

Dentist-patient communication: how do the models correspond?

Olga V Boiko

Associate Research Fellow, Peninsula Collaboration for Leadership in Applied Health Research and Care

Correspondence to: : Peninsula Collaboration for Leadership in Applied Health Research and Care, Peninsula College of Medicine and Dentistry, University of Exeter, Veysey Building, Salmon Pool Lane, EX2 4SG, UK

Email: olga.boiko@pcmd.ac.uk

Introduction: The uniqueness of dental interactions has been somewhat assumed, but never scrutinised in depth, as ethnographic studies in dentistry are quite rare. On the other hand, medical sociology has accumulated a massive body of knowledge in relation to health professional-patient communication. In responding to the current calls to bridge the gaps between sociology and dentistry, this paper unpacks the complexity of communications in dental encounters. **Aims and objectives:** To analyse the specificities and commonalities of dentist-patient communication in relation to the models of medical professional-lay interactions. **Research design:** The study involves an ethnographic analysis of four dental-patient cases in primary and secondary dental care in the UK. These observations were part of a larger study of dental clinical encounters (36) undertaken in NHS primary and secondary care dental clinics in the UK in the period of 3 January – 31 October 2007. Each case was studied separately in accordance with the principle of ethno-methods: “just follow that case (patient)” (Garfinkel, 1967). **Results and conclusions:** Four case-studies demonstrated that different models of interactions were at work in dentist-patient interactions (consensus, negotiation, conflict and contractual models). The analysis revealed that, first, the model and its corresponding communications were likely to be determined by the type of the dental setting and oral health problem of the patient and, second, the model-split was not always feasible because of the interactive dynamics that blended the process and outcome of the encounters.

Key words: Healthcare communication, dentist-patient interactions, ethnography

INTRODUCTION

Most research into healthcare communication known to date seemed to focus on consultation-based communication, so that studying encounters which involve invasive procedures remains rare (Gordon *et al.*, 2005). In those interactions, “the very involvement of practitioners in physically treating patients... produces interactional dilemmas not typically found in doctor-patient encounters” (Pilnick *et al.*, 2009). This applies to dentistry where communication patterns are conditioned upon the nature of the dental treatment. Dental encounters are endemically clinical; they are also instrumental and often surgical encounters, including a minor or major intrusion into the oral cavity.

For the majority of us, visits to the dentist are a life-spanning task, so that the dental clinic, in its surveillance, has an omnipresent significance for individuals (Nettleton, 1992). Meanwhile, the whole routine of going to the dentist has been surrounded by precluded communication, where the part of the dental patient is a silent one. The nature of dentistry is such that dentists often communicate with patients,

whose ability to initiate or to respond to communication is impaired (Nestel and Betson, 1999). It is disadvantageous for the patients and equally did not serve well for the dentists: “physical barriers to verbal communication may not work to the dentist’s desired effect. The patient may feel frustrated, save questions to the end of the consultation, and so prolong the session” (Humphris and Ling, 2000) A dentistry-induced vulnerability is fairly common among patients, despite the wide-spread use of sedation techniques and technological advancements that are meant to reduce the patients’ discomfort. Fear and anxiety persist in the population because of the emotional work associated with dental visits. Anxiety, embarrassment, and other complex emotions compound the necessity of ‘maintaining face’ (Pollock, 2007) in dental surgeries. Such reactions may well be explained by the delicacy and symbolism of the mouth (Gibson, 2008). These unique features associated with oral treatments - instrumental intervention, symbolic sensitivity of the mouth, impaired patient verbal activity add to the complexity of dental interactions.

This context attaches particular importance to exploring

the role of communication in dentistry, which has been recognised as pertinent to the quality of dental care. Despite a dramatic rise in dentists' awareness of the good communication (Söndell and Söderfeldt, 1997), disappointments with dental interactions remain common complaints for patients. Patients, as it stands, have had and always will have the great expectations of socio-emotional support. In a study of dental patients by Holt *et al.* (1997) 'care and attention' was rated as very important by 90% of patients, while 'pain control', 'dentist puts you at ease' and 'safety' were crucial for 73% of respondents. Another study demonstrated that even in emergency situations patients were more positive about dentists' communicative behaviour when it was related to answering their questions (Schouten *et al.*, 2003). On the contrary, lack of explanations of dental treatments and rushed appointments seriously affected trust in dentistry (Smith *et al.*, 2005). A study by Gregory *et al.* (2007) revealed an extensive repertoire of patients' tales about negligence and excessive treatments offered by the dentists. It contributed to a breach of trust in dentists, exacerbated by the inaccessibility of dental services. As a result, people were more likely to become non-attenders, drop-outs from the dental system, or in the worst cases, attempting do it yourself (DIY) dentistry. Poor communication was reported as one of the major contributors into the 'failed', unsatisfactory and litigation cases.

On the other side, dentists also appeared vulnerable in interacting with patients. Kay *et al.* (2009) established that dental practitioners considered patient demands a major occupational stress (75%), similar findings were reported elsewhere (Gorter *et al.*, 1998). Recently, the new contract (April 2006) for NHS general dental services (GDS) in the UK seemed to heighten mutual dissatisfaction with communication and problems with the provision of care. It aimed at introducing a three-band target system for dental treatments in primary care; it also changed the relationships of practices with local PCTs. The new regime affected interactions with patients in terms of the reduction of consultation time and led to a growing impartiality in relationships (Steele *et al.*, 2009). A decrease in job satisfaction was reported elsewhere: a postal survey of 440 practitioners disclosed a drop in 24.7% in satisfaction of GDS dentists and 49.0% of Personal Dental Service dentists after the contractual change (Harris *et al.*, 2009). These reports suggested that the erosion of professional autonomy had restricted the dental practitioners' ability to provide quality care for their patients. Whereas these studies raised a number of important issues they were short in detail. There was no clarity in understanding the ways that communication has been affected, for example, how shrinking the consultation time impacted on dentist-patient verbal exchanges, understanding, and on the emotional comfort and satisfaction in each single case.

The tendency to generalise on patients, encounters and dental care as a whole was pertinent to the dental and behavioural scholarship to date. In seeking to address communication difficulties the literature expanded on two issues: first, it made good use of the classifications of dental patients and second, it focussed on quantification of the dentists' commu-

nication skills. Lahti *et al.* (1996) argued that most studies bore a utilitarian character; they sought to improve patient manageability through enhancing dentist communication.

In the early days of behaviourist research, the studies looked at constructing the profiles of an 'ideal dental patient' who was expected to demonstrate compliance, dental sophistication and responsiveness (Corah *et al.*, 1985). It worked the other way around too: uncooperative dental patients were typified as 'difficult', 'anxious' and 'depressed', with corresponding management strategies (Ayer, 2005; Freeman and Humphris, 2006). Dental anxiety in patients served for a long time as a notorious blueprint for explaining communication difficulties. Some studies looked into personality traits as the causes of dissatisfaction with treatments. Fenlon *et al.* (2007) reported correlations between neuroticism in dental patients and low satisfaction with complete dentures. On a different note, alternative and multifactorial descriptions of anxiety in patients were also discussed (Liddell and Locker, 2000; Kulich, 2003) and failures in relationships were uprooted from the individual in order to be placed in the past experiences of dental treatments (Kunzelman and Dunnunger, 1990; Abrahamsson *et al.*, 2003). In a way, such studies marked a promising move away from victim-blaming towards recognition of complexities associated with dentist-patient communication.

