

PROBLEMS AND PROSPECTS IN THE STUDY OF PHYSICIAN-PATIENT INTERACTION: 30 Years of Research

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■ **Abstract** Working within the functionalist perspective that he did so much to develop, Parsons (1951) conceptualized the physician-patient relationship according to a normative framework defined by the pattern variable scheme. As Parsons clearly recognized, this normative conceptualization was one that empirical reality at best only approximates. In the 1970s, two major studies established doctor-patient interaction as a viable research domain. In the present review, we consider approaches to the medical interview developing from these initiatives and that have a primary focus on observable features of doctor-patient interaction. Within this orientation, we consider literature dealing with social, moral, and technical dilemmas that physicians and patients face in primary care and the resources that they deploy in solving them. This literature embodies a steady evolution away from a doctor-centered emphasis toward a more balanced focus on the conduct of doctors and patients together.

INTRODUCTION

In the 1970s, two major studies established doctor-patient interaction as a viable research domain. The first, conducted by Korsch & Negrete (1972) at the Children's Hospital of Los Angeles, was based on observations of 800 pediatric acute care visits and used a modified version of Bales's (1950) Interaction Process Analysis (IPA) to code the data. The results were striking. Nearly one fifth of the parents left the clinic without a clear statement of what was wrong with their child, and nearly half were left wondering what had caused their child's illness. A quarter of the parents reported that they had not mentioned their greatest concern because of lack of opportunity or encouragement. The study uncovered a strong relationship between these and other communication failures and nonadherence with medical recommendations, showing that 56% of parents who felt that the physicians had not met their expectations were "grossly noncompliant."

On the other side of the Atlantic, *Doctors Talking to Patients* (Byrne & Long 1976), based on some 2500 audio recordings of primary care encounters, anatomized the medical visit into a series of stages and developed an elaborate characterization of doctor behaviors in each of them. Drawing on Balint's (1957) proposal that the primary care visit has therapeutic value in its own right, Byrne & Long focused on how its therapeutic possibilities were attenuated by the prevalence of doctor-centered behaviors in the encounters they studied. The study documented the overwhelming prevalence of doctor-centered behavior and was also conceived as an intervention: Physicians were invited to use the study's coding framework to evaluate their own conduct and to modify their conduct in a more patient-centered direction. Not surprisingly given these goals, *Doctors Talking to Patients* was itself somewhat doctor-centered. The authors had much less to say about patients' contributions to the encounter or to the socio-cultural context of social interaction in primary care. In the present review, we consider approaches to the medical interview that, developing from these initiatives, have a primary focus on observable features of doctor-patient interaction. Within this orientation, we consider literature dealing with social, moral, and technical dilemmas that physicians and patients face in primary care and the resources that they deploy in solving them. This literature embodies a steady evolution toward a more balanced focus on the conduct of doctors and patients together.

SOCIOLOGICAL APPROACHES TO THE PHYSICIAN-PATIENT RELATIONSHIP

Although the sociology of medicine predates Parsons's (1951) theoretical analysis, *The Social System* contains an account of the doctor-patient relationship that is classic in every sense. Parsons conceptualizes the institution of medicine as a social system's normative mechanism for assisting those who fall ill and returning them to their regular work-related contributory capacities. Medical practitioners treat patients according to generalized technical standards of treatment (universalism), rather than standards that are adjusted to the social characteristics of the patient (particularism); they enact a specific technical focus on medical care (specificity) rather than a general "wise counselor" role (diffuseness); they treat patients without extensive emotional involvement (affective neutrality) rather than the reverse (affectivity); and they put patient welfare above their personal interests (a "collectivity" rather than "self" orientation). Complementary to the practitioner's role is the "sick role" for the patient, which means exemption from responsibility for the illness itself and from normal duties, but it also requires sick persons to be motivated to get well, rather than languish in a state of illness, and to pursue this end by seeking help from a competent physician and following a prescribed therapeutic path.

There were, of course, significant difficulties with this analysis. Parsons (1951, p. 440) himself notes that his formulation of the patient's situation is highly abstract because it was designed to offer a general picture of the physician-patient

relationship, without particular regard to the range of illnesses that patients can experience. Almost immediately, Szasz & Hollender (1956) observed that the extent to which patients will be passive recipients of medical expertise and authority will vary with the character and severity of their illness, whether it is severe and requiring physically intrusive intervention (such as surgery), or chronic and only necessitating unsupervised self-medication (diabetes or hypertension, for example).

Other voices expressed reservations about the Parsonian emphasis on the functional significance of institutionalized patterns in medicine, the benign treatment of the complementarities of the physician-patient relationship, and the bland endorsement of medical authority. Foucault's (1975) critique of the normalizing and control functions of medical disciplines has found concrete extension in treatments of the medicalization of social problems (Conrad & Schneider 1992). Parsons's analysis emerged at a time—the “golden age of doctoring” (McKinlay 1999)—when medical authority reached its zenith (Freidson 1985, Shorter 1985, Starr 1982). The so-called “modern doctor” (Shorter 1985, pp. 75–106) worked within a “sovereign profession” (Starr 1982) and serenely dispensed both medication and authoritative judgment. During 1945–1965, U.S. medicine, Freidson (1988, p. 384) comments, “was at a historically unprecedented peak of prestige, prosperity and political and cultural influence—perhaps as autonomous as it is possible for a profession to be.”

