Measuring the Adequacy of High-Stakes Communications

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Abstract

Certain types of communication have such high stakes that only ideally appropriate and efficient structures are appropriate for inclusion in them. The term *high-stakes communication* refers to any publication or discourse that must meet high standards of communicative pertinence, efficiency, and truthfulness because the consequences of misunderstanding by those required to use or respond to them can be severe.

The term *high-stakes examination* is commonly used in the field of psychometrics to identify examinations that help to determine the course of a candidate's career. Psychometricians apply exacting standards and procedures to ensure fairness in all aspects of the high-stakes testing process.[1] Linguists, logicians, and other professionals involved in producing and approving the content of such psychometric products have developed standards and guidelines to evaluate the communicative adequacy of each test item.[2, 3]

On what bases can we identify these ideally appropriate and efficient structures? Such identification should not be a matter of opinion, just a replicable matter of checking whether a participant in a communicative event violated one or more of the established principles of successful communication. It might be easy enough to identify flaws and impediments to successful communication, but it is also important to define the positive features to which high-stakes communications have a duty to aspire.

The process of communication is a pervasive aspect of human existence, so the principles governing successful communication are pervasive too, not limited in origin and application to a particular field of inquiry. Communication is linguistic, logical, and pragmatic, so communication is governed by definable linguistic, logical, and pragmatic rules. The principles of successful communication, accordingly, emerge from the linguistic, the logical, and the pragmatic levels of analysis.

The presence of apparently intentional errors of reasoning, those specifically designed to mislead the reader, is a serious professional blunder and possibly an ethical infraction, which should call into question the professional fitness of the

individual involved. Logical fallacies and other misleading forms of argumentation—at least when used intentionally and not as an editorial oversight—are essentially illicit methods to gain an unfair advantage in proposing a point of view. Fallacies and other deceptive arguments constitute evidence of professional malpractice and are in some instances professionally disqualifying for those who intentionally resort to them.

In order to merit acceptance, each principle of communicative success requires reasoned justifications and evidence; otherwise, it will merely be someone's opinion about the way we all should talk.

In this presentation, I consider categories of linguistic, logical, and pragmatic evidence that imply certain principles and can be used to support them. The goal is to develop a set of standards that can be used to quantify the level of communicative malpractice or communicative malfeasance in any given high-stakes document or discourse.

Additional Comments:

The proposed standards can be used to hold the producers of high-stakes documents and discourses accountable to communicate cooperatively and efficiently, as appropriate given the intended use of the linguistic product.

Certain types of errors are widely considered unacceptable for professional examinations and expert witness reports. The presence of deceptive rhetorical devices in a high-stakes scientific or legal report is antithetical to the role of an expert and thus can justifiably serve to disqualify the supposed expert in question. Media reports have somewhat lower stakes, yet they are regularly treated legally as having high stakes for plaintiffs claiming defamation, or the assertion and public dissemination of falsehoods injurious to the plaintiff's reputation in a relevant community. The derogations asserted and implicated can be collected and compared to a list of semantic categories known to be reputationally injurious.

Linguists do not find it helpful to divide communicative events into good ones and bad ones, so linguists do not use the somewhat nebulous concept of *a good communication*. One might usefully distinguish *truthful communications* from *deceptive* ones. But "truthful" needs to be defined as a good-faith presentation of the data or facts judiciously collected in a manner consistent with the consumers' expectations regarding the duty of the speaker, writer, or publisher to be appropriately informative.

The theory of cooperative communication identified by Paul Grice[4, 5] distinguishes *successful communications* from unsuccessful ones. *Success* in this regard can be defined as a sender's presentation of information that is truthful (at least to the sender's knowledge and belief), perspicuous (clear and not ambiguous), relevant (not out of the blue, but connected to reasonable expectations about the next most appropriate contribution to a conversation), and appropriately informative (providing neither too much unneeded detail nor too little information considering the context).

