

## **How rational is deception?**

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### **Abstract:**

The following paper discusses general notions of rationality and their relation to deception; in particular how accepted notions of validity and truth are involved in deception. The paper introduces a theoretical account of communication and deception, and presents two controversial arguments that draw the different issues of this paper together.

### **Introduction:**

Current research in deception has shown that there are linguistic patterns in deceptive communication signalled through negations; closer inspection of these types of communication reveal that there is a logical structure to some deceptive arguments. These findings have implications for notions of rationality, because they challenge everyday notions of truth and validity. The first section of this paper presents the current issues in the study of rationality in psychology, the next two sections provide a background to communication in general and deceptive communication. The final section returns to rationality, and controversially proposes that deceptive communication can be taken as an example of rationality, and that all communication is deceptive communication.

### **Rationality**

Rationality is considered to be uniquely human; it sets us apart from other species, and is one of the highest forms of thought. It is inextricably involved with concepts such as logic, deduction, and is defined as an ability to reason or having the quality of reasonableness; characterised by properties such as being methodical, and presenting clearly stated arguments, beliefs or opinions. Debates as to whether humans are rational have reached a point, at least in psychological literature, where there can be an acceptable resolution; i.e. that the approach taken largely determines how the question is answered. Although this response may seem unsatisfactory it does at least capture the key elements of the debate. Stanovich and West (1998) identified three approaches defined in relation to the general positions taken when studying reasoning: descriptive, normative and prescriptive. Descriptive models account for response patterns exhibited in empirical investigations of cognitive processes. Normative models embody standards of cognitive activity, if these standards are met; they suggest that optimum accuracy and efficiency are achieved, for deductive reasoning normative models would measure individuals' performance in reasoning tasks against logical answers. Prescriptive models accept the limitations of the cognitive system, and prescribe the best method of solution based on our limited system. Given these three positions there are still two possible answers to the question 'Are humans rational?' Taking a normative standpoint would result in the answer 'no'; assuming the prescriptive approach would also result in a 'no' answer, if however you adopted the descriptive position then you would assume that humans are rational. The first two positions require a standard by which to measure behaviour, and as a consequence human behaviour does not always follow the principles of logic and is deemed irrational. If it is accepted that humans are fallible and using normative models to measure human behaviour is unfair, then humans need not be judged as irrational. Therefore depending on how the reasoning process is empirically investigated impacts on whether individuals are considered to be rational or not.

There are many intricate issues that are involved in this debate, and for the purposes of this discussion they will not be considered since they have less bearing on the main topic. However, it is noteworthy that

current debates on rationality in the study of reasoning have now entered a new domain, involving conscious and unconscious processing. Dualist approaches to reasoning (Evans and Over, 1996; Sloman, 1996; Stanovich and West, 1998) now assume that it is divided into an unconscious (heuristic/non-analytic/quick/effortless) process, and a conscious (analytic/effortful/slow) process; both of which have different implications for how we are to understand human rationality. This also illustrates that the type of approach to investigating reasoning is still a moot point and determines how rational humans are considered to be.

Returning to the main discussion, another important aspect of rationality is what we accept to be true, and valid: rationality is based not only on presenting clearly justifiable arguments, but also judging and evaluating arguments in a fair manner. In logic truth and validity have a clearly defined status that does not necessarily depend on context. Context often governs how individuals assess/evaluate/judge everyday occurrences/facts/events as true or false in everyday terms, and although truth and falsity enter into degrees when set in everyday life, they cannot in logical terms. The validity of a logical argument depends upon on the structure of the argument and how the premises and conclusion adhere to the basic principles set out; i.e. a sentential argument could not have true premises and a false conclusion, this would make the argument false, but the argument would also be invalid, since it necessarily follows that if the premises are true, then the conclusion must also be true.

Deception is one example where the individual is in a unique position of having to present an argument that is false, but valid within the confines of the hearer's knowledge of the given context. The deceiver aims to present an argument that is considered true and credible, which relies on a general understanding of what constitutes a valid plausible argument. The aim of this paper is to set out how classical concepts such as truth, validity and rationality play a role in deception, and discusses how, in turn, deception has implications for the way in which such concepts are understood within a logical framework and an everyday context. The next sections provide a brief theoretical background to communication and deceptive communication.

