Jones, R. (2015) Discourse and health communication. In H. Hamilton, D. Tannen, and D. Schiffrin (eds.) *Handbook of discourse analysis* 3rd edition. London: Wiley.

Discourse and Health Communication

Rodney H. Jones

City University of Hong Kong

0 Introduction

Over the past several decades there has been considerable interest among discourse analysts in various aspects of health communication, including physician-patient interaction, the discourse of health promotion texts, the construction of health and risk in the media, and the discursive negotiation of health and risk in everyday life (for overviews see Brown et al. 2006, Candlin and Candlin 2003, Gwyn 2002, Jones 2013, Sarangi and Roberts 1999). Discourse analytical approaches to health and risk communication have been heavily influenced by work in disciplines such as medical anthropology, with its concern with understanding how people's explanatory models of illness and danger can vary across cultures, medical sociology, with its concern with the ways in which communication of health and risk are embedded in social structures, and cultural studies, with its preoccupation with the ideological and 'disciplinary' nature of biomedical discourse (Foucault 1976). What distinguishes a discourse analytical perspective from other approaches to health and risk is its focus on 'language in use', that is, on the way people use discourse as a tool to take concrete social actions. This focus is especially suited to

the domains of health and risk, whose most pressing problems hinge on this relationship between discourse and action: Much of what clinicians do, for example, depends on successfully transforming interactions with patients into various kinds of texts (such as medical records and diagnoses), and then using these texts (along with their patients) to take further actions (such as treatments). Similarly, the central task of health promoters is to make sense of the actions that people take in relation to various health issues, and to determine what kinds of discursive interventions are most likely to result in changing or maintaining those actions (Jones 2013a). Discourse analysis, with its rich repertoire of analytical tools, provides the resources to help scholars and healthcare practitioners understand not just how people make meanings around health and risk, but also 'how people "do" health through daily embodied and discursive practice' (Paugh and Izquierdo, 2009, p. 188).

Health educators and medical practitioners have traditionally viewed the relationship between discourse and action in a rather straightforward way, assuming that discourse leads (or should lead) rather directly and unproblematically to some kind of desired action, and that the 'better' the discourse (in the form of information) the better the health outcomes. Unfortunately, time and time again in the area of health we are confronted with situations in which the relationship between what is said, written, or otherwise communicated and what people actually *do* is complicated, indirect, or utterly contrary to what is expected. The aim of discourse analytical approaches to health and risk communication is to help to unravel this complexity.

1 Challenges for the discourse analysis of health communication

Several aspects of health communication, especially as it is practiced in the contemporary world of high-tech biomedicine, present particular challenges for discourse analysts. First, because notions of health and risk are so pervasive, touching so many aspects of our lives, it is often difficult to sort out what counts as health communication in the first place. People talk about health in many varied sometimes indirect ways, and talk about health is often used to accomplish actions that are not directly related to health: as Jones (2013a, p. 3) puts it: 'when one is talking about health one is usually talking about other things as well, things like fear, trust, commitment, love, money, morality, politics and death... (and) communicating about health can be used to accomplish many different social actions from making an insurance claim, to making love, to making conversation around the dinner table.'

Second, health communication almost always involves the intersection of what Treichler (1988, p. 42) calls 'multiple meanings, stories and discourses.' On the simplest level, a visit to the doctor inevitably involves the interaction between what Mishler (1984) calls 'the voice of medicine' and the 'voice of the lifeworld'. On a more complex level, whenever people talk about health they invariably draw on a wide range of different 'voices', the voices of doctors and other medical professionals, the voices of family members, the voices of traditional cultural models of health and risk, and the voices of various media texts from newspaper articles to internet web pages. The inherently 'heteroglossic' (Bakhtin 1981) nature of health communication is especially evident today as medicine itself becomes more more

and more specialized, as more and more biomedical information becomes available to laypeople via electronic media, and as more and more aspects of everyday life become medicalized (Lupton, 1995).

Third, texts and interactions related to health and risk are almost always part of complex negotiations of power and expertise between people who have access to different kinds of discursive resources (such as doctors and patients). Recently, the terms of these negotiations have been rapidly changing as medical systems treat patients more and more like 'customers', and medical interactions are increasingly seen as exercises in 'shared decision-making' (Armstrong1983, Lupton 2003).

Finally, discourse around health has become more complex as our experiences of our bodies are increasingly mediated through 'technologies of entextualization' (Jones 2013) such as laboratory tests, high-tech scans, and electronic medical records. One consequence of this is that the body as an object of medical knowledge has itself become more *discursive*, a collection of texts that are increasingly separated from the actual physical body of the patient (Atkinson 1995, Berg and Bowker 1997, Iedema, 2003).

Scholars approaching health and risk communication from a discourse analytical perspective have focused on a variety of different kinds of discourse. Some have focused on real time, face-to-face encounters around health and risk, most commonly those occurring in professional settings like clinics and hospitals. Less common sites of investigation have been more 'everyday' settings like supermarkets, bedrooms, dinner tables and fitness centres in which interactions around health and risk often do not involve 'healthcare professionals' but may have

more profound consequences on people's health behaviour than more formal, clinical encounters. One particularly fruitful area of investigation for discourse analysts both inside and outside the clinic has been the study of people's narratives of health and risk. Still other scholars have focused more on written texts such as newspaper articles and health promotion pamphlets, as well as professional genres like medical records and case reports, and their role in disseminating and regulating health related practices and beliefs. More recently, discourse analysts are turning their attention to the ways health and risk communication is increasingly being mediated through technologies like medical tests and high-tech scans within clinical settings, and internet discussion forums, patient social networks, and health related mobile 'apps' outside of clinical settings.

2 Clinical encounters

By far the most extensive work done by discourse analysts interested in health and risk has been in the area of physician-patient communication, and the chief concern of such work has been to understand how features of discourse and interaction affect the 'success' of such encounters, especially given that doctors and patients often bring to them different forms of expertise, different stocks of interactional knowledge (Peräkylä & Vehvilfinen 2003), and different expectations about what constitutes a 'successful' consultation (Mishler 1984).