Subsequently, Medicare and Medicaid legislation, the growth of third-party payers and for-profit medical service corporations (Gray 1991; Waitzkin 2000, 2001), rising health care costs, and the growth of medical consumerism have created conditions that are erosive not only of the political and economic influence of the profession, but also of the cultural authority (Starr 1982) and technical autonomy of medicine (Freidson 1988). Although the practice of medicine has never been free of complex financial incentives (Rodwin 1993), managed care organizations have built incentive structures that reward minimized care (Waitzkin 2001) and designed review processes that regulate the exercise of clinical judgment, reaching deeply into the citadel of medical autonomy (Light 2000). As Potter & McKinlay (2005, pp. 467–68) suggest, a corporatist metaphor, in which patients become clients and physicians become providers, “came to define the doctor-patient relationship at the beginning of the 21st century.” In short, as Light (2000) argues, the well-known notion of professional dominance (Freidson 1970) needs to be supplanted by the concept of countervailing powers.

Even as we recognize that health care has undergone big changes in recent decades, rather less is known about its effects on the particulars of the doctor-patient encounter (Waitzkin 2000, p. 272). There is no stable conceptual framework for the analysis of the doctor-patient relationship as realized in situ, and few historical benchmarks against which to evaluate evolution and change. Yet it is important to recognize how much of the doctor-patient relationship is realized interactively in the here and now. Abstract statements about this relationship almost universally gloss the complexity and specificity of the actions and responses that make up the medical interview. Sociological theory and research on the

doctor-patient encounter tend to opt for generalized characterizations rather than dealing with concrete particulars. In short, there has been sparse attention to interaction as it is conducted in real time or to “the study of life as it is experienced by those who are living it” (Pescosolido et al. 2000, p. 413). The result is that theoretical formulations of the physician-patient relationship are insufficiently responsive to the specific elements of talk and action through which it is constituted. Conversely, lacking an empirical baseline founded in recordings and explication of the range and extent of the proceedings between physician and patient, researchers cannot easily evaluate current relationships, explicate processes of historical change, or determine the impact of specific factors such as the rise of managed care or patients’ acquisition of Internet-based information on the contemporary practice of primary care.

THE PHYSICIAN-PATIENT RELATIONSHIP: THE VIEW FROM MEDICINE

Reflection on the physician-patient relationship is undoubtedly as old as medicine itself, and recognition of its therapeutic power goes back to Hippocrates who, in his Precepts (VI), observed that “some patients, though conscious that their condition is perilous, recover their health simply through their contentment with the goodness of the physician.” Modern investigation of the relationship stems from the psychoanalytically inspired revival of this insight that has issued from the movement for patient-centered medicine (McWhinney 1989). In an influential critique of traditional biomedicine, Engel (1977) called for it to be supplanted by a biopsychosocial approach that considers interpersonal and social aspects of patients’ lives along with biological processes. Since that critique, physicians and social scientists jointly have sought to evaluate the significance of interaction in shaping medical outcomes (Frankel et al. 2003). Related to Engel’s model is research on relationship- or patient-centered care. This research suggests that patients who receive such care are enhanced in their program attendance, smoking cessation, glucose control, long-term exercise, weight loss, adherence to treatment regimens, and other aspects of physical and mental health (Williams et al. 2000). Both quantitative and qualitative studies show that when physicians listen fully, exhibit care and compassion, and engage in other prosocial behaviors, patients’ psychological status, physiological symptoms, and functional outcomes all improve (Stewart 2003).

The unifying conception of patient-centered medicine is a critique that contemporary scientific medicine has become preoccupied with disease and its evaluation, at the expense of patients and their concerns. Its objective is to reverse this process:

The essence of the patient-centered method is that the physician tries to enter the patient’s world, to see the illness through his or her eyes. In the traditional doctor-centered method, physicians try to bring the patient’s illness into their

world and to interpret the illness in terms of pathology. The transformed method will, of course, include this process, but it will no longer have the dominance it now enjoys (McWhinney 1989, p. 34).

Patient-centered practice is now widely taught through the well-known three-function model of the medical interview (Cohen-Cole 1991, Cohen-Cole & Bird 1991). The three-function model explicitly sets the biomedical/diagnostic objectives of the medical interview within the context of (a) the patient's psychosocial context, "why this person has become a patient, what the disease (or perceived disease) means to him or her, and how he or she is behaving in the role of a patient" (Lazare et al. 1995, p. 5); (b) the construction of a therapeutic relationship in which the physician builds an alliance with the patient; and (c) the education of the patient, not only recommending and negotiating therapeutic measures to treat disease, but also determining any areas of conflict between clinician and patient and working with social and psychological consequences of the illness.

In making the nature of the interview explicit across types of diagnosis, clinical settings, and temporal nodes in the illness or the doctor-patient relationship, the three-function model provides a normative baseline for researchers, clinicians, and students to assess the success of the interview (Carroll 1995, Lazare et al. 1995) according to whether physicians treat the patient, rather than just the disease. It invites an approach that prioritizes skills in communication and in empathy, and a more involved and less authoritarian pattern of interaction between doctor and patient.