### **Communication: The rules and regulations**

Communication is taken to mean a transmission of meaning, signals or symbols, from one domain to another; furthermore, in order for the transmission between the two domains to be successful there has to be a common code; this ensures that the transmission will be correctly conveyed and interpreted. This view forms the basis of the Code Theory by Shannon and Weaver (1949). However, this is a rather limited view of communication, and assumes that as long as the signal is conveyed correctly, it will be understood correctly. Grice (1975) proposed that communication is far from a simple exchange of signals, but instead rests on a set of intuitive rules; these can be obeyed or broken depending on the intentions of the communication. '*Conversational implicature*' a term used by Grice (1975) emphasises the point that conventional meanings of words or phrases determine what is implicated, as well as facilitating the process of determining what is conveyed. Stemming from this, Grice presents a general principle: Co-operative principle, of which there are four categories; Quantity, Quality, Relation and Manner, each contains several maxims that underpin what he considered, if followed, to be accurate means of communicating. Quantity refers to quantity of information provided in a communication, and should be balanced so as not give more informative than required and not to provide less information than is required. Quality is based on the need to make the communication true, in that it should be based on supporting evidence that is known to be true, or else should not be conveyed if it is believed to be false. This category is of particular relevance, and will be returned to later on in the discussion. The third category, Relation quite simply refers to the idea that communication should be relevant. Finally, Manner relates to a number of important aspects of communication that should include orderliness, and avoid obscurity, ambiguity, and prolixity. This category will also be referred to again in the latter part of this discussion.

In summary, the process of communication is a simple exchange, however in human communication e.g. conversation we accept that the exchange of information is less straightforward and how it is delivered and received is dependent on implicit regulations.

## **Breaking conversational rules**

In one sense the Co-operative principle proposed by Grice (1975) is necessary for conversation resulting in mutual understanding of a fact. However, the principle can also be used as a means of detecting where there are breakages in the normal processes of communication; one common example is ambiguity, and it flouts the category of quality. Ambiguity occurs in circumstances where there are multiple meanings of a given phrase, or word; this can often be avoided provided that an adequate context is available from which to judge which interpretation is the relevant one. Grice suggests that the deliberate inclusion of ambiguous statements in conversation is questionable, and that there is reason to suspect the nature of such an inclusion. The effects of ambiguity cannot be found in logic for the very reason that it occurs in everyday language, i.e. it does not have clearly defined concepts as its foundation. Context is used to eliminate the different possible interpretations, although context itself has different meanings for different individuals.

Another element of communication that leads to problems of misinterpretation through lack of context are negations; these are also treated as less favourable methods of communication, because pragmatically they are confusing, lead to more errors in understanding, and are more difficult to process than affirming statements. In the reasoning literature the detrimental effects of negations on processing and performance are well documented. It is a widely accepted view that the inclusion of negations in a given statement without a context will result in an effortful, time consuming, and error laden endeavour to assess its validity (Cornish and Wason, 1970; Evans, 1972; Evans and Lynch, 1973; Wason, 1961; Wason, and Johnson-Laird 1972; Wason and Jones, 1963).

Ambiguity and negations create problems for the recipient; without a valid context it becomes difficult to evaluate the communication and determine which interpretation is the correct one. Grice (1975) suggested that both these examples should be avoided if a clear message is to be communicated; however, they are almost essential in deceptive communication.

At this point it is important to emphasise that so far the discussion has focused on ambiguity and negations in the context of everyday communication, and although they flout conversational rules that facilitate effective comprehension of a given communication, they are not deliberate. Furthermore the rules of conversation are not rigid as in logic, and ambiguity and negations have a legitimate place in communication, in contrast the next section will discuss where both these concepts can be used to the deceiver's advantage and genuinely flout the rules of conversation.

## **Deception Communication**

Deceptive communication takes many forms, serves different purposes, and can be intentional or unintentional. Concealment, exaggeration, equivocation, half-truths, irony, and misdirection can all be considered as types of deceptive communication (Buller, Burgoon, Buslig and Roiger, 1994). Embedded in deceptive communication are the behaviours that Grice (1975) strictly aimed to avoid, namely conveying false information, and presenting information in an obscure and unclear way, flouting the categories quality and manner.

Principally the aim of deceptive communication is to avoid revealing some fact, either to the self or to others. Intentional deceptive communication is the deliberate attempt to conceal, however, unintentional deception can occur depending on a number of factors based on a lack of context, and equivocation, and results in confusion, misunderstandings, or humour (e.g. irony, which relies on similar linguistic patterns as deception).

