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The commensuration of pain: How nurses transform subjective experience into objective numbers

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ABSTRACT

Commensuration—the transformation of different qualities into a common metric—has recently received increased scholarly attention. While mostly studied at the meso- or macroscale, this article extends the focus to microscale commensuration. Based on fieldwork in a Norwegian emergency medical service, the article analyses how nurses rated patients' pain intensity on a scale from zero to ten. While nurses were instructed to score pain by combining patients' self-report with their own 'objective' assessment, the article finds that their actual assessments relied almost solely on the latter. After exploring nurses' objections against the use of self-report, the article reconstructs the principles, methods and beliefs underlying nurses' 'objective' approach to pain scoring. In so doing, the article demonstrates how a fundamental aspect of human experience was filtered through nurses' professional gaze—to the advantage of some patients and the disadvantage of others. The article also advances theorising on microscale commensuration, thus providing guidance for future studies of how the world is transformed through the everyday production of numbers.

1. Introduction

> Pain presents a unique problem in terms of measurement, and a unique cruelty in terms of suffering. –Eula Biss, *The Pain Scale*.

In recent decades, social scientists have begun to pay more explicit attention to *commensuration*, the process of transforming qualitative differences into a common metric (Espeland and Stevens, 1998, 2008). Commensuration is a ubiquitous and fundamental feature of modern societies, as evidenced by the proliferation of rankings, cost-benefit analyses and standardised tests across a range of institutional settings. While its ubiquity and apparent objectivity can make commensuration easy to overlook, Espeland and Stevens (2008, p. 406) have urged scholars not to take these processes for granted; instead, we should question the work and conventions that underpin the production of seemingly neutral numbers. This is particularly crucial because commensuration is a *transformative* process, emphasising certain aspects of the objects that it measures while downplaying others (Espeland and Stevens, 1998, pp. 314–8).

Whereas previous research has primarily studied commensuration at the meso- or macroscale, this article extends the focus to microscale commensuration. It does so by exploring a puzzling case of pain scoring, drawn from my fieldwork in a Norwegian emergency medical service. The service in question was a walk-in clinic similar to emergency departments in other countries. Its frontline personnel were triage nurses, who assessed the urgency of patients' complaints. As part of their assessment, nurses were required to score patients' pain intensity using the Numeric Rating Scale (NRS). The NRS is an 11-point scale ranging from zero ('*no pain*') to 10 ('*the worst pain imaginable*'); when used in triage assessments, the NRS score has consequences for priority setting, affecting whether the patient must wait for hours or is seen immediately by a physician. To determine a patient's NRS score, the clinic's triage guidelines specified that nurses should score pain by combining their own assessment with the patient's self-reported pain score, respectively referred to by nurses as 'objective and 'subjective' NRS. However, nurses did not adhere to these guidelines; instead of combining the two ratings, they relied almost solely on the 'objective' NRS, asking patients to self-report their pain score only when the 'objective' NRS was considered ambiguous or inconclusive. Such deviations from guidelines are of course not uncommon (cf. Timmermans and Epstein, 2010), but this particular practice seemed puzzling, as self-report is widely seen as 'the gold standard' for pain assessment (cf. Pierik et al., 2017). Indeed, one influential definition states that pain is "whatever the experiencing person says it is, existing whenever the experiencing person says it does" (cited in Woodrow, 2002, p. 62). Additionally, nurses themselves commonly insisted that pain is a subjective phenomenon. This raises two important questions: Why did nurses disregard patients 'subjective' pain score, and what did their 'objective' approach entail?

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To address these questions, the present study employs an ethnographic approach that emphasises *Verstehen*—i.e. considering "actors' situated intentions, beliefs, and opportunities" (Turco and Zuckerman, 2017, p. 1273) to locate their actions "in an intelligible and more inclusive context of meaning" (Weber, 1978, p. 8). This approach serves to foreground *the situated logic* of nurses' commensuration of pain, which has largely been neglected in previous studies of pain assessments. Specifically, the article shows that nurses considered 'subjective' NRS to be antithetical to pain assessment, and how they instead relied on a range of 'objective' methods and principles they believed would provide more correct, consistent and efficient commensuration. While facilitating decision making in triage, this 'objective' approach also transformed the phenomenon of pain in significant ways, with systematic consequences concerning who and what was prioritised. Thus, in analysing nurses' commensuration of pain, the present article seeks both to contribute to the study of microscale commensuration and to demonstrate how a fundamental aspect of human experience is filtered through nurses' professional gaze.

In the following, I discuss existing studies of pain and commensuration; describe the study's data and methods, and then present and discuss the study's findings.

1.1. Social science and pain

Studies of pain have a long history in the social sciences, dating back at least to Zborowski (1952) *Cultural Components in Responses to Pain*. Comparing different ethnic groups, Zborowski demonstrated significant differences in their attitudes towards and reactions to pain. His findings challenged the idea that pain is a purely physical phenomenon and the sole domain of the natural and medical sciences, showing instead that pain has a cultural component and is a suitable subject for social scientific inquiry.

Following Zborowski, social scientists have shown a clear preference for exploring patients' perspectives on pain, often also contrasting these to how professionals comprehend patients' experiences (cf. Frank, 1997; Greenhalgh, 2001; Kleinman, 1988). Concerning the latter, the studies give important demonstrations of the "enormous chasm between embodied experience and professional evaluation" (Bendelow, 2006, pp. 59–60); however, as they predominantly focus on the patient-side of this relationship, they largely leave professionals' perspectives and practices unexplored. Some notable exceptions include macro-oriented studies of how pain is conceptualised within the broader context of biomedical culture (Bendelow and Williams, 1995; Morris, 1993; Scarry, 1985; Vrancken, 1989), and more micro-oriented studies of how clinicians perceive and treat chronic pain patients (Baszanger, 1992; Buchbinder, 2015; Crowley-Matoka and True, 2012). However, while these studies provide important insight into the cultural and organisational aspects of pain assessment, they pay less attention to the question of how professionals *assess* pain in concrete encounters with patients.

Insofar as the practice of pain assessment has attracted academic attention, this is predominantly in quantitative studies that measure the quality of clinicians' assessments (cf. Duignan and Dunn, 2008; Modanloo, 2010; Pierik et al., 2017; Prkachin et al., 2007; Puntillo et al., 2003; Solomon, 2001; Teanby, 2003). Comparing clinicians' with patients' own pain scores, these studies show that clinicians systematically give lower pain scores than patients do, and that the discrepancy is greater for experienced clinicians. Moreover, as many studies use patients' self-report score as yardstick, these findings are often taken as evidence of clinicians *underestimating* patients' pain and becoming more prone to underestimation as their experience increases (cf. Pierik et al., 2017; Prkachin et al., 2007; Solomon, 2001).

