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ABSTRACT

If the discussions of communication can be divided into those concerned with a description or theory and those concerned with prescription, then it must be understood that the former can never by itself improve communication. As a field, communication studies does not yet know enough about prescriptive language theory; that is, theory concerned with the practical application of language in real life situations, such as in law enforcement or air traffic control. Typically, textbooks are both descriptive and prescriptive, but the connections between these two areas are usually vague at best. In Malcolm Davies' "The Business of Communicating," for instance, the first four chapters explain what communication is and when and why it works or does not work; the last two chapters prescribe which forms of communication should be used. No clear connection between the two sections, however, is made. Had the descriptive section been left out, the prescriptive section would have been just as effective. In developing a prescriptive theory of communication, the scholar should consider at least four questions: (1) what constitutes "good" communication; (2) why it is so difficult to influence how people communicate; (3) which aspects of communication can and should be controlled; and (4) what types of communication failure occur and why. Much work remains to be done in all of these areas. (Includes 11 footnotes.) (TB)

# Controlling communication: a prescriptive approach to communication studies

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## Background to the paper

For the past decade or so, we have been working in the field of "operational communication". We can define this for the present as the communication which enables an organization responsible for public order and safety (such as a police force or an air traffic authority) to conduct its operations (such as responding to a road accident or controlling flights in and out of airports)[1]. Language is overwhelmingly the major medium used for communication during operations and it is therefore also a major source of impediments to their safe and efficient conduct. The challenge of operational communication research is to devise ways of speaking and writing which are as simple, unambiguous, and as easy to learn and use, as possible.

There is a long history of military interest in the language of operational messages, for example, the precursors of the modern NATO or "phonetic" alphabet originated in military radio practice during the First World War. Civilian organizations are only beginning to realize its importance. One of the first operational communication schemes to be widely adopted is the language of international air traffic control, which was formalized in the 1950s[2].

We recently completed an operational communications scheme for the Kent County Constabulary in Great Britain[3]. The research involved devising, on the basis of thorough analysis of operational requirements and practice, an extensive set of standard radio procedures and phraseology. The scheme is being gradually taught to the Kent force, and other British constabularies are considering adopting it. At the time of writing this paper, we were completing a detailed report on the operational communication requirements of the British and French emergency services in the Channel Tunnel.

## Description and prescription in theories

The study of communication[4] is a fundamentally applied activity. It is concerned with one very significant aspect of how people behave: how they make meanings in daily life. Without this behaviour there is no communication. There is no independent entity called "communication". And, whilst it may be necessary to idealize communicative behaviour so as to model it, what is modelled is no more than the process of people's communicating. This distinguishes communication science from, for example,

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1 For a fuller discussion of operational communication, see Garner and Johnson (1994).

2 F. Robertson & E. Johnson, *Airspeak*, London: Pergamon, 1988

3 M. Garner, "PoliceSpeak: Mind Your Language!", *Australian Police Journal*, vol. 47, no.3, 1993; PoliceSpeak, *Police Communication and Language and the Channel Tunnel*, Cambridge, PoliceSpeak Publications, 1993.

4 In this paper, we are referring to the broad area of interpersonal communication, especially individual interactions and patterns of interaction within an organizational context. Some of what we say may also apply to other forms of communication, such as the mass media, but we are not competent to make the connexions.

linguistics, in which language is often regarded as if it were an object largely independent of actual instances of its use. (Whether this is desirable is another question, which we need not go into here.) The value of studies of communication will always ultimately lie in some application or other. To say this, however, is not to say that all communication research has or should have an immediate application, but that its yardstick will always be actual communicative behaviour.