In order for a communication to be successful, there must be at least one receiving party, who is not faced with undue challenges to the efficient processing of the information as presented and intended. So in order for a communication to be successful, the sender must encode messages cooperatively and the receiver must decode the message using the same cooperative rules. These "rules" are not some commandments imposed from any authority—including Paul Grice. The rules are based on observations of how successful communications actually occur and an analysis of the causes of misunderstandings.

The theory of cooperative communication is not merely the fascinating musings of a linguistic philosopher but rather a practical model essential to the reasonable analysis of language production in context. The clinically useful nature of the theory is exemplified by the fact that the American Speech-Language-Hearing Association (ASHA) cites Grice's theory as part of the basis for ASHA's official categorization of the Components of Social Communication.[6]

Grice's theory of cooperative communication helps healthcare professionals to understand and treat disorders of communication. Thus an individual's persistent violation of any of Grice's maxims can indicate an underlying pathology, unless the violations are performed for comedic, poetic, or rhetorical purposes.

Intentionally deceptive communications are pathological too, because they knowingly violate Grice's maxim of quality (truthfulness) and fail to meet the receiver's reasonable expectation that the sender was communicating cooperatively. Deception exploits the receiver's normally legitimate assumption that the sender was communicating in good faith.

Individuals existing within a propaganda bubble can actually communicate cooperatively, even while disseminating information known to be false by those living outside the bubble. A lot of cooperative communication did occur regarding a flat Earth before the planet was scientifically demonstrated to be rather round.

An act of communication, even if it contains misguided or completely incorrect information, can be cooperative in nature because of the sender's perceptual limitations and belief in the truthfulness of the message sent. When such information is combined with deceptive rhetorical strategies, it becomes evident that the communication is not cooperative. Logical fallacies as a rhetorical strategy are used by individuals who do not fully endorse the truth of the message they are sending. Otherwise, they would not need to resort to deception in order to promote them.

Additionally, the entire rhetorical mode of persuasion cannot reasonably be considered inherently disordered, pathological, uncooperative, or otherwise "bad." Persuasive writings can be and often are meticulously cooperative in that they present a series of verified facts and draw reliable inferences from them. Even if it is intended to inspire the reader to take some action, a communication can still be successful and healthy.

Only persuasive communication that violates the maxims of cooperative communication can be defined as bad or disordered. Those are the types that would be useful to detect, restrict, or label in some way.

The development of algorithms to identify pathological communications requires not only a linguistically realistic definition of the pathologies but also a realistic conception of language itself. A document might be characterized as a bag of words and analyzed in that way. But the analysis and conclusions drawn will likely be deficient because language use entails not just the transfer from one person to another of a list of the words (or lexical units) but also the connections (syntax) that tie the words together into meaningful utterances. Bag-of-words analyses thus deny and ignore a defining characteristic of human language.[7]

It will be insufficient to endow an algorithm with lexical units typical of persuasive language, because the algorithm will also capture healthy or cooperative persuasion. Likewise, an unemotional exposition of a series of demonstrable falsehoods in the service of some occult agenda can produce a similar result of misinforming the reader and can later be cited as evidence in persuasive documents in an arsenal of propaganda.

Nonetheless, it could be useful to perform normalized comparisons of features known to be characteristic of traditional propaganda, such as the count of question marks and exclamation marks per page or per sentence. At another level of analysis, it would seem useful to count specific clause types, such as "Did/do you know/think that . . .?" and "You might have thought/imagined that," which appear to be overt attempts to restructure the reader's existing beliefs and understandings. These phrases can be reduced to their grammatical components (e.g., [*you*] [modal verb] [base form verb] [complementizer (*that*)]), and an algorithm can be trained to recognize their lemmatized counterparts in texts treated with an automatic parser. In these examples, directly addressing the reader as *you* seems to be essential to a certain propagandistic style, for which the other personal pronouns are not a good fit. Notice that these same clausal markers are also likely to occur in harmless and perfectly cooperative communications aimed at children, which is how some propaganda machines regard their readers.

Keywords: High-Stakes Communications, Cooperative Communication, Communicative Malpractice, Deception.

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