While giving important evidence of workers assessing pain differently from patients, these studies provide less documentation on *how* workers go about assessing pain or *why* their assessments differ from those of patients. A notable exception is Vuille and colleagues' (2017) interview study of nurses in a Swiss ED, which shows that ED nurses regularly perceive a difference between their own pain assessment and patients' self-report, that the nurses privilege their own assessment, and that they use different techniques to ensure greater congruence between the two assessments. The authors attribute these findings to nurses' pursuit of objectivity, which they in turn interpret as an expression of nurses' self-understanding as professionals. While closely aligned with the present article, Vuille and colleagues' study is limited by a relatively small sample (12 nurses) and the use of interviews to draw conclusions about nurses' practice—limitations that are recognised by the authors themselves, who characterise their study as "an important first step in understanding pain management" (Vuille et al., 2017, p. 675). The present article seeks to take further steps, delving deeper into both how and why nurses assess pain as they do.

1.2. Commensuration

In addition to unpacking nurses' pain assessments, this article also contributes to research on commensuration. While implicit in much social scientific work (cf. Simmel, 1978), the study of commensuration has been most explicitly formulated by Espeland and Stevens (1998, 2008), who define commensuration as "the transformation of different qualities into a common metric" (1998, p. 314). Commensuration is a form of *classification*, in which people or things are sorted into categories of 'more or less'; it is often also treated as synonymous with *quantification*, but we should note a subtle difference between the two. Commensuration is a *subtype* of quantification, in which qualities are reduced to quantities and distinctions between objects become a question of magnitude (Espeland and Stevens, 1998, p. 316); this must be distinguished from quantification that is purely symbolic, as in the differentiation of football players based on their jersey number (Espeland and Stevens, 2008: 407). Importantly, commensuration is a *transformative* process, emphasising certain aspects of the objects being measured while downplaying others. As such, commensuration can be understood as "a system for discarding information and organizing what remains into new forms" (Espeland and Stevens, 1998, p. 317).

To date, research on commensuration has predominantly focused on meso- and macro-level issues. One strand of studies traces the increasing emphasis on quantification in modern societies (cf. Desrosières, 2002; Hacking, 1990; Porter, 1996); another elucidates the broader cultural and institutional arrangements that make commensuration possible (cf. Fourcade, 2011; Huault and Rainelli-Weiss, 2011; Khaire, 2014; Samiolo, 2012). Representing the latter, a range of studies have explored how difficulties in commensuration have been overcome to create markets for 'products' such as art (Velthuis, 2003), carbon emissions (MacKenzie, 2009) and organ transplants (Healy, 2006). Another strand explores the unintended consequences of commensuration—a key example being Espeland and Sauder (2007) study of how law school rankings alter the workings of the law schools whose quality they are supposed to rank neutrally and non-intrusively.

Complementing these meso- and macro-level studies, a small but significant literature has explored commensuration on the ground floor of professional practice. For instance, Essén and Oborn (2017) study the 'performativity' of numbers in a Swedish rheumatology unit; focusing on the use of metrics in clinical practice, they highlight "the role of numbers in constituting the healthcare reality they are intended to depict" (2017, p. 134). Similar to the present article, their study draws attention to metrics that are generated habitually by a range of actors in clinical practice—numbers that are typically produced in a more distributed and discretionary fashion than those published in authoritative reports by corporations and agencies (a dominant case in the larger-level studies). However, in contrast to the present article, Essén and Oborn limit their study to how "numbers do things" (2017, p. 134) for patients and physicians—thus focusing on the work numbers do rather than the work of making numbers.

In shifting the focus to the situated production of numbers, the present article aligns more closely with a few other studies that explore number production in micro-level practice. Key contributions are Lamont's (2009) study of how members of peer review panels work to render applications commensurate, and Lynch's (2018) study of how legal actors accomplish—and circumvent—the numbers-based logic of federal sentencing guidelines. While less extensive than meso- and macro-level accounts, these microscale studies allow the researchers to zoom in on the distributed number production that occurs routinely in professional settings—often without notice, yet with great significance for peoples' life chances. As such, they demonstrate the importance of studying the principles, methods and beliefs that underlie microscale commensuration. When seen together, these studies also highlight a salient contrast between differently elaborated forms of commensuration: While Lynch's judges are required to use elaborate guidelines for sentencing, Lamont's peer reviewers have far fewer prescriptions for how to rank applications. The nurses in the present study are most closely aligned with the peer reviewers, in that their guidelines leave significant room for discretion (as I return to in the Findings section).

Moreover, in contrast to the more deliberative settings of court rooms and peer review panels, the present article examines commensuration under conditions of significant time pressure and uncertainty. Actors have to 'think fast' (Kahneman, 2011) when scoring, and in so doing, they rely on a range of routines and heuristics to elaborate their guidelines (Lipsky, 1980, pp. 63–5). As well as exhibiting the same transformative effects as 'slower' commensuration, this 'faster' commensurative work depends largely on experiential, common-sense and unsanctioned knowledge. Scrutiny of fast and decentralised commensuration is therefore highly relevant—especially in professional settings, where workers typically have significant power over clients.

Thus, in addition to addressing how and why nurses assess pain as they do, the study raises a range of questions of broader relevance for the microscale study of commensuration: How do commensurators commensurate? What criteria, methods, principles and broader epistemological concerns underpin their work, and how do these transform the commensurated objects? How is their commensuration shaped by the circumstances under which it takes place? And what are the broader implications of their work? These questions are addressed in the Findings section, but first I discuss the study's data and methods.

2. Data and methods

The paper forms part of the author's larger ethnographic project exploring how Norwegian emergency medical workers interpret and prioritise patients (Johannessen, 2018a). Ethnography involves the first-hand study of people as they go about their everyday lives (Emerson et al., 2011), which enables the researcher to observe first-hand what people do rather than relying purely on people's own verbal accounts of what they do (Jerolmack and Khan, 2014). Accounts are not unimportant—indeed, much of nurses' work cannot be observed directly, including the knowledge and reasoning underlying their assessments—but ethnography allows the researcher to situate the actors' accounts in the context of what they do from day to day, "when all the constraints of their ordinary social situation are operative" (Becker, 1996, p. 62). Moreover, through first-hand participation in a social milieu for an extended period, the ethnographer can sample people's sayings and doings in a range of settings and situations, comparing these various data points to make strong inferences about people's reasons for behaving as they do (Becker, 1996; Jerolmack and Khan, 2014). This makes ethnography an apt method for unpacking both the hows and whys of nurses' commensuration of pain.