The approach that has dominated studies of patient-physician interaction over the past three decades has been conversation analysis, with its focus on the procedural logic of clinical encounters and the moment by moment

'accomplishment' of social identities like 'doctor' and 'patient' and social actions like 'examination'. 'diagnosis' and 'treatment' (Garfinkel 1967, Heritage & Maynard 2006). Central to most conversation analytical studies of clinical encounters is a focus on the sequentiality of conversational actions, the notion that medical consultations typically follow a predictable sequence of 'phases' -- formulated by ten Have (1989) as 1) opening, 2) complaint, 3) examination or test, 4) diagnosis, 5) treatment or advice, and 6) closing (see also Byrne and Long 1976) -- and that each of these phases has its own typical set of locally organized sequential moves (ten Have, 1991). Different scholars have focused on describing the discursive characteristics of these different phases, Beckman and Frankel (1984) and Marvel and her colleagues (1999), for example, concentrating on the 'complaint' phase, Heritage and Stivers (1999) focusing on the 'examination' phases, and Heath (1992) and Maynard (2004) and focusing on diagnoses.

Another preoccupation of conversation analysts has been exploring how power relations in clinical encounters are brought about through strategies of questioning, turn-taking, interruption and the like. In contrast to most medical sociologists, who view power in medical consultations as a consequence of social roles and institutional structures, and to cultural critics who see it as a result of the disciplinary character of biomedical discourse, conversation analysts argue that power and control in medical encounters are best viewed as 'micro-political achievements, produced in and through actual turns at talk' (West 1984, pp. 95-96, see also Maynard 1991, Heritage et al. 2005). In one of the earliest and most influential interactional studies of medical consultations, for example, Byrne and

Long (1976) found that in three-quarters of the over 2,000 medical interviews they recorded, doctors performed all of the initiating moves and patients all of the responding moves. Subsequent studies have confirmed that moves like questions, orders, and proposals are mostly taken by physicians and seem to be 'dispreferred' when taken by patients (see for example Frankel 1990, Todd 1984, West, 1984). Doctors also maintain interactional control through the kinds of questions they ask (Frankel, 1984, 1990, Mishler, 1984) and how they respond to patients' answers using 'third turns' (ten Have, 1991). Finally, studies have shown that doctors frequently interrupt patients, and that once interrupted, patients rarely regain the floor until doctors have issued a further initiating move (Beckman and Frankel 1984, Beckman, Frankel, and Darnley 1985, Frankel, 1990, West 1984).

The asymmetry in power relations in medical consultations, however, is not just a matter of the discursive behavior of physicians. Both Heath (1992) and ten Have (1995), for example, have shown how patients also contribute to this asymmetry by resisting invitations by physicians to make initiating moves (see also Silverman 1987). Others have pointed out that patients have their own strategies for asserting interactional control in medical encounters by formulating questions indirectly (West 1984), and using other 'subtle and covert devices' to regain control of topics and 'hold off the doctor's questioning interventions' (ten Have 1991, p. 142).

Conversation analysts have also been concerned with the ways healthcare professionals and their patients deal with 'delicate' topics in consultations and make themselves 'accountable' for particularly consequential utterances such as the delivery of diagnoses. Several scholars have focused on how doctors and patients

work together to accomplish diagnoses and make themselves mutually accountable for them (see for example Garfinkel 1967, Heritage 2005, Peräkylä 2002). Perhaps the most well known study dealing with such issues is that of Maynard (1991), in which he describes the use of what he calls the 'perspective display series', a strategy in which the physician invites the patient to give an opinion or assessment before delivering his or her diagnosis as a way of laying the groundwork for acceptance of the diagnosis or compliance with a treatment by framing the diagnosis as a 'joint activity'. Others have explored how participants in medical consultations make use of subtle conversational cues to manage face threatening topics like the delivery of bad news or talking about risk. In a classic study of the imputation of 'at risk' identities in counseling sessions at an HIV testing center, for example, Silverman and Peräkylä (1990), demonstrate how seemingly insignificant features in conversation such as pauses, hesitations, and false starts can be used to mitigate the possible face threats associated with talking about the risk of HIV infection.

Another important approach to the analysis of clinical encounters has been interactional sociolinguistics, a perspective that focuses on how people negotiate social actions by strategically contextualizing their utterances and positioning themselves in relation to their interlocutors, the topics under discussion, and the social groups they belong to. Whereas conversation analysts focus on the ways participants in such encounters accomplish activities like diagnosis and advice giving through the sequential logic of conversation, interactional sociolinguistics explore how they use linguistic and paralinguistic cues to dynamically negotiate

'what they are doing' and 'who they are being' (Jones 2013a). The classic description of this phenomenon in medical consultations is Tannen and Wallat's (1987) analysis of a pediatric consultation in which the doctor uses various contextualization cues such as subtle shifts in tone and register to dynamically 'frame' the different activities of examining an eight-year-old cerebral palsied child, explaining what is going on to the child's mother, and reporting on the procedure for medical residents who will later watch it on videotape. Similar studies include Beck and Ragan's (1992) demonstration of how nurse practitioners shift between a medical examination frame and a relational 'small talk' frame as a way of dispelling the embarrassment associated with pelvic examinations, Justine Coupland and her colleagues' (1994) discussion of how doctors and elderly patients work together to mix and blend socio-relational and medical frames in ways that help to make their encounters seem less 'clinical', and Adolphs and her colleagues' (2007) study of how nurses reframe inquiries about risk as administrative rather than medical questions. Central to most of this work is the acknowledgement that actions in health related encounters are rarely accomplished in a neat, sequential manner, and that participants must often manage multiple, simultaneous activities, some of which might involve considerable ambiguity or be interpreted very differently by different parties in the interaction. A good example of this is Sarangi's (2000) work on genetic counseling, which he characterizes as a 'hybrid activity type' in which counselors and clients constantly combine, adapt, and transform discourse types in strategic ways.

Interactional sociolinguistic explorations of medical encounters have also

provided fresh insights into the issue of power in physician-patient interaction based on analytical perspectives from frame analysis and politeness theory. Aronsson and Satterlund-Larsson (1987), for example, have found that physician interruptions, seen in most conversation analytical studies as evidence of asymmetry, often function as expressions support, and cooperation rather than assertions of power. Perhaps the most famous challenge to assumptions of asymmetry in medical encounters comes from Ainsworth-Vaughn (1998), who shows in her analysis of interactions in private medical clinics in the United States that patients often take an active role in co-constructing both their diagnoses and their treatment choices, take the initiative to frame interactions to accommodate their own storytelling, and sometimes openly challenge the assertions and decisions of their physicians.

A more recent interest of interactional sociolinguists has been with the way healthcare workers and patients negotiate *expertise*, an issue that is becoming increasingly complex as patients gain more access to medical knowledge via channels like the internet. As Candlin and Candlin (2002) have pointed out, displaying 'expertise' is more than just being able to show one's command of a particular body of knowledge, but crucially involves being able to produce various kinds of accounts, to manage assessments of probability, to control conversational topics, to manage politeness strategies and the alignment of frames, and to make use of indirectness, mitigation, hedging, and other rhetorical devices. In most medical encounters, both doctors and patients occupy different 'zones of expertise' (Sarangi and Clarke 2000), which they dynamically take up, defend, and surrender using

various discursive strategies like hedging, indirectness, and reframing. In an important early paper on this topic, for example, Moore and her colleagues (2001) describe how HIV positive patients and their doctors trade positions as experts by framing and reframing definitions of 'viral load'.

With increased migration and globalization, intercultural communication has become a major preoccupation in healthcare, and it is here where discourse analysts, especially interactional sociolinguists have made particularly important contributions. Medical anthropologist have traditionally traced the sources of intercultural misunderstandings in medical consultations to conflicting cultural models of health and illness. Studies by interactional sociolinguists like Cameron and Williams (1997), Erickson and Rittenberg (1987), and Roberts (2006, 2010), on the other hand, have shown that such misunderstandings are often more the result of the different expectations people bring to interactions regarding discourse (including such issues as turn-taking, topic management, and the appropriate ways information should be structured). Erickson and Rittenberg (1987), for example, have found that the difficulties Vietnamese and Polish physicians in the United States have in communicating with patients can be attributed to their different ways of managing topics in conversation, of drawing inferences, and of showing appropriate 'listenership', and Roberts and her colleagues have shown that speakers of different varieties of English order information differently when explaining their reasons for seeking medical attention in the context of consultations.

When discourse analysts speak of 'cultures' however, they mean much more than 'national cultures'. They also consider a range of different kinds of groupings

associated with things like professions and institutions (Cook-Gumperz & Messerman 1999; Iedema and Scheeres 2003), gender (Fisher 1995), age (N. Coupland et al. 1991), and social class (Todd 1984). For example, just as health communication is increasingly involving interaction between people from different countries, it is also increasingly involving interaction among professionals from different specialties who may speak different disciplinary 'languages', have different notions about the way information about health should be communicated and with whom it should be shared, and bring to interactions different ideas about the roles and responsibilities of different participants (Peräkylä et al. 2005). Iedema and his colleagues (2006, p. 1126) argue that healthcare is increasingly characterized by what they call 'interactive volatility', a phenomenon in which people with different ways of discursively constructing knowledge and communicating about it must work together to negotiate meaning. Interest in such volatility has led many discourse analysts to take more a more ethnographic approach to health communication, examining how discourse circulates through complex networks of knowledge and competence distributed across different departments and professions in institutions such as hospitals and clinics (Atkinson 1995, Iedema and Scheeres 2003, Maseide, 2007).

This 'ethnographic turn' in studies of clinical communication can be seen as part of a larger trend that began in the 1990's in response to the perceived narrowness of conversion analytical approaches to doctor patient communication, a movement towards more socially embedded, 'ecologically valid' (Cicourel, 1992) accounts involving such methods as in-depth interviewing and participant observation which

capture what Sarangi and Roberts (1999, p. 2) call the 'thickly textured' and 'densely packed' nature of human activity (see for example Ainsworth-Vaughn 1998, Candlin and Candlin 2003, Gwyn 2002). Scholars promoting such multi-dimensional approaches have argued that the key challenge in the study of the discourse of health and risk is understanding how larger social and institutional formations of power/knowledge are both reflected in and constituted through situated talk.

3 Beyond the clinic

While the vast majority of discourse analytical research in health and risk communication has taken place in clinical settings, there is a growing recognition that many of the most important conversations that people have around health do not occur in clinics or hospitals, but rather in places like bedrooms and around dinner tables with people like friends, family members, and sexual partners -- what Brown and his colleagues (2006, p. 95) call 'wildtrack' communication. Of course, it is often more difficult for discourse analysts to gather data about such communication, or sometimes even to know if and how particular interactions are related to health or risk.

Much of the work on health communication outside of professional settings has focused on how family members and caregivers communicate with people whose medical conditions have severely impaired their physical or mental functioning. A particularly notable example is Hamilton's (2005) application of tools from interactional sociolinguistics to the analysis of conversations with an Alzheimer's patient observed over a period of four years. What distinguishes Hamilton's study

from earlier work on the topic is that the data was gathered in the course of the patient's everyday life rather than in clinical or experimental settings in which characteristics of institutional discourse such as power asymmetry can affect the way people talk. Other good examples include Goodwin's (1995) application of conversational analytic principles to the study of conversations with an aphasic man, and Al Zidjaly's (2009) use of mediated discourse analysis to explore the communication and coping strategies of a young paraplegic man.

Other explorations of family communication around health and risk have focused more on how caregivers communicate with each other. In a pioneering study of the dynamics of health-related communication within families, for example, Beach (2001, 2009) uses conversation analysis to examine a corpus of telephone calls involving members of a family in which the mother has been diagnosed with cancer, showing both how family members discursively navigate delicate moments like delivering 'bad news', and how, in the course of their conversations, the topic of 'mom's cancer' sometimes becomes a vehicle for talking about other things like family relationships. Yet another approach to the study of health communication within families can be seen in Paugh and Izquierdo's (2009) examination of dinnertime conversations between parents and children in which parents try to socialize their children into healthy eating habits. What such studies highlight is how health-related events or concerns have a way of rupturing the 'obdurate orderliness' of everyday life (Maynard, 1996, p. 4), complicating mundane interactions about things like work, school, shopping, traffic, and eating.

Other scholars have focused more on the role of discourse in constructing and

disseminating health related beliefs and behaviors across communities and social networks. Poltorak and his colleagues (2005), for example, explore how parents manage issues of power and solidarity in informal conversations with their friends and neighbors about vaccinations, and Danforth and Navarro (2001) examine how people work to co-construct notions of Attention Deficit Hyperactivity Disorder (ADHD) in their everyday talk. In a particularly inventive approach to understanding how stories about the spread of HIV are disseminated through a village in rural Malawi, Watkins, Swindler and Biruk's (2008) used a technique that they call 'hearsay ethnography' in which informants kept diaries in which they recorded overheard conversations related to HIV/AIDS throughout their day. The problem with most studies of health communication which analyze focused (mostly dyadic) encounters, they argue, is that they are unable to capture the complex ways discourse about health travels throughout communities 'like a game of pool, with multiple players and multiple balls going this way and that' (Watkins et al., 2008, p. 29), and how the information given to people by healthcare professionals can undergo profound and sometimes unpredictable transformations as it is filtered through social networks in which members are inevitably engaged in complex and dynamic negotiations of social identity.

Finally, online communities have become particularly rich sites to observe health and risk communication outside of clinical settings. In a pioneering study of online health communication in the late 1990's, for example, Hamilton (1998) showed how the stories participants in a forum for people who had undergone bone-marrow transplants and their relatives told contributed to patients' individual

and collective construction of identities as 'survivors'. Other studies of health communication in online communities include Richardson's (2003) analysis of newsgroup debates on the relationship between cellular phones and cancer, Jones's (2009) examination of how gay men use online discussions about the risk of sexually transmitted diseases to manage their social identities, and the work of Harvey (2013) and Locher (2006) on the discourse of health-related online advice websites.

Since it is often difficult to collect primary data concerning actual interactions around risk behavior, many discourse analytical studies of health and risk 'in the wild' have relied on analyzing peoples retrospective accounts of risky behavior. The purpose of such analyses is not so much to understand what 'really happened' as it is to understand how people understand and reconstruct the 'orderliness' of risk taking in ways that make themselves 'accountable' as competent members of the social groups to which they belong. Jones and Candlin (2003), for example, analyzed gay men's narratives of unsafe sex, paying attention to such features as the temporal framing of actions and the ways speakers assigned agency to themselves and others, and Eggert and Nicholas (1992) used in-depth interviews to understand the discursive rules governing the drug-taking behavior of suburban teenagers, showing how rituals of 'getting high' are 'rule-governed' speech events with their own internal logic. Dtudies like this dramatically demonstrate the utility of discourse analytical methods to go beyond simplistic 'knowledge based' perspectives of risk (which often dismiss risk-taking as the result of ignorance or 'irrationality') to reveal how risk-taking is often a 'socially interactive enterprise' (Rhodes, 1997, p.

211) governed by its own 'situated rationality' (Parsons and Atkinson, 1992). The way people account for risk behavior can often reveal a great deal about their underlying assumptions about the speech events within which these risky actions occur and how they fit into community norms and practices. Such understanding is particularly important for health promoters who wish to design targeted interventions for particular groups.

4 Narrative

No overview of discourse analytical approaches to health and risk would be complete without a mention of the considerable work done in the area of narrative. Narratives of illness have long been of interest to sociologists and anthropologists (see for example Frank 1995, Garro 1994, Hydén 1997, Kleinman 1986), and, since the 1980s there has also been a strong focus on the therapeutic and diagnostic value of patient narratives within the field of medicine itself (Charon 2001, Greenhalgh 1998), what Polkinghome (1988) refers to as a 'narrative turn' in medicine. Where discourse analysts have contributed most significantly to the analysis of illness narratives has been in bringing to bear insights regarding how people use various linguistic resources to structure and interpret their experiences and manage their social identities and relationships. They have, for example, examined how narrators use 'reported speech' in narratives to position themselves in relation to more powerful figures such as doctors (see for example Hamilton 1998), and how they use verb tenses, metaphors, negations and evaluative language to structure their experiences with chronic illness (see for example Cheshire and Ziebland 2005).

Research on illness narratives in medical sociology and anthropology has sometimes been criticized by discourse analysts for not paying sufficient attention to the ways narratives are affected by the social contexts in which they are told (see for example Atkinson 2009), and the ways they are always, to some degree' jointly constructed by narrators and their audiences. A key feature of a discourse analytical approach to narrative in medical contexts, therefore, has been a focus not just on the contents of people's stories, but also on the ways they are socially occasioned and embedded in different social contexts. Analysts have observed, for example, how doctors and patients work together to construct narratives in medical encounters (Cicourel 1983, Eggly 2002), how patients' narratives are sometimes interrupted or limited by doctors (Clark and Mishler 1992, Mishler 1984), and how doctors sometimes assist patients in elaborating and focusing their stories (Chatwin 2006). Several analysts have endeavored to provide systematic accounts of how this collaborative aspect of illness narratives affects their structure and content. Eggly (2002), for example, in her review of studies of physician-patient collaborative narratives in medical consultations notes three main ways in which doctors and patients co-construct narratives: by working together to reconstruct chronologies of events, by cooperating in producing elaborations of events, and by jointly constructing interpretations of events. Bülow, in her examination of patient-patient collaborative narratives in the context of a patient support group pays more attention to the participation structures involved in the co-construction of illness narratives, observing how narratives sometimes take the form of self-contained personal stories which individuals perform for an audience, other times take the

form of orchestrated chained narratives, in which participants take turns telling narratives on a common theme, and still other times take the form of co-narrated collectivized stories, in which participants work together to build a common narrative of their experience with an illness. This concern with the joint construction of narrative has also extended beyond the clinic to other professional contexts like health insurance reporting (Bastos and De Oliveira 2006) and to family communication, as in Sirota's (2010) account of how families with autistic children use conversational narrative to co-create with children aspirations and goals in the face of uncertain futures.

Digital technologies have introduced new forms of illness narratives to which discourse analysts have turned their attention, stories in which many of the features of illness narratives described above are magnified through the participatory and performative dimensions of social media. Chou and her colleagues (2011), for example, have analyzed the personal narratives that cancer survivors tell in *YouTube* videos, noting how such stories tend to share a common narrative syntax outlining the tellers' transformation from patient to survivor, thus helping to construct a sense of a collective struggle with other's coping with cancer, and Page (2012) explores the relationship between gender and the ongoing narratives cancer patients tell on weblogs, noting how women's cancer blogs are characterized by more frequent use of evaluative anecdotes and also tend to attract more comments from other readers, and concluding that while men tend to use such blogs to gather and share information, women are more likely to use them to build networks of social support.

5 New directions in the study of health and risk discourse

Much of the more recent work on the discourse of health and risk has been focused on coming to terms with the effect of technology on the ways we talk about and experience the body and the way knowledge about health and risk is disseminated. Within clinical settings, more and more communication is mediated through technologies like medical tests, high tech scans, and electronic medical records. As Atkinson (1995, p. 61) notes, 'the discursive space of the body is no longer coterminous with the bedside.' Instead, the bedside has become a site where data are collected to generate 'virtual bodies' that are dispersed throughout institutions and healthcare systems. This progressive 'extextualization' of the body (Jones 2013a) has been accelerated by the development of technologies which have enabled us, in the words of cardiologist and geneticist Eric Topol (2012, p. vi), to 'digitize humans.' Particular attention has been paid to the ways clinicians and patients work together to interpret texts like medical tests and medical images. J. Roberts (2012), for example, in her observation of interactions around fetal ultrasound, describes a process that she calls 'collaborative coding' in which sonographers and pregnant women work together to construct stories about the images that appear on screens. There has also been considerable interest in the effect of electronic medical records on physician-patient interaction, primarily related to how they can complicate the participation frameworks of medical encounters (see for example Swinglehurst et al. 2011), but also related to ways doctors and patients sometimes use them strategically to perform interactional

work like topic management (Pearce et al. 2008) and signaling listenership (Frankel et al., 2005).

Outside of clinical settings, new technologies are quickly altering the discursive balance of power between healthcare workers and patients as ordinary people gain access to both increased information about health and risk (of varying degrees of reliability) and to new tools for self-monitoring and self-diagnosis. Rose and Novas (2005) have used the term 'digital biocitizenship' to describe the growing trend for individuals to make use of digital technologies to constantly monitor their bodily functions and health behavior. These technologies often involve ways for users to automatically collect and analyze health data using sensors and mobile phone applications, and to communicate that data to other users or to healthcare workers. In fact, one of the most dramatic changes in physician-patient communication in the coming years will be that much of it will take place at a distance via such technologies. These devices also help to encourage the formation of networks of people who share information about their health for purposes of collective knowledge building. Unlike more traditional 'online communities' like that analyzed by Hamilton (1998), 'health social networks' such as PatientsLikeMe, and CureTogether are looser structures in which people with a wide range of motivations and interests exchange information which is aggregated in various ways to help individuals make health decisions. Where discourse analysts have a stake in such changes is in understanding how personal health technologies discursively represent the body to their users and the consequence of these representations for health behavior, how laypeople in social networks work

together to construct medical knowledge, and how issues of privacy and power are negotiated in such settings (Jones 2013a, b).

Associated with the above developments is increased concern with how topics related to health and risk are portrayed in the media, especially on the internet, and how knowledge about health and risk changes as it moves from professional genres to more popular genres. While most social scientific accounts of media 'popularization' of biomedical knowledge focus on how media accounts and laypeople 'distort' facts or oversimplify scientific concepts, discourse analytical studies (see, for example Calsamiglia and van Dijk, 2004) can help reveal how the popularization of biomedical discourse often involves complex linguistic strategies such as metaphorization, exemplification, and reformulation, and how people interact with such information in sometimes sophisticated ways (Nettleton et al. 2005).

Finally, digital technologies are not just changing the ways people interact around health and risk; they are also creating new opportunities for discourse analysts to study these interactions. Among the most significant developments in discourse analytical studies of health and risk communication is the increased use of corpus based approaches in which large collections of texts or transcripts are analyzed using computer programs (Adolphs et al. 2008, Harvey 2013). At the same time, advances in digital video have made the multimodal analyses of medical communication more common (see for example Pasquandrea, 2011, Swinglehurst et al. 2011).

The story of discourse analysts' involvement with health communication over

the past three decades has been one of a gradual 'opening of the circumference' (Scollon & Scollon 2004) of what we understand as 'health communication' from a narrow focus on dyadic interactions between doctors and patients to the more 'messy' encounters that take place across professions and institutions and beyond the clinic itself, in which discourse about health and risk circulates from person to person and from group to group across multiple modes and media, being strategically appropriated and adapted by different people for different purposes. Future work in this area will continue to seek to understand how, along these complex itineraries, health outcomes and risk behaviors are invariably tied to the different discursive resources people have available to them and to the strategies they use to apply these resources to 'doing health'.

References

Adolphs, S., Atkins, S., & Harvey, K. (2007). Caught between professional requirements and interpersonal needs: Vague language in health care contexts. In J. Cutting (Ed.), (pp. 62–78). Basingstoke: Palgrave.