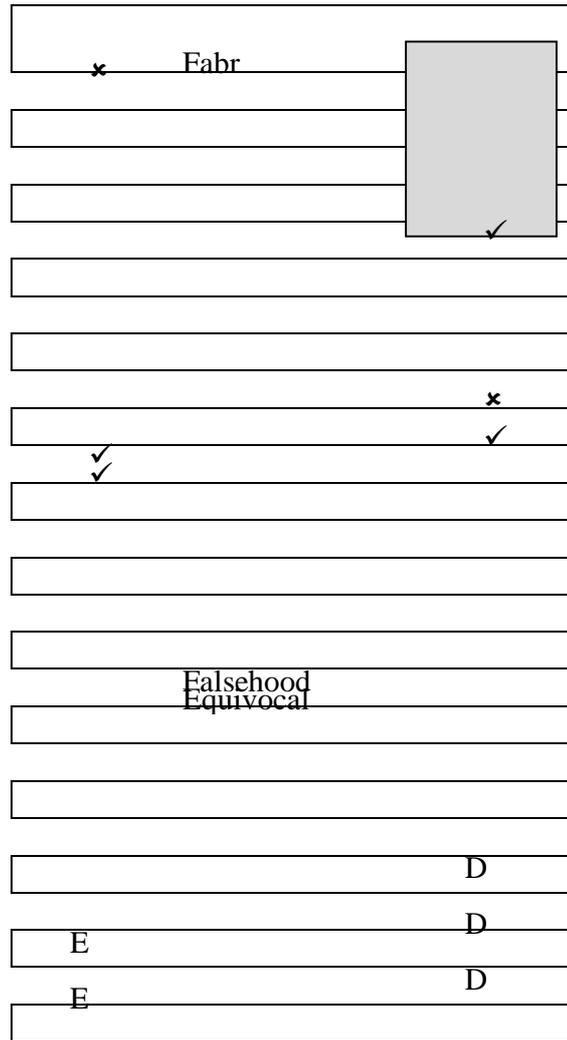
One important behavioural indicator of deception in communication is the inclusion of negations. A meta-analysis conducted by DePaulo, Stone and Lassiter (1985) revealed that negative statements were second to pupil dilation, as one of the most frequently occurring behavioural cues found in deception studies; however, this cue was not perceived as signalling deceptive communication. This highlights two important aspects of deception: first, negations feature heavily in deceptive communication, and secondly, they are not detected as a means of indicating deceptive communication. Therefore using negations, in particular

equivocal negations (e.g. 'I wasn't sure', 'I don't know', 'I couldn't tell') that are non-committal and ambiguous, is the most effective linguistic device available to deceive.

The reasons for why such a type of communication is effective and why it is commonly used are illustrated using the following example and explained using the tripartite model of deceptive communication (Osman and Heath, 1999).

### **The Model**

The Tripartite model sets out a hierarchical structure of three commonly occurring lies: fabrication (outright lie), falsehoods (outright denial) and equivocal negations presented in figure 1.



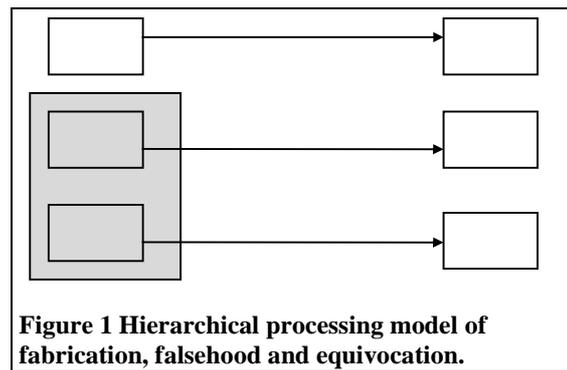
'E' denotes the encoder (Liar), and 'D' denotes the decoder (recipient), the shaded boxes around either the encoder or decoder denote the presence of a context and the ticks and crosses represent the ease and difficulty of processing. For example, in the case of an equivocal negation, a preconception exists in the mind of the encoder and it is easy to generate, conversely the decoder has no preconception, and when attempting to assess the negation it is difficult. The following example also uses an equivocal negation lie.

**The Example**

A: Did you go out  
B: I didn't stay in.

B's response is an equivocal negation, it does not directly answer A's question, B fails to give an adequate result is hard to out, rendering their reply ambiguous.

To begin in B's mind the known fact is 'I stayed in', this is the pre-conception and object lie, when A asks the question, B negates the preconception, which results in the reply 'I didn't stay in'. A must decode the statement and ascertain that B was out. The procedure is effortless for B because they have a context in mind the known fact is 'I stayed in', this is the pre-conception and object lie, when A asks the question, B negates the preconception, which results in the reply 'I didn't stay in'. A must decode the statement and ascertain that B was out. The procedure is effortless for B because they have a context in



**Figure 1 Hierarchical processing model of fabrication, falsehood and equivocation.**

are to negate; negations help distance the deceiver from the event and can be easily executed. In turn, it is more difficult for the recipient to convert the negation into an affirmative statement, than the other way around. Wason and Johnson-Laird (1972) and Clark (1972) propose that it is easier for the cognitive system to encode affirmative, rather than negative statements; the process of conversion from negation to affirmation is effortful and leads to errors, but necessary for comprehension. A recent study conducted by Heath and Osman (2000) found that equivocal negations were rated as more credible than other types of lie, and were harder to process leading to more errors in recall, which supports the model, and Wason and

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Johnson-Laird (1972) and Clark's (1972) assertions. Receivers have difficulty in converting the equivocal negations to affirmative counterparts, and so it is easier to accept them as true than otherwise because they are difficult to falsify.