Another inclination has been to investigate dentist communicative behaviours, often by deploying quantitative tools or training packages. Since Ingersoll (1982) accentuated the importance of a good chair-side manner in dentistry, the dentist's communication skills became a focus of their training and daily work. The call for better communication culture seemed as urgent as ever because in the daily work of dentists the task of putting the patient at ease, albeit important, may well be pursued in a superficial manner. A study of dental encounters in Hong Kong (Nestel and Betson, 1999) discovered mixed patterns of communication: whereas dentists greeted their patients, the subsequent communication was authoritarian in almost half of the consultations. In arguing for continuous communication Shaw (2007) pointed out that patient verbal consent was only taken as an agreement to sit in a dental chair, while other procedures went unarticulated. Similarly, in reporting on quantifications of 132 dental interactions Wanless and Holloway (1994) established that greetings and preliminary chats were much more common uses of verbal interactions, while explanations and summaries were the rarest communicative events. Authentic and open information-seeking behaviour of patients struggled to integrate into communication culture in dentistry (Newton and Fiske, 1999). Overall, these studies made a vigorous argument in favour of exploring communication subtleties and patients' participation. They, however, were insufficient in securing a consistent insight into the interactive complexity of dentistry because of their descriptive, occasional and, commonly, atheoretical character.

As far as a quantitative approach was concerned, researching dentist-patient communication seemed largely a one-sided exercise. It focussed almost exclusively on the measurements of dentist verbal production. The Communication in Den-

tal Settings Scale (CDSS) gained some influence in quantification of verbal interactions in dental encounters (Newton and Brenneman, 1999; Theaker *et al.*, 2000; Newton, 2003). It aimed at the identification of dentist communications that were tailored to the stages of the dental consultation: opening, examination, treatment, and closing. While helpful in structuring the consultations, the CDSS primarily captured the ability of a verbally active and competent dentist to run the dental treatments as smoothly as possible, without attending to the patients' verbal activity. RIAS-dental, originated in the Roter's scale of verbal exchanges (Roter and Frankel, 1992) complemented the arsenal of dentistry-specific tools for communication measurement. When applied to the interactions in prosthetic dentistry, this instrument revealed an interesting fusion of task-centred and socio-emotional communications, which suggested greater sensitivity to a dynamic nature of interactions (Sondell *et al.*, 2003). RIAS-dental also attempted to account for the verbal exchanges of both dentists and patients. Clearly, those methodologies capable of attending to dentist-patient encounters as joint interactive accomplishments could set certain prospects for development in dental research. All in all, this brief review reinforced the specificity of dental interactions. It also pointed at the existing approaches in the literature on communication in dentistry. Instrumental orientation of dental encounters and patients' impaired communication were said to create a unique contextual frame for the communication between dentists and patients.

Conventionally, dental anxiety complicated the interactions but new factors such as structural changes in the dental system in the UK have also negatively affected the relationships with patients in primary dental care. The review also uncovered an inclination of communication research towards the concrete behavioural explanations of personalities and verbal activities of both dentists and patients. The real drama of their interactions was largely missing from the debate and pleaded for methodological and theoretical scrutiny.

RATIONALE AND STUDY AIM

The current investigation pursued contribution into dental research by seeking possibilities to adopt methods and theoretical frameworks, originally developed within the sociology of health and illness. Locker (1989) was among the first researchers in dentistry who pointed at the narrow scope of dental research on interactions. He also argued for an advantageous use of the sociological literature on doctor-patient relationships. In a similar vein, Gibson *et al.*, (2000) discussed the links between our understanding of oral health experiences and a broader research on chronic illness. Other arguments were put up front, yet, only few studies attempted to draw the parallels with sociological literature as far as dental communication was concerned (Boiko *et al.*, 2011).

Meanwhile, sociological scholarship on healthcare communication was known as long profiteering from theoretical rigour and qualitative tradition. The early days of theorising over doctor-patient relationships gave rise to a number of typologies. Szasz and Hollander (1956) differentiated

healthcare interactions on the basis of the type of medical setting and nature of the medical condition. The activity-passivity model was advised for acute surgical complaints; the mutual participation model was expected in the treatment of chronic and long-term conditions, and the guidance-cooperation model has been assigned to a wide range of interim cases. Apart from dividing medical patients into speciality groups, Szasz and Hollander (1956) also injected the vector of activity-passivity into the equation. Lefton and Rosengren (1966) pursued similar composition based on the criterion of organisational setting. According to this typology, medical settings varied in either lateral or longitudinal relations with patients and, correspondingly, different degrees of investments into the patient's biography.

The recent classifications culminated into the models of professional-patient relationships (Bury, 2000). Gabe and Bury (2004) summarised these theories into four models: the consensus, conflict, negotiation and contractual models. This typology has been also readily imported into behavioural and social sciences in dentistry. Burke and Freeman (2004) discussed another split of the models into the paternalistic model, the consumer model, the interpretative model, the deliberative model and the negotiation model. Compared with the typology of Bury, it brought about the idea of patient autonomy, taken to an extreme in patients' withdrawal choices (deliberative model). There was also a mention of withdrawal and default as a result of dental consultation in other typologies (Humphris and Ling, 2000). To date, and it seemed fair for both medical sociological and dental research, the models of communication have been used as a framework rather than an analytical tool to enthuse empirical research. Therefore, putting these schemes into an explorative trial appeared an important exercise, fostering theoretical advances in dental research. With this in mind, the current study aimed at exploring dental interactions with reference to the models of healthcare encounters. The four-fold typology (Gabe and Bury, 2004) was chosen for empirical testing: consensus model, conflict model, negotiation model and contractual model.

MATERIALS AND METHODS

The study adopted the qualitative approach to researching interactions in dental clinics. Data collection and data analysis were based on the ethnographic method of observation and interpretation of real-time dentist-patient communication. Ethnography has been a long-standing tradition in qualitative research and has been applied advantageously in healthcare studies of hospitals and surgeries (Fox, 1993; Grant *et al.*, 2009). Another strand of ethno-methods was based on Latour and Garfinkel's dramaturgical ethnography and recently reinvigorated in the studies of healthcare encounters by Radley *et al.* (2008) and Rapley (2008). In these accounts, the drama of the clinical interactions has been unpacked with reference to the interpretation of the dynamism and complexity in particular cases. This approach set up a strong methodology to the analysis to follow.

The data discussed below were part of a larger study

RESULTS

undertaken in NHS primary and secondary care dental clinics in the UK in the period 3 January – 31 October 2007 (Boiko 2008; Boiko *et al.*, 2011). In this larger study, data were collected through the observation of 36 encounters of five dentists (two general dental practitioners and three hospital consultants) seeing 20 patients of different backgrounds, age and gender. Using the model of other ethnographic studies in healthcare encounters, the focus was on a smaller number of professionals in the interest of promoting depth of understanding and the development of a good research relationship (Barry *et al.*, 2001). The design of the overall study included 20 cases of patients; an equal number of patients were sampled in general practices and hospital. For the purposes of ethnographic in-depth analysis four cases were selected out of the wealth of interactional scenarios – those with immediate reference to the four-fold typology, discussed above. Each case was then studied separately in accordance with the principle of ethno-methods: ‘just follow that case (patient)’, (Garfinkel, 1967).

Ethical approval was granted by the South Sheffield NHS Research Ethics Committee. Recruitment strategy was as follows. Dentists were recruited directly upon the agreement with the practice manager or hospital consultant. Patients were approached using appointment databases, so that the contacts of all adult patients having appointments on a few selected days were obtained. A letter of invitation to the study was sent two weeks prior to the appointment and written consent was obtained on the day. Some cases in the ethnographic study were single visits, others assumed repetitive visits (but all occurred over six months). In all cases communication was observed from the outset of the first (for recurrent visits) and single (if check up) visit to the clinic. The researcher entered the surgery with the patient and then sat passively at a distance during the consultation which allowed her to hear the conversation and take field notes. Whereas non-participatory observations were sought, the researcher accounted for a considerable element of bias associated with the ‘observer effect’, which is a part of research reflexivity in qualitative observational studies.

Verbal interactions were also audio-recorded and transcribed verbatim. The focus was placed on the analysis of verbal communication at some expense of non-verbal data, so that communication between dentists and patients was primarily recorded and discussed. For ease of reading, and to engage into an in-depth analysis, data were presented as sequences of exchanges illustrating both communication flow and the interactional drama set between dentists and patients. Following the principal of ethno-method, the discussion prioritised the ‘live’ drama of the relationships between the two parties. In this tradition, communication was studied through both relational and instrumental aspects of the exchanges over oral health and treatments.

Four dental encounters observed and discussed in the study were from both primary and secondary care. They concerned a range of oral health problem: two cases (Cases 1 and 3) were regular check-ups with minor complaints, Case 4 involved interaction around tooth extraction and Case 2 was an oral medicine visit. The encounters lasted between 10 minutes and one hour. To answer the research aim, the analysis to follow links these case-studies with four-fold typology of interactions.

Case 1. Consensual model

The consensus model (sometimes called the paternalistic model) had originated in Parsons’ (1951) prominent reflection on the divided power between the doctor and ‘his’ patient. More than a century ago he argued that medical paternalism and reciprocity of the doctors’ role and the ‘sick role’ was attuned to a social system with the overall aim of enabling patients to regain their status of normal social contribution. In committing to get well the patient was expected to cooperate willingly, trustfully and deferentially with the doctor, who set the rules and the normative expectations of the encounter. In paternalistic tradition, patients could often derive considerable comfort from the doctor’s leading role and so be relieved from the burden of decision-making. Doctor-patient relationships were inherently asymmetric and complementary, and generally reflected a long-standing inclination in Western cultures towards instrumental efficiency (Shilling, 2002). Later, there were few a concerns over the basic assumptions of Parsons’ theory, related to the ‘double bind’ (Bloor and Horobin, 1975), emotional dependency of patients and consumerism (Lupton, 1997a).

The encounters that build upon asymmetric professional-patient relations occur in dental practices and in hospitals on an everyday basis. A key to the success of such encounters laid in the predetermined or achieved consensus about the role divide, often backed up by the complementary expectations. Paternalistic interactions were common in the study due to hierarchical, instrumentalised and routinised delivery of dental care. The following example was taken from a check-up encounter in primary dental care. Observations revealed the communications of a dental practitioner (D) (Michael) performing a routine dental assessment of the patient (P) (Kate) (all names in this study changed). The patient came for a check up having a little concern about the soreness of a tooth. The transcript below addresses most of their conversation following the greeting and dental examination (Parts 1,2,3,4 and 5).

Part 1

D. Have you had it for a while or did it just come up?

P. No, I had it only recently.

D. Put your tongue out. Whereabouts has your tooth been sore?

P. Edges really.

D. Only edges, yeah.

Part 2

(Pause due to examination)

D. Well I suppose it might be, when you grind your teeth.

P. I don't know, no.

D. Sore tooth, if you are not grinding...and you have gum recession, that's why it is a bit sensitive down there. It can generally be treated, that would be the first call, using desensitising toothpaste rather than doing anything physical. Are those bits sensitive to the probe?

P. No.

D. No... Just turn towards me and try a bit of cold air.

P. Umm, umm.

Part 3

(Pause due to examination)

D. Just turn your tongue to touch the cheek, that's it, now the other way, to the roof of the mouth. Just open your mouth a little bit so I could see the floor of your mouth, stick your tongue right up. That's it. Good. That's fine.

P. What is this all about sensitivity?

D. Yepp, you just need to come back another for clean up.

P. Oh, do I? I hardly had any cleaning.

D. You are doing really well. It is just at the back of those front ones.

P. Oh these, all right.

D. We want to take a couple of X-rays of you to check in between your teeth, whether there are gaps.

P. Yes... I am not very good at X-rays.

D. Right. Oki-doki.

Part 4

(Nurse speaking)

Part 5

(Patient on the doorstep)

P. I do get edges at the side of my gums, but I think that is probably what I do in the night, you know.

D. Yeah. I think, you know, you probably outgrind your teeth, and what you possibly do tell them to act like a bite guard.

P. Right, I see.

D. You have not really got it... or, you know, very minimal. But you might start doing that, you know, and that's why it might be sore. I can't see anything else but then obviously, you must come back and see me if it does get worse.

P. All right then [Michael-Kate, encounter 13.04.2007]

This relatively straightforward encounter appeared free from conflicting messages. It was illustrative to the classical Parsons' asymmetry in the purposes and values of the doctor and patient roles. For the time being the consensus between Michael and Kate was achieved. Their roles were asymmetric and complementary: "I am the professional, you are the patient". The dental practitioner led the appointment, instructed the patient in the dental examination and attended to her complaint. There was a great deal of confidence and authority in Michael's activities: both instrumental manipulations and instructions. On her part, Kate seemed readily

appealed and 'bowed down' to the expertise of the dentist. Looking at the peculiar features of their communication more closely, some interesting interactional qualities can be found. Both parties conveyed their polar, yet, complementary concerns. In dealing with the complaint, the dentist used the task-oriented communication around a few hypotheses of the soreness: 'grinding teeth-gum section-sensitivity-gaps between the teeth' (Part 3). The technique of the surgical sieve guided the diagnostic process by the paramount rule of exclusion. As soon as Kate declined some of the obvious statements about the behaviour of her teeth and mouth - "not grinding" (Part 3), the dentist suggested taking an X-ray.

Interestingly, Kate fought back the dentists' attention on her way out (Part 5) by a 'doorhandle remark', reported in the conversation analysis of the general practice encounters (Campion and Langdon, 2004). She requested more information by going back to her observations over the edges of the tooth so that the dentist felt that reassurance and suggesting the 'grinding hypothesis' was appropriate. In wrecking the ceremonial order, the patient brought up another element into discussion. Her doorhandle remark coloured this asymmetric encounter with a shade of negotiation, by reviving the concerns and attempting a shared decision-making.