As a normative baseline, the three-function approach is a work of advocacy, designed to influence medical practice. To evaluate practice, Emanuel & Emanuel (1992) provide an influential conceptualization. They suggest these dimensions by which to measure the medical visit: (a) which person sets the goals of the visit (the physician, the patient, or both in negotiation); (b) the status of the patient's values (assumed by the physician, jointly explored, or unexamined); and (c) the functional role of the physician (guardian, advisor, or consulting technician). In a mutual relationship in which the power and symbolic resources of each participant are broadly balanced, the visit's agenda is negotiated, the patient's values are explored, and the physician adopts an advisory role with regard to the patient's goals and decisions. In a paternalistic relationship, in which the physician's power and symbolic resources outweigh those of the patient, physicians control the visit's agenda, goals, and outcomes. The physician tends to adopt a more narrowly biomedical stance and acts as a guardian in the best interests of the patient, although those interests are not explicitly explored, but rather assumed to be congruent with the physician's. In a consumerist relationship, patients set the goals and agenda and make decisions on treatment and other outcomes. Patient values are explicit but not discussed, and the physician becomes a technical consultant in a market relationship.

Most contributors to the medical literature are advocates for, and working toward, the mutual model. However, the literature on patient attitudes suggests that the kind of patient autonomy and patient centeredness that the model advocates is

not universally desired (Ende et al. 1989, Frosch & Kaplan 1999). A large-scale study of routine (chronic care) visits by Roter and colleagues (1997) suggests that only about 20% of such visits approximate a mutual model in which both parties contribute and discuss the psychosocial context of the patient's concerns along with its biomedical content. In their analysis, 8% of the visits emerged as predominantly consumerist, whereas the majority (66%) were largely physician driven in their narrowly biomedical or expanded biomedical concerns. Not surprisingly, the narrowly biomedical visits were rated least satisfying by physicians and patients alike. Because contemporary measures of patient centeredness in the medical visit are far from stable (Epstein et al. 2005, Mead & Bower 2000), it is difficult to evaluate the extent to which the beneficial effects of mutually founded medical visits vary according to patient preferences and medical conditions. The three-function model, with its normative approach, needs a robust empirical component that has strong implications for clinical practice.

STUDIES OF DOCTOR-PATIENT INTERACTION: A METHODOLOGICAL DICHOTOMY

Research on doctor-patient interaction has increased greatly since its inception in the late 1960s, and this increase has resulted in a large literature ranging over many medical settings and illness conditions (Roter & Hall 1992). Although a number of medical and social scientific disciplines have converged in this literature, two main approaches have emerged: process analysis and the microanalysis of discourse (Charon et al. 1994).

Process Analysis

As already noted, process analysis was introduced into medicine in a series of pathbreaking studies by Korsch & Negrete (1972) on interaction in a pediatric acute care hospital context. Their findings made a powerful case for the study of physician-patient interaction. They showed that systematic study in the field is achievable and that the results can be significant for patient health outcomes. Roter (1977) extended the Korsch studies, showing that training patients to be more proactive in the medical interview led to improved health outcomes. Further studies developing this approach to encompass patients with chronic conditions showed significant improvements in physiological and functional outcomes (Greenfield et al. 1985, 1988; Kaplan et al. 1989). Related studies showed that eliciting the patient's view of the illness increased recall, understanding, and commitment to following physician advice (Brown et al. 2003, Stewart 1995).

We also noted that the original Korsch studies quantified interaction using Bales's (1950) Interaction Process Analysis. IPA classified role behavior in task-oriented small groups in terms of a contrast between task-oriented and socio-emotional behaviors. The Bales scheme had real strengths, including the attempt to be exhaustive and to facilitate administration so that a trained Bales researcher

can code interaction in real time, without even the need for a tape recorder. As an approach to doctor-patient interaction, however, the scheme also had significant weaknesses. Its categories are exceedingly general, yielding a picture of the physician-patient encounter that is fuzzy at best. Nor are they adapted to the particularities of doctor-patient communication and the phases of the medical encounter. Moreover, the Bales system's strict dichotomization of behaviors into task-focused and socio-emotional categories forced coders to make awkward judgments. For example, as Wasserman & Inui (1983, p. 286) noted, when a patient says, "Doctor, am I going to die?" is the coder to treat this as category 8 (asks for opinion) or category 11 (shows tension)? Few researchers would want to make this call, yet it was mandated by the system.

As a result, coding schemes have undergone progressive refinements over the years to address these problems, tailor them to dyadic interaction, and accommodate the specific content of physician-patient interactions (Inui & Carter 1985, Inui et al. 1982, Roter & McNeilis 2003, Roter et al. 1988, Wasserman & Inui 1983). By far the most influential of the emergent schemes has been developed and refined by Roter and colleagues. The current Roter Interaction Analysis System (RIAS) contains 39 categories broadly subdivided into socio-emotional (15 categories) and task-focused (24 categories) (Roter & Larson 2002). Like the Bales system, RIAS is designed to implement an exhaustive classification of the events of the medical visit using categories that are compatible with the three-function model of the medical visit described above (Roter & Larson 2001, 2002). Coders can classify events without transcription, thus conserving costs and enabling analysis of large numbers of interactions required for intervention and evaluation studies. With the use of additional codes, RIAS also accommodates a wide range of contents and circumstances beyond primary care, including oncology, obstetrics and gynecology, end-of-life discussions, well-baby care, and specific diagnostic categories such as asthma, hypertension, and diabetes (Roter & Larson 2002).

The RIAS framework has opened up the physician-patient relationship to a significant degree. Shown by comparative studies to be superior to other coding systems (Inui et al. 1982, Thompson 2001), it has revealed important differences in how men and women (both physicians and patients) interact in the medical visit and how these interaction patterns are related to physician and patient satisfaction (Hall et al. 1994a,b; Roter & Hall 1992). It has formed the basis for a valuable empirical specification of the main styles of primary care visit (Roter et al. 1997) described above. And it has been used in nearly 100 empirical investigations of a wide variety of medical contexts (Roter & Larson 2002).

Although the Roter system has served as the backbone for the study of the physician-patient relationship over the past 20 years, it is not without controversy. Criticisms of the RIAS system have focused on the very features that have contributed to its success—its capacity to deliver an exhaustive and quantified overview of the medical encounter.

As Charon et al. (1994) note, process models take little account of the context or content of medical visits, sacrificing this for an overview across medical encounters

in which the interactivity—the capacity for one party to influence the behavior of another, or to adjust behavior in response to another—becomes invisible (Stiles 1989). Hence, “because the content or context of the interview is not assessed, these methods implicitly assume no connection between how people talk and either what they talk about or why they talk” (Charon et al. 1994, p. 956). Further, the focus on medical outcomes as the primary object of research can generate awkward choices because they commit “the researcher to an ontological position on the nature of medicine.” For example, when physicians use a consumer model in making decisions about prescriptions, and attempt to meet perceived patient preferences, this can result in inappropriate treatment outcomes (Kravitz et al. 2005, Mangione-Smith et al. 1999). Finally, general patient preferences may well vary in relation to illness conditions: A consumerist patient in the context of upper respiratory infections may look for a more paternalist stance from a physician in the context of a cancer diagnosis.

Microanalysis

At the opposite pole of the analytic continuum lie studies that focus on the microanalysis of medical discourse. Originating within anthropology and sociology, these studies deploy an essentially ethnographic and interpretive methodology to disclose the background orientations, individual experiences, sensibilities, understandings, and objectives that inhabit the medical visit. In sociology, microanalytic studies have a heritage that includes the “Chicago School” of ethnography. Those studies that draw on Hughes’s (1958) work focus primarily on medicine as an occupation, and for these studies, an astute observation by Fox (1989, p. 38) still holds true: “Sociologists have written more about health professionals—especially about physicians—than they have about patients.” However, other ethnographic work in the tradition of Goffman (1955) has concentrated less on the sociology of the profession and contributed more to the study of the physician-patient relationship *per se*.

Strong’s (1979) comparative study of pediatric clinics in the United States and Scotland introduces the notion that a ceremonial order of the pediatric encounter can emerge in different formats. In particular, a bureaucratic format—involving formality, politeness, and control of emotions—predominates as compared with clinical, charity, and private formats. Although Strong agrees with Parsons and Freidson that the technical expertise of the physician is a source of medical control, he adds a dimension documenting how the ceremonial order and bureaucratic format of clinical encounters enables expression of medical authority. His study is complemented by Emerson (1970), who, in a symbolic interactionist study of the gynecological exam, demonstrates the existence of counter themes to the traditional medical model and resistance to the authority relations embedded within it.

Throughout the 1980s, British ethnographers drew on Strong’s fusion between ethnographic observation and discourse analysis. Significant contributions by Bloor (1976, 1997), Silverman (1987), and Atkinson (1995, 1999) represent a

convergence between field observation and the systematic use of recorded data in the medical arena that is a feature of discourse studies of the medical visit. In the United States, Anspach's (1993) distinguished investigation of interactions between pediatricians, nurses, and the parents of children in the intensive care unit detailed how the medical professionals preconstructed end-of-life decisions for which parent assent was required.

In recent years, ethnographers have included discourse analysis as part of their investigation of doctoring. Their analyses of patients' experiences, sensibilities, understandings, and objectives suggest that patients' subjectivity resides, like an iceberg, mainly below the surface of talk. It is maintained in this submerged condition by a combination of patient diffidence and self-censorship (Strong 1979) and practitioner disattention and obfuscation. Practitioner suppression of patient experience, investigators argue, is due to status and authority as built from educational, socioeconomic, ethnic, gender, and other differences between patients and physicians (Atkinson 1995; Clair & Allman 1993; Davis 1963; Fisher 1984; Todd 1989; Zola 1964, 1973). Ethnographic research in this vein has also drawn on the perspective of social constructionism (Miller & Holstein 1993, Spector & Kitsuse 1977). For example, Brown (1995, p. 37) argues for an approach to the social construction of diagnosis and illness in which an understanding of social and political contexts informs the analysis of interpersonal communication between doctor and patient.

Medicine as Discourse

Mishler's (1984) *The Discourse of Medicine* is a compelling implementation of microanalysis. In an analysis focused on history taking, Mishler observes that physician and patient often pursue distinct, and sometimes conflicting, agendas in the medical visit: The doctor's medical agenda focuses on biomedical evaluation and treatment, and the patient's lifeworld agenda concentrates on personal fears, anxieties, and other everyday lifeworld circumstances. Enforcing a medical agenda through questioning, physicians recurrently suppress the patient's concerns, even though they can be important sources of evidence of further medical problems.

Mishler's observations were expanded in Waitzkin's (1991) *The Politics of Medical Encounters*. In a nutshell, Waitzkin's argument is that the underlying, and largely unrecognized, structure of medical discourse militates against the expression of personal troubles, including "difficulties with work, economic insecurity, family life and gender roles, the process of aging, the patterning of substance use and other 'vices,' and resources to deal with emotional stress" (Waitzkin 1991, pp. 231–32). Instead, the medical management of patients' contextually generated problems focuses on technical solutions, reinforces ideologically dominant outlooks and prohibitions, and contributes to social control by reinforcing the patient's accommodation to the social contexts from which illness arises. This argument is pursued through all phases of the medical encounter and is richly documented for a wide variety of the personal problems previously listed. As described in Waitzkin

(1985), it draws on a larger data set: 50 cases selected randomly from a data set of 336 encounters, and supported by interview material with each patient. Waitzkin (1991, pp. 231–32) observes that these dysfunctional features of the medical visit emerged in 70% of the cases he examines.

Similar findings are reported in microanalytic studies involving women's reproductive choices (Fisher & Todd 1986, 1993; Todd 1989), studies that also address a wide variety of aspects of the medical visit. In a persuasive discussion, Todd (1989) documents several patterns by which "women's voices and medical care all too often pass each other by."

Although the mechanics through which these miscommunications emerge are various (West & Frankel 1991), West (1984) observes several gender-based communication patterns in physician-patient interaction that are strongly associated with dominance and subordination. The most fundamental of these is interruption—the verbal interdiction of another's talk—which is associated with social dominance, regardless of whether that involves gender or not (Kollock et al. 1985). West found that physicians interrupt patients more than the reverse, except when the patient is male and the physician is female, when, it appears, gender trumps occupational role as a covariate of interruptive behavior. In research on the same data set, West (1984) also showed that patients asked fewer questions than physicians and were less likely to receive answers to them than physicians were.

Taking Stock

We must now take stock of these two traditions of interaction research: the Bales-based RIAS coding model and the microanalytic approach. In principle, the strengths and weaknesses of the two approaches are complementary, and combining them should result in a greatly enhanced view of the medical encounter (Roter & Frankel 1992, Waitzkin 1990). In practice, this has not come about (Roter & McNeilis 2003), and it is instructive to consider why this is the case. Process approaches have resulted in findings about the medical encounter that are systematic and replicable. The most robust findings have centered on relationships between interaction variables and patient and provider characteristics, and to a lesser extent with patient satisfaction and adherence outcomes. Process approaches have not developed associations between interaction variables and medical decision making (surely one of the core areas of medical practice), nor in relation to patients' treatment preferences or physicians' perceptions of those preferences. In short, there is a lack of systematic investigation of the relationship between process variables and the content of medical practice and patient concern.

This deficiency is clearly associated with the kinds of coding categories used in process analysis. In the effort to generalize across practice contexts, coding categories are pitched at a very general level; hence, they lack detail and specificity. This is a well-rehearsed criticism of process analysis (Inui & Carter 1985, Mishler 1986, Pendleton 1983, Tuckett & Williams 1984, Tuckett et al. 1985), and it is associated with two related problems. The first of these is that, in the course of coding,

the content of the medical encounter is largely washed out. What the physician and patient were talking about is lost, often irretrievably when the original tapes are destroyed, and the coded material rather than the actual interaction on which it is based effectively becomes "the data" (Charon et al. 1994, Mishler 1984). A second problem is that coding expunges the context of utterances and actions. The location of utterances and actions in a phased activity within an encounter such as history taking or counseling and their placement in a specific and autocthonously intelligible sequence and course of action are precisely the aspects of context that give utterances and actions their meaning.

On the other side of the ledger, microanalytic approaches have retained crucial elements of medical sensemaking. Moreover, whereas process techniques like those of Roter concentrate on what is present in medical conversations, the microanalytic discourse approach, in highlighting absences in the dialogue, imparts a strongly critical edge to appraisals of medical practice. Nevertheless, many small-scale, quasi-ethnographic studies of discourse have not been able to establish a noninterpretive evidential base for associations between meaningful conduct on the one hand and social context or medical outcomes on the other. They retain vulnerabilities to objections in what Mishler (1986), following Katz (1983), terms the four Rs: representativeness, reactivity, reliability, and replicability. Granting the insight of the observer and the compelling nature of the observations, how can we be sure that the same phenomena obtain elsewhere or that another observer would come up with similar observations? To these insistent difficulties may be added another: What kinds of systematic patterns can be extracted from so little data that are also very particular in terms of time, place, participation, medical condition, payment, and other circumstances? If the objective is that of the cautionary tale, to describe ways in which physicians should not conduct themselves, then the message is often plain enough. Or if the objective is to identify the generics of interactional methods by which doctor and patient communicate, there are recommendations to be made that enhance that communication. But the message may go awry if physicians and others can find in the examples some exceptional element that makes their application to other circumstances moot.

From both the coding and the microanalytic perspectives, extracting clear conclusions about how physicians (or patients) should conduct themselves in specific moments in the flow of the medical encounter is not always possible. Equally, it has not been possible to establish many clear connections between factors that putatively impact physician-patient interaction and the details of medical encounters, nor relationships between conduct in medical encounters and the outcomes of those encounters. Moreover, finding a meeting point between the two methodologies has not yet been possible. Progress in research on physician-patient interaction, as several prominent researchers (Roter & Frankel 1992, Roter & McNeilis 2003) have attested, is seriously weakened by the lack of reconciliation between the two approaches.

Clearly, the same interactional conduct, addressed in such very different ways in the two research traditions, is the source both of individual meaning (shared

understanding, interactional obfuscation) and of systematic outcomes that can be subjected to quantitative investigation. An analytical framework is required that is responsive to very granular, individual moments in the physician-patient encounter, but that simultaneously supports coding at a higher level of abstraction sufficient to reach beyond individual cases to generate findings at a statistical evidentiary standard. Such a framework requires an analysis of interaction, grounded and validated in the direct analysis of the conduct of participants, and application to the medical encounter that is illuminating at both qualitative and quantitative levels.

CONVERSATION ANALYSIS AS AN APPROACH TO PHYSICIAN-PATIENT INTERACTION

During the past 20 years, conversation analysis (CA) has become a substantial presence in studies of physician-patient communication. Beginning with pioneering work by Frankel (1983, 1984), Heath (1982, 1986), and West (1984), it now spans the gamut of activities that make up physician-patient interaction in primary care (Heritage & Maynard 2006, Maynard & Heritage 2005) and has a growing presence in many more specialized aspects of medicine from AIDS counseling (Peräkylä 1995, Silverman 1997) to surgery (Koschmann et al. 2005, Mondada 2003). We review this literature as a kind of model for other approaches that aim for close analysis of interaction and that may also want to codify and relate practices of talk to measurable outcomes in the medical interview.

In its application to medical care, CA begins from the perspective that much of what goes on in the medical encounter is conversation, and that conversational practice involves the importation of the interaction order (Goffman 1983), together with ordinary methods of commonsense reasoning (Garfinkel 1967), into the very heart of the medical encounter. This point of view has several important implications. First, interactional practices through which persons conduct themselves elsewhere are not abandoned at the threshold of the medical clinic. That is, the organization of interaction described in CA studies of ordinary conversation—for example, turn taking (Sacks et al. 1974) and repair (Schegloff et al. 1977)—is largely carried forward from the everyday world into the doctor's office. Second, practices for effecting particular kinds of actions—describing a problem or trouble (Jefferson 1988) or telling bad and good news (Maynard 2003)—are also carried across the threshold of the doctor's office and affect how doctors and patients go about addressing particular interactional tasks. Third, the organization of interaction is fundamentally geared to the joint management of self-other relations (Brown & Levinson 1987, Goffman 1955, Heritage & Raymond 2005, Maynard & Zimmerman 1984). Departures from this organization, as in the interruption of one speaker by another, often represent violations of this joint management process. Within this perspective, CA begins from the presumption that physician and patient, with various levels of mutual understanding, conflict, cooperation, authority, and subordination, jointly construct the medical visit. This point of view mandates

a departure from the physician-centered approaches previously described because the contributions of the patient, no matter how minimal, are unavoidably implicated in the coconstruction of the medical encounter.

The CA perspective has been extensively described elsewhere (Clayman & Gill 2004, Drew & Sorjonen 1997, Goodwin & Heritage 1990, Heritage 2005, Hutchby & Wooffitt 1998, Maynard & Clayman 1991, ten Have 1999, Zimmerman 1988). In the following sections, we simply sketch some foci through which CA furnishes a distinctive perspective on physician-patient interaction.

Primary Care Interaction Comprises an Overall Structure of Component Activities

Unlike many forms of interaction, physician-patient encounters have a discernable overall structure. For example, the acute primary care encounter ordinarily manifests itself as an ordered structure of component activities, beginning with an opening sequence, progressing through problem presentation, history taking, physical examination, diagnosis, and treatment recommendations, and then on to a closing sequence (Byrne & Long 1976, Heritage & Maynard 2006, Robinson 2003). (Other types of medical visit—follow-up, routine maintenance, and physical check-ups—have distinctive, but equally patterned, structures.) This structure is institutionalized in a fully sociological sense: It is taught in medical school, patients are repeatedly trained by exposure to it from childhood (Stivers & Majid 2005), and both parties to the interaction orient to the internal boundaries in this structure with considerable exactness (Robinson & Heritage 2005, Robinson & Stivers 2001). The importance of overall structure is that it is a source of endogenously generated order that is realized in doctor-patient interaction. As such, it is also an important baseline for comparisons. Whereas analysis of the contributions of doctors and patients without reference to the structural subcomponents of medical visits can lead to results that are vague and difficult to interpret, analyzing the conduct of the parties in different phases of the interview yields clearly meaningful findings. Inquiry into medical openings, for example, or problem presentation, or diagnosis, or treatment recommendations readily yields patterns that permit comparisons across such dimensions as gender, race, specialty, payment system, national culture, and all of these dimensions across historical time (Tates et al. 2002).

Activities in Primary Care Are Constructed as Interaction Sequences

The activities that make up the medical encounter are transacted through sequences of interaction. In general, sequence organization is the engine room of interaction because, through it, participants generate the sense and meaning of utterances, as well as local identities and roles (storyteller, news deliverer, sympathizer) and larger social and institutional identities (woman, grandparent, Latino, physician, patient etc.). Sequential organization is a robust form of the interaction order,

subject to sanction and amenable to manipulation. We illustrate the relevance of sequence organization by reference to studies of sequences in which physicians offer diagnoses and make treatment recommendations.