In summary, negations and ambiguity are an important part of deceptive communication. In general attempts are made to ensure that everyday communication is as clear and understood as possible in the least effortful, time consuming way, in contrast deceptive communication relies on effortful, confusing and time consuming means of conveying a false message. Truth and validity have been implicated in the discussion so far but the final section explicitly focuses on how these concepts are involved in both types of communication.

### **Truth and validity have the final say**

The title question asks how rational is deception, the aim of the discussion so far has been to set the scene (briefly) for what constitutes rationality, communication and deception. The remaining part of this paper will draw the different elements of the discussion together in order to present two arguments: first, that deceptive communication can be taken as an example of rationality, and second, all communication can be construed as deceptive.

The paper has introduced a range of different issues from opposing ends; deception is typically represented as lying, falsity and untruths, while rationality exemplifies truth, logic and balanced arguments. The aim of this section is to examine where the relationship lies between deception and rationality. What makes a rational argument is that it is reasonable, and therefore logical. A good logical argument should be valid, and that depends on the relationship premises have to their conclusions. One interesting aspect of logic is that if the premises are false and the conclusion is false the argument is valid. There is a conflict between what is true and what is valid, and this is crucial to the present argument. In order to tell whether an argument is valid, there is no need to know whether the premises and conclusion are true, it isn't even required that they are true. Validity is dependent on what is possibly the case, rather than what is actually the case. Equivocal negations are examples of valid arguments that present a possible event, although not the actual event, and in this sense they are logical. Consequently they are also examples of rational communication because they follow the constraints of valid logical arguments. This argument may be considered as a matter of detail and has no bearing in the real world; however, Heath and Osman (2000) have shown that deceptive communication is rated as most credible when it includes equivocal negations, despite it causing more confusion, misunderstandings, and difficulty in comprehension. Heath and Osman (2000) and Osman and Heath (1999) argue that equivocal negations are effective because they are based on reality (i.e. they negate a real event) and therefore closer to the true event, they are also easy to generate in the mind of the deceiver and are too effortful for the receiver to falsify. These are information processing reasons, but in terms of a linguistic analysis, equivocal negations are also logical and valid arguments in their own right, and can also be judged as credible in logical terms. The important point here is that what marks out effective deceptive communication are the same reasons that mark out an effective valid logical argument; therefore it is fair to say that deceptive communication can be rational.

The second argument that concludes this paper is that all communication has an element of deception. Grice's (1975) maxims of conversation outline generally accepted, albeit implicit, rules that all individuals pertain to when conversing, either by obeying or breaking them. The Code theory of communication proposed that as long as the transmission is clear, and the code used to interpret the transmission is correct, then there is no discrepancy between the message sent and the interpreted message. However, communication between humans relies on context and relevance (Sperber and Wilson, 1986), and that does not always ensure that the communication is true when it leaves the sender, and that the correct context is used to interpret the message. Context relies on both parties (sender and receiver) to have similar background knowledge, to interpret tone, intonation and idiosyncratic phrases in the same manner, from among a multitude of possible interpretations of a communication, and most importantly to remember the same concepts in the same way. Let us remind ourselves that deception is an essentially an act that leads to misunderstanding and misinterpretation, as well as classical associations with falsehoods, in particular lying. Most aspects of human communication can potentially lead to misapprehension simply because there is no single way of interpreting a communication. There are different subtle mechanisms that can lead to

vastly different interpretations e.g. the statement ‘ I don’t think he is crazy’ given two different contexts e.g. ‘I don’t think he is crazy- I know he is’ and ‘I don’t think he is crazy, just a little anti-social’. Both examples are an admission that the person in question is ‘crazy’; the first is assertive, the second is more of a placation. The statement itself suggests that a person is not crazy, that they are in fact sane, the supplementary information that follows both versions suggests otherwise. Often we do not always have the appropriate context to rule out one interpretation or another as possible, in normal conversation this is problematic and can be construed as deceptive, in deceptive communication this is a necessary attribute that leads to affective duping. Just as in the debate of whether humans are rational, considering whether communication is deceptive or not depends on the view point, and the intentions behind the communication which is often the most difficult to ascertain.

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