Case 2. Conflict encounter.

The conflict model emphasised the fundamental differences, 'clashes' of the doctors' and patients' perspectives. Initially, the conflict-negotiation model (Freidson, 1970) brought into light the inherent opposition, which existed in doctor-patient relationships. The power of medicine and medical authority became the major focus of sociological critique. Foucault's (1973) work offered further insight into the problems of medical dominance by disclosing omnipresent power and policing regimes of medicine. In dentistry, Nettleton (1992) showed the medicalised discourse over tooth brushing as an example of domesticated diligence. The everyday validity of patients' experiences was seen as colonised by the strategic rationality of the medical system (Habermas, 1984; Scambler, 2001). System and Lifeworld decoupling explained the endemic conflict between 'voices of medicine' and 'voices of lifeworld' in the studies of the physician-patient encounter (Mishler, 1984; Barry *et al.*, 2001).

The divergence of perspectives in dental encounters was also obvious in a few encounters observed in this study. The following case involved two visits by a patient (Tom) to secondary dental care for a clinical assessment and follow up. The patient was referred to the oral medicine clinic at the hospital with a complaint about blisters, which developed occasionally in his mouth. The dentist (Caroline) performed a standard history-taking and dental examination so that the blisters were described: the size, frequency, triggers, localisation and other qualities. The patient exposed his painful experience of having them in his mouth. It was also established that the blisters came and went so at the time of both appointments the condition was not visible. Both encounters were similar in style, manner of presentation, and closure;

due to this fact and their length, the extract out of the first encounter was selected for presentation.

At the start of the first encounter Tom disclosed his account of having blisters in his mouth.

Part 1

D. So, these blisters, like you said, they are filled with blood?

P. Yeah. They can be quite big.

D. Mm.

P. I actually have a picture that's how I was 1st January. I have got a picture of it before if you have a look.

D. Have you got it yet?

P. Yeah. That was... By the time it felt like it took absolutely ages to clear.

D. No, it seems they tend to be short lived and by the time we get to see them they cannot be seen.

P. Basically, this is how it used to be had one, they came around and it was touching my beat, pulsated. There was nothing there, I got in a car and drove off and then I could feel it - like tickling sensation, and I thought it is coming this one around. And it did straight back I could not believe it.

Part 2

(After examination)

D. Hm, gm. There is nothing to see at the moment.

P. It is a problem I need to come when they are out, but it is relief now and then.

D. Right. There is a condition called 'Angina bullosa haemorrhagica'. And basically what it means is painful blood-filled blisters. So, it does not really tell us why they are being here.

P. Not to be worried about.

D. No. They are typically in the roof of the mouth, sort of between jaw and the soft palate. And they probably will be caused by minor trauma, there tends to be an initiating factor... And it tends to be just come up, sort of blood, hurts and they only discharge themselves, and a lot of people, like you said, pop them and they just go away.

P. Hm.

D. And it tends to go away on its own, maybe, after couple of years.

P. Right.

D. The ones on the cheek, it could be part of the same problem and again is on the line when you are biting. It is possible that you cut it at some stage, but it sounds from what you say this is not always the case.

P. Mm.

D. What could we do? So called blood tests. We just check you are not anaemic and also check proteins, and we look for antibodies, because what I mentioned earlier there are some conditions, where you get skin affected. We just check that everything is ok and if everything comes back to be normal well, we assume that this is 'Angina bullosa haemorrhagica'. And there is not a huge amount that we can do to change it.

P. No.

D. And that I suppose...

P. It is not something that worries me. Just grows more if is on my back (...)

D. I am not aware why it is on the back, I suppose in theory... it is typically in the area you described. But sometime they are quite large and I have met people who have them really big and it is frightening because it seems to fill the mouth. But that is quite exceptional. Hm... Bursting...

P. If you press them well, you will be with no mouth.

D. Ha-ha. So it slides along.

P. Yea, it changes shape as well [Caroline-Tom, encounter 15.01.07].

These two excerpts from Tom and Caroline's encounter demonstrated an interactive dynamic over the blistering condition. It involved a few conundrums and became repetitive in theme as their communication progressed. From the start, in the discussion over the nature of the blisters, the dentist and patient perspectives appeared to be discordant and demonstrated the classical discrepancy of two worlds: the system and the lifeworld (Mishler, 1987). Tom's account (Part 1) revealed his troublesome experience, whereas Caroline kept to neutral clinical knowledge. Tom saw the blisters as big (1cm in diameter), painful, blood-filled ulcers, with uncertain and elusive nature. His interpretation of the blisters' behaviour suggested an inquisitive attempt to understand their nature. The interview would have been unremarkable if the patient has not been so adept in his observations over his condition and keenness to find the corresponding cure.

Part 2 of the first encounter related to the post-examination phase. This was characterised by Caroline's diagnostic statements about the condition as a standard manifestation of the condition called *Angina bullosa haemorrhagica*. The problem had been classified and established in a routine manner. The diagnosis was obvious for the dentist within the first few minutes. Part 2 also showed a relatively constrained involvement of the patient (hm, gm, mm), seemingly complaint with the dentist's interpretations. The patient seemed to realise that because the blisters were not present at the moment of examination, it would have been difficult to see the scope of the problem. Hence, Tom endeavoured to bring mobile phone pictures (!) of the blisters to make them real in his hospital visit. There was no magical cure for his autoimmune condition apart from antiseptic mouth wash and no ultimate solution was offered. It would be tempting to say that these explanations were satisfactory to Tom, yet, his bitter irony: "If you press them well, you will be with no mouth" and repetition of the complaint "It changes shape as well" made after the dentist's verdict - all pointed to the underlying disagreement. His sorrow over the conclusions was noteworthy. To a great extent the participants were 'talking past' each other. There was no real shared understanding.

This case illustrates the possibilities of the existence of two conflicting worlds, even though there was no open verbal conflict between the dentist and the patient. It also lent support to the literature on the narratives of chronic illnesses. In battling for recognition of their experiences, lay people became expert patients in reading the expectations of the clinical system (Shaw, 2002). Sometimes they try to oppose or influence a clinician's verdict, as did Tom by bringing pictures and repeating his concerns.

Case 3. Negotiation encounter

The negotiation model put into the fore the dynamics and dialogical properties of healthcare communication. In some way, the model was a reaction to the perspective of conflicting worlds and an attempt to bridge the differences between the parties. Roter and Frankel (1992) argued that “talk... is the fundamental instrument by which the doctor-patient relationship is crafted and by which therapeutic goals are achieved” (p.35). The socio-emotional component of clinical interviews received further acknowledgement. Studies in conversation analysis dominated this particular agenda because of their emphasis on communication patterns, bargaining techniques, and repair mechanisms in the conversations (Drew *et al.*, 2000; Heritage and Maynard, 2005; Pilnick, 2008). Consultation was demonstrated as a contingent, agile and negotiable accomplishment with the outcome being emergent rather than predetermined.

