

**Compliance, concordance and 'Corpus Linguistics': Towards a new paradigm  
in the study of clinical encounters**

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## **The Linguistic Turn in Health Care: New Opportunities**

### **Compliance: The concept and its problems**

There has been a good deal of interest in recent years in the subject of compliance or concordance in health care. Whereas a great many visits to the doctor are made – up to a million a day in the UK (Vazquez-Barquero et al, 1999) - the level of adherence to the advice or the recommended treatment regime is often quite low. There are considerable concerns about low rates of compliance across a whole range of clinical specialisms: Blood pressure (Bremner, 2002), diabetes (Campbell et al 2003) post-transplant surgery (Chisolm, 2002) and mental health (Coriss et al, 1999). Compliance rates are lower where more medication doses have to be taken (Claxton et al, 2001). Sometimes fewer than 50% of patients are believed to be following the optimal course of action with their medication or other therapeutic recommendations. Once lifestyle issues such as diet, smoking and exercise are taken into consideration, rates of compliance with medical advice may be even more disappointing for clinicians.

This issue of whether people comply with courses of treatment is particularly urgent in the UK as there is considerable concern over the national 'drugs bill'. Currently, according to news reports in the UK (BBC, 2003) this stands at between 5 and 6 billion pounds sterling, for the 530 million or so prescriptions that are filled.

At the same time, there is considerable concern about the state of the research and published literature on the state of compliance research. Newell et al (1999) are particularly vocal in criticising the 'less than optimal' design of studies which have been performed to address compliance enhancement, making it difficult to derive specific recommendations for practice from the literature published up to the end of the 20<sup>th</sup> century.

Compliance, then, is a problem from the point of view of researchers, clinicians and policymakers. It is our intention in this paper to outline some of the problems with compliance research and to suggest ways in which insights from the study of language and interaction in health care could be deployed to clarify the issues, identify the nature of the phenomena in question and suggest new avenues for inquiry and clinical practice.

To begin with, let us examine the nature of the concept itself. A working definition of compliance might be defined as “the extent to which the patient’s medication taking behaviour coincides with the prescribed regimen” (Chisholm, 2002, p. 31) and is conventionally seen to be the extent to which the patient follows their physician’s instructions. This kind of definition has been challenged more recently by the use of a number of competing terms such as ‘concordance’ and ‘adherence’. The concept of compliance itself is thus one which is debatable. Concordance is preferred by some authors because it “emphasises patient rights, the need for information, the importance of two way communication and decision making . . . a concordance model suggests that patients have the right to make decisions (such as stopping medication) even if clinicians disagree with those decisions.” (Gray et al, 2002, p. 278). ‘Adherence’ is preferred by others because “it incorporates the desirable, interactive, patient practitioner relationship that we as practitioners, want to achieve.” (Chisholm, 2002, p. 31).

Sociological critiques of the health care process have asserted that the concepts of compliance and adherence do not do justice to the complexity and sophistication of lay theorising about illness (Blaxter 1983; Calnan 1987; Blaxter and Britten 1996; Williams and Calnan 1996), and it has been suggested that health professionals should seek to develop ‘concordance’ with their clients (Working Party 1997). Concordance has been defined by a multi-disciplinary group of health professionals, academics and members of the pharmaceutical industry in the UK in the following terms:

“Concordance is based on the notion that the work of the prescriber and patient in the consultation is a negotiation between equals and the aim is therefore a therapeutic alliance between them. This alliance, may, in the end, include an agreement to differ. Its strength lies in a new assumption of respect for the patient’s agenda and the creation of openness in the relationship, so that both doctor and patient together can proceed on the basis of reality and not of misunderstanding, distrust and concealment.” (Working Party 1997, p. 8)

Thus there is a concern to introduce an appreciation of the interactive, ethically and politically nuanced process of arriving at a course of action, whether or not it is medically advisable. There have been a number of attempts to critically interrogate what the term compliance means in practice (Murphy and Canales, 2001). The concern is that language use (and healthcare practices themselves) might be

vehicles for social control and domination. The term 'concordance' might equally be argued to place a gloss of consensus on a process which may itself remain profoundly unequal.

Thus, compliance as a concept is a contested one, which yields problems for its study as it is unclear as to exactly what should be operationalized or what a desirable outcome is. The focus on concordance for example may mean that it is equally desirable if patient and practitioner reach an informed and mutually respectful 'agreement to differ' as to the best course of action. From the point of view of clients struggling with regimes they perceive to be onerous, arcane and riddled with unpleasant side effects, there may be quite strong motivations to avoid treatment.

The problem of compliance is compounded by the difficulty of finding any coherence in the working definitions of the issue in different research projects. Noncompliance may be defined in a variety of ways which may include complete cessation, verbal refusals or even any deviation from the treatment protocol (Gray et al, 2002). The measurement of compliance through self report and physician report questionnaires and interviews is notoriously prone to overestimate the phenomenon (Churchill, 1985). From the earliest days of compliance study, widely differing estimates of compliance rates were compiled. These include the relatively low rate of non-compliance estimated by Quitkin et al (1978) at only 10% through to the much higher rate of 73% detected through the use of patient interviews over a 6 month period by Wolf and Colacino (1961). More recently, in a global review of the literature pertaining to mental health, Cramer & Rosencheck (1998) proposed an overall compliance rate of about 42%. Clearly then, according to the estimates culled from a multifarious literature, there are some difficulties from the point of view of treatment optimisation.