Like all forms of social science, interpersonal communication theory has a bivalent relationship to human behaviour. In one direction, it is connected to descriptions of what happens when people communicate. This connexion may be very close: as, for example, when a model is constructed to explain collected data, and validated or modified by further empirical research; it is often more intuitive and speculative. Most models arise from a more philosophical approach: theorists conceptualize communication phenomena and describe what they think must be happening to give rise to them. However the model is arrived at, the result is a description: an attempt to observe, record, and analyse what happens when communication takes place. Descriptive approaches result in *empirical* statements about human behaviour by a researcher who is an *impartial, "scientific" observer.*

In the other direction, communication theory is linked to ways of improving communicative behaviour. Examples are commonly met with in the manuals which give advice and practice in "how to do it better". To borrow a term from linguistics, the orientation here is prescriptive[5]. A prescriptive approach aims to influence human behaviour, and results in *normative* statements by a researcher who is a *commentator and evaluator.* Unlike modern linguistics, communication science has always included a prescriptive aspect.

Although these two orienations - description and prescription - are widely met with in the literature, the distinction is rarely made explicit. It is, nonethless, implicit, since in a prescriptive context (as in the handbooks we mentioned above), the author first presents a descriptive model of communication and then moves into prescriptive mode. The theory is never a model of prescription: for example, showing how communicative behaviour is controlled, what it is possible for a person to learn, communicatively speaking, etc.

The work of developing a theory of communication is always assumed to be a matter of scientific description. Prescription comes later, in the application of the theory: it is never a part of the theory itself. There are probably several reasons for this. Prescription has acquired a bad name over the years, especially in linguistics, where it is invariably a term of disapproval. Certainly, if prescription is not to be arbitrary and vacuous, it must rest on a sound descriptive base. There may also be a suspicion abroad that to prescribe is to abandon one's scientific rigour. A major step in establishing linguistics as a science was taken when Saussure separated objective, systemic description of language from statements about good and bad usage. Prior to that, the two had been confused. Understandably but unfortunately, ever since then prescription has been consigned to linguistic oblivion.

There is, however, no theoretical justification for researchers, whether in linguistics or communication, to elevate one arm of theory at the expense of the other. On the contrary: unless we have a sound and scientific theoretical perspective on how communicative behaviour can be changed, any attempt at applying theory to practice is likely to be ineffective. There is no *a priori* reason why a prescriptive theory of communication should not be as scientific and rigorous as a descriptive one. The fact that prescription has often in the past been no more than the statement of arbitrary personal preference does not mean that it must always be so. Highly fanciful descriptions of many

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5 The term "prescription" in this context does not necessarily imply rigidity and severity, as is often the case in its everyday use. It simply means "saying how it ought to be done".

easily verifiable things - human anatomy, for example - were prevalent until very recent times, yet this has not precluded the gradual emergence of rigorous, descriptive sciences.

## Prescription and the study of communication

The history of theory-building in communication science has not been encouraging so far. The search is still on for a comprehensive and convincing theoretical description of how communication works. The relationship of any model to the process of effecting change in people's behaviour has not been considered, from a theoretical perspective, at all. We believe that it may be time for a reorientation.

The conceptual gulf between theory and application becomes plain whenever an attempt is made to influence behaviour. Take communication textbooks, for example. There is typically a first section in which a model is given of how communication works, followed by a number of sections in which prescriptions about various aspects of communication are given. For example[6]:

| | |
|---|---|
| **Section 1** | **Theoretical background** |
| *Chapter 1* | What is communication? |
| *Chapter 2* | Communication in the business environment |
| *Chapter 3* | Language, people, and communication |
| *Chapter 4* | Breakdowns, barriers and blockages in communication |
| **Section 2** | **Communication skills** |
| *Chapter 5* | Basic receiver skills |
| *Chapter 6* | Basic sender skills ... |

In the text from which this example is taken, Section 1 contains descriptive statements of the type:

> The sender is the one who starts the communication process. The parts of the communication model in which the sender is most involved are the idea, the message, the codes and the channels. (page 5)

Section 2, by contrast, contains normative or prescriptive statements of the type:

> Once you begin to analyse arguments into premisses and conclusions, it becomes easier to formulate and evaluate arguments quickly and effectively. There are only two aspects of any argument you have to worry about - correct premisses and correct conclusions. (page 103)

In this particular book, the prescriptive sections are imaginative and clearly presented, but there is no inherent relationship with the earlier description given in section 1. The introduction to section two begins:

> In chapter 1. a model of the communication process was presented, in the next chapter, Chapter 6, the emphasis will be on the encoding and expression aspects of the model - the sender skills. The process of communication also involves

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6 Davies, Malcolm R., *et al.*, (1985) *The Business of Communicating*, Sydney, McGraw-Hill.

> decoding, interpreting, comprehending, and understanding the message. These are the receiver skills and will be dealt with in this chapter. (page 99)

In other words, the descriptive model presented is being used as no more than a labelling system to divide the prescriptive materials into identifiable chunks. Given that the first section is entitled "Theoretical background", it would appear that the authors believed that they were providing more than that. Yet there is no attempt to *explain* or provide a basis for the advice and exercises. The prescriptions - which, as we said, are in themselves quite sound - would be equally effective without the theoretical section.

This example is typical in this way of all of the communication manuals we have examined, from the populist "how to make friends and influence people" type to the professional training manuals for emergency service personnel. In all of them, the gap between "theory" and "skills" has to be crossed by a leap of faith. This will inevitably be the case until we properly recognize the need for a truly applied and applicable theoretical approach. Prescription has a central rôle within communication studies.

It is a commonplace to say that we in the field of communication science are still a long way from developing a theory of communication which is even remotely comprehensive and generally accepted. Avoiding for the moment the question of whether such a theory is possible *in principle*, we propose four levels on which the present very partial theories may be assessed[7]. They can be characterized according to their:

i) *descriptive* adequacy (Do they include all relevant phenomena?);

ii) *explanatory* adequacy (Do they explain why the phenomena are as they are and not otherwise?);

iii) *predictive* adequacy (Do they predict new phenomena?)

iv) *prescriptive* adequacy (Do they account for those factors which affect how communicative behaviour can be controlled or modified?)

Whatever else they may lack, in terms of prescriptive adequacy existing theories of communication are deficient. Some of the prescriptions to be found in the manuals are unexceptionable, but they often comprise only generalizations and exhortations, and give no guidance about what actually to do in any particular situation. In certain contexts, for instance during operations, clear and rapid communication is essential. Yet, despite official recognition of this fact, communication training for officers in various services is often inadequate. Elementary problems in communication result in avoidable misunderstandings - occasionally with disastrous results. Without thorough research into the control of communication, the goal of influencing people's practice for the better will remain elusive. In the remainder of this paper, we outline some of the directions this research needs to take.

## Towards a theory of prescription

We were first approached a number of years ago to work on an operational communication project because we were linguists. The problems to be solved appeared to be essentially linguistic ones: officers were using language imprecisely, and things were going wrong. After some time working closely with the organizations concerned, however, we found it was not so straightforward. Far more is involved than showing how to make language simple and clear. We have often had well-researched proposals rejected out of hand by the officers. Others are accepted in principle, but for some reason they do not find their way into operational practice, whilst others, rather unpredictably, turn out to be highly acceptable. On

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7 The basis of this idea is Chomsky's early outline of linguistic theory (*Syntactic Structures*, The Hague, Mouton, 1957). It is doubtful, however, that Chomsky would approve of the fourth level of adequacy, which is our own.

the other hand, even when the recommended procedures are adopted, miscommunication still occurs.

Out of this arose our attempt to develop a a theory of prescription, or a theoretical understanding of how communicative behaviour can be improved in actuality. The work on the model has only just begun, but the answers to four questions appear to be fundamental:

i) What constitutes "good" or "successful" communication in different contexts?
ii) Why is it difficult to influence how people communicate?
iii) What aspects of communication can and should be influenced, and in what contexts?
iv) What types of communication failures occur, why, and in what contexts?

*What constitutes "good" communication?*

The criteria by which success is judged vary in different contexts[8]. There are some situations - for example, when relaying a message to a third party during an operation - in which the preservation of the original form is essential. In many others what matters is the relevance of the interpretation. In operational contexts the most useful definition takes into account the behavioural response:

> Successful operational communication occurs when the response is operationally appropriate and is made in the shortest practicable time.

In other organizational settings, such as management meetings, the physical response may be secondary, and attitudes and beliefs may be the most important outcomes. In counselling, the actual expression of the message may become the measure of success, and the listener's interpretation irrelevant.

It is clearly essential to be able to understand - and to teach - the criteria by which success will be measured within any given context before there can be any hope of influencing communication.

*Why is it so difficult to influence how people communicate?*

People have been trying to improve the way they communicate since at least classical times, and not often with success. An instructive example is the artificial languages movement, which since the seventeenth century has seen hundreds of linguistic systems presented to the world[9]. Despite the fact that there are excellent *a priori* reasons for adopting an artificial language for universal communication, human beings still prefer to make the far greater expenditure of time and effort on learning natural languages - and often doing so poorly. English teachers and communication trainers, amongst others, will need no convincing that human beings learn new communicative habits very slowly, partially, and erratically.

A prescriptively oriented theory of communication cannot take this obvious fact for granted. There is evidently something about human communicative behaviour which makes it difficult to change, and to understand communication properly we need to understand why. Less prevalent, but theoretically as important, are those examples, such as air traffic control langauge, which seem to be easily learned and consistently used, with remarkable effect.

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8 The simplistic but widespread "transfer" view measures success by how closely the idea in the "receiver's" head matches that in the "sender's". Casting doubts on the usefulness of this measure is one of the first challenges confronting the operational communication planner. It is a difficult task.

9 Although they are usually regarded eccentrics, some language makers have been highly respected intellectuals. Bacon, Descartes, Newton, and Leibniz, for example, were among the early thinkers to investigate universal, "philosophical" language.

We need much more research into these questions. The answers would seem to depend, amongst other things, on:

- Social-psychological factors

  Communication skills are learned very early in life, and seem to reside in an inner core of the self, so that changing the way a person communicates may threaten his or her self-concepts.

- Linguistic factors

  Language is inherently polysemous and multi-functional: all attempts at eliminating these features by placing restraints on it have failed, except in highly circumscribed situations. The point is quickly reached at which language becomes so "improved" that it becomes unnatural and in that sense not human and therefore not usable.

- Cultural factors

  We mentioned above the misleading idea that communication is about the "transfer of information". This view is very deep-seated in our culture, and presents an enormous barrier to attempts to change communicative behaviour[10].

- Institutional factors

  The political and economic environment of many organizations leads to over-valuing tangible items like sophisticated communications technology at the expense of improved personal communication. This makes it all the harder to convince personnel to make the great effort needed to change their communicative behaviour.

*What aspects of communication can and should be controlled?*

In the light of the relative definition of "success", and the limitations of people's capacity to change their communicative behaviour, it is important for a theory to mark clearly the boundaries around what can and what should be prescribed.

In principle, it is possible to write a fully regulated communication scheme. The artificial languages mentioned earlier are large (and unsuccessful) examples; some services (for example, British ambulance services) have adopted a closed set of phrases for some of their basic operational requirements. Air traffic control language is very highly prescribed. So, in one sense, the answer is: all aspects of communication can be controlled. But this would be to confuse the prescriptions on paper with their actual implementation.

How does a particular context influence the ways in which communication can be controlled? Clearly, the more limited and contextually bound the possible messages and their functions are, the higher the level of predictability. When the meaning to be ascribed to a message is a choice from a finite number, the form in which it is expressed becomes an index: "This is this message and not one of the other messages". At this stage, the most important issue is how to ensure that the index is not mistaken for something else: audibility (or legibility), distinctiveness, and conciseness govern the choice of expression. The best known example of this situation is the NATO alphabet, in which words chosen according to these criteria stand as tokens for letters.

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10 A related view, that teaching and learning are about getting information from one place (a book, or the teacher's head) to another (the student's book or head) has caused untold mischief in education for millennia.

Few contexts are as controllable as that, however. There is almost always a tension between, on the one hand, the theoretical ideal of a fully prescribed communicative code free from functional and topical ambiguity and, on the other hand, a practicable code which is possible to learn and use. But we know very little about what this practicability consists in.

We also need to learn a lot more about what aspects of communication *should* be controlled in order to maximize communicative efficiency. Are the auditory signals more important than visual cues; is function more significant than topic; is syntax more salient than lexicon? Should discourse rules be more constrained than individual utterance rules?

*What types of communication failures occur, and why?*

It is usually taken for granted that, provided the equipment is in order, participants will communicate easily and naturally. When problems do arise, they are regarded as one-off phenomena. Causes are sought and found in the exceptional circumstances obtaining at the time, or in explicable, isolated human errors. In the former case, the very fact that the circumstances were unusual is often taken as sufficient excuse for mistakes; in the latter case, those responsible may identified and reprimanded. In this way, confidence in the organization's communication provisions themselves is not shaken. After any investigations have been completed, practitioners are likely to be rather more careful for a while, but before long practice returns more or less to what it was before.

But the underlying causes of miscommunication are ignored. There is rarely any systematic attempt to understand its causes, because of the assumption that communication is "really" pretty straightforward. The "success without effort" view of communication pervades organizational thinking; it fosters confidence, even complacency, about professional practice. The alternative is too worrying to contemplate. Yet there is abundant evidence from emergencies and disasters that miscommunication results in the main not from a single massive blunder by one person but from a network of small mistakes. To mention one example of many, the investigator of the King's Cross Underground station fire painted a picture of sustained communicative incompetence on the part of all agencies involved, throughout the emergency:

> ... opportunities to pass vital information between the services were missed. Moreover there was a complete ignorance on the surface of what was taking place downstairs. ... There [was] a breakdown of communications at command level between the emergency services. ... It is clear that the station staff, several of whom had a good knowledge of the communications equipment available, failed to make use of it. They did not call the L[ondon] F[ire] B[rigade] upon discovery of the fire, inform the station manager or the line controller promptly, nor use the station PA system to keep passengers informed during the emergency. ... No-one in the station telephoned L[ondon] U[nderground] staff and emergency services on the surface either directly or made contact via the HQ controller[11].

Note that none of these comments concerns equipment failure: they are all about poor practice.

Miscommunication arises from more than mere occasional and exceptional causes: it is endemic to all communication, a natural and integral part of it. Our analysis of the routine radio communications of a police force over a ninety-six hour period, for example, showed that roughly one-quarter of conversations (exchanges) contained unintelligible words. Of 100 randomly selected instances of confusion about who was

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11 Department of Transport [UK] . *Investigation into the King's Cross Underground Fire*, by Desmond Fennell QC. London: HMSO, 1988. ch 11 paras. 29-32 and ch. 16 para 7

speaking to whom, approximately two-thirds were due to participants' failing to use simple calling procedures. There are many sorts of miscommunication: for example, essential messages are not expressed; messages are not heard and may or may not be repeated; they are heard but misinterpreted; they are not expressed to the appropriate person. A starting-point for a sound understanding of miscommunication would be a simple taxonomy of observed instances.

## Conclusion

This paper is an initial attempt to introduce the notion of prescription as an essential element in any theory of communication. A purely descriptive approach to theory can never by itself provide the basis for any attempt to improve communication, as it overlooks many of the most significant characteristics of communicative behaviour. We do not yet know enough to articulate a comprehensive theory of prescription, but we have indicated some of the areas which our work in operational communication research and planning suggests should be investigated.