A substantial body of CA research has shown that physicians and patients treat the management of diagnosis and treatment discussions in sequentially distinctive ways. Diagnoses tend to be offered and accepted on authority and ordinarily do not attract significant overt acknowledgment or acceptance by patients (Heath 1992; Peräkylä 1998, 2002; Stivers 2005a,b; Stivers & Majid 2005), although when diagnostic news is bad, silence also may be a patient's exhibition of stoicism (Maynard 2003). Moreover, patients may view the diagnosis as a precursor to treatment proposals (Freidson 1970) and tend to withhold response in light of that consideration (Robinson 2003). In sequential terms, patients withhold verbal responsiveness to clinician's diagnostic statements. Treatment proposals, in contrast to diagnostic announcements, tend to receive some form of acknowledgment, most often in the form of a fully overt acceptance (Heritage & Sefi 1992; Stivers 2005a,b, 2006). Underlying this sequential variation are profound differences in the social, epistemic, and interactional foundations of the two actions. Diagnoses are produced and recognized as actions performed by an expert who is licensed to perform medicine and render authoritative judgments about the nature of medical conditions. Nevertheless, when the diagnosis is favorable, patients and other recipients may produce a positive evaluation, whereas as recipients of adverse diagnoses, they regularly refrain from evaluative assessment in part to avoid any appearance of self-pity (Maynard 2003). However, in orienting to treatment recommendations as proposals, participants understand the sequences in which they appear as complete only when, normatively speaking, some exhibit of acceptance is produced. The contrasting sequential properties of diagnostic announcements and treatment proposals afford different options to patients who wish to resist diagnoses, compared with those who wish to resist treatment recommendations (Stivers 2002a, 2005a,b). Diagnoses that, from the patient's point of view, are adverse must be resisted actively (e.g., "You don't think it's strep?"). Treatment recommendations, by comparison, can be resisted passively: Patients, by withholding acceptance to a treatment recommendation, can pressure clinicians into elaborate justifications of a recommendation and, not infrequently, to alter or reverse it (Stivers 2005a,b).

On the topic of sequence organization, it is also relevant that physicians often systematically and strategically manipulate sequence structures to achieve rather specific objectives. For example, in a series of papers Maynard (1991a,b, 1992) has identified practices involved in the perspective display sequence (PDS) whereby clinicians prepare recipients for the delivery of adverse medical diagnoses. In presequence fashion, patients are invited to describe their own view of the medical problem before clinicians present their own diagnostic conclusions. At one level, use of these practices can seem like a grotesque manipulation of medical authority: What possible value can the layperson's view be in a context in which a professional medical judgment is about to be expertly rendered? But Maynard shows that, among other things, the PDS facilitates forecasting the news, not only preparing

the patient for the difficult information they must receive, but also establishing an auspicious interactional environment in which the professional can build on the patient's perspective through agreement rather than confrontation. The patient's perspective is complicated in the diagnostic presentation. The PDS does involve a strategic manipulation of the asymmetric relations between doctor and patient, but in a displayed benign way and with consequences that are often beneficial to the patient's understanding and acceptance (Maynard 1996).

Interaction, Contexts, and Outcomes

The CA studies described in the preceding sections were developed using the qualitative methods that have been the stock in trade of CA research for the past 30 years. In each case, going on a case-by-case basis, researchers identify structures as resources that the participants orient to and act upon as they deal with each other's talk, gesture, and other embodied conduct. Because CA results are descriptions of the organization of conduct that investigators validate qualitatively by reference to the participants' own actions in situ, it is possible to integrate CA findings into quantitative analyses that incorporate normal survey and outcome data to yield a more complete picture of a particular dimension of medical practice. Although the question of quantification has been controversial in CA (Drummond & Hopper 1993, Guthrie 1997, Schegloff 1993, Zimmerman 1993), a number of questions about the relationship between talk, its contexts, and its outcomes clearly cannot be answered without the statistical analysis of results.

We begin by noting that a number of studies suggest that specific interactional choices can have surprisingly large effects on both the interaction itself and its outcomes. For example, responses to the question "What can I do for you today?" are on average four times as long as responses to the question "Sore throat and runny nose for two days, huh?" (Heritage & Robinson 2006), and the choice has a significant influence on patients' satisfaction with their physicians regardless of how long they actually spend in presenting a medical problem (Robinson & Heritage 2006). Similarly, considering the choice between "some" and "any" in the question "Do you have some/any other concerns you want to address today?", the choice of "some" will reduce the incidence of patients' unaddressed concerns in the visit by up to 50%, whereas the choice of "any" will not reduce unaddressed concerns at all (Heritage et al. 2006). Consequences of interactional choices also reach well beyond immediate responses. For example, in a study of utilization review, pediatric patients' medical records were reviewed by insurance companies to determine whether they were eligible for tympanostomy tube surgery (Heritage et al. 2001, Kleinman et al. 1997). Boyd (1998) looked at interactions in which board-certified physicians call attending physicians who are proposing surgical procedures, interview them about the details of the case, and approve or disapprove insurance reimbursement for the procedure. The decisions of these reviewers were, formally at least, controlled by a set of explicit clinical criteria that cases must meet to merit reimbursement (Kleinman et al. 1994). Reviewers open the review

in one of three ways—bureaucratic, consensus building, or collegial (Boyd 1998). In the bureaucratic opening, the reviewer stresses a need for specific missing information, whereas in the collegial style, the reviewer asks for information in an open-ended fashion, as if consulting a colleague on a case. Boyd found that, although these openings initiate a review process intended to implement explicit criteria, the question designs predicted the outcome of the review. Controlling for individual differences and other factors, the odds of collegially opened reviews resulting in approval were three times greater than their bureaucratic counterparts, a finding that remained robust in more complex regression models incorporating all the variables predicting decisions that departed from the reviewing organization's explicit criteria for surgery, and a number of additional, potentially confounding variables.

Researchers have conducted similar studies concerned with prescribing decisions in pediatric medical visits, finding that inappropriate antibiotic therapy (for viral conditions) is linked to physicians' belief that parents expected an antibiotic prescription for their child. In a substantial study, Mangione-Smith et al. (1999) showed that this perception was the only significant predictor of inappropriate prescribing: When physicians thought the parent wanted an antibiotic for their child, they prescribed them 62% of the time versus 7% when they did not think the parent desired antibiotics. Actual parental expectations for antibiotics (as reported in a previsit survey) were not a significant predictor of inappropriate antibiotic prescribing after controlling for covariates. Additionally, when physicians thought parents wanted antibiotics, they diagnosed middle ear infections and sinusitis much more frequently (49% and 38% of the time, respectively) than when they did not think antibiotics were desired (13% and 5%, respectively).

Given that overt requests for antibiotics were rare in the data (Stivers 2002a), Stivers (2002b) examined parents' opening descriptions of their child's medical condition and distinguished between symptoms-only descriptions and descriptions that included (or strongly implied) a candidate bacterial diagnosis. She argued that the symptoms-only descriptions assert a medical problem but are agnostic on whether the problem can be treated with an antibiotics prescription. By contrast, the parent's candidate diagnoses (found in references to ear infections, strep throat, or bronchitis) assert the treatability of the child's complaint and may imply that the treatment should be antibiotic. Quantitative analysis showed that physicians are significantly more likely to perceive parental expectations in favor of antibiotics when they are presented with a candidate diagnosis rather than a symptoms-only presentation. However, the data also indicate that parents do not systematically discriminate between these problem presentations: Equal numbers of those who indicated prior to the consultation that they expected to get an antibiotic prescription for their child used each type of problem presentation (Stivers et al. 2003).

The studies described above demonstrate robust and sizable relationships between interactional conduct on the one hand and various kinds of interactional, relational, and medical outcomes on the other. These results hold promise for the

idea, promoted by Goffman (1983) in his presidential address to the American Sociological Association, that interaction is a significant element in the linkage between sociological variables such as gender, race, ethnicity, and socio-economic status on the one hand and medical decision making and outcomes on the other. Unfortunately, much less is known about the relationship between these determinants and the details of interactional conduct in medicine.

In the pediatric data described previously, which comprised a large multi-ethnic sample, patient/parent education levels and, to a lesser extent, patient ethnicity may affect some aspects of physician conduct (Stivers & Majid 2005). This is a domain of research that will certainly repay sustained investigation in the next wave of research effort.

Although the introduction of CA research into a multivariate framework is still in its infancy, these and other results are very encouraging. The CA observations, introduced into several analyses as coded variables, have proved strikingly robust in the multivariate context. This may be less surprising than it seems. The CA variables have been painstakingly validated in the most direct way possible, by examining the unmediated behavior of recipients of the conduct in question. If this conduct has significance on a case-by-case basis, it should survive and enrich multivariate analysis. And this validation has a further payoff: Empirical findings have direct interpretations in the conduct of the participants and are thus transparent as well as robust (Maynard & Frankel 2006).

CONCLUSION

In this overview, we have sketched the main perspectives and lines of development that have emerged in 30 years of studies of recorded doctor-patient interaction. This is a large field that has been extensively supported by the National Institutes of Health and other funding agencies in the United States and elsewhere. Its complexities are enhanced by disciplinary, methodological, and ideological divisions that are relatively enduring features of the field, by the changing structure of health care provision in many societies, and by the sheer multiplicity of health contexts and types of health care service in which social interaction plays a pivotal role. Amid these contingencies, it has been difficult to anchor generalizations in repeatedly observable particulars of medical interactions. Neither the Parsonian nor the three-function models as normative approaches have come to grips with the empirical process and content of doctor-patient interaction, and critiques that emphasize authority and dominance have done only somewhat better. Recent ethnographic, discourse analytic, or other qualitative inquiries have needed more disciplined or systematic approaches to counter the charge that findings are interpretive and idiosyncratic. Although efforts to adapt Bales's IPA to the medical context have provided a basis for a substantial number of studies, they are pitched at a level of abstraction entailing a considerable cost of its own: the loss of concrete content that interaction in the interview comprises.

During the past 30 years, there has been no shortage of inquiry into doctor-patient interaction. Unfortunately, the bifurcation of the field into conceptually disconnected quantitative and qualitative research approaches has often also involved disjunctive disciplinary and ideological perspectives with little interchange between them. However, we may be at a pivotal moment in the development of studies of physicians and patients with realistic prospects for reconciliation and integration. Approaches that deal with practices of talk and social interaction, which account for the meaningful character of social conduct in the medical encounter as an organized *verstehende* domain in its own right, also can provide the essential building blocks for generalizations about the causal significance of this meaningful social conduct and its relation to health outcomes.

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ERRATA

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