The article's ethnographic data are drawn from a Norwegian emergency primary care clinic (EPCC). In general, EPCCs are heterogeneous institutions, ranging from single physicians on call in rural areas to large-scale urban organisations employing hundreds of workers (Hansen and Hunskår, 2016). The largest EPCCs are open to all patients at all times, and in contrast to Norwegian emergency departments (EDs), they allow patients to walk in at their own discretion. Because they also serve patients across the entire spectrum of criticality, these large-scale EPCCs resemble EDs in most other Western countries (Vassy, 2014). The clinic under study was one such large-scale EPCC. It was located in the city centre, performed more than 50,000 consultations per year, employed more than 100 nurses and physicians and was open for 24 h on every day of the week. The clinic was intended to serve patients with medical rather than surgical conditions.

Fieldwork at this EPCC was conducted between April and December 2015. The 47 fieldwork sessions had an average duration of approximately 6 h. Of these, 20 sessions were spent observing nurses in triage and asking them about their assessments in close proximity to actual patients, which was crucial because of the ephemeral and largely unspoken nature of nurses' 'objective' pain scoring. In total, I observed 342 face-to-face assessments, performed by 2 male and 14 female nurses, most of whom were aged between 25 and 35 years. All of these nurses held a bachelor's degree in nursing (as is required for the protected title of 'nurse' in Norway); on average, they had worked in this EPCC for 3.5 years (range 1–7 years). I also attended two mandatory courses in triage nursing and conducted semi-structured interviews with seven nurses, two physicians and two managers, in which pain assessment was an important theme. For the purpose of analytical contrast, a further nine fieldwork sessions were conducted at two other emergency institutions.

The interviews were transcribed verbatim. During fieldwork sessions, I scribbled keywords and near-verbatim quotes on a notepad or laptop for subsequent use in more elaborate field notes, yielding approximately 1270 single-spaced pages. As all notes were written in Norwegian, I have translated the extracts included here, making minor grammatical and aesthetic adjustments.

The study was approved by Norwegian Social Scientific Data Services. Pseudonyms are used to secure informants' internal and external confidentiality (Tolich, 2004), and no other identifying information is disclosed. I signed non-disclosure agreements with the participating EPCCs and secured workers' informed consent by distributing an information letter and delivering several short presentations on the project. When interacting with patients, each EPCC worker I shadowed would ask the patient whether it was acceptable that I witnessed their interaction.

Analysis began immediately on entering the research setting. I learned about nurses' 'objective' approach to pain scoring quite early in the fieldwork and subsequently dedicated significant time and attention to understanding what that approach entailed and why they favoured it. For the purposes of this article, relevant field notes have been inductively differentiated and iteratively reviewed to explore the logics of nurses' pain scoring. However, as the analysis has also been significantly influenced by my reading of the empirical and theoretical literature, it is more appropriately referred to as an *abductive* process—that is, as a dialogue between data and theory, in which data influences the choice of theory, and theory facilitates the interpretation of data (Swedberg, 2017; Tavory and Timmermans, 2014).

3. Findings

In considering nurses' commensuration of pain, I begin with a general overview of triage and pain assessments. After describing the nurses' objections against 'subjective' NRS, I go on to review their 'objective' approach, which they considered a more correct, consistent and efficient method of assessing pain.

3.1. Triage and pain assessments

Working at the clinic's frontline, the EPCC triage nurses sat in booths and called patients individually. Triage was often carried out under hectic conditions, as the waiting room was noisy, the queue to triage could be long, and there was always the risk that those waiting to be triaged might be critically ill. As nurses assessed anywhere between

40 and 70 patients during busy shifts, triage was considered tiring work. (Having witnessed approximately 60 unique assessments on my first day in the field, I can attest to this.) A triage assessment typically lasted 4–8 min, during which time the nurse would record a brief medical history, collect vital parameters and perform simple examinations before assigning an urgency level. While all of this information had to be documented for each assessment, their geographical separation from the rest of the clinic meant that there was little direct supervision of nurses' practices.

To regulate nurses' assessments, the clinic used the *Manchester Triage System* (MTS), which is currently the most widely used triage system in Europe. The MTS is part of a broader trend towards the standardisation of clinical practice; since the late 1980s, the drive towards evidence-based medicine has led to a mass introduction of clinical practice guidelines in healthcare (Timmermans and Berg, 2003). These guidelines represent a shift in how professional work is regulated; while earlier attempts sought primarily to streamline working conditions, clinical practice guidelines instead seek “to intervene at the moment of a health care provider's special expertise: medical decision making” (Timmermans and Berg, 2003, p. 13).

The MTS is less optional in character than most clinical guidelines, aiming for near-exhaustive codification of the decision-making process. Designed as a paper-based manual, the MTS consists of 53 flow charts ordered by ‘chief complaints’, such as abdominal pain, allergy, ear problems and head injury. Nurses must assess patients using the most relevant of these charts, each of which lists ‘discriminators’ (i.e. symptoms and signs) related to the complaint in question. The aim is to order patients in one of five formal levels of priority; known as ‘triage codes’, these levels are referred to by colour: red (most urgent), orange, yellow, green and blue (least urgent). (Note: As an instrument for ranking patients' complaints, the MTS is itself a form of commensuration; see Johannessen (2018b; 2018a; 2017) for a discussion of how nurses generally use—and depart from—the MTS.)

Pain is a central component of the MTS-prescribed triage assessment. For one, the system requires nurses to check for *symptom-oriented* aspects of patients' pain—such as its character, duration and location—as this can help reveal underlying disease (such as heart attacks or abdominal aneurisms). Moreover—and of particular relevance for present purposes—the MTS also instructs nurses to assess patients' pain *intensity*, which is listed as a separate ‘discriminator’ in 44 of the MTS′ 53 flowcharts (it is not included in charts like ‘asthma’ and ‘intoxication’). The fact that the MTS treats pain intensity as a *separate* criterion for priority setting means that it can be potentially decisive for the patient's triage code (and, consequently, for how long patients have to wait before seeing a physician). This is symptomatic of how EMS organisations, in response to allegations of poor pain management, have sought to make pain assessments a required and standardised aspect of triage (Teanby, 2003). This, in turn, reflects a broader shift in how pain is conceptualised in medicine, where it is now seen as harmful in itself rather than just as a symptom of something else (Morris, 1993, p. 74).

To determine pain intensity, the MTS requires nurses to use the 11-point Numeric Rating Scale. The 11 NRS scores are distributed across the bottom four triage codes, where a score of 0 corresponds to a ‘blue’ priority, 1–4 is ‘green’, 5–7 is ‘yellow’, and 8–10 is an ‘orange’ priority. To arrive at a single NRS score, the MTS instructs nurses to combine two sub-measures: the patient's self-report and the nurse's own clinical pain assessment, respectively referred to by nurses as ‘objective and ‘subjective’ NRS. Beyond this, the system offers few instructions for combining the two measures or for clinically assessing patients' pain. Thus, while the MTS is a relatively elaborate tool for commensuration, the system leaves significant room for discretion in assessing pain; hence, it was up to nurses to ‘fill in the blanks’ of the system.

