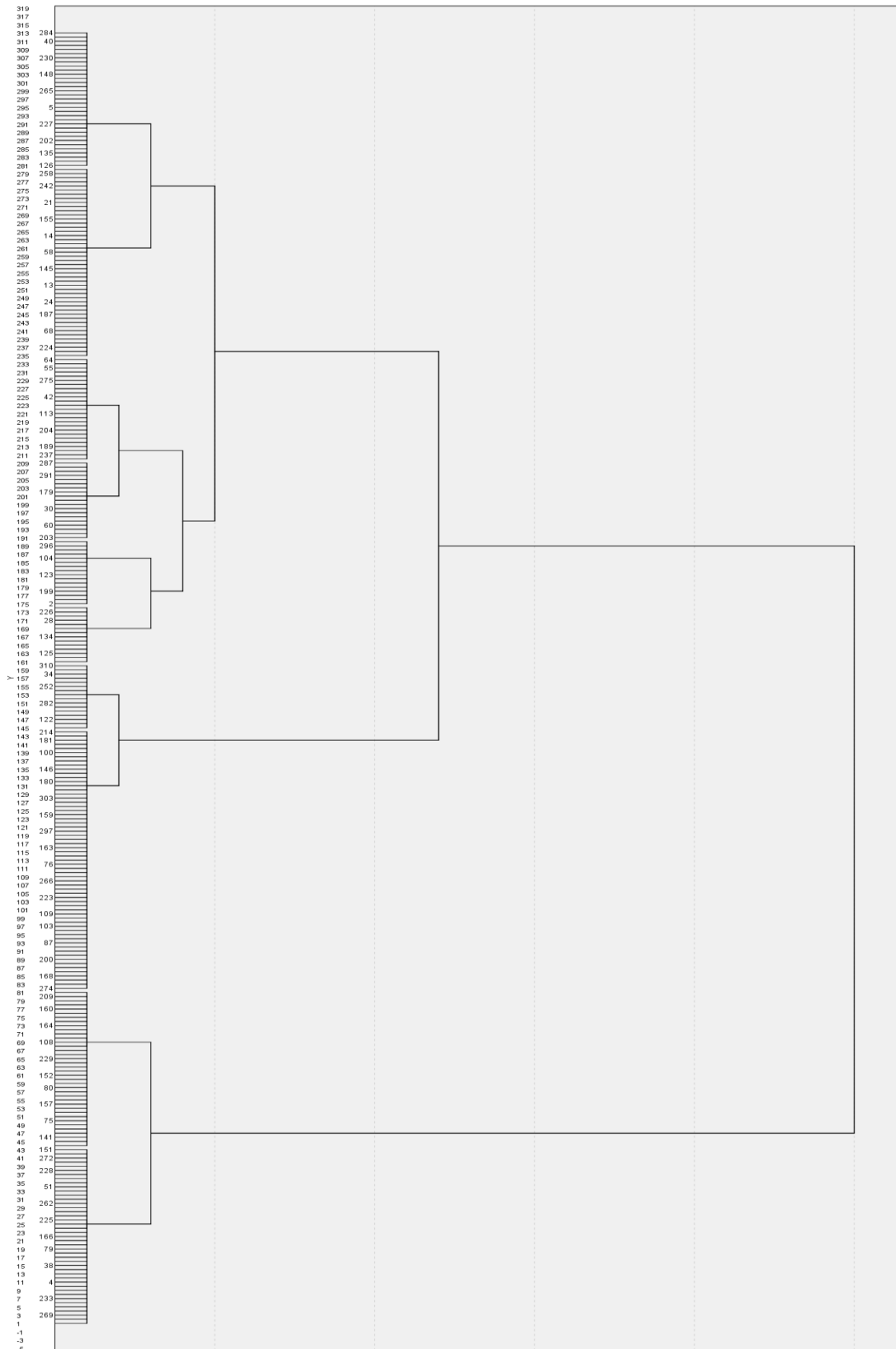
Being asked to write in Welsh is a major barrier for some audience members, who feel nervous or embarrassed about sharing their written Welsh with a wider audience. Some believe that their grammar or spelling is not ‘good’ enough to participate in content in writing – even when media producers reassure them that it is. Enabling users to check their Welsh as they type into an online form might help reduce their insecurity. It is recommended that media companies explore the potential of this approach.

Conclusion

Ideally, Welsh-language media should include something for everyone: opportunities to engage with other Welsh speakers, plenty of scope to react to content non-linguistically, a choice between taking part on the phone or online and, where possible, fresh and innovative forms of participation. Whatever opportunities for participation are offered, it is recommended that producers ensure that potential participants have all the information they need to make an informed decision about participation. By making the audience’s role clear and enjoyable, producers may help reduce audiences’ apprehension and increase their willingness to interact with content in the future.

Appendix C: Dendrogram

Figure 1: Dendrogram obtained using Ward's linkage method. The far left hand side represents the start of the process, where each of the 313 cases forms a separate cluster, and the far right represents the end, where all clusters have been merged into one. Vertical lines show the stage at which two clusters have been amalgamated. The length of horizontal lines represents the relative dissimilarity of clusters being merged. (Details are hard to see at this scale.)



Appendix D: Further results

In chapter 6, associations between cluster membership and various other variables are analysed and discussed. Further associations were found between respondents' cluster membership and their (a) Welsh language acquisition context, (b) language(s) of education and (c) use of Welsh, relative to English. These associations are not crucial to the arguments presented in the thesis, but are detailed here for reference.

(a) Welsh language acquisition context

Table D.1: Frequency of Welsh language acquisition context according to cluster.

	Naturally N (% of cluster)	Classroom/mixed N (% of cluster)	Total
Enthusiasts	57 (70.4)	24 (29.6)	81
Avoiders	45 (50.0)	45 (50.0)	90
Optimists	47 (49.0)	49 (51.0)	96
Talkers	31 (67.4)	15 (32.6)	46
Total	180 (57.5% of total)	133 (42.5% of total)	313

A significant association was found between cluster membership and Welsh language acquisition context.¹¹³ Enthusiasts (70.4%) and Talkers (67.4%) were made up largely of respondents who had acquired their Welsh naturally; the other two clusters were split equally between natural acquirers and classroom/mixed learners of Welsh (table D.1), which means that they were skewed towards classroom/mixed learners when compared to the sample as a whole.

(b) Language(s) of education

Table D.2: Frequencies of language(s) of education according to cluster.

	Primary		Early secondary		Total
	Welsh or bilingual N (% of cluster)	English N (% of cluster)	Welsh or bilingual N (% of cluster)	English N (% of cluster)	
Enthusiasts	72 (88.9)	9 (11.1)	64 (79.0)	17 (21.0)	81
Avoiders	44 (48.9)	46 (51.1)	35 (38.9)	55 (61.1)	90
Optimists	54 (56.3)	42 (43.8)	50 (52.1)	46 (47.9)	96
Talkers	38 (82.6)	8 (17.4)	29 (63.0)	17 (37.0)	46
Total	208 (66.5% of total)	105 (33.5% of total)	178 (56.9% of total)	135 (43.1% of total)	313

¹¹³ Chi-square(3) = 12.270, $p = .007$; Cramer's $V = .198$.

An association was also found between cluster membership and the language(s) respondents used at (a) primary school and (b) early secondary school.¹¹⁴ Enthusiasts and Talkers comprised mostly those who attended Welsh-medium or bilingual schools (table D.2), while Avoiders and Optimists were somewhat more evenly divided between those educated through English and those educated through Welsh or bilingually (which means that they were skewed towards those educated through English when compared with the sample as a whole).

(c) Use of Welsh

Table D.3: Means and standard deviations for use of Welsh relative to English through childhood and nowadays according to cluster. The scale runs from 1 (the respondent “always or almost always” uses English) to 5 (the respondent “always or almost always” uses Welsh); 3 represents equal use of Welsh and English.

	Use now		Use 0-3		Use 4-11		Use 12-17	
	M	SD	M	SD	M	SD	M	SD
Enthusiasts	3.48	1.184	4.04	1.336	3.69	1.211	3.37	1.177
Avoiders	2.39	1.313	2.83	1.651	2.63	1.472	2.33	1.281
Optimists	2.54	1.289	3.00	1.711	2.81	1.468	2.61	1.268
Talkers	2.98	1.358	3.67	1.592	3.50	1.278	2.89	1.233
Total	2.81	1.348	3.32	1.656	3.09	1.445	2.77	1.300

An independent-samples ANOVA indicated that cluster membership was moderately related to current use of Welsh relative to English.¹¹⁵ Enthusiasts reported using their Welsh more nowadays than did Avoiders and Optimists ($p < .001$) (table D.3). Talkers fell in the middle of the range and did not use Welsh significantly more or less than the other clusters.

Cluster membership was also related to use of Welsh at ages 0-3, 4-11 and 12-17.¹¹⁶ Enthusiasts used Welsh more at ages 0-3, 4-11 and 12-17 than did Avoiders and Optimists ($p < .001$). Talkers used Welsh more than Avoiders at age 0-3 ($p = .022$) and more than clusters Avoiders and Optimists at age 4-11 ($p \leq .035$).

There are fairly large standard deviations in all four clusters, for Welsh use at all ages (table D.3), suggesting that there is considerable variation in Welsh use within each cluster. It appears that the language use variables may therefore not be the most useful ones for characterising the four clusters.

¹¹⁴ Primary: chi-square(3) = 40.613, $p < .001$; Cramer's V = .360; early secondary: chi-square(3) = 29.666, $p < .001$; Cramer's V = .308.

¹¹⁵ $F(3,309) = 12.343$, $p < .001$; partial eta-squared = .107.

¹¹⁶ Age 0-3: $F(3,309) = 10.406$, $p < .001$; partial eta-squared = .092; age 4-11: $F(3,309) = 11.063$, $p < .001$; partial eta-squared = .097; age 12-17: $F(3,309) = 10.633$, $p < .001$; partial eta-squared = .094.

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