A further problem in making sense of compliance data across different studies is to do with the way that treatment approaches and the subjective 'look and feel' of treatment regimes have changed dramatically over the 20 or 30 years that compliance has been studied intensively (Gray et al, 2002).

Thus, there are a variety of difficulties with the compliance concept, at least as far as the idea is conceived of at present, relating to the nature of the concept, the way it is operationalized and the differences both methodologically and historically between

the treatment regimes involved and the studies which have been performed to measure it.

### **The compliance process – current conceptions.**

A good deal of the literature which has sought to probe the compliance or concordance process has conceptualized it in terms of cognitive, attitudinal, psychosocial and demographic variables. That is, for example the health belief model is widely used to make sense of compliance behaviour. The health belief model is an archetypal pattern used to evaluate or influence an individual's behavioural changes concerning a particular health condition. The model suggests that the likelihood that an individual will take action concerning a health condition is determined by the person's desire to take action and by the perceived benefits of the action weighed against the perceived costs of barriers. The model also evaluates how an individual estimates their susceptibility to a condition and the benefits of detection and treatment for that particular illness (Becker, 1974; Hochbaum et al 1992). The individual's health behaviour in this formulation will be based on their perception of how susceptible they are to the disease in question, and by their expectation of benefits, adverse experiences and barriers likely encountered as a result of the recommended action.

Indeed, such is the vigour with which these conceptions of the compliance process are pursued that some theorists talk of 'the disease of non-adherence' and the need of practitioners to 'diagnose' and commence 'therapy' for the condition (Chisholm, 2002, p. 31). This enthusiasm for conceptualising the issue in terms of the cognitive and attitudinal features of health beliefs models is justified in terms of the relative success of these models in health promotion initiatives. Yet a number of notes of caution need to be sounded.

First, and most importantly, from our point of view, it is not focused on health encounters themselves. The kinds of data on which it encourages us to focus are derived from questionnaire and standard interviews and are very rarely based on the rough and tumble of health care interactions. It is based in a kind of philosophical nominalism which presupposes that attitudes and beliefs pre-exist and precede individuals' health behaviour.

Secondly, in this model it is assumed that health behaviour proceeds from a rational evaluation of the costs and benefits of different courses of action. Of course, as critics are quick to point out, not everyone processes information according to the standards of rationality laid out by the health care professions themselves (Obeid, 1996). Information and education are generally assumed to be 'good things' as they reduce anxiety. This has indeed been shown to be true in some studies (Hagopian, 1991; Poroch, 1995). Yet equally there is evidence from other studies that the opposite is true (Miller et al, 1988; Wells et al, 1990; Ohanahan, 1990). Different kinds of people desire different sorts of information. Ohanahan (1990) showed that parents of children with cancer were most interested in information about prognostic indicators, whereas the adolescent children were more interested in information relating to personal and bodily concerns. Moreover, as Hinds et al (1995) note, not everyone desires information.

A second difficulty with health beliefs models as vehicles with which to study compliance is that the staff themselves have not been subject to such intense scrutiny (Obeid, 1996). The possibility that health care decision making is a joint process, as suggested by the terms concordance and adherence, has not yet been reflected in changes in these kinds of attitudinal and cognitive models. Health beliefs models are embedded within a traditional model of expertise which sees the knowledge flowing downwards from the expert to the patient. They assume that the scientific formulations of knowledge available within western health science are the standard which should supervene over other ways of understanding health. This idea is of course contentious (Feyerabend, 1999), especially in the light of increasing concerns on the part of social scientists to make sense of other cultures and belief systems in their own terms and not just as poor imitations of western science.

The individualistic focus of health beliefs models is a source of further difficulty. We cannot easily see the practitioners or patients in this system as being part of broader linguistic communities or frameworks of understanding. Certainly, social support networks and the like are sometimes included as variables in the model (Chisholm, 2002). Yet these are not accorded a constitutive role in giving shape and form to the health encounter, nor as helping to give form to the symptoms of the complaint.

Despite their alignment with empirical approaches to the study of health attitudes and behaviour then, health belief models tend to be rather squeamish about the actual texture of socially located and institutionally bounded health care activities.

It is therefore appropriate to consider whether a fresh start would be appropriate in the study of compliance and concordance. Interestingly, despite the intense scrutiny of doctor-patient interaction from health care professionals there has been relatively little focus on the question of concordance.

### **Language and interaction in health care: The story so far**

Over the last thirty years there has been a growing interest in health care language (e.g. Fisher & Todd 1983; Mishler 1984; Silverman 1987; Heritage and Sefi 1992; Heath 1992; Maynard 1992; Nettleton 1992; Backer & Rogers 1993; Ratzan 1993; Harding et al. 1994; Lupton 1994; Atkinson 1995; Caldas-Coulthard & Coulthard 1996; Tulloch & Lupton 1997, Johnson 1997; Silverman 1997; Crawford et al. 1998; Jackson & Duffy 1998; Northouse 1998; Pilnick 1998; Pilnick 1999; Pilnick & Hindmarsh 1999; Candlin & Hyland 1999). Previous researchers' concerns have included the interactive achievement of diagnosis in clinical encounters (Korsch et al, 1968, Wallston, 1978, Tate, 1994; Pitts, 1998); compliance with recommendations (Hussey & Gilland, 1989); controlling frame structures (Goffman 1974, Fisher, 1991, Coupland et al 1994); and interactional management of encounters (Coupland et al 1994, Gill & Maynard, 1995). However, the language of compliance and, lately, concordance remains underexplored.

For example, whereas Hussey and Gilland (1989) were concerned with compliance, they were largely interested in internal psychological variables such as literacy level and locus of control. Whereas Maynard's (1991; Gill and Maynard, 1995) work was concerned with bringing patients' parents into agreement with the diagnosis, the implications of this for their future action were not fully explored.

However, Maynard's work especially highlights the possibility that the kind of language used by various health professionals may promote or hinder compliance and concordance. To be able to map such language both quantitatively and qualitatively could have significant implications for the study of concordance and compliance.

Thus, let us examine next some of the analytic tools which have been derived from this body of literature as they are currently deployed in the analysis of health care language. An important drift in this literature is the use of methodologies derived from

conversation analysis. It is therefore appropriate to describe this in some detail. As Drew et al (2001) characterise it, CA (conversation analysis) is a method which focuses largely on the verbal communications which people recurrently use in interacting with one another. People are, in this view attempting to produce meaningful action and to interpret the other's meaning. In Drew et al's view, there are three key features of CA:

- 1) Any utterances are considered to be performing social actions, such as maintaining agreement between the participants, finding out the reasons for the present situation and securing the interactant's identity as a creditable person.
- 2) Utterances and actions are considered to be part of sequences of action, so that what one participant says and does is occasioned by what the others have just said and done. CA thus focuses on dynamic processes of interaction from which sequences are built up.
- 3) These sequences appear to have stable patterns. How one participant acts and speaks can be shown to have regular, predictable consequences for how the other responds.

Social interactions are meaningful for the participants who produce them and they have a natural organisation that can be discovered and the analyst is interested in understanding the machinery, the rules and the structures that produce or constitute this orderliness. There are several basic assumptions involved in conversation analysis, (from Psathas, 1995, ps. 2-3)

- 1) Order is a produced orderliness.
- 2) Order is produced by the parties in situ: That is it is situated and occasioned.
- 3) The parties orient to that order themselves; that is, this order is not an analysts conception, not the result of some preformed or preformulated theoretical conceptions concerning what action should/must/ought to be based on generalising or summarising statements about what action generally/frequently/often is.
- 4) Order is repeatable and recurrent.
- 5) The discovery, description and analysis of that produced orderliness is the task of the analyst.
- 6) Issues of how frequently, how widely, or how often particular phenomena occur are to be set aside in the first instance,: the primary task is discovering, describing and analysing the structures, the machinery, the organised practices, the formal procedures, the ways in which order is produced.
- 7) Structures of social action, once so discerned, can be described and analysed in formal, that is, structural, organisational, logical. atopically contentless, consistent and abstract terms.



As Harvey Sacks put it there was 'order at all points'. Moreover, as far as conversation analysts are concerned that is the only order there is. From the point of view of ethnomethodology and especially conversation analysis, '...the primordial site of social order is found in members' use of methodical practices to produce, make sense of and thereby render accountable, features of their local circumstances ... The socially structured character of ... any enterprise undertaken by members is thus not exterior or extrinsic to their everyday workings, but interior and intrinsic, residing in the local and particular detail of practical actions undertaken by members uniquely competent to do so. (Boden and Zimmerman, 1991, p. 6-7)

In addition to this concern with locally produced and managed conversational order, there has been a 'corpus revolution' (Leech, 2000) such that an increasing number of scholars are concerned to develop large transcribed archives of the spoken English language. This offers the opportunity to probe into the 'terra incognita' of spoken language (Carter & McCarthy, 1995). Whereas conversation analysis has sometimes had the ambition to examine regular, repeatable features of interaction, it is the corpus revolution that makes this ambition possible through the availability of larger scale bodies of the spoken language.

Corpus Linguistics can provide a detailed account of encounters between health care professionals and clients in terms of the language used. Healthcare is a language-based enterprise deeply affected by language choices and strategies, spanning a wide range of problems and interactional styles. The study of compliance and concordance would be enhanced considerably if this language use were exhaustively characterised in qualitative, quantitative and stylistic terms in order to advance a deeper understanding of the central role that language plays in accomplishing alignment between clients and practitioners. Greater scrutiny and awareness of language use may illuminate, interrogate and potentially transform how professionals reach agreement on treatments with patients and ensure that such treatments or interventions are sustained or maintained by willing, informed patients. Thus, the language used to promote compliance and concordance may result in improved clinical outcomes.