The case below suggested a ‘negotiation’ type of encounter. It involved a routine visit of the regular patient (Lucy) to a primary care dentist (Richard). The patient had no obvious complaints and visited the practice for two reasons: for a scale and polish by the hygienist and a regular check up at the dentist. Lucy entered the dental surgery following her visit to the hygienist. The dentist-patient communication is presented below in a shortened form.

Part 1

D. How have you done upstairs?

P. All right. Yea... I have just been saying, other than having them cleaned and polished I have not had anything done yet...you know. I have said that rather coming to you, I come to visit between you, it’s very good.

D. You know, with your risk of gum problem, loss of teeth, so.

P. So I said I would rather come to see her hygienist, so I have less to do, than come to see you.

D. Well, yes... it’s a regimen. So you are getting better.

P. Oh, yea. The lady who came upstairs who said they did not know anything about it, about this lady. She said they usually do need to review patients, perhaps, I am at the older rate at the scale. Ha-ha. Because I mean it is 35 years since I first started and went to the dental hospital, when I first had problems with gums. But now you see, probably dentist do a lot more things in the dentist than they used to do then.

D. Yea. That depends on individual practitioner, generally speaking.

P. Because when I went to Y (another practice), that was when Mr N was there. Well, he was just started, he was probably the one who started doing it and he used to go a couple of days a week to the dental hospital so really he sent me there but then I suppose dentists now more into doing preventative things.

D. Also we have hygiene care available to you.

P. Yes, you see they won’t have anything like that in a dentist.

D. No scaling and polishing was taken as a cosmetic procedure, whether as we are using it as therapeutic procedure,

makes a lot nicer, yet, but treating diseases too.

P. Yes, I suppose so.

Part 2

(Checking the medical history and medication taking by the patient)

Part 3

D. Yea... well, just checking your protein levels and Ok... Look at your mouth. Bite together for me. Denture feels comfortable?

P. Uhuh.

D. Good... It’s nice and clean. Solid, thank you. Your bridge works quite nice, excellent... Breath there, little rest there, looking good, if you put tongue out for me, please. Just a look to the roof of your mouth. That’s it. Top of your mouth. Brilliant. I pop it there, thank you very much. I’d rather see you again towards Christmas time. Can tell your teeth are doing brilliant. Good. In my impression we are doing a lot less active treatment now.

P. Yea, you see I can’t remember when I came down and I had fillings. It’s probably the last thing I could remember is, perhaps when I had that scrabbling that tooth. That one we have got it.

D. That’s nice and settled. It’s 3.97 now. We just made a new denture and few filings in ten years to come. Good to see you again [Richard-Lucy, encounter 13.04.07]

Part 1 of the encounter was remarkable because of the fluency and control that the patient had over her narratives of the dental past and present. Lucy confidently switched between the stories, placing them into the context of her life experience (‘proto-stories’ as described by Radley *et al.*, 2008). Clearly, Richard allowed this space for Lucy to talk through and to revive their relations: the first three minutes were spent on re-connection. It was also obvious that the dentist looked for the opportunity to lead the conversation too. His communication emphasised the oral health regimen, agreed upon earlier with the patient and centred on the health of her gums. Richard also remarked on the advantageous policy of the dental practice in expanding on the preventive and therapeutic effects of the hygienist treatment.

This part of the encounter was unproblematic as both knew each other really well, and, perhaps, were making a reference to the presence of the observer in the surgery. A little performative drama set around mutual rapport was clear in this verbal exchange. The analysis of their language lent further support to this claim: the dentist and patient often paraphrased and echoed each other: (“Well” – “Well”, “Yes” – “Yea”, etc.) Both used positive language in Part 2 and in particular, Part 3. The dentist performed the examination in a sanguine manner (“Good”, “solid”, “brilliant”), supporting the patient’s confidence. Lucy was able to show that she was in control of her own health. It was obvious that the shared understanding and familiarity of the dentist and the patient attached a good value to their interactions. Apart from the reservation about the ‘observer effect’, their interaction would

be somewhere close to, the often cherished, ideal of the true partnership between dental professionals and patients.

Case 4. Contractual encounter

The contractual model of interactions addressed contemporary changes in health and delivery of care by introducing the notions of consumerism and the growing impartiality of healthcare. Lupton (1997b) summarised the tendency to the commodification of health as the societal situation where health professionals became “suppliers of services, competing amongst themselves and seeking to maximize their income by selling their professional expertise” (p.373). Patients were depicted as consumers, users and customers of care, shopping around in the pursuit of their health and well-being. Recent studies in pharmacies lent support to the idea of diversity in patients’ positions, ranging from permissive to challenging consumers (Hibbert *et al.*, 2002; Stevenson *et al.*, 2008). There was an argument for the modernised version of the clinical encounter (Potter and McKinlay, 2005), as fleeting, purpose-driven and contractual encounter. Elsewhere, (Rapley *et al.*, 2008) warned that informed choice is not as an immediate sum of the information available to patients but a more subtle process of considering and reconsidering knowledge through a number of encounters, negotiations and decisions. Equally, such controversies within the contractual model raised dilemmas of choice and responsibility for health outcomes.

The case below illustrates the engagement of the dental patient in informed decision-making, by calling out the informed consent. It involved two encounters in a minor surgery clinic of the hospital consultant (Caroline) and the patient (Claire) for wisdom tooth extraction, following referral from general practice. There was a reasonable concern about gum infections associated with tooth extraction. Informed consent was taken verbally during the first encounter and was summarised again before the procedure (second visit). The extract out of this communication is shown below.

Part 1

(After examination and X-ray)

D. I have got your X-ray. Do you want to look at it?

P. I am all right.

D. You are all right. It is...temperamental (to the screen). That’s better. I can see the tooth and the position in itself. It is fairly upright but leaning back slightly. I suspect we need to cut the gum and maybe to do a little bit of drilling to get this out.

P. Mm.

D. The way we generally do it is just under local anaesthetic, I am just making sure you know. We will have to cut the gum and fold it back to give us better access to the tooth. I mean we usually do a bit of drilling away and sometimes even cut the tooth in pieces to take it out. So it may take a little while.

P. Yep, ok.

D. It should not hurt while you are having it done but it will feel a little bit odd and pushing. After that we will have a couple of stitches in the mouth.

P. Uhu.

Part 2

D. They tend to dissolve on their own and so you don’t need to come back to have it out although you can. It does get a bit sore afterwards, in fact it can be very painful, so, you need to make sure you get some painkillers, aspirin is probably the best and paracetamol. The face will swell after, always has with this sort of procedure. It might be just a little bit of swelling but it could be quite significant, could be like a hamster with the stuff chipping out. It might look a little bit sore and you will feel sorry for yourself.

P. Uhu.

D. While you are swollen you might not be able to open your mouth comfortably and fully until it will all settle down so... that could be a few days. Some people bruise, if you bruise and have your teeth out, it is down the neck and looks quite alarming, but it is just like normal bruise. Now. They are sort of standard package if you like... There is a nerve which goes through your jaw, you have risk of damaging that... So when we make you numb these areas going numb but the roots of the lower wisdom teeth can be close to that nerve and you could end up with some damage to it and some awkward feeling in your lower lip. Now looking at your X-ray looks like a bit of the gap between the nerve and the root, but I think the risk is very small. But we tell everyone there is a slight risk and if you get some damage the worst case scenario you are numb for ever now. But usually what happens is a temporary problem that resolves over a few minutes. Some people get feeling it is not quite right. But it is unlikely.

P. Uhu.

Part 3

D. I think this explains a little bit.

P. Ok. Will I be having a top one out as well or just a bottom?

D. We don’t usually take the top one out unless there is something wrong with this so I would say no.

P. Ok.

D. So you are quite happy and easy about that?

P. Yea. I mean, I had teeth out before.

D. It is not quite the same as tooth extraction; you did not feel quite sorry for yourself, did you?

P. How long will it take, the day afterwards?

D. The plan is if it is just twist tooth out you will be all right probably the same day or next day. If you do need to do the drilling and so on you feel sorry for yourself for quite a while so, to be honest on a safe side, perhaps don’t do anything for the week immediately after.

P. Ok.

D. You may feel fine.

D. Ok. Is that ok?

P. Yep.

D. You will hear from us in due time. If you have any problems contact your dentist or us in a meantime.

P. Ok. Thank you very much [Caroline-Claire, encounter 22.01.07].

There, Caroline took charge in explaining the procedures

and possible side effects of the wisdom tooth extraction. Her purposive and meticulous approach in advising on treatment and post-treatment scenarios including drilling, postoperative pain, stitches, appearance, numbness and psychological distress was common for the hospital consultants, who ran hundreds of surgeries of a similar kind on a daily basis. Caroline's proficiency in giving comprehensive and accessible information to Claire was, therefore, unquestionable. Its clarity and the depth of guidance were comforting to the patient who appeared to trust her clinical expertise. Indeed, Claire's deferential attitude was based on a positive past experience: "I mean, I had teeth out before" (Part 3).

Part 3 of their encounter finalised the process of informed consent. The dentist opened up room for Claire to ask questions. Claire made use of it by throwing two clarifying questions. She also demonstrated her agreement with treatment course by a few 'okeys'. As for the exhaustive list of adverse effects, one could anticipate that the patient was well prepared. Yet, during the actual procedure, Claire was troubled by pain from the needle injecting anaesthetics – tears were shed [Caroline-Claire, encounter 26.04.07]. By that time Caroline managed to distract the patient's attention. Nevertheless, there was a hint of paradox in the fact that she was prepared to face other side-effects of the surgery, but could not expect the injection to be painful.

All in all, the informed consent presented a communication pattern, which became a rite of passage for the dentists as well as other health professionals. In assuring accountability, all information possible was given to back up the clinical decision-making. The case of the wisdom tooth extraction suggested that as far as routine procedures are concerned, informed consent could be taken verbally and comprehensively. In such situations patients were given the opportunity to relate, to think through and to ask questions, important to them. It is another argument for ongoing communication as "forms can never take the place of the necessary dialogue between dentists and patients" (King, 2001) (p.40).

DISCUSSION

This paper aims at exploring real-time dentist-patient communication from the perspective of the sociology of healthcare interactions. The realisation that "the business of dentistry actually exists when you strip out the treatment" (Hancocks, 2009), became a certain benchmark for modern dentistry. At the same time it infused the search for comparisons within the wider context of healthcare communication as well as for a new qualitative methodology. It was also hoped that researching communications in dentistry as a dynamic interactive enterprise shifted the focus from the idea of basic quantifications around dentists' skills or patients' behaviours.

The four case-studies presented above demonstrate that dental interactions could well correspond to four general models, identified earlier in the sociology of professional-lay relationships. However, the live data set is a certain challenge to the formal schemes, i.e. the ethnographic analysis

was advantageous in capturing a number of insights 'from the inside' of dental surgeries. It sensitised the analysis with subtle details of dentist-patient conversations, while attempting at some generalisations about the models of interactions. So what were the relations between the models? Could they be helpful to understand and apply in daily dental practice?

The answer to that question led to two hypothetical propositions that emerged as a result of the qualitative inquiry (the concept of propositions was used after May *et al.*, 2004).

P1. The model of the dentist-patient relationship is likely to be determined by the type of dental setting and oral health complaint presented by the patient.

There seemed to be three pillars to this proposition. First, dentistry in itself set up the specific setting for interactions. This argument was disclosed in the review and readily supported by the case-studies. Because of the instrumental interventions and physical restrictions on the part of the patients, most of the dental interactions at least in some part were likely to respond to the activity-passivity (Szasz and Hollander, 1956) or paternalistic (Parsons, 1951) model. The example of the consensual encounter (Case 1), in particular, illustrated the power of the professional expertise and dentist's prominent role in diagnostics. Elsewhere, dentists were also in charge, executing the treatment, providing the technical guidance and oral health advice. Second, the differentiation between models emerged from the organisational divisions within dental care, i.e. hospital versus primary care.

Drawing on earlier ideas (Lefton and Rosengren, 1966) about the communication differences in different settings, and in line with Potter and McKinlay's (2005) proposition of hospital visits as lateral relations with minimal biographical investment, hospital dental encounters demonstrated less intimate but more intense communications. Indeed, the communications in the dental hospital shaped contractual interactions (Case 4, informed consent) or even conflicting communications between lay experts and highly qualified consultants (Case 2, blisters). The long-term therapeutic clinic (dental primary care) allowed longitudinal relations and corresponding relational investments (Case 3, routine check up). This hypothesis, however, should be contextualised by the current changes in NHS dentistry, which continue to affect primary dental care.

Third, oral health complaint and dental aetiology were contributors to the choice of the model. The severity of pain and oral pathology caused different communications about expectations, treatment plans, and prognosis. The patient, who came for a filling, could talk and receive answers in a different manner than someone with an oral cancer. Yet, the picture was more complicated than this – only on the basis of dental aetiology the models could not be easily dichotomised. The two check up encounters (Cases 1 and 3) demonstrated different scenarios: the former was rather paternalistic while the latter involved more negotiations. The search for other variables should not stop as individual, interactional, organisational and environmental factors could shift the model. Dentist-patient communications became contingent and this is where the second proposition comes into force.

P2. *The separation of models is not feasible in real-time dentist-patient communication.*

The proposition adds some relativism to the models. Burke and Freeman (2004), in their discussion on incorporating the classifications of professional-patient relationships into dentistry concluded that the (old) models "have the tendency to be more static than dynamic, explaining only one aspect of the relationships with the clinician" (p.61). In line with this criticism were observations in this study – whereas the encounters had an inclination to a particular model, they also rendered the blend of rebalancing forces in communications between dentists and patients. Thus, the consensual case (Case 1) involved the elements of negotiation, introduced by the patient in a 'doorhandle remark'. The conflict case (Case 2) also demonstrated the patient attempting to share expertise about blisters and to initiate the negotiation. The negotiation case (Case 3) had elements of a contractual model incrustated, where the patient acted as a customer in charge of her dental care. Importantly, in these cases the patients' communication deliberated the encounters from the mainstreaming model, predetermined by their oral health and dental needs.

These findings resonated with the research in non-dental settings that similarly reported the mix of the models. Rapley *et al.* (2006), for instance demonstrated that patients moved between passive and active subject positions within a single consultation mediated by computerised decision-making tools. Likewise, Stevenson *et al.* (2008) found "multiplicity of customer agenda" in a single pharmacy encounter. The fact that the rigid typologies are no longer satisfactory in understanding live clinical interactions argues for rejoining dental research with non-dental healthcare research.

Modern dentistry supports the move from clinical paternalism towards more flexible and patient-centred interactions. There is still a great deal of confusion in terms of its practical application so that shared decision-making and patient autonomy sometimes remains an illusion. Nevertheless, the expectation of new (and positive) types of dentist-patient relationships has increasingly been adopted in a dynamic and equalising professional-patient interaction, where the ability of both parties to participate in joint decision-making has been recognised (Freeman, 2000). As this paper reveals, both dental professionals and patients were willing to exercise interplays of communications in attending to the interactional dynamics. Such study could not provide a one-size-fits all algorithm for dentist-patient communication, it rather opens up the agenda for qualitative and ethnographic research into its complexity.

Acknowledgements

My sincere gratitude goes to all research participants in this study. I am thankful to Dr Barry Gibson and Professor Peter G Robinson for their advice and the possibility to grow within and beyond my PhD project.

- Abrahamsson KH, Berggren U, Hakenberg M, Carlsson SG. The importance of dental beliefs for the outcome of dental-fear treatment. *Eur J Oral Sci* 2003; **111**: 99-105.
- Ayer W. *Psychology and dentistry: mental health aspects of patient care*. London: Haworth, 2005.
- Barry C, Stevenson S, Britten N, Bradley C. Giving voice to the lifeworld. More humane, more effective medical care? A qualitative study of doctor-patient communication in general practice. *Soc Sci Med* 2001; **53**: 487-505.
- Bloor M, Horobin G. Conflict and conflict resolution in doctor-patient interactions. In Cox, C. and Mead, A. (eds) *A sociology of medical practice*. London, Macmillan, 1975.
- Boilko O. Double Contingency and Dental Clinical Encounters. PhD thesis. University of Sheffield, 2008.
- Boiko O, Robinson PG, Ward PR, Gibson B. Form and semantics of communication in dental encounters: oral health, probability and time. *Sociol Health Illness* 2011 in press.
- Bridgman A. Consent - a study from the dental patients' viewpoint. *Br Dent J* 2001 **191**: 36-40.
- Burke T, Freeman R. *Preparing for dental practice*. New York, Oxford University Press, 2004.
- Bury M. *Health and illness in a changing society*. London, Routledge, 2000.
- Bury M, Gabe J. *The Sociology of Health and Illness: A Reader*. London, Routledge, 2004.
- Campion P, Langdon M. Achieving multiple topic shifts in primary care medical consultations: a conversation analysis study in UK general practice. *Sociol Health Illness* 2004 **26**: 81-101.
- Chapple H, Shah S, Caress A-L, Kay EJ. Exploring dental patients' preferred roles in treatment decision-making - a novel approach. *Br Dent J* 2003 **194**: 321-328.
- Chestnutt I, Davies L, Thomas D. Practitioners' perspectives and experiences of the new National Health Service dental contract. *Br Dent J* 2009 **206**: E18.
- Corah N, O'Shea RM, Bissell GD. The dentist-patient relationship: perceptions by patients of dentist behaviour in relation to satisfaction and anxiety. *J Amer Dent Assoc* 1985 **111**: 443-446.
- Deber R, Kraerschmer N, Urowitz S, Sharpe N. Patient, consumer, client or customer: what do people want to be called? *Health Expectations* 2005 **8**: 345-351.
- Drew P. Conversation analysis: a method for research into interactions between patients and health-care professionals. *Health Expectations* 2000 **4**: 58-70.
- Exley C. Bridging a gap: the (lack of a) sociology of oral health and healthcare. *Sociol Health Illness* 2009 **31**: 1-16.
- Fenlon M, Sheriff M, Newton J. The influence of personality on patients' satisfaction with existing and new complete dentures. *J Dent* 2007 **35**: 744-748.
- Fochsen G, Deshpande K, Thorson A. Power imbalance and consumerism in the doctor-patient relationship: health care providers' experiences of patient encounters in a rural district in India. *Qualitative Health Res* 2006 **16**: 1236-1251.
- Foucault M. *The birth of the clinic: an archaeology of medical perception*. Transl. By Sheridan AM. London, Tavistock, 1973.
- Fox N. Discourse, organization and the surgical ward round. *Sociol Health Illness* 1993 **15**: 16-42.
- Freeman R. *The Psychology of Dental Patient Care*. London: BDJ Books, 2000.
- Freeman R, Humphris G. *Communicating in Dental Practice: Stress-Free Dentistry and Improved Patient Care*. London: Quintessence, 2006.
- Freidston E. *Profession of medicine*. New York: Dodds Mead, 1970.
- Garfinkel H. *Studies in ethnomethodology*. Engelwood Cliffs, NJ: Prentice Hall, 1967.

- Gibson BJ, Drennan J, Hanna S, Freeman R. An exploratory qualitative study examining the social and psychological processes involved in regular dental attendance. *J Public Health Dent* 2000 **60**: 5-11.
- Gibson B. Cultural history of the mouth and teeth. In Pitts-Taylor, V. (ed.) *Cultural Encyclopaedia of the Body*. Westport, Greenwood Press, 2008.
- Gordon H, Street R, Soucek J, Wray H. Physician-patient communication following invasive procedures: an analysis of post-angiogram consultations. *Soc Sci Med* 2005 **61**: 1015-1025.
- Gorter RC, Albrecht G, Hoogstraten J, Eijkman MA. Workplace characteristics, work stress and burnout among Dutch dentists. *Eur J Oral Sci* 1998 **106**: 999-1005.
- Grant S, Huby G, Watkins F, Checkland K, McDonald R, Davies H, Guthrie B. The impact of pay-for-performance on professional boundaries in UK general practice: an ethnographic study. *Sociol Health Illness* 2009 **31**: 229-245.
- Gregory J, Gibson BJ, Robinson PG. The relevance of oral health for attenders and non-attenders: a qualitative study. *Br Dent J* 2007 **202**: 1-5.
- Habermas J. *The theory of communicative action. Vol. 2*. Cambridge, Polity Press, 1987.
- Hancocks S. Are oral health and dentistry compatible? *Br Dent J* 2009 **206**: Editorial.
- Harris R, Burnside G, Ashcroft A, Grieveson B. Job satisfaction of dental practitioners before and after a change in incentives and governance: a longitudinal study. *Br Dent J* 2009 **207**: E4.
- Heritage J, Maynard D. *Communication in Medical Care: Interactions between Primary Care Physicians and Patient*. Cambridge: Cambridge University Press, 2005.
- Hibbert D, Bissell P, Ward PR. Consumerism and professional work in the community pharmacy. *Sociol Health Illness* 2002 **24**: 46-65.
- Holt V, Machugh K. Factors influencing patient loyalty to dentist and dental practice. *Br Dent J* 1997 **183**: 365-370.
- Humphris J, Ling M. *Behavioural Sciences for Dentistry*. London: Harcourt Publishers Ltd., 2000.
- Ingersoll BD. *Behavioral Aspects in Dentistry*. New York: Appleton-Century-Crofts, 1982.
- Kay EJ, Lowe JC. A survey of stress levels, self-perceived health and health-related behaviours of UK dental practitioners in 2005. *Br Dent J* 2009 **204**: E19.
- King J. Consent: the patients' view - a summary of findings from a study of patients' perceptions of their consent to dental care. *Br Dent J* 2001 **191**: 36-41.
- Kulich K. A qualitative analysis of patient-centered dentistry in consultations with dental phobic patients. *J Health Communication* 2003 **8**: 171-187.
- Kunzelman K, Dunninger P. Dental fear and pain: effect on patient's perception of the dentist. *Community Dent Oral Epidemiol* 1990 **18**: 264-266.
- Lahti S, Tuutii H, Hausen H, Kääriäinen R. Patients' expectations of an ideal dentist and their views concerning the dentist they visited: do the views conform to the expectations and what determines how well they conform? *Community Dent Oral Epidemiol* 1996 **24**: 240-244.
- Lefton M, Rosengren WR. Organizations and clients: lateral and longitudinal dimensions. *Amer Sociol Rev* 1966 **31**: 802-810.
- Liddell A, Locker D. Changes in levels of dental anxiety as a function of the dental experience. *Behavioral Modifications* 2000 **24**: 57-68.
- Locker D. *Behavioural Science and Dentistry*. London: Routledge, 1989.
- Locker D, Poulton R, Thomson WM. Psychological disorders and dental anxiety in a young adult population. *Community Dent Oral Epidemiol* 2001 **29**: 456-463.
- Lupton D. Psychoanalytic sociology and the medical encounter: Parsons and beyond. *Sociol Health Illness* 1997a **19**: 561-579.
- Lupton D. Consumerism, reflexivity and the medical encounter. *Soc Sci Med* 1997b **5**: 373-381.
- Marshman Z, Gibson BJ, Robinson PG. The impact of development defects of enamel on young people in the UK. *Community Dent Oral Epidemiol* 2009 **1**: 45-57.
- May C, Allison G, Chapple A, Chew-Graham C, Dixon C. Framing the doctor-patient relationship in chronic illness: a comparative study of general practitioners' accounts. *Sociol Health Illness* 2004 **26**: 135-158.
- Mishler E. *The discourse of medicine*. Norwood: Ablex, 1984.
- Nestel D, Betson C. An evaluation of communication skills workshop for dentists: cultural and clinical relevance of the patient-centred interview. *Br Dent J* 1999 **187**: 385-391.
- Nettleton S. *Power, pain and dentistry*. Buckingham: Open University Press, 1992.
- Newsome P, Wright G. Qualitative techniques to investigate how patients evaluate dentists: a pilot study. *Community Dent Oral Epidemiol* 2000 **28**: 257-266.
- Newton J, Brenneman D. Communication in Dental Settings Scale (CDSS): Preliminary development of a measure to assess communication in dental settings. *Br J Health Psychol* 1999 **4**: 277-284.
- Newton J, Fiske J. Breaking bad news: a guide for dental health professionals. *Br Dent J* 1999 **186**: 278-282.
- Newton J. Development and evaluation of a CD-ROM to support student learning in dentist-patient communication. *Eur J Dent Educ* 2003 **7**: 95-95.
- Parsons T. *The social system*. London: Tavistock Publications Ltd with Routledge & Kegan Paul Ltd., 1951.
- Pilnick A, Hindmarsh J, Gill VT. Beyond 'doctor and patient': developments in the study of healthcare interactions. *Sociol Health Illness* 2009 **31**: 787-802.
- Pollock K. Maintaining face in the presentation of depression: constraining the therapeutic potential of the consultation. *Health* 2007 **11**: 163-180.
- Potter S, Mckinlay J. From a relationship to encounter: an examination of longitudinal and lateral dimensions in the doctor-patient relationship. *Soc Sci Med* 2005 **61**: 465-479.
- Radley A, Mayberry J, Pearce M. Time, space and opportunity in the outpatient consultation: 'The doctor's story'. *Soc Sci Med* 2008 **66**: 1484-1496.
- Rapley T. Distributed decision-making: the anatomy of decisions-in-action. *Sociol Health Illness* 2008 **30**: 429-444.
- Rapley T, May C, Heaven B, Murtagh M, Graham R, Kaner E, Thomson R. Doctor-patient interaction in a randomised controlled trial of decision-support tools. *Soc Sci Med* 2006 **62**: 2267-2278.
- Roter D, Frankel R. Quantitative and qualitative approaches to the evaluation of the medical dialogue. *Soc Sci Med* 1992 **34**: 1097-1103.
- Scambler G, Britten N. System, lifeworld and doctor-patient interaction. In Scambler G. (ed) *Habermas: critical theory and health*. London: Routledge, 2001.
- Schouten B. Dentists' and patients' communicative behaviour and their satisfaction with the dental encounter. *Community Dent Health* 2003 **20**: 11-15.
- Shaw I. How lay are lay beliefs? *Health* 2002 **6**: 287-299.
- Shaw D. Continuous consent and dignity in dentistry. *Br Dent J* 2007 **203**: 569-571.
- Shilling C. Culture, the 'sick role' and the consumption of health. *Br J Sociol* 2002 **53**: 621-638.
- Söndell K, Söderfeldt B. Dentist-patient communication: a review of relevant models. *Acta Odontologica Scandinavica* 1997 **55**: 116-126.
- Söndell K, Söderfeldt B, Palmqvist S. Underlying dimensions of verbal communication between dentists and patients in prosthetic dentistry. *Patient Educ Counsel* 2003 **50**: 157-165.
- Smith P, Entwistle VA, Nuttall N. Patients' experiences with partial dentures: a qualitative study. *Gerodontology* 2005 **22**: 187-192.

- Steele J, Rooney E, Clarke J, Wilson T. NHS Dental Services in England. An independent review led by Professor Jimmy Steele. June 2009. http://www.uk-dentistry.org/downloads/external/steele_review.pdf
- Stevenson F, Leontonowitsch M, Duggan C. Over-the-counter medicines: professional expertise and consumer discourses. *Sociol Health Illness* 2008 **30**: 913-928.
- Szasz T, Hollander W. A contribution to the philosophy of medicine: the basic model of doctor-patient relationship. *Arch Internal Med* 1956 585-592.
- Theaker ED, Kay EJ, Gills S. Development and preliminary evaluation of an instrument designed to assess dental students' communication skills. *Br Dent J* 2000 **188**: 40-46.
- Wanless MB, Holloway PJ. An analysis of audio-recordings of general dental practitioners' consultations with adolescent patients. *Br Dent J* 1994 **177**: 94-98.