Adophs, S., Brown, B., Crawford, P., & Sahota, O. (2004). Applying corpus linguistics in a health care context. *Journal of Applied Linguistics*, *1*(1), 9–28.

Ainsworth-Vaughn, N. (1998). *Claiming power in doctor-patient talk*. Oxford: Oxford University Press.

Al Zidjaly, N. (2009). Agency as an interactive achievement. *Language in Society*, *38*(02), 177–200.

Armstrong, D. (1983). *Political anatomy of the body: Medical knowledge in Britain in*

the twentieth century. Cambridge: Cambridge University Press.

Atkinson, P. (1995). *Medical talk and medical work: The liturgy of the clinic*. London: Sage.

Atkinson, P. (2009). Illness narratives revisited: The failure of narrative reductionism. *Sociological Research Online*, *14*(5), 16–16.

Bastos, L. C., & De Oliveira, M. do C. L. (2006). Identity and personal/institutional relations: people and tragedy in a health insurance customer service. In A. de Fina, D. Schiffrin, & M. Bamberg (Eds.), *Discourse and Identity*. Cambridge University Press.

Beach, W. A. (2001). Stability and ambiguity: Managing uncertain moments when updating news about mom's cancer. *Text*, *21*(1/2), 221–250.

Beach, W. A. (2009). *A natural history of family cancer: Interactional resources for managing illness*. New York: Hampton Press.

Beck, C. S., & Ragan, S. L. (1992). Negotiating interpersonal and medical talk: Frame shifts in the gynaecologic exam. *Journal of Language and Social Psychology*, *11*(1-2), 47–61.

Bakhtin, M. M. (1981). *The dialogic imagination: Four essays*. Austin: University of Texas Press.

Banks, W. P., & Thompson, S. C. (1996). The mental image of the human body: Implications of physiological mental models on our understanding of health and illness. In J. S. Mio & A. N. Katz (Eds.), (pp. 99–126). Mahwah, NJ: Eribaum.

Bülow, P. H. (2004). Sharing experiences of contested illness by storytelling. *Discourse and Society*, *15*(1), 33–53.

Beckman, H. B., & Frankel, R. M. (1984). The effect of physician behavior on the collection of data. *Annals of Internal Medicine*, *101*(5), 692–692.

Beckman, H. B., Frankel, R. M., & Darnley, M. (1985). Soliciting the patient's complete agenda: A relationship to the distribution of concerns. *Clinical Research*, *33*, 7174A–7174A.

Berg, M., & Bowker, G. (1997). The multiple bodies of the medical record: Toward a sociology of an artifact. *Sociological Quarterly*, *38*(3), 513–537. doi:10.1111/j.1533-8525.1997.tb00490.x

Brown, B., Crawford, P., & Carter, R. (2006). *Evidence-based health communication*. McGraw-Hill International.

Byrne, P. S., & Long, B. E. L. (1976). *Doctors talking to patients: A study of the verbal behaviour of general practitioners consulting in their surgeries*. Exeter: Royal College of General Practitioners.

Cameron, R., & Williams, J. (1997). Sentence to ten cents: A case study of relevance and communicative success in nonnative-native speaker interactions in a medical setting. *Applied Linguistics*, *18*(4), 415–445.

Candlin, C. N., & Candlin, S. (2002). Discourse, expertise, and the management of risk in health care settings. *Research on Language & Social Interaction*, *35*(2), 115–137.

Candlin, C. N., & Candlin, S. (2003). Health care communication: A problematic site for applied linguistic research. *Annual Review of Applied Linguistics*, *23*, 134–154.

Charon, R. (2001). Narrative medicine: Form, function, and ethics. *Annals of Internal Medicine*, *134*(1), 83–87.

Chatwin, J. (2006). Patient narratives: A micro-interactional analysis. *Communication & Medicine*, *3*(2), 113–123.

Chou, W.-Y. S., Hunt, Y., Folkers, A., & Augustson, E. (2011). Cancer survivorship in the age of YouTube and social media: A narrative analysis. *Journal of Medical Internet Research*, *13*(1), e7. doi:10.2196/jmir.1569

Cicourel, A. V. (1983). Hearing is not believing: Language and the structure of belief in medical communication. In A. Duranti & C. Goodwin (Eds.), (pp. 138–155). Washington DC: Centre for Applied Linguistics.

Cicourel, A. V. (1992). The interpenetration of communicative contexts: Examples from medical encounters. In A. Duranti & C. Goodwin (Eds.), (pp. 291–310). Cambridge: Cambridge University Press.

Clark, J. A., & Mishler, E. G. (1992). Attending to patients' stories: Reframing the clinical task. *Sociology of Health and Illness*, *14*(3), 344–370.

Cook-Gumperz, J., & Messerman, L. (1999). Local identities and institutional practices: Constructing the record of professional collaboration. In S. Sarangi & C. Roberts (Eds.), (pp. 145–181). New York: Mouton de Gruyter.

Coupland, N., Coupland, J., & Giles, H. (1991). *Language, society and the elderly: Discourse, identity, and ageing*. Oxford: Blackwell.

Coupland, J., Robinson, J. D., & Coupland, N. (1994). Frame negotiation in doctor-elderly patient consultations. *Discourse & Society*, *5*(1), 89–124.

Danforth, S., & Navarro, V. (2001). Hyper Talk: Sampling the social construction of ADHD in everyday language. *Anthropology & Education Quarterly*, *32*(2), 167–190.

Eggert, L. L., & Nicholas, L. J. (1992). Speaking like a skipper: “Skippin” an’ gettin’ high’. *Journal of Language and Social Psychology*, *11*(1-2), 75–100.

Eggly, S. (2002). Physician-patient co-construction of illness narratives in the medical interview. *Health Communication*, *14*(3), 339–360.

Erickson, F., & Rittenberg, W. (1987). Topic control and person control: A thorny problem for foreign physicians in interaction with American patients. *Discourse Processes*, *10*(4), 401–415.

Fisher, S. (1995). *Nursing wounds: Nurse practitioners/doctors/women patients and the negotiation of meaning*. New Brunswick, NJ: Rutgers University Press.

Frank, A. W. (1995). *The wounded storyteller: Body, illness, and ethics*. Chicago: University of Chicago Press.

Frankel, R. M. (1984). Physicians and patients in social interaction: Medical encounters as a discourse process. *Discourse Processes*, *7*(2), 103–105.

Frankel, R. M. (1990). Talking in interviews: A dispreference for patient-initiated questions in physician patient encounters. In G. Psathas (Ed.), (pp. 231–262). Washington, DC: University Press of America.

Frankel, R. M., Altschuler, A., George, S., Kinsman, J., Jimison, H., Robertson, N. R., & Hsu. (2005). Effects of exam-room computing on clinician-patient communication: A longitudinal qualitative study. *Journal of General Internal Medicine*, *20*(8), 677–682.

Foucault, M. (1976). The birth of the clinic: An archaeology of medical perception. London: Tavistock.

Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice

Hall.

Garro, L. C. (1994). Narrative representations of chronic illness experience: Cultural models of illness, mind, and body in stories concerning the temporomandibular joint (TMJ). *Social Science & Medicine*, *38*(6), 775–788.

Goodwin, C. (1995). Co-constructing meaning in conversations with an aphasic man. *Research on Language & Social Interaction*, *28*(3), 233–60.

Greenhalgh, T. (1998). Narrative based medicine in an evidence based world. In T. Greenhalgh & B. Hurwitz (Eds.), (pp. 247–265). London: BMJ Books.

Gwyn, R. (2002). Communicating health and illness. London: Sage.

Hamilton, H. E. (1998). Reported speech and survivor identity in on-line bone marrow transplantation narratives. *Journal of Sociolinguistics*, *2*(1), 53–67.

Hamilton, H. E. (2005). *Conversations with an Alzheimer's patient: An interactional sociolinguistic study*. Cambridge: Cambridge University Press.

Harvey, K., 2013. *Investigating adolescent health communication: a corpus linguistics approach*. London: Bloomsbury.

Heath, C. (1992). The delivery and reception of diagnosis in the general-practice consultation. In P. Drew & J. Heritage (Eds.), (pp. 235–267). Cambridge: Cambridge University Press.

Heritage, J. (2005). Revisiting authority in physician-patient interaction. In J. F. Duchan & D. Kovarsky (Eds.), (pp. 83–102). Berlin and New York: Mouton de Gruyter.

Heritage, J., & Maynard, D. W. (2006). *Communication in medical care: Interaction between primary care physicians and patients*. Cambridge: Cambridge University Press.

Heritage, J., & Stivers, T. (1999). Online commentary in acute medical visits: A method of shaping patient expectations. *Social Science and Medicine*, *49*(11), 1501–1517.

Hydén, L.-C. (1997). Illness and narrative. *Sociology of Health & Illness*, *19*(1), 48–69.

Iedema, R. (2003). The medical record as organizing discourse. *Document Design*, *4*(1), 64–84.

Iedema, R., Rhodes, C., & Scheeres, H. (2006). Surveillance, resistance, observance: The ethics and aesthetics of identity (at) work. *Organization Studies*, *27*(8), 1111–1130.

Iedema, R., & Scheeres, H. (2003). From doing work to talking work: Renegotiating knowing, doing, and identity. *Applied Linguistics*, *24*(3), 316–326.

Jones, R. H. (2009). Learning about AIDS online: Identity and expertise on a gay internet forum. In C. Higgins & B. Norton (Eds.), (pp. 171–196). Bristol: Multilingual Matters.

Jones, R. H. (2013a). *Health and risk communication: An applied linguistic perspective*. London: Rouledge.

Jones, R. (2013B) Cybernetics, discourse analysis and the entextualization of the human. A Plenary address at the 31st AESLA (Spanish Applied Linguistics

Association) International Conference, La Laguna/Tenerife, Spain, April 18-20.

Jones, R. H., & Candlin, C. N. (2003). Constructing risk across timescales and trajectories: Gay men's stories of sexual encounters. *Health, Risk & Society*, *5*(2). doi:10.1080/1369857031000123966

Kleinman, A. (1988). *The illness narratives: Suffering, healing, and the human condition*. New York: Basic Books.

Locher, M. A. (2006). *Advice Online: Advice-giving in an American Internet Health Column*. John Benjamins Publishing.

Lupton, D. (1992). Discourse analysis: a new methodology for understanding the ideologies of health and illness. *Australian Journal of Public Health*, *16*(2), 145–150.

Lupton, D. (2003). *Medicine as culture: Illness, disease and the body in Western societies* (2nd ed.). London: Sage.

Marvel, M. K., Epstein, R. M., Flowers, K., & Beckman, H. B. (1999). Soliciting the patient's agenda: Have we improved? *Journal of American Medical Association*, *281*(3), 283–287.

Maynard, D. W. (1991). Interaction and asymmetry in clinical discourse. *American Journal of Sociology*, *97*(2), 448–495.

Maynard, D. W. (1996). On "realization" in everyday life: The forecasting of bad news as a social relation. *American Sociological Review*, *61*(1), 109–131.

Maynard, D. W. (2004). On predicating a diagnosis as an attribute of a person. *Discourse Studies*, *6*(1), 53–76.

Maseide, P. (2007). Discourses of collaborative medical work. *Text and Talk*,

27(5/6), 611–632.

Mishler, E. G. (1984). *The discourse of medicine: Dialectics of medical interviews*. Norwood, NJ: Ablex Publishing.

Moore, A., Candlin, C. N., & Plum, G. A. (2001). Making sense of HIV-related viral load: One expert or two? *Culture, Health & Sexuality*, *3*(4), 429–450.

Nettleton, S., Burrows, R., & O'Malley, L. (2005). The mundane realities of the everyday lay use of the internet for health, and their consequences for media convergence. *Sociology of Health & Illness*, *27*(7), 972–992.

Norris, S. (2004). *Analyzing multimodal interaction: A methodological framework*. London: Routledge.

Page, R. E. (2012). *Stories and social media: Identities and interaction*. New York: Routledge.

Parsons, E., & Atkinson, P. (1992). Lay constructions of genetic risk. *Sociology of Health & Illness*, *14*(4), 437–455. doi:10.1111/j.1467-9566.1992.tb00131.x

Pasquandrea, S. (2011). Managing multiple actions through multimodality: Doctors' involvement in interpreter-mediated interactions. *Language in Society*, *40*(04), 455–

Paugh, A.,& Izquierdo, C. (2009). Why is this a battle every night?: Negotiating food and eating in American dinnertime interaction. *Journal of Linguistic Anthropology*, *19*(2), 185–204.

Pearce, C., Trumble, S., Arnold, M., Dwan, K., & Phillips, C. (2008). Computers in the new consultation: Within the first minute. *Family Practice*, *25*(3), 202–208.

Peräkylä, A. (2002). Agency and authority: Extended responses to diagnostic

statements in primary care encounters. *Research on Language & Social Interaction*, *35*(2), 219–247.

Peräkylä, A., & Vehvilfinen, S. (2003). Conversation analysis and the professional stocks of interactional knowledge. *Discourse & Society*, *14*(6), 727–750.

Polkinghorne, D. E. (1988). *Narrative knowing and the human sciences*. Albany, NY: State University of New York Press.

Poltoraka, M., Leach, M., Fairhead, J., & Cassell, J. (2005). "MMR talk" and vaccination choices: An ethnographic study in Brighton. *Social Science & Medicine*, *61*, 709–19.

Reisfield, G. M., & Wilson, G. R. (2004). Use of metaphor in the discourse on cancer. *Journal of Clinical Oncology*, *22*(19), 4024–4027.

Rhodes, T. (1997). Risk theory in epidemic times: Sex, drugs and the social organisation of "risk behaviour." *Sociology of Health & Illness*, *19*(2), 208–227.

Richardson, K. (2003). Health risks on the internet: Establishing credibility online. *Health, Risk and Society*, *5*(2), 171–184.

Riessman, C. K. (1990). Strategic uses of narrative in the presentation of self and illness. *Social Science and Medicine*, *30*(11), 1195–1200.

Roberts, C. (2006). Continuities and discontinuities in doctor-patient consultations in a multilingual society. In M. Gatti and F. Salager-Meyer (Eds.), *Advances in medical discourse analysis: Oral and written contexts* (pp. 177-95). Bern: Peter Lang.

Roberts, C. (2010). Intercultural communication in healthcare settings. In D. Matsumoto (Ed.), *APA handbook of intercultural communication* (pp. 213-28).

New York: Walter de Gruyter.

Roberts, J. (2012). “Wakey wakey baby”: Narrating four-dimensional (4D) bonding scans. *Sociology of Health & Illness*, *34*(2), 299–314.

Rose, N., and Novas, C. (2005). Biological citizenship. In A. Ong and S. Collier (Eds.), *Global assemblages: Technology, politics and ethics as anthropological problems* (pp. 439-63).London: Blackwell.

Sarangi, S. (2000). Activity types, discourse types and interactional hybridity: The case of genetic counselling. In S. Sarangi & M. Coulthard (Eds.), (pp. 1–27). London: Longman.

Sarangi, S., & Clarke, A. (2002). Zones of expertise and the management of uncertainty in genetics risk communication. *Research on Language & Social Interaction*, *35*(2), 139–171.

Sarangi, S., & Roberts, C. (1999). *Talk, work and institutional order: Discourse in medical, mediation, and management settings*. Berlin and New York: Mouton de Gruyter.

Scollon, R., & Scollon, S. W. (2004). *Nexus analysis: Discourse and the emerging internet*. London: Routledge.

Silverman, D. (1987). *Communication and medical practice: Social relations in the clinic*. London: Sage.

Sirota, K. G. (2010). Narratives of transformation: Family discourse, autism and trajectories of hope. *Discourse and Society*, *21*(5), 544–564.

Silverman, D., & Peräkylä, A. (1990). AIDS counselling: The interactional organisation of talk about “delicate” issues. *Sociology of Health & Illness*, *12*(3),

293–318.

Swinglehurst, D., Roberts, C., & Greenhalgh, T. (2011). Opening up the "black box" of the electronic patient record: A linguistic ethnographic study in general practice. *Communication and Medicine*, *8*(1), 3–15.

Tannen, D., & Wallat, C. (1987). Interactive frames and knowledge schemas in interaction: Examples from a medical examination/interview. *Social Psychology Quarterly*, *50*(2), 205–216.

Ten Have, P. (1989). The consultation as a genre. In B. Torode (Ed.), *Text and Talk as Social Practice* (pp. 115–135). Dordrecht: Foris Publications.

Ten Have, P. (1991). Talk and institution: A reconsideration of the "asymmetry" of doctor-patient interaction. In D. Boden & D. H. Zimmerman (Eds.), (pp. 138–163). Cambridge: Polity Press.

Ten Have, P. (1995). Medical ethnomethodology: An overview. *Human Studies*, *18*(2), 245–261. doi:10.1007/bf01323212

Topol, E. (2012). *The creative destruction of medicine: How the digital revolution will create better health care*. New York: Basic Books.

Todd, A. D. (1984). The prescription of contraception: Negotiations between doctors and patients. *Discourse Processes*, *7*(2), 171–200.

Treichler, P. A. (1988). AIDS, homophobia and biomedical discourse: An epidemic of signification. In D. Crimp (Ed.), (pp. 31–70). Cambridge, MA: MIT Press.

Watkins, S. C., Swindler, A., & Biruk, C. (2008). Hearsay ethnography: Conversational journals as a method for studying culture in action. *California Center for Population Research, UC Los Angeles*. Retrieved from escholarship.org—

0hp8m602

West, C. (1984). *Routine complications: Trouble with talk between doctors and patients*. Bloomington: Indiana University Press.