By building a large corpus or computational collection of key interactions in treatment provision or advice, it becomes possible to perform an in-depth analysis of vocabulary, interactional structure and reality construction that can affect compliance and concordance. We can advance an understanding of the conversational practices

of the interactants as they achieve their mutual understanding or even mutual miscommunications. Once these formulations are accomplished, it is clear from previous work that their implications can have far reaching effects if they are put into practice (Crawford et al 1995; Brown et al, 1999). The internal organisation of conversation structure and content then is a vital sphere of study in its own right. Insights from this can guide our search for the elements of an encounter, such that an optimal course of action is established which maximises compliance or concordance.

### **Possible Study Areas: The terra incognita of concordance and compliance in practice**

This line of research has a variety of potential applications. In order to facilitate subsequent discussion of the issues involved let us summarise some of the possible areas of enquiry as a kind of corpus linguistics 'twelve step programme'.

Corpus linguistics can for example help us to:

- i) Provide a detailed description and analysis of the language of prescribing or treatment consultations, and to characterise the unique features of professional and patient language in this context.
- ii) Identify possible strategies for more effective language use in any treatment consultation with patients.
- iii) Identify linguistic difficulties between participants at the interface of a professional or technical lexicon and a lay or non-technical one.
- iv) Enhance our understanding of underlying linguistic dynamics that could influence how patients react to their treatment or medication regime.
- v) Analyse how emotions are conveyed during health professional-patient interactions and how this could affect patient concordance.
- vi) Examine features such as turn-taking, turn-length, topic control, congruence between topic and language style, interruptions, intonational information and meaning;
- vii) Determine preference structures and paralinguistic features;
- viii) Analyse the interactional processes which are undertaken by professionals and identify the linguistic strategies that professionals adopt in treatment/ prescribing activity;

- ix) Investigate the strategies by which professionals attempt to secure compliance with advice and the strategies by which patients signal their acceptance of, or resistance to, that advice in the conversational encounters themselves;
- x) Determine the genre and register of consultation language which are likely to differ in systematic ways from the use of English in general;
- xi) Examine the kinds of vocabularies, 'fixed expressions' and common collocations associated with different kinds of consultation scenarios;
- xii) Identify features of 'successful' communication and offer recommendations for future training and best practice.

It is important to stress here that the overall methods of linguistic research can be applied flexibly and be used to address a whole variety of questions, topics and ideas. These aims will perhaps best be achieved by means of a willingness to work flexibly with partners in the education system, in health policy and in the commercial sector so as to explore topics of mutual interest and reach conclusions which lead to tangible benefits in terms which make sense to policymakers, patient groups, practitioners and commercial partners.

### **Clues about compliance and concordance in the existing literature:**

#### **Compassion or coercion?**

However we conceptualise the issue of compliance or concordance, there are a variety of techniques which health care professionals have been observed using when they attempt to create concordance between themselves and the clients. Douglas Maynard's work on the giving and receiving of diagnostic news between clinicians and the parents of children with developmental disabilities and autism, for example, shows how this can be achieved (Gill & Maynard, 1995). After making their assessment of the child, the professionals commence delivering their opinion to the parents by asking the parents for their opinion of what the problem is. This then enables them in most cases to neatly re-engineer the parents' formulation so as to incorporate the technical diagnosis – 'autism' or 'mental retardation' because it seems to the parents that this is merely a technical reformulation of the problems they are already aware of. This then gives the diagnosis a more compelling quality because the parents 'own' it too. It gives it a grounding in their own experience.

Thinking of how these kinds of insights might be turned into research questions which could be pursued with larger corpora of language, it might be possible to work

through transcripts of a greater variety of healthcare encounters to examine the achievement of alignment between patient and professionals. Perhaps, once the patient is encouraged to describe their symptoms and the nature of their complaint, the course of action recommended is contrived so as to appear to be the solution to the patients own, self-described problems. The conversational mechanisms of securing an alignment between the professional and client deserve further exploration. This process might also be detectable when professionals talk about medicines and courses of treatment which they did not prescribe themselves. Concerns over non-compliance make professionals sometimes increasingly desperate to keep clients on courses of tablets, and makes them keen to ensure that the clients are not doing something egregious like swapping the medication with their friends, losing it, trading it for other goods and services and so forth.

A close-grained attention to some actual clinical encounters might yield important new insights as to how the prescribing and use of the product might be optimised. Will the encounters become product oriented? Here we might think of the work with GPs that suggests the prescription becomes the reason for the consultation, and the way that some GP practices have started using 'non-prescription' pads which explain why antibiotics are not appropriate in particular cases. In Heritage and Stivers's (1999) work on medical consultations there is an interactional device used by doctors the 'online commentary' during an examination which often tends to minimise the severity of the outward signs of the illness. Phrases such as 'that's fine', 'a little bit red' or 'I don't feel any lymph node swelling' lead neatly in to a decision not to prescribe in a way which carries the patient along. Indeed, there is currently also a poster campaign to tell the public that antibiotics are rarely useful for colds and influenza. A more selective use of pharmacological agents might be advantageous because they can be restricted to cases where they might be most effective, enhancing the reputation of the product and the company and safeguarding against complaints of side effects and iatrogenic problems caused by ill-advised usage.

As a corollary of this it might be possible to study the subcultures which exist amongst patients and practitioners as they make sense of the experience of health and disease. Conversations about health and illness are an important part of the social fabric. The technologies of care, the medications, products and aids to prevention and healing, make a difference to the conceptual map of human life. The availability of agents to tackle meningitis, pneumonia, diphtheria and HIV makes a big difference to the lethality of these illnesses and their impact in the sufferer and his

or her family. Of course, in many of these cases, the prevention and treatment of these illnesses is not wholly in the hands of the individual practitioner. However, treatment innovations make a difference to the conceptual structure of the illness and its emotional texture, and this consequently makes a difference to the professional-client encounter.

From the health care providers' point of view, across the wide range of health interventions, the client's acceptance and adherence to form of care, drug or treatment protocol are important. In practice, the range of factors involved in the decisions to comply or not, and the ways in which these might contribute to subsequent difficulties are complex. To illustrate this complexity, let us consider the case of hip protectors for elderly clients at risk of a fall. Osteoporosis related fractures are a major public health problem and lead to pain, disability and increased mortality at an estimated annual cost of £940 million to healthcare service resources (Dolan and Torgensen, 1998). The most serious consequences arise in those with a hip fracture. There is a significant increase in mortality, with an overall 12%-20% reduction in expected survival and a 5%-20% excess mortality within the first year (Eiskjaer et al, 1992). Moreover, half of the previously independent patients become partly dependent while one third become totally dependent. The risk of a second hip fracture is increased 5-10 fold. Despite this, measures to prevent fractures, particularly the second fracture are rarely undertaken (Sheehan et al, 2000). However, hip protector pads are an effective way of reducing hip fractures within a selected high risk population (Parker et al, 2002). Reduction in fracture rates have been found to be higher [40-60%] among the institutionalised (Lauritzen et al, 1993; Ekman et al 1997; Kannus, 2000) compared to the community dwelling elderly (Hindso & Lauritzen, 1998; Hildreth et al, 2001). Nursing home studies yield higher compliance rates than those found among community dwelling subjects. In one community dwelling study hip fracture rates were reported to increase in the group assigned to wear the protector pads. However, within the hip protector group, only one patient was wearing the pad at the time of fracture (Hildreth et al, 2001). Perhaps this is to do with the effect that wearing protector pads has on confidence. When wearing hip protectors one third of the patients feel more confident whilst walking, with an additional 15% spending more time outdoors (Hindso & Lauritzen, 1998) which may explain the increase in fracture risk on the background of poor compliance. Another study has reported improved self efficacy with the use of hip protector pads (Cameron et al, 2000). Older people are largely unaware of their risks of a hip fracture - particularly those with an existing fracture - uneducated about the

value of hip protectors, and the attitudes of health care providers may also play an important part. Unfortunately methods used to explore these perceptions and attitudes in clinical practice with elderly clients are poor. Interview techniques are commonly used but translating these into robust, quantitatively based evidence is difficult.

However, within the discipline of linguistics researchers have long recognised the value of compiling a large corpus of spoken language and subjecting it to computerised analysis to discern the patterns in language use across a broad range of human social practice (Carter & McCarthy, 1995; Leech, 2000). Once the potential of correlating these measures of language with longer term measures of compliance, for example, in the above case, the prevalence of falls, fractures and mortality, researchers and clinicians will be equipped with a valuable tool for distinguishing the kinds of language which are associated with higher compliance and better outcomes. But, more in keeping with the current and more dialogical theme of 'concordance' - negotiating and reaching joint decisions about treatment choices and processes - such analysis may yield key discursive strategies that can be adopted to promote this more collaborative process of alignment between clinician and client.

Whereas we have been critical about existing research on compliance, it has successfully identified some issues which might be worth exploring in more detail. In the case of elderly clients and precautions in case of falls, there are some valuable clues about issues that might be explored more rigorously in this way, once we have compiled a corpus of spoken language concerning hip protector pads in clinical contexts. For example, a number of authors have highlighted the importance of the relationship between clinician and client in securing compliance (Ryan, 1999; Latter et al, 2000) yet there is some uncertainty about what this might look like in practice. Likewise, patients' beliefs about their condition and the treatments available have been identified as a factor in compliance (Horne & Weinman 1999) yet so far little is known about the linguistic markers that might communicate this in the clinical encounter. A further example concerns the observation that the elderly patient's social context and social support network has an impact on adherence with medication and advice (Kidd & Altman 2000), yet it would be useful to know how this might be attended to by the participants in clinical encounters and whether this might be related to future compliance. In addition, clues concerning the client's future compliance might be found in the interactional structure and reality construction associated with different kinds of advice as to the best course of action. It has been noted that a good deal of human communication, especially in health care contexts,

is governed by what has been called 'politeness theory' (Brown & Levinson 1987) where interactants use non-directive forms of speech rather than directive ones, so as to preserve the 'face' of their fellow interactants. For example, rather than telling a client what to do, the professional may say 'we generally advise people to...' (Benkendorf et al 2001; Silverman 1997). However, in health care contexts this non-directiveness may obstruct not only advice giving but prevent exploration of patients' misgivings too (Benkendorf et al 2001). It is hoped that systematic studies of large corpora or bodies of language will explicate the forms of advice-giving and will yield greater insight into the meanings produced in health care interaction.