Nurses were given some direction in the course they were required to attend prior to practising triage, where the instructors (who were themselves experienced triage nurses) repeatedly told participants to privilege their own ‘objective’ score over the patient's self-report. In observing triage assessments, I found that nurses imposed an even more hierarchical relationship between the two measures; of the 342 assessments I observed, I noted only five instances in which nurses asked patients to self-report their score. This was no anomaly; nurses commonly claimed that they had stopped using the ‘subjective’ NRS unless they considered the ‘objective’ score ambiguous or inconclusive. The next section begins to explore why.

3.2. The problems with ‘subjective’ NRS

In the clinic under study, the ‘subjective’ NRS was widely perceived as a flawed measure. Nurses' objections were multiple. First, some patients were perceived as *intentionally* underreporting or exaggerating their score. While underreporting was attributed to a range of different motives—for example, wanting to appear brave or to avoid troubling EPCC workers—intentional exaggeration was seen primarily as an attempt to cheat the queue.

Second, many patients were said to *unknowingly* distort their score—for instance, by overreporting their pain due to anxiety or fear. Nurses also claimed that many patients lacked *imagination* when comparing their pain to the NRS end-point (defined as ‘the worst pain imaginable’). Nurse Hanna described this with a mixture of humour and annoyance when she confided: “I had a patient who sat calmly in his chair and talking, saying ‘NRS 10’—and then I thought, ‘So, if I kick you in the nuts right now, you wouldn't feel more pain?!’“. We should note that these unimaginative patients are conceptually distinct from the ‘cheaters’ mentioned above; while cheating implies bad intentions, a lack of imagination merely suggests naïveté regarding the full spectrum of pain experiences.

A final objection was that asking for ‘subjective’ NRS could lead to time-consuming discussions. Consider the following account by Nurse Helga.

> In the beginning, when we started using triage, we tried to ask every patient about it [NRS]. And then we saw that a lot of them were quick to say eight, nine, ten, leading to discussions like “But, you're walking okay and you're sitting calmly …“, and there's no use discussing NRS with the patients.
>
> Such discussion was considered anathema to triage, as it wastes time and potentially puts sicker patients at risk (and, potentially, the nurse too; an internal annual report documented 173 reported incidences of threats and violence towards nurses in the clinic).

In these nurses' view, then, the ‘subjective’ NRS ran counter to the aims of scoring pain consistently, correctly and efficiently. These are important aims across healthcare settings and may account for why other workers (e.g. in post-operative units) have been found to disregard subjective scores (cf. Solomon, 2001). However, nurses seemed to consider the ‘subjective’ NRS to be particularly antithetical to triage assessments, as pain scores are used here to rank patients in line to see a physician. Ranking requires pain scores to be spread across the whole scale—something that patients allegedly failed to do; and as Nurse Thomas put it, “There's no use having a triage system if everyone gets orange”.

Nurses' objections stand in remarkable contrast to the notion of self-report as the ‘gold standard’ of pain assessment, and to the evaluative studies that treat self-report as the benchmark for evaluating the precision of nurses' assessments. Instead, nurses considered ‘subjective’ NRS unfit for the situation it is intended to standardise. In its place, they relied on an ‘objective’ approach to pain assessment, whose key principles are detailed in the following sections.

3.3. ‘Objective’ assessments

The advantages of an ‘objective’ approach may seem self-evident, given that the term suggests an unbiased, factual assessment. However, as firmly established in science studies (cf. Daston, 1992; Porter, 1996;

Shapin, 1995), what is designated ‘objective’ can vary across time, place and actors. It seems useful, then, to unpack what this ‘objective’ approach entailed in the present case.

3.3.1. Objective signs and credibility checks

A first point of entry is nurses' reliance on so-called ‘objective’ signs. These were expressions of pain that are directly or indirectly observable, such as a particular form of body language (e.g. restlessness, facial contractions, gestures towards the painful area); reduced functional capacity (e.g. inability to walk upright, sit down, breathe properly, or eat and drink without feeling pain) and certain physiological changes (e.g. raised pulse, pallor or sweating).

As the term ‘objective’ suggests, these signs were granted significant validity. However, ‘objectivity’ was treated in continuous rather than binary terms, which meant that some signs were seen as purer expressions of pain than others. The most ‘tainted’ signs were patients' self-reported pain scores, closely followed by their verbal descriptions (the latter were granted *some* weight, as evidenced by how nurses regularly asked patients whether they were in ‘discomfort’ or ‘pain’). Behavioural signs of the more familiar and easily manipulated kind were assigned somewhat greater validity, whereas the more esoteric and less governable behavioural signs (e.g. a particularly restless body language), as well as physiological signs, were considered purest.

In addition to this hierarchy, nurses also relied on several techniques for assessing the credibility of patients' complaints. First, nurses appraised whether ‘objective’ signs were *significant in their absence*. As pain was assumed to express itself in at least some observable signs, patients displaying no ‘objective’ signs were taken to be in little or no pain. The most referenced example was patients sitting calmly in their chair, claiming to have a pain score of ten. Similarly, nurses typically discounted patients who claimed to be in severe pain, only to answer ‘no’ when asked if they had taken painkillers. Illustrating the abovementioned hierarchy of validity, Nurse Madeleine also explained, “If [you claim] your stomach really hurts and your pulse is 70, then I think, ‘Okay, you're not in *that* much pain’; but with a pulse of 120, then I know something's not right”. As these examples show, the absence of ‘objective’ signs was taken to suggest exaggeration, and nurses therefore had to adjust pain scores accordingly.

Second, nurses also appraised signs in light of the *pain interval* of the patient's condition. By ‘pain interval’ I mean the range of pain stimuli and, consequently, of pain scores associated with a particular condition. Some conditions (e.g. abdominal pain) were seen to have wide intervals, potentially ranging from top to bottom of the NRS. Other conditions had narrower intervals; for instance, ear pains and sore throats stereotypically entailed little pain while gallstones and kidney stones were believed to elicit intense pain. Using these notions of inherent or ‘normal’ pain (see Sudnow, 1965), nurses could check whether patients' verbal and behavioural expressions of pain were misaligned with their condition. Accordingly, patients expressing pain outside their interval (e.g. by sobbing dramatically over ear pains or a sore throat) were suspected of distorting their ‘real’ level of pain.

Third, nurses also looked for behavioural slip-ups in patients' impression management (Goffman, 1959). Typical examples included patients who came limping into triage only to walk flawlessly when leaving the assessment, or patients who came laughing into the clinic only to appear deadly serious in the triage booth. Nurses also made more elaborate inferences about how patients ‘really’ felt about their pain. For instance, Nurse Julie explained, “If you come in, put your purse on the floor and your coffee on the table, claiming, ‘I'm in real pain’, then I'm thinking that you're probably in pain but not so much that you couldn't manage to buy coffee first”. In other words, such ‘slip-ups’ were taken to suggest a discrepancy between claimed and ‘real’ pain, which nurses had to take into account.

Finally, nurses also tried to compensate for the fact that certain patients may have a ‘different’ way of expressing their pain. Nurse Madeleine argued this point with reference to certain ‘cultures’.

> Certain cultures, for instance, they often express themselves in a different way in response to illness. It's a lot of shouting and hollering and body movements and stuff you often—[when I smile to encourage her to continue, she seemingly interprets my smile as disbelief.] But it's true! [I express understanding.] And then you develop this attitude of “Okay, but they're not *that* ill, right?” That's the way they behave, they tend to exaggerate.

Madeleine's account illustrates the widespread belief that patients from certain ‘cultures’ behave in a particularly expressive way, and how this expressive behaviour might be interpreted as ‘exaggeration’. She did not specify the ‘cultural’ group in question, but others attributed these particular characteristics to Somali women. Note, however, that nurses did not assert that there are cultural differences in how patients *experience* or *endure* pain—only that certain groups *express* pain more strongly than others. ‘Cultural’ differences in pain expression is a common theme in the scholarly literature (cf. the seminal studies by Zborowski, 1952; Zola, 1966), and attending to such differences is actually encouraged in the MTS handbook, which states that nurses' pain assessments must take account of how cultural groups “differ in how they respond to, or express, their pain” (Mackway-Jones et al., 2014, p. 32). Attending to cultural differences is supposed to increase the validity of nurses' pain scoring; put simply, if members of one group *express* pain more strongly than those of other groups, their information should be weighted to arrive at a more correct assessment. Accordingly, the most remarkable aspect of Madeleine's account is not necessarily that she holds generalised beliefs about particular patient groups; for present purposes, the more noteworthy point is that these beliefs are seen to serve an important role in *calibrating* nurses' commensuration.

3.3.2. Benchmarks and collegial calibration

In addition to their reliance on objective signs and credibility checks, nurses sought to ensure consistent commensuration by using fixed reference points for the pain scale. While some of these have already been hinted at (e.g. sore throat, gallstones), this section foregrounds nurses' use of fixed *end-points* for ‘the worst pain imaginable’.

Although not universally embraced in the EPCC, fixed end-points were a commonly claimed feature of nurses' assessments. In general, these were used as benchmarks for assessing the intensity of a patient's pain expression—as illustrated in the following backstage account by Nurse Natalie, concerning patients who make exaggerated claims about back pain.

> If you've given birth, right, then you'd say that just as you're pushing the head out, then you're at ten. [She jokingly simulates the midwife's voice] “Are you at ten now?” And then you have them [patients with back pain], standing like this [she grasps her lower back and sways her body dramatically back and forth, imitating the patient], “You know, I have such terrible pains in my back, it has to be a nine”, and I'm like, “No, if it had been a nine, then you'd be like this” [she bends over, standing as if her back was completely stuck].

Natalie's account illustrates, first, how she equates an NRS score of 10 with the climactic moments of giving birth, and, second, how this reference point (together with the absence of certain ‘objective’ signs) is taken as grounds for discounting patients' exaggerated assertions. Nurses' reliance on benchmarks such as birth pains implies that they assess pain from an *inter-patient perspective*, in which patients' complaints are judged according to nurses' standards, rather than adopting an *intra-patient perspective* that relates pain intensity to the patient's own reference points. Opting for the latter would have been particularly challenging considering that nurses assessed *unknown* patients, whose pain thresholds could not be established reliably within a brief triage assessment. In its place, the use of nurse-determined benchmarks seemed a fitting proxy, ensuring, in nurses' view, that pain was scored according to a stable and ‘objective’ standard.

This is not to say, however, that all nurses shared exactly the same standards. For instance, while Nurse Natalie equated an NRS score of 10 with birth pains, Nurse Hanna—who referred to herself as a 'strict' pain assessor—equated birth pains with an NRS score of 8 and reserved the 10 for 'torture'. This suggests less than perfect reliability *between* nurses' ratings. Consequently, with all else being equal, the same patients would receive different pain scores depending on whether a nurse like Natalie or Hanna assessed them. (It is also worth noting that Hanna and other 'strict' nurses typically expressed their 'strictness' with some *pride*. This can be partly understood in light of the widespread belief that the EPCC was 'abused' by patients with 'trivial' complaints (explored more thoroughly in Johannessen, 2018c), for which reason 'strictness' served as an important form of 'adult education'. 'Strictness' also seemed to have a seasoned, distinguishing quality to it, which set the 'strict' apart from those who indiscriminately empathise with the most trivial of pains.)

However, while there were differences in strictness, daily EPCC socialisation ensured that pain was assessed according to a *similar* if not *identical* metric. Working in a large clinic meant interacting regularly with colleagues, and this served to align nurses' beliefs about pain and the standards for its assessment. Of particular importance was nurses regular interactions with the clinic's coordinating nurse and physician, who monitored patient flow and followed up on patients post-triage. Among other things, coordinators sanction nurses when their pain ratings (and assessments more generally) seem too out of tune with agreed-upon standards. Although relatively infrequent (I observed only one case), these sanctions could have a significant preventive effect, in the sense that nurses sought to mimic the standards of their colleagues in order to avoid being reproached. In combination with other everyday exchanges—such as discussions about difficult, interesting or frustrating cases—these collegial interactions contributed to aligning nurses' pain assessments, creating an intersubjective agreement that was seemingly perceived as common sense and, indeed, *objective* (see Shapin, 2012, p. 176).

This brings us again to the problems associated with 'subjective' NRS. While nurses could work to align each other's assessments, they had only limited influence on patients' standards. Educating one's clientele during brief, one-off encounters was considered a waste of time and effort and could even cause patients to feel alienated or distrusted. Thus, while the sociology of standardisation (Timmermans and Epstein, 2010) offers rich illustrations of the challenges in standardising professionals' behaviour, 'subjective' NRS highlights the additional and arguably more challenging issue of standardising *patients'* conduct.

Finally, it is worth noting that some patients were considered better than others at rating their pain. For instance, it was suggested that the elderly are more appropriately imaginative than others; as Nurse Natalie jokingly explained, "Older people have more experience, so they're probably better at assessing, like, 'It wasn't exactly like when I was shot during the war, but it kinda feels like it'". Similarly, patients who work in healthcare were simply said to 'get' the NRS; as Nurse Miriam proclaimed, "It's great with healthcare workers who know the NRS—I just ask and then write what they say". Thus, as long as patients were seen to follow nurses' standards, their self-report could be used for commensuration.

3.4. Explaining nurses' approach

To sum up thus far, we have seen how nurses disregarded patients' self-report and instead approached pain 'objectively' by relying on 'objective' signs, credibility checks and the use of nurse-determined benchmarks for 'the worst pain imaginable'. In so doing, nurses rendered pain a *professional* concern, in which proper assessment relied on their professional gaze and standards. Pain was thus seen less as a subjective experience and more as an underlying 'thing' to be determined by reference to the absence or presence of 'objective' signs. Interestingly, this meant that nurses treated pain states in much the same way as other *disease entities* in biomedicine—that is, as "distinct, objective entities that are common to afflicted patients" (Chiong, 2001, p. 90).

It should be noted that this transformation is not exclusive to the nurses under study, as a preference for 'objective' assessments has been reported in several of the studies reviewed above. Most notably, Vuille et al. (2017) found that nurses preferred 'objective' data to patients' self-report; had different methods for assessing patient credibility; relied on what has been described here as an inter-patient perspective; and used fixed end-points in their assessments.

To explain this preference for an 'objective' approach, we can first look to the situational requirements of triage. Reducing pain to an observable phenomenon enables nurses to rank patients on a single dimension rather than having to weigh this against other, more subjective dimensions. Moreover, this reduction more easily meets the need to assess patients quickly; instead of engaging in potentially time-consuming dialogue with the patient, nurses can observe 'objective' signs while attending to other matters. Treating pain 'objectively' as an observable phenomenon therefore simplifies nurses' commensuration, allowing them to assign pain scores quickly and, in their view, with greater precision and consistency than if they had simply relied on patients' self-reports.

However, the use of an 'objective' approach cannot be explained completely by the organisational constraints of triage, as studies have found a preference for 'objective' pain scoring among healthcare workers in other contexts as well, including in pain clinics and post-operative units (Baszanger, 1998; Harper et al., 2007; Solomon, 2001). While conducive, the structural features of triage are therefore not necessary or exhaustive conditions for assessing pain 'objectively'.

Beyond triage, one likely explanation for the reliance on an 'objective' approach can be found in Goffman's remark that people regularly "use what are considered to be the ungovernable aspects of [a person's] expressive behaviour as a check upon the validity of what is conveyed by the governable aspects" (1959, p. 18). In other words, as people have a general propensity for using signs that are 'ungovernable' or beyond conscious control to assess each other's credibility, we should expect healthcare workers to prefer 'objective' and assumedly ungovernable signs over patients' all too governable self-report.

Adding to this, I believe that this propensity for validity checking is exacerbated by at least two additional aspects of healthcare work. Firstly, these workers control access to scarce goods (e.g. a high priority in triage, painkillers in post-operative units), meaning that patients, in order to receive said goods, have incentives to exacerbate their complaints. Workers are therefore likely to cultivate at least some skepticism towards patients' self-presentation (cf. Hughes, 1988; for a more general account, see Yuille, 2013).

Secondly, healthcare workers are employed in organisations in which biomedical culture is deeply entrenched. Thus, as they fill roles and are held accountable to beliefs and values that are closely associated with biomedicine, we should not be surprised to see healthcare workers approach 'subjective' evidence with skepticism. Ever since the advent of 'scientific medicine' in the eighteenth and nineteenth centuries, the 'subjective' has suggested a personal, emotional and biased account, far removed from the 'objective' and true nature of things (Malterud et al., 2015). Clinicians therefore have a long history of seeking ways "to bypass patient-narratives in their search for an 'objective' diagnosis" (Bourke, 2014, p. 256; see also Jewson, 1976). In the case of pain, the shift to 'scientific medicine' meant that the phenomenon was characterised less in terms of an experiencing subject and more in terms of stimuli and response—typically explained in terms of an internal 'pain system' that carries messages from pain receptors in the skin to a pain centre in the brain before being expressed mechanistically in observable signs (Bendelow and Williams, 1995, p. 141). Accompanying this, clinicians increasingly attended to the 'gestural language' of pain (Bourke, 2014); that is, to how pain expresses itself in a stable set of observable signs (as those mentioned above). While the 1960s saw a renewed *theoretical* emphasis on patients' subjectivity (Melzack and Wall, 1965), the mechanistic stimuli-response model can still be found in clinical *practice*; as Bendelow and Williams argue, clinicians often equate 'real pain' with "something that is acute with an easily observable physiological pathology" (1995, p. 145). This relates to how biomedicine privileges vision as a form of knowing, and to how 'objectivity' often tends to depend on the visibility of evidence (Leder, 1990, pp. 19–20). Or as Buchbinder remarks, "to know that symptoms are 'real', [clinicians] need to be able to see them" (2015, p. 11).

Returning to the nurses under study, it was primarily such a mechanistic conception of 'real' physical pain that underpinned their 'objective' approach to pain scoring. This is not to say that nurses always and intentionally understood pain in mechanistic terms (i.e. as directly readable from patients' bodies and behaviour); rather, this was an *assumption* that they often *privileged* in their assessments. As indicated, the reasons for doing so seem closely aligned with both organisational constraints and a heuristic biomedical view of pain and the body. Combined with the factors mentioned in the previous sections, I therefore see their use of an 'objective' approach as intimately linked with having to (1) rank and (2) distribute scarce goods to (3) previously unknown patients (4) quickly by use of (5) a unidimensional measure, while (6) being part of, or accountable to, a culture that places a premium on 'objective' evidence. In short, these are situations where an 'objective' approach seems likely to be considered the most valid, reliable and efficient proxy for scoring patients' pain. However, more research is needed to determine the transferability and relative importance of these factors. I would particularly encourage comparative designs, exploring assessments of different types of pain (e.g. chronic or acute), assessed with varying degrees of complexity and with different goals in mind (e.g. priority setting, pain relief, diagnosis), under different treatment regimes (cf. Baszanger, 1992; Vrancken, 1989), and carried out by different actors in different settings. Approached this way, we could significantly improve our understanding of how pain is commensurated in various healthcare settings.

3.5. Pain and priority setting

Before concluding, it is worth reflecting briefly on how nurses' 'objective' approach can have systematic—and potentially problematic—consequences for their prioritisation of patients; especially in light of how nurses rendered pain a professional concern, and thus shifted the power balance of the triage encounter significantly in favour of themselves.

To begin, we have seen that members of certain minority cultures were believed to express pain in a 'different' and exaggerated way. While such assumptions arguably play an important calibrating role in nurses' assessments, the use of perceived group characteristics to judge individual patients also means that nurses run the risk of suspecting exaggeration *even when evidence of exaggeration is absent*. This is a general problem with stereotypical reasoning, often referenced by critics of related practices such as statistical discrimination (Pager and Karafin, 2009) and racial profiling (Harris, 1999).

Furthermore, in attending solely to patients' 'objective' signs, nurses privilege 'physiological' pain over other forms of suffering, such as 'emotional' pain (Bendelow and Williams, 1995). While this may seem an obvious priority in emergency medicine, it is worth emphasising that other logics of priority setting exists, as evidenced in the following statement by Nurse Elma:

> It's hard to measure emotional pain. Very hard. And the worst is people saying, "It's only anxiety". Okay … so if I put a gun in your mouth and say "I'll kill you", only to reveal that it's April Fools—that doesn't make your [initial] experience any nicer. Like, "You only *thought* you were going to die!" Granted, anxiety is between one's ears, but so is your pain center. Nothing is worse than having mental pain, it's even worse than physical pain—that's why people self-harm, to reduce their pain. So it's a difficult patient group—it's a lot easier to put on a Band-Aid.

Nurse Elma had a background in psychiatry and was a clear outlier in my sample; nevertheless, she reveals a different logic for pain scoring. To judge whether this is a *better* approach is beyond the scope of this paper; the point is rather to highlight the contingency of the 'objective' approach, thus opening up a space for discussing alternative logics.

Lastly, one can also ask whether rating pain relative to *nurses'* benchmarks (e.g. 'birth pains', 'torture') runs counter to the point of singling out pain intensity as a separate criterion for priority setting. That point is to prioritise those who are *experiencing* pain—and, *qua* experience, pain is arguably determined by patients' rather than nurses' reference points (cf. Bourke, 2014).

These issues suggest a need for developers and implementers of guidelines to find ways of incorporating patients' voice in the pain assessment, while simultaneously allowing nurses to rank patients consistently. This is a challenging task indeed; as the article has shown, nurses' commensuration is shaped by organisational constraints that impose significant limitations on their pain assessments. Every day, triage nurses face loads of complete strangers, whose subjective experience must be assessed as quickly as possible while nurses simultaneously attend to other aspects of the assessment. For that reason, their scoring necessarily depends on routines and heuristics, entailing various blind spots (cf. Lipsky, 1980). While it is important to illuminate these blind spots and to thoroughly debate them, it is equally important to realise that nurses' working conditions place significant limits on what pain *can be* in this context (see also Graham and Herndl, 2013). Such organisational constraints are of crucial importance, both for understanding and improving nurses' assessments and for analysing commensuration more generally.

4. Conclusion

This article departed from a puzzling deviation from guidelines: While nurses were instructed to assess pain intensity by combining patients' self-report with their own 'objective' assessment, their actual assessments relied almost solely on the latter. This contravenes the widespread belief that self-report is the gold standard of pain assessments, thus raising the questions of how and why nurses assessed pain as they did.

The article has shown that nurses had several objections against the use of self-report in triage. Most importantly, they considered patients prone to knowingly or unknowingly distort their pain score, which meant that a reliance on self-report would reduce the consistency and precision of their priority setting. Nurses thus considered 'subjective' NRS unfit for the situation it was intended to standardise—a common problem that is well documented in the sociology of standardisation (Timmermans and Epstein, 2010).

The article has also detailed nurses' 'objective' approach to pain scoring, which included a reliance on 'objective' signs, credibility checks and the use of nurse-determined benchmarks for 'the worst pain imaginable'. Nurses believed that this approach enabled more correct, consistent and efficient pain scoring, in marked contrast to 'subjective' NRS. Moreover, the article has argued that nurses' 'objective' approach is closely aligned with their organisational constraints and a heuristic biomedical view of pain and the body—and that prioritising patients based on this approach means emphasising some forms and expressions of pain over others, with systematic consequences for who is prioritised and treated in the EPCC.

By delving deeply into the situated logic of nurses' approach, then, the article goes further than previous studies in unpacking how and why nurses assess pain as they do. In so doing, the article also contributes to research on commensuration, which has so far been dominated by more meso- and macro-oriented studies. Specifically, the article adds to a small strand of studies demonstrating the importance of microscale commensuration, while also extending these studies by exploring 'fast' commensuration—a form that is particularly characteristic of professional practice at street level (Lipsky, 1980). As illustrated in the analysis above, street-level professionals often work in time-pressured environments that force them to use routines and heuristics to facilitate the speedy assessment of clients. While aiding decision-making and making the job more manageable, this reliance on heuristics can also have systematic consequences for clients, privileging some at the expense of others (Lipsky, 1980, p. 84). This makes 'fast' commensuration a particularly apt area for exploring the transformative aspects of commensuration.

Looking forward, I would encourage social scientists to focus more explicitly on microscale commensuration. Although explored implicitly in many studies (cf. Latour and Woolgar, 1986), the elusive quality of both commensuration and micro-practice can conceal the broader significance and family resemblance of these practices. To combat this, we must reflect more explicitly and critically—and with greater amazement—on the work of creating seemingly neutral numbers. There is no lack of cases; healthcare has seen an explosion of metrics (Whooley, 2016) and quantification is common in all professions, from teachers grading papers to employers ranking job applications. By detailing how these commensurators commensurate, we can deepen our knowledge of how the world is transformed through the production of numbers.

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References

Baszanger, I., 1998. Inventing Pain Medicine: from the Laboratory to the Clinic. Rutgers University Press, New Brunswick, N.J.

Baszanger, I., 1992. Deciphering chronic pain. Sociol. Health Illness 14, 181–215. https://doi.org/10.1111/1467-9566.ep11343694.

Becker, H.S., 1996. The epistemology of qualitative research. In: Jessor, R., Colby, A., Shweder, R.A. (Eds.), Ethnography and Human Development: Context and Meaning in Social Inquiry. The University of Chicago Press, Chicago, pp. 53–71.

Bendelow, G.A., 2006. Pain, suffering and risk. Health Risk Soc. 8, 59–70. https://doi.org/10.1080/13698570500532298.

Bendelow, G.A., Williams, S.J., 1995. Transcending the dualisms: towards a sociology of pain. Sociol. Health Illness 17, 139–165. https://doi.org/10.1111/j.1467-9566.1995.tb00479.x.

Bourke, J., 2014. The Story of Pain: from Prayer to Painkillers. OUP Oxford, New York, NY.

Buchbinder, M., 2015. All in Your Head: Making Sense of Pediatric Pain. University of California Press, Oakland, California.

Chiong, W., 2001. Diagnosing and defining disease. J. Am. Med. Assoc. 285, 89–90. https://doi.org/10.1001/jama.285.1.89-JMS0103-2-1.

Crowley-Matoka, M., True, G., 2012. No one wants to be the candy man: ambivalent medicalization and clinician subjectivity in pain management. Cult. Anthropol. 27, 689–712. https://doi.org/10.1111/j.1548-1360.2012.01167.x.

Daston, L., 1992. Objectivity and the escape from perspective. Soc. Stud. Sci. 22, 597–618. https://doi.org/10.1177/030631292022004002.

Desrosières, A., 2002. The Politics of Large Numbers: A History of Statistical Reasoning. Harvard University Press, Cambridge, Mass (u.a).

Duignan, M., Dunn, V., 2008. Congruence of pain assessment between nurses and emergency department patients: a replication. Int. Emerg. Nurs. 16, 23–28. https://doi.org/10.1016/j.ienj.2007.09.003.

Emerson, R.M., Fretz, R.I., Shaw, L.L., 2011. Writing Ethnographic Fieldnotes. University of Chicago Press, Chicago.

Espeland, W., Stevens, M., 1998. Commensuration as a social process. Annu. Rev. Sociol. 24, 313–343. https://doi.org/10.1146/annurev.soc.24.1.313.

Espeland, W.N., Sauder, M., 2007. Rankings and reactivity: how public measures recreate social worlds. Am. J. Sociol. 113, 1–40. https://doi.org/10.1086/517897.

Espeland, W.N., Stevens, M.L., 2008. A sociology of quantification. Eur. J. Sociol. Arch. Eur. Sociol. 49, 401–436. https://doi.org/10.1017/S0003975609000150.

Essén, A., Oborn, E., 2017. The performativity of numbers in illness management: the case of Swedish Rheumatology. Soc. Sci. Med. 184, 134–143. https://doi.org/10.1016/j.socscimed.2017.05.026.

Fourcade, M., 2011. Cents and sensibility: economic valuation and the nature of "nature. Am. J. Sociol. 116, 1721–1777. https://doi.org/10.1086/659640.

Frank, A.W., 1997. The Wounded Storyteller: Body, Illness, and Ethics. University of Chicago Press, Chicago.

Goffman, E., 1959. The Presentation of Self in Everyday Life. Doubleday, Garden City, N.Y.

Graham, S.S., Herndl, C., 2013. Multiple ontologies in pain management: toward a postplural rhetoric of science. Tech. Commun. Q. 22, 103–125. https://doi.org/10.1080/10572252.2013.733674.

Greenhalgh, S., 2001. Under the Medical Gaze: Facts and Fictions of Chronic Pain. University of California Press, Berkeley.

Hacking, I., 1990. The Taming of Chance, 1 edition. Cambridge University Press, Cambridge England ; New York.

Hansen, E.H., Hunskår, S., 2016. Legevaktarbeid: en innføringsbok for leger og sykepleiere. Gyldendal akademisk, Oslo.

Harper, P., Ersser, S., Gobbi, M., 2007. How military nurses rationalize their post-operative pain assessment decisions. J. Adv. Nurs. 59, 601–611. https://doi.org/10.1111/j.1365-2648.2007.04369.x.

Harris, D.A., 1999. Driving while Black: Racial Profiling on Our Nation's Highways. American Civil Liberties Union, Washington, DC.

Healy, K., 2006. Last Best Gifts: Altruism and the Market for Human Blood and Organs, New edition edition. University of Chicago Press, Chicago.

Huault, I., Rainelli-Weiss, H., 2011. A market for weather risk? Conflicting metrics, attempts at compromise, and limits to commensuration. Organ. Stud. 32, 1395–1419. https://doi.org/10.1177/0170840611421251.

Hughes, D., 1988. When nurse knows best: some aspects of nurse/doctor interaction in a casualty department. Sociol. Health Illness 10, 1–22. https://doi.org/10.1111/1467-9566.ep11340102.

Jerolmack, C., Khan, S., 2014. Talk is cheap: ethnography and the attitudinal fallacy. Socio. Methods Res. 43, 178–209. https://doi.org/10.1177/0049124114523396.

Jewson, N.D., 1976. The disappearance of the sick-man from medical cosmology, 1770-1870. Sociology 10, 225–244. https://doi.org/10.1177/003803857601000202.

Johannessen, L.E.F., 2018a. Between Standardisation and Discretion: the Priority Setting of Triage Nurses (Ph.D.). Oslo Metropolitan University.

Johannessen, L.E.F., 2018b. Workplace assimilation and professional jurisdiction: how nurses learn to blur the nursing-medical boundary. Soc. Sci. Med. 201, 51–58. https://doi.org/10.1016/j.socscimed.2018.02.004.

Johannessen, L.E.F., 2018c. Narratives and gatekeeping: making sense of triage nurses' practice. Sociol. Health Illness 40, 892–906. https://doi.org/10.1111/1467-9566.12732.

Johannessen, L.E.F., 2017. Beyond guidelines: discretionary practice in face-to-face triage nursing. Sociol. Health Illness 39, 1180–1194. https://doi.org/10.1111/1467-9566.12578.

Kahneman, D., 2011. Thinking, Fast and Slow. Farrar, Straus and Giroux, New York.

Khaire, M., 2014. Fashioning an industry: socio-cognitive processes in the construction of worth of a new industry. Organ. Stud. 35, 41–74. https://doi.org/10.1177/0170840613502766.

Kleinman, A., 1988. The Illness Narratives: Suffering, Healing, and the Human Condition. Basic Books, New York.

Lamont, M., 2009. How Professors Think: inside the Curious World of Academic Judgment. Harvard University Press, Cambridge, Mass.

Latour, B., Woolgar, S., 1986. Laboratory Life: the Construction of Scientific Facts. Princeton University Press, New Jersey.

Leder, D., 1990. Clinical interpretation: the hermeneutics of medicine. Theor. Med. 11, 9–24. https://doi.org/10.1007/BF00489234.

Lipsky, M., 1980. Street-level Bureaucracy: Dilemmas of the Individual in Public Services. Russell Sage Foundation, New York.

Lynch, M., 2018. The Narrative of the Number: Quantification in Criminal Court. Law Soc. https://doi.org/10.1111/lsi.12334 Inq. n/a-n/a.

MacKenzie, D., 2009. Making things the same: gases, emission rights and the politics of carbon markets. Account. Org. Soc. 34, 440–455.

Mackway-Jones, K., Marsden, J., Windle, J., Manchester Triage Group, 2014. Emergency Triage, third ed. