Chapter 17 The Challenge of Validating the Experience of Chronic Pain: The Importance of Intersubjectivity and Reframing

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Abstract A fundamental tenet of Western biomedicine is the validation of a patient's predicament by the clinician through demonstration of a disease process underlying illness. For the person experiencing chronic pain, however, the absence of demonstrable pathophysiological evidence of disease is a challenge to the clinician's ability to discharge that role. What may not have been appreciated is that the reverse situation can also hold true, insofar as the patient cannot validate the clinician as possessing sufficient knowledge and expertise to relieve their pain. In an effort to understand and remediate this impasse, this chapter explores the dynamics of the clinical encounter through the lens of the French sociologist Pierre Bourdieu, and examines the effects on the players when dealing with the *aporia* of pain. Then, in the novel approach of reframing the *field* of the clinical encounter through considerations of intersubjectivity, empathy and prospection, ethical possibilities for clinician and patient to achieve mutual validation of their predicaments are canvassed.

1 Outlining the Problem

I can only believe that someone else is in pain, but I know it if I am. Yes: one can make the decision to say "I believe he is in pain" instead of "He is in pain." But that is all. What looks like an explanation here, or like a statement about a mental process, is in truth an exchange of one expression for another, which, while we are doing philosophy, seems the more appropriate one. Just try—in a real case—to doubt someone else's fear or pain (Wittgenstein 1953, §303).

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Why is the management of chronic pain so unsatisfactory and frustrating for both the person experiencing pain and the attending health professional? The biomedical model of illness, which has long dominated Western healthcare, turns on the ability of a clinician to validate a patient's clinical presentation by demonstrating an underlying disease process through a commitment to obtaining empirically observable ("objective") evidence, leavened by the testing of hypotheses. In this context, "to validate" (from the Latin *validus*, strong) means to confirm, corroborate or substantiate. However, this criterion of validation breaks down in those forms of illness in which there is no demonstrable pathophysiological evidence of disease (Wade and Halligan 2004).

The predicament of the person experiencing chronic pain is an example *par excellence* of the inability of medical practitioners to validate that person's experience, as there may be no identifiable underlying cause. Thus, there is no specific treatment that will result in its resolution (Quintner et al. 2008). This leads to a crisis for both observer and observed. As Wittgenstein (1953) argues, whilst on the one hand, it is impossible for an observer to confirm the experience of pain of another person; on the other hand, it is equally impossible for an observer to deny that that person is feeling pain.

For clinicians whose training has been in accord with the strict rules imposed by the biomedical model of disease (Quintner et al. 2008), such a clinical presentation constitutes an impenetrable puzzle or an *aporia* (Derrida 1993). It is therefore understandable why physicians can become demoralized by their inability to provide validation when the context in which they have to practice is unfamiliar to them (Frank 2004). Furthermore, this failure of validation categorizes such pain sufferers as members of an "outgroup" (Robbins and Krueger 2005), and can result in them encountering societal disbelief (Newton et al. 2013) and stigmatization (Cohen et al. 2011).

This chapter will seek to understand why what should be a basic function of health professionals—the clinical management of people experiencing persistent pain—is not only unsatisfactory in terms of therapeutic outcomes, but also frustrating for both patient and clinician, each of whom is seeking validation from the other. Recognition of the *realpolitik* of how this clinical "game" is "played" can lead to some innovative approaches and strategies towards more satisfactory ethical and therapeutic outcomes for both parties. This opens novel avenues for clinicians to safely and ethically lead their patients towards a better understanding of their existential predicament, which itself is an important component of validation.

2 The Clinical Encounter

Central to this challenge of validation of the pain experience is the nature of the clinical encounter itself. In examining the dynamics of this fundamental interaction, a lead is taken from the writings of the French philosopher and sociologist Pierre

Bourdieu [1930–2012] (Colyer et al. 2015), as applied to clinical medicine by Frank (2002) and to medical education by Gomes and Rego (2013). The discussion turns on Bourdieu's concepts of *illusio*, *habitus*, *field*, and *capital*.

2.1 Illusio

The essence of a clinical encounter is dialogue, captured by Frank (2002) as "talk grounded in mutual desire to recognize and be recognized," as an example of a social "game." For this Bourdieu coined the term *illusio* (drawing upon its Latin root *ludere*, to play), to describe how a person could be caught up as a player in other people's social games. The medical consultation can be viewed as one such social game, which both parties are enjoined to take seriously, as the stakes can be high (Frank 2002).

Illusio can be viewed from the perspective of the kinds of discourse that typically operate in exchanges between clinician and patient. Although in practice they overlap, three standard forms of discourse—or "game"—can be identified. The "objective" discourse of factuality, as informed by science, is the basis of biomedical practice. The "subjective" discourse, which is the realm of personal expressiveness, has tended to be diminished in this context. The third form of discourse might be called the intersubjective or social that emphasizes negotiation towards shared meaning. To each of these forms of illusio the players bring their own habitus and field.

2.2 Habitus

According to Bourdieu, the *habitus* of an individual is the set of embodied habits, tastes, actions, styles and attitudes that are acquired through the process of growing up in families, communities and societies. These constitute a primer for how it is that people act and think, in accordance with that social context. In their *habitus*, people's experiences become embodied and through them they develop a "feel for the game," learning the rules that become second nature to them (Bourdieu 1994). Moreover, "these habits are not just individual ways of behaving, but include lasting decisions, values and judgments made by an individual that have been adopted in the course of his or her life" (Moran 2011).

In practical terms, *habitus* embodies our "know-how" in managing day-to-day life situations, and is a predictive model of our behaviours in response to certain circumstances that call for us to act (Gomes and Rego 2013). These authors argue further, in the context of medical education, that *habitus* "...is not the simple internalization of social rules, rather it is a dynamic interaction between individuals,

social agents and social structure in order to enable acting-in-the-world" (hyphens added). In medical practice, *habitus* conditions clinicians' ways of "being, seeing, acting and thinking" (Emmerich 2013).

2.3 Field

It follows that clinician and patient each brings to the clinical encounter not only their own *habitus* but also this "mutual desire to recognize and be recognized." The encounter itself takes place in what Bourdieu (1975) termed a *field*, a structured space in which agents and their respective social positions are located. The position of each particular agent in the *field* is a result of dynamic interactions between the specific rules of the *field*, the agent's *habitus* and what Bourdieu termed the agent's *capital*, that refers to the kinds of resources agents bring to the social interaction or the products of those interactions (as discussed below).

Gomes and Rego (2013) draw on Bourdieu's concepts in relation to medical education: "Considering medicine as a socially structured space where social agents, namely physicians and those who intend to gain this title—medical students—meet and follow rules and principles of regulation specific to that occupation, it would appear that this profession can function ... as a well-organised model for Bourdieu's field." An extrapolation to medical practice itself is clear, the *field* being constituted by its own story or "monopoly of categories of appreciation and of modes of operation." I

In Western medical practice, the rules of the game are usually unspoken, but well understood. Society expects clinicians to be trained primarily to apply basic scientific principles of diagnosis to the injured or diseased human body in order to return it to functional health. The patient is expected to present symptoms to the clinician, who then evaluates them in order to arrive at a specific diagnosis and plan a regimen of treatment. However, when these expectations cannot be met for the persistent pain sufferer, the fundamental assumption of the clinician's task appears to have been misguided from the outset.

Horton (2003) has shown how their use of language provides clues as to the way in which medical practitioners might bring to the *field* their *habitus* as a form of benevolent possessor of their patients. The word "patient" as a sufferer waiting for something to be done to alleviate suffering, and the way in which patients become "subjects" in research studies, exemplify these unconsciously adopted paternalistic attitudes that can strip sick people of their unique characteristics.

¹Bourdieu saw the locus of these interactions as being "a competitive struggle in which the specific issue at stake is the monopoly of scientific authority or ... the monopoly of scientific competence in the sense of a particular agent's socially recognised capacity to speak and act legitimately (i.e. in an authorized and authoritative way) in scientific matters." [p. 20] Substitute "clinical" for "scientific," and these comments capture the *field* of the clinical encounter.

2.4 Capital

Bourdieu's concept of *capital* (1986) is the third player in the *illusio*, with *habitus* and *field*. This concept includes economic capital (concerned with material resources), social capital (an enduring network of mutual acquaintances), and cultural capital (the cultural competencies individuals develop through socialization and learn over time).

For health care professionals in contemporary society, prestige, reputation and fame have become valued forms of social capital (then referred to as symbolic capital), which can be incorporated as skills and knowledge, objectivised in books or tools, or institutionalized as degrees or certificates (Abel and Frohlich 2012). The historical outcome of health professionals' persistent search for accumulation of these resources is to entrench hierarchies that in turn require permanent vigilance to legitimize and maintain these social differences, or a continuous effort to conceal the origins of these asymmetries (Navarro 2006).

When such social capital becomes legitimized as part of a dominant culture, Bourdieu's concept of *symbolic violence* can come into play (Bourdieu 1990). Pringle (1998) explains how this concept relates to her particular medical specialty:

His account applies well to the field of internal medicine where, it may be argued, power and prestige are maintained through forms of symbolic violence, 'gentle, invisible ... unrecognised as such, chosen, as much as undergone, that of trust, obligation, personal loyalty, hospitality, gifts, debts, piety, in a word, of all the virtues honoured by the ethics of honour (Pringle 1998, p. 98).

Horton (2003) also sees the unstated terms and conditions of the doctor-patient relationship as one that may be more appropriate as being between master and servant. Typical examples of "medical master" discourses in chronic pain include: the biomedical narrative, reducing the patient to a mere organism in the hands of a techno-scientific apparatus; the bio-behavioral story of pain as a conditioned response; the egotistic clinician narrative, where social standing and career goals overshadow patient needs; the ironic-sarcastic discourse, which though superficially friendly, barely conceals the clinician's contempt for the patient's explanatory story; and, above all others, the stigmatizing narrative by which the patient is declared an immoral *malade imaginaire* (Molière's "The Imaginary Invalid").

This form of discourse can also be seen as reflecting tension between the social or symbolic capital of the health care professional and that of the patient-person experiencing chronic pain. It then becomes understandable how the clinician's inability to relieve a patient's pain may threaten his or her social capital. However, an important aspect of social capital for people experiencing pain is very much linked to their access to reliable and up-to-date information to explain their pain, and therefore to clear assessment and treatment pathways, which is the provenance of health care professionals (Nielsen 2012). When such information is not conveyed appropriately, the patient's social capital becomes threatened and trust in the health care professional will be undermined. When it comes to the needs of persistent pain sufferers, all such master-servant narratives must count as unethical options for medical practice.

3 Pain as an Aporia

What is it about pain that disturbs the otherwise ordered rules of engagement in the *illusio* of the clinical encounter? The lived experience of being in pain is not only difficult to express in natural every-day language but also ultimately not communicable in these terms. As Scarry (1985) has shown, people experiencing pain have no language with which to express it and are constrained to use metaphor, often creatively. For clinicians, pain is too complex to be understood from the standpoint of linear causation or even from a desire to make sense of it using currently available frameworks of reference (Quintner et al. 2008). As a result, our attempts to develop explanatory models of pain bounce off a metaphysical brick wall, which constitutes an encounter with the *aporia* of pain.

An *aporia* (from the Greek meaning "lacking a path, a passage or a way") is a mystery or puzzle that encompasses the dual problems of neither knowing how one has arrived at a particular place nor knowing where next to proceed (Burbules 2000). As it is unlikely that pain can ever be demonstrated objectively (that is, to be seen as an observable "thing"), the clinician's experience becomes one of uncertainty, discomfort and doubt.

The person experiencing pain, encountering the same *aporia*, presents for investigation and treatment with the quite reasonable expectation that the clinician will be able to explain their lived experience using currently available medical scientific knowledge. However, when the clinician does not know how to proceed, the result for both parties can be a crisis of choice, of action, and of identity. The clinician's dilemma can lead to loss of empathy and even to feelings of resentment towards the person in pain (Cohen et al. 2011).

When confronted with their clinician's dilemma, the person experiencing pain is forced to share the very same doubt and uncertainty, thereby compounding their own discomfort, with potentially negative implications for the therapeutic relationship, the most serious of which is the risk of stigmatization of the patient (a form of "social suffering") within the health care system and poor integration of health services (Nielsen 2012).

4 Rapprochment

All the interventions that treat the body as an object, and that consequently understand pain as something inside the body, will never be enough for many patients ... Sooner or later, what affects pain is the relationship between the patient and the clinician (Frank 2003, p. 619).

The discussion above has shown that the conventional *field* of biomedical discourse in usual Western medical encounters breaks down when confronted with the

aporia of persistent pain, to the detriment of all players, irrespective of their habitus. To recall Frank (2002), neither party "recognizes or is recognized." Given the established nature of habitus and the unlikelihood of changing capital, perhaps it is the field—that "monopoly of categories of appreciation and of modes of operation"—in which there is potential for resolution and therefore for validation.

Some perspectives on reconstituting the *field* of the clinical encounter come from an examination of the roles of intersubjectivity and the "third space": empathy, and social prospection (Crisp 2015), or imaginability (Ruthrof 2014).

5 Intersubjectivity and the "Third Space"

In his most influential work, the philosopher Martin Buber [1878–1965] outlined two different approaches through which people can choose to relate to others: that of I-It or I-Thou (Buber 1958). The biomedical model of illness has traditionally employed the I-It approach or paternalistic model (Charles et al. 1997), where the patient is portrayed as a passive recipient of treatment, but from whom cooperation with treatment is expected. By contrast, echoing Buber's I-Thou approach, intersubjectivity refers to one's ability to interact with others in a reciprocal and mutually meaningful fashion (Grinnell 1983). Translating Buber's I-Thou approach to the doctor-patient relationship has profound ethical implications for both parties. Frank (2004) offers valuable insights into the practice of ethics-as-process:

First, being ethical requires working with people who have never had to confront the realities of a hard choice until they face a clinical situation involving a choice no one should have to make ... Ethics needs to shift its orientation from decisions to identities—that is, who I become as a result of making this decision. That I-in-becoming refers equally to clinicians and patients and families. Second, claims to autonomy should be tempered by the recognition that values are held only in relation to other values, both other values of one's own and other people's values (Frank 2004, p. 357).

The realization of intersubjectivity takes place within what Winnicott (1971) termed the "third space." Similarly, to the imaginative play of children, the "third space" can be likened to that in which the players are able construct a relevant culture for a particular purpose. In such an empathetic clinical encounter, clinician and patient seek to carve out a communal public space of signs and understandings created by their respective actions (Favareau 2002). In effect, this space constitutes a *field* of Bourdieu where the *habitus* of each player is respected (Emmerich 2013).

This form of clinician-patient interaction is also an example of Frank's "ethics-in-process," taking place in a virtual space that both parties have agreed to enter for creating a therapeutic relationship (Frank 2004). It functions as an "in-between" or transitional space between subject and object (Praglin 2006) where a truly ethical culture of clinical practice develops and each can live in the other's experience. This space can then become a zone of active exchange, where dynamic negotiation and testing of boundaries take place (Blair 2014).

According to Praglin (2006), the intersubjective space is "where one finds the most authentic and creative aspects of our personal and communal existence, including artistic, scientific, and religious expression." Through creative expression, situations can be resolved and new possibilities emerge. Thus, the clinician-patient relationship becomes a truly intersubjective one, when Buber's I-Thou dichotomy can be unified as "We."

6 Empathy and Prospection

Etymologically derived from the Greek *empatheia* for "in suffering or passion," empathy implies a shared phenomenology wherein the observer is able to accept and understand the expression of another person's emotional experience because it reflects that observer's own experience or capacity to appreciate such experience (Cohen et al. 2011).

Empathy represents the core ethical value of intersubjectivity, as it functions as a foundation for other acts that allow one to live in the experience of the "other" in an intuitive manner without the necessity of having to share the same experience at an emotional level, as is the case for sympathy (Stein 1917).

Evidence from neuroimaging studies accords with phenomenological descriptions (Gurmin 2007) and functional simulation proposals of empathy (Barnes and Thagard 1997; Gallese et al. 2002) that suggest that the act of observing others who are experiencing pain triggers activation of neural networks that have been implicated in the direct lived experience of pain (Decety et al. 2009).

Importantly, these networks include those that have been found to accompany the observation of strong negative emotional expressions such as disgust, fear, anger and sadness (Budell et al. 2010) as well as those associated with positive emotions such as joy (Takahashi et al. 2008). As these neural networks sub-serving emotions are shared, it is not surprising that empathic responses of both clinician and person-experiencing-pain will bias the attitudes, emotions, intentions and behaviour of both parties.

7 Prospection

One of the tenets of empathy is the ability to put oneself in the position of the other because of shared human biology and humanity. Crisp and colleagues (Crisp and Turner 2012; Miles and Crisp 2014; Crisp 2015) have developed this theme as *social prospection*, defined as "the capacity to mentally project oneself into the past or the future to consider alternative perspectives based on our past experiences."

In his important "contact hypothesis," Allport (1954) suggested that bringing together members of different groups under appropriate conditions could lead to more positive inter-group relations. Crisp and Turner (2012) expanded Allport's

hypothesis to encompass "the planning, rehearsal, and enacting interactions with others—the ability to mentally time-travel that is necessary to transcend peoples' tendencies to see out-groups as 'them', and to see a possible future in which they are also 'us'." In support of this proposal they have assembled evidence that by simply imagining contact with a member of an "out" group a person is engaging in conscious processes that parallel those involved in actual contact.

The potential benefits of a person imagining a positive interaction with an outgroup member include positive changes in attitudes and behaviour towards the member, as well as less overall anxiety for the person involved. In addition, they draw on research from other areas of behavioral science that shows that social prospection can enhance self-efficacy.

Evidence assembled by Miles and Crisp (2014) also supports the proposition that imagined contact is potentially a key component of educational strategies aiming to promote positive social change. Although this proposition has not been tested in relation to clinicians and their patients in pain, it has been shown on the one hand that only providing information does not change intergroup attitudes, while on the other hand that imagined contact could help to challenge existing attitudes and to "reduce anxiety and negative expectations about contact, while generating positive emotions like empathy" (Crisp and Turner 2012). Social prospection may be a novel template for reframing the clinical encounter in pain medicine.

8 Negotiation Towards Validation: Reframing the Problem

Validation was defined above as confirmation, corroboration or substantiation. That process for the person with chronic pain has two dimensions: the recognition and affirmation by the clinician of where-they-are-in-the-world, and a mutually agreed reframing of the person's predicament. In order to help the patient come to terms with the fundamental change in their existential situation, the clinician needs to have a genuine interest in the patient as a person by the facilitation of a genuine dialogue.

9 Strategies for an Ethical Discourse

The conscious experiences of other people cannot be perceived, analysed, or defined as objects or as things—one can only relate to them dialogically. To think about them means to talk with them, otherwise they immediately turn to us their objectivised side: they fall silent, close up, and congeal into finished, objectivised images (Bakhtin 1963).

In contrast to monologic discourse, which pretends to be the ultimate word, finalized and deaf to the other's response, dialogic discourse is the willingness to become caught up in the other's *illusio*, at least provisionally (Frank 2002). From a dialogical standpoint, listening is the capacity to share what makes someone's story worth telling and worth hearing. The dialogical and profoundly ethical task is for each to see themselves as participants in the other's story to the extent that "each feels implicated in the other's life story, and feels that other's implication in his or her own story—and believes these stories matter, crucially" (Frank 2002).

Trevarthen (1979) suggested that in humans the experience of pain is fundamentally associated with the need to "tell" someone about it. For those experiencing chronic pain, where there may be no readily discernible lesion or process, the third space provides a unique opportunity for them to "tell" this to their clinician, and for both to use the process of dialogical discourse to reframe the problem in an attempt to comprehend their suffering.

10 Reframing the Problem Through Narrative

The biomedical narrative, which is based upon the discovery of underlying disease, cannot be the only one for the person experiencing chronic pain. By contrast, in order to meaningfully engage with their patients at a deeper level, clinicians may need to offer a continuous narrative that might lead the patient to an existential understanding of their condition and predicament. This proposition is supported by findings that patients with pain associated with cancer who disclosed highly emotional narrative material reported lower pain intensity and improved well-being (Cepeda et al. 2008).

One such narrative, which is biologically based, serves to make both parties aware that humans share fundamental properties in common with all living organisms and that the experience of being in pain can often be associated with a host of clinical features suggesting activation of evolutionarily conserved systems of stress or sickness response (Lyon et al. 2011). This narrative transcends dualistic thinking as it is made clear that both physical and psychological traumata can activate these systems. Moreover, the clinical problem can be reframed as one due to dysregulation of the mechanisms that control them.

11 Reframing the Concept of Validation

Another, older connotation of the word "validation" (from its Latin root) is "strengthen." This can itself add another ethical dimension to the role of the physician, through the act of "being with" the patient-experiencing-pain in the intersubjective space and negotiating an interpretation of the patient's narrative through dialogical discourse, the clinician is able to provide a satisfactory

explanation of the patient's predicament and lay the groundwork for the patient to play an active role in addressing that predicament. The strength of this approach is that it increases the likelihood of adherence to prescribed therapy, and implementation of strategies of self-monitoring, self-management and self-efficacy.

However, it must be expected that such an approach may be resisted by agents of the dominant ideology, whose "task of teaching medicine leans towards cultural and social reproduction... that, in effect intends to perpetuate the existing *symbolic capital*" (Gomes and Rego 2013).

12 Conclusion

When confronted with the *aporia* of pain and the uncertainty that attends phenomena that do not accord with the biomedical imperative, validation of another person's experience of chronic pain may well be challenging and even threatening to the social capital of both parties. However, by accepting this risk and reframing this problem through the concepts of intersubjectivity, and using the strategies of dialogical discourse, mutually negotiated narratives and social prospection, a rapprochement characterized by both confirmation and strengthening can be reached in an ethical manner (Fig. 1).

Legend: Clinician and patient both grapple with the aporia of pain. Both face risks that can threaten their respective social capital. Through negotiation in the intersubjective (third) space, using strategies of dialogical discourse, the experience of the person in pain can be reframed and thereby validated.

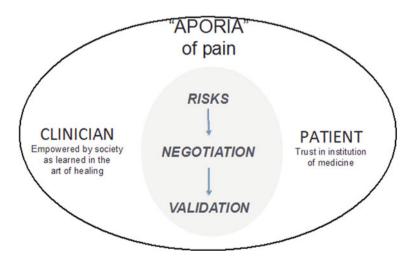


Fig. 1 Intersubjective (third) space negotiation

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References

Abel T, Frohlich KL (2012) Capitals and capabilities: linking structure and agency to reduce health inequalities. Soc Sci Med 74:236–244

Allport GW (1954) The nature of prejudice. Addison-Wesley Publishing Company, Reading Bakhtin M (1963) Problems of Dostoyevsky's poetics. Khudozhestvennaja literatura, Moscow. English edition: Emerson C (1984) University of Minnesota Press, Minneapolis

Barnes A, Thagard P (1997) Empathy and analogy. Dialogue 36(04):705-720

Blair G (2014) Gayari Chakravorty Spivak: the negotiation of space. Eye Mind IDSVA J Philos Aesthet Art Theory 2. http://www.elputnam.com/eyemind/Blair.htm. Accessed 12 Dec 2015

Bourdieu P (1975) The specificity of the scientific field and the social conditions of the progress of reason. Soc Sci Inform 14(6):19–47

Bourdieu P (1986) The forms of capital. In: Richardson J (ed) Handbook of theory and research for the sociology of education. Westport CT, Greenwood, pp 241–258

Bourdieu P (1990) The logic of practice (trans: Nice R). Stanford University Press, Stanford Bourdieu P (1994) In other words (trans: M Adamson). Polity Press, Cambridge

Buber M (1958) I and Thou (trans: Ronald Gregor Smith). Charles Scribner and Sons, New York Budell L, Jackson P, Rainville P (2010) Brain responses to facial expressions of pain: emotional or motor mirroring? Neuroimage 53:355–363

Burbules NC (2000) Aporias, webs and passages: doubt as an opportunity to learn. Curriculum Inquiry 30(2):171–187

Cepeda MS, Chapman CR, Miranda L, Sanchez R, Rodriguez CH, Restrepo AE, Ferrer LM, Linares, RA, Carr DB (2008) Emotional disclosure through patient narrative may improve pain and well-being: results of a randomized controlled trial in patients with cancer pain. J Pain Symptom Manage 35:623–632

Collyer FM, Willis KF, Franklin M, Harley K, Short SD (2015) Healthcare choice: Bourdieu's capital, habitus and field. Curr Sociol. doi:10.1177/0011392115590082

Cohen M, Quintner J, Buchanan D, Nielsen M, Guy L (2011) Stigmatization of patients with chronic pain: the extinction of empathy. Pain Med 12:1637–1643

Crisp R (2015) The social brain. Robinson, London, pp 99–112

Crisp RJ, Turner RN (2012) Imagined intergroup contact. In: Hodson G, Hewstone M (eds) Advances in intergroup contact. Psychology Press (Taylor and Frances), Hove, pp 135–151

Decety J, Michalska KJ, Akitsuki Y, Lahey BB (2009) Atypical empathic responses in adolescents with aggressive conduct disorder: a functional MRI investigation. Biol Psychol 80:203–222

Derrida J (1993) Aporias (trans: Thomas Dutoit). Stanford University Press, Stanford

Emmerich N (2013) Medical ethics education: an interdisciplinary and social theoretical perspective. Springer Science and Business Media, New York, pp 21–39

Favareau D (2002) Beyond self and other: on the neurosemiotic emergence of intersubjectivity. Sign System Studies 30:57–100

Frank AW (2002) "How can they act like that?" Clinicians and patients as characters in each other's stories. The Hastings Center Report 32:14–22

Frank AW (2003) How stories remake what pain unmakes. In: Dostrovsky JO, Carr DB, Koltzenburg M (eds) Proceedings of the 10th world congress on pain (progress in pain research and management, vol 24). IASP Press, Seattle, pp 619–630

Frank AW (2004) Ethics as process and practice. Intern Med J 34:355-357

- Gallese V, Ferrari PF, Umiltà MA (2002) The mirror matching system: a shared manifold of intersubjectivity. Behav Brain Sci 25:35–36
- Gomes AP, Rego S (2013) Pierre Bourdieu and medical education. Rev Bras Educ Méd 37:260–265 Grinnell F (1983) The problem of intersubjectivity: a comparison of Martin Buber and Alfred Schutz. Hum Stud 6:185–195
- Gurmin JH (2007) Edith Stein and Tania Singer: a comparison of phenomenological and neurological approaches to the 'problem of empathy'. In: McDonnell C (ed) Maynooth philosophical papers, Issue 4. National University of Ireland, Maynooth, pp 99–122
- Horton R (2003) Second opinion: doctors, diseases and decisions in modern medicine. Granta Books, London, pp 1–64
- Lyon P, Cohen ML, Quintner JL (2011) An evolutionary stress-response hypothesis for chronic widespread pain (Fibromyalgia Syndrome). Pain Med 12:1167–1178
- Miles E, Crisp RJ (2014) A meta-analytic test of the imagined contact hypothesis. Group Process Intergroup Relat 17:3–26
- Moran D (2011) Edmund Husserl's phenomenon of habituality and habitus. J Br Soc Phenomenol 42:53–77
- Navarro Z (2006) In search of a cultural interpretation of power: the contribution of Pierre Bourdieu. IDS Bull 37(6):11–22
- Nielsen A (2012) Journeys with chronic pain: acquiring stigma along the way. In: McKenzie H, Quintner J, Bendelow G (eds) At the edge of being: the aporia of pain. Inter-disciplinary Press, Oxford, pp 83–97
- Praglin L (2006) The nature of the "in-between" in DW Winnicott's concept of the transitional space and in Martin Buber's Zwischenmenschliche. Universitas 2(2). http://www.uni.edu/universitas/archive/fall06/pdf/art_praglin.pdf. Accessed 16 Jan 2016
- Pringle R (1998) Sex and medicine: gender, power and authority in the medical profession. Cambridge University Press, Cambridge, pp 97–127
- Quintner JL, Cohen ML, Buchanan D, Katz JD, Williamson OD (2008) Pain medicine and its models: helping or hindering? Pain Med 9:824–834
- Robbins JM, Krueger JI (2005) Social projection to ingroups and outgroups: a review and meta-analysis. Pers Soc Psychol Rev 9:32–47
- Ruthrof H (2014) Language and imaginability. Cambridge Scholars Publishing, Newcastle upon Tyne
- Scarry E (1985) The body in pain: the making and the unmaking of the world. Oxford University Press. New York
- Stein E (1917) On the problem of empathy. English edition: Stein W (1989) The collected works of Edith Stein, vol 3. ICS Publications, Washington DC
- Takahashi H, Matsuura M, Koeda M, Yahata N, Suhara T, Kato M, Okubo Y (2008) Brain activations during judgments of positive self-conscious emotion and positive basic emotion: pride and joy. Cereb Cortex 18:898–903
- Trevarthen C (1979) Pain and mood. In: Wolstenholme G, Oconnor M (eds) Brain and mind. Ciba Foundation 69, Excerpta Medica, Amsterdam, pp 323–334
- Wade DT, Halligan PW (2004) Do biomedical models of illness make for good healthcare systems? Br Med J 329:1398–1401
- Winnicott DW (1971) Playing and reality. Tavistock Publications, London
- Wittgenstein L (1953) Philosophical investigations (trans: Anscombe E). The MacMillan Company, New York