The promise of corpus linguistics is that it will allow a detailed analysis of 'narratives of compliance and concordance', such that an optimal course of action can be developed. This might entail the development of education for professionals in how to maximise future concordance, once the 'linguistic signature' of effective communication is characterised. In the case of hip protector pads, it would be useful to identify the communication dynamics associated with patients' reactions to their use. It is also possible to analyse how emotions are conveyed in such accounts and how the use of emotional terms might be associated with patient compliance and concordance. Hitherto, a general finding has been that higher compliance is associated with multi-method techniques that involve cognitive, behavioural and affective components (Dunbar-Jacob & Mortimer-Stevens 2001; Roter et al 1998) yet it would be useful to characterise more precisely the features of these which yield the enhanced compliance. Using corpus linguistics it is possible to provide a nuanced explication of how participants' inferential structures and perceptions of hazard intersect with their emotional language relating to the use of drugs and other intervention devices. In addition, this allows the identification of the kinds of terms and concepts used by participants in describing physical, psychological, social and aesthetic aspects of any intervention. Such information may be valuable in terms of the design of future interventions, including for example drug delivery systems, prosthetic and safety products. With this approach, it may be possible ultimately to fine tune the language of the health care encounter to facilitate clients' and professionals' adaptation to any negative aspects of use, and tailor persuasive strategies to address these issues. This could lead to interventions targeted at all the major actors on the health care stage, including governments, manufacturers, health professionals and patients themselves, since experience suggests that simply targeting patients is but one piece in a much larger jigsaw (Homedes & Ugalde, 2001). This creative synthesis between medicine and applied linguistics could

provide all these actors with the information they need to make substantial improvements in the wellbeing of individuals.

Language and action have a logic and orderliness which is not reducible to cognitive and attitudinal measurement (Potter 2000). Close attention to the language used in introducing and monitoring compliance is important and will help reorient research away from the 'sterile' concepts of 'compliance' and into more fruitful directions concerning how courses of action in healthcare are formulated, agreed and translated into concordance.

### **Compliance and concordance revisited: reformulating the concepts**

As models for conceptualising health care relationships, compliance and adherence have come in for sustained criticism. Although compliance and adherence have been extensively researched, it has been argued that the outcome of much of this work provides "little consistent information other than the fact that people do not always follow the doctors orders" (Morris and Schultz 1992, p. 295). The main function of such terms (according to some) is ideological: to provide a framework for doctors to express their ideas about how patients *ought* to behave (Trostle, 1988; Britten, 2001). Notions of compliance and adherence offer clear justifications for attributing blame when patients' actions do not match the expectations placed on them by health professionals (Donovan and Blake, 1992; Britten, 2001). Thus, if the potential of linguistic study were harnessed, it might be possible to identify how exactly responsibility was attributed to patients in health care encounters. Moreover, the

Awareness of the limitations of the compliance and adherence models in their application to health care relationships has taken root within health services research and policy in recent years. It is now suggested that interactions with patients should not be viewed simply as opportunities to reinforce instructions around treatment (Working Party, 1997; Blenkinsopp, 2001). Rather, health care relationships should be understood as a space where the expertise of both patients and health professionals can be pooled to arrive at mutually agreed goals. The value of linguistic analysis in this context is that it can function as a check on how exactly this mutual agreement is created. Studies of the fine grain of health care encounters often identify the means by which professionals interactively manage the encounter so as to steer it in the direction that conforms to their judgement (Brown et al, 1996; Heritage and Stivers, 1999). Thus, from the point of view of clients' interests and the



current political climate which encourages a focus on client's views, this kind of research is particularly valuable.

### **Compliance, concordance and doctor patient relationships**

This vision of health care interactions is one where each party's views and goals are considered to be of equal value, and where the consultation represents a space for dialogue has been contrasted with the paternalistic and authoritarian compliance or adherence model which is characterised by an "unspoken assumption that the patient's role was to be passive" (Working Party, 1997, p. 8). The principles of concordance are not new (Britten, 2001), however, it is increasingly referred to within health services research and health policy circles (Blenkinsopp, 2001). In contrast to compliance or adherence, it fits more neatly into the political landscape of the National Health Service (NHS) in the UK. Its negotiated approach to health care interactions resonates with the emphasis on consumerism in the NHS (Williams and Calnan, 1996) and, if it can be achieved, it would be congruent with ideas such as shared clinical decision-making (Charles et al, 1997; 1999) and patient-centredness (May and Mead, 1999). Regular sampling of the language of health care as it is delivered would be valuable as a way of assessing progress towards these goals.

The World Health Organisation has long held that patients and health professionals have a right (and a duty) to participate in the delivery of health care (WHO 1977, p. 3). Similarly, the UK Department of Health is engaged in an Expert Patient initiative (Department of Health, 2000) and a Medicines Partnership Initiative (Medicines Partnership, 2003) both of which seek to exploit the experiential knowledge patients amass over the course of their illness. Whilst this prevailing discourse can be viewed as a response to the wider epistemological challenge to medicine and as a political challenge to professional power, there seems little doubt that user engagement, building partnerships and privileging the patient's voice, are now firmly on the national and international health policy agenda (Small and Rhodes 2000). Again, understanding the language of health care is a crucial component of all of this political change. After all, if we take the project of linguistic analysis outlined at the start of this article seriously, we are encouraged to see the primordial site of social order in this health care interaction. As yet, the vast majority of it is indeed terra incognita, yet it is within these encounters that the proof of the political pudding must be sought.

Whereas the fine detail of much of the UK's million or so daily health care encounters is as yet undisclosed, there is a growing body of research describing the impact of 'patient-centredness' on satisfaction with care (Kinmonth et al, 1998) and models of shared decision-making (Charles et al, 1997; 1999; Stevenson et al, 2000). Interesting research has also been conducted in relation to the misunderstandings that arise between patients and doctors in the consultation and the unvoiced agendas of patients in this arena (Barry et al 2000; Britten et al 2000). Again, the possibility of detecting these misunderstandings and miscommunications on a wider scale is opened up by the use of corpus linguistic approaches.

The process of medical decision making is an interpersonal one that can be seen as a social act (Davidoff, 1996) which the law conceptualises as a process of obtaining consent. This process which takes place in the context of the doctor – patient relationship. Indeed Sommerville (1993) saw consent as the trigger that allows the interchange between doctor and patient to take place and is an essential part in the establishment and continuation of the therapeutic relationship.

A number of studies focus on the relationship between the doctor and the patient particularly at the time of decision making. Balint (1957) coined the terms doctor centred and patient centred. Di Caccavo et al (2000) note that much of the research regarding medical interaction has centred around these styles of communication and their effect on patient compliance and satisfaction (Savage and Armstrong, 1999). Doctors use both styles of communication (Ruusuvuori, 2001); alternating between a doctor centred approach (the doctor using his or her knowledge for the benefit of the patient) and the patient centred style (in which the patient is seen as an expert in his or her own illness). The issues of how the agenda for the consultation is set, who sets the agenda, and how interaction is accomplished and organised have not been addressed so far in this strand of scholarship. Once again, this is a constituency of interest which could be offered some insights via the discipline of corpus linguistics. What, for example, are the linguistic signatures and motifs of 'patient centred' or 'doctor centred' communication? How is the patient's expertise on his or her own illness formulated? As well as specific vocabularies relating to the ailment in question, there may be generic forms through which lay people describe the nature of their problems.

The traditional role of the doctor has been one of an expert using his or her knowledge and expertise for the benefit of patients The historical lack of involvement

of the patient in his or her own healthcare has been superseded with a new interest in shared decision making. In the shared decision making model both the doctor and patient are involved, both share information, both take steps to build a consensus about the preferred treatment and finally, an agreement is reached on the treatment that is to be implemented (Charles et al 1999). In this way the doctor patient relationship is viewed as a partnership. However the nature of the partnership remains debatable, as Sommerville (1993) comments the relationship may best be viewed as complimentary rather than equal. Mc Kinstry (2000) addressed the issue of whether patients wished to be involved in decision making, finding that patients preferences varied according to factors such as their age, social class and even their smoking status - apparently smokers preferred a shared decision making approach. Once more, the scope and impact of this work is limited by the fact that we still know so little of the fine detail of the medical encounter. The idea of shared decision making, like so many of the attempts to conceptualise the health care process, is hampered by lack of specific data. However, if it is accepted as an ideal, the question then arises of how we are to assess whether it has taken place, and it is this question with which corpus linguistics is ideally suited to help.

The doctor, by virtue of his or her professional training and experience can be seen as a resource for the patient. The doctor often has to strike a balance between submerging the patient in information, thereby diminishing the ability of the patient to make decisions and restricting the amount of information given so as to make decision making simple. The legal position has always been supportive of doctors in respect of their duties to disclose information to the patient. Lord Bridge recognised the right of the patient to make informed choices especially when a risk may be described as significant; nevertheless he was of the opinion that the amount of information given to the patient in assisting the patient to make a medical decision is primarily a matter of clinical judgement. While the inconsistent approaches to the case by the Law Lords make the analysis difficult (McHale & Fox, 1997) the Guidance issued by the Department of Health (1996) for doctors quotes the views of Lord Templeman and Lord Scarman. They proposed that risks of a 'material kind' or those risks that are 'special in kind or magnitude' should be disclosed. Though the doctors' duty is to be subjected to the test in Bolam v Friern Hospital Management Committee (1957). Of course, the process of being made aware of risks and difficulties attached to different courses of treatment is difficult to characterise without more concrete data from health care encounters. This question of how the doctor should proceed in talking about drawbacks, side effects and limitations and how

patients might most advantageously inquire about them could be addressed with the analysis of a substantially sized corpus of health care language, especially if it were possible to relate the encounters themselves to

### **Landscapes of rationality: informed decisions**

Research suggests that giving patients adequate information not only increases patient satisfaction but reduces subsequent litigation when complications arise (Stauch 2000 NEEDS A REFERENCE). However Osuna (1998) found that 69% of patients claimed not to have been informed about the risks associated with surgery, further, 75% claimed not to have been informed about anaesthetic risk, while no patients undergoing local anaesthesia said they had been informed of any risks. In a similar survey White (1995) found that when questioning patients one day after they had signed a consent form only 55% could demonstrate an understanding of the procedure to be performed. It may be that there is a significant difference between remembering and processing risk and remembering what a procedure entails. Ellis (2001) in a small survey of patients attending a transient ischemic attack and minor stroke clinic, found that when the patients were given information based on the National Institute of Neurological Disorders Trial they were unable to understand and quantify the risks they were told For example 39% of patients did not know a risk of 25% was one in four. Calman et al (1997) note that while risk is generally couched in numerical odds research suggests that people find these hard to grasp, leading to the suggestion that national scales of risk should be developed. However research in cognitive psychology has shown that people are quickly overwhelmed by having to consider more than a few options at once and rather than use systematic decision making strategies resort to simplified ways of making decisions (Redelmeir and Sharif 1995). Indeed Ubel and Loewenstein (1997) postulate that in some situations when people dissect their decisions they come up with reasons which conflict with their intuition. There appears to be a need to find a way of combining patient views with medical facts and intuition with a systematic way of making treatment decisions. Some argue that such a method exists in the form of decision analysis. Those who support this approach claim that doctors can integrate patient values and opinions with medical facts (Pauker et al, 1998) though Ubel and Loewenstein (1997) observe that the psychological feelings - such as hope and fear - associated with medical decision making are not accounted for.

The nature of decision making can be seen to involve the interpersonal relationship between the doctor and the patient, inevitably the communication skills of those involved are important if the consent process is to be seen as successful. However other factors including the cognitive ability of the patient to manage complex information are also important especially at a time when pain, stress and/ or anxiety are experienced by the patient. Barry et al (2001) conducted a qualitative study in 35 GP practices and found that only 4 out of the 35 patients interviewed had been able to discuss with the doctor the items they had previously identified as issues for discussion. The reasons for this were not researched however, while the research was not focussed on the gaining of consent, the inability of patients to raise concerns with the doctor is very relevant to the obtaining of consent. Thus, it would be instructive to ask what exactly takes place in medical encounters which relates to the presentation or evaluation of information.

The bulk of the research we have just reviewed is founded in the assumption that rational decisions can indeed be arrived at through adequate processing of information. This in itself is debatable. The results of medical interventions may turn out to disappoint. There is a good deal of evidence across a variety of medical specialisms that even in conditions which have been intensively researched there is no clear-cut rational way to make decisions. To take one example, namely the use of surgery in prostate cancer, awareness of the many published studies on the subject does not yield an unequivocal single best course of action. After surgery, reductions in physical activity lead to a poorer reported quality of life and marital adjustment. Over half of post-surgery patients reported distress at loss of erectile function when followed up eighteen months after surgery (Pedersen et al., 1993). To complicate matters even further, when following up people who have had prostatectomy, it appears that the rate of satisfaction with the choice declines over time. Herr (1994) notes that up to three years after surgery 83% of those who have had their prostate gland removed would choose a radical prostatectomy again, whereas of those more than three years post surgery only 47% would do so. As Moore and Estey's participants said:

'Even though the urologist spent a long time with me and answered all my questions before surgery, the only thing I ever heard was cancer. The biggest shock is to find I am incontinent. It just hadn't penetrated and is devastating.'

As another said:

'I think he told me about incontinence but I didn't know he meant this.'

(Moore and Estey, 1999, p.1125)

This illustrates that even when equipped with the knowledge of the situation they were facing, people do not necessarily make decisions which they will consider to have been the best for them later. Rationality then, does not guarantee satisfaction and is not necessarily more likely to result on accord being maintained between client and physician. Again, there is a need for further investigation of the kinds of language in the discussions of the operations and alternative courses of action. It would be instructive to investigate exactly how it was that expectations were managed, courses of action evaluated and benefits of surgery assessed. The difficulty in this case seems to lie in the disappointing results of the operations, in terms of side effects and postoperative disability.

**In conclusion: The linguistic paradigm in health care research.**

In this paper then we have attempted to outline some of the limitations of existing forms of inquiry concerning compliance and concordance and highlight the possible contribution of language studies and corpus linguistics to the field. The concepts of compliance and concordance themselves are somewhat debatable and are subject to a whole range of attempts at reformulation, from theorists, researchers and policymakers. Language study should enable the debate to proceed with some clarity about what exactly is going on in health care encounters. Moreover it is through attention to the language used that we will be able to grasp the jointly formulated irrationality of health care and begin the process of mapping the terra incognita of oral health care work. The difficulties of compliance and concordance and how they fit into current political debates about the inclusion of patients' voices can be addressed by means of a thorough sampling and analysis of the language of health care encounters at a variety of levels. This will enable policymakers to establish whether indeed the politically desirable ideals in health care have been met, and it will enable practitioners to guide their interactions down the most advantageous channels so as to ensure that clients are empowered to make the most of the treatments and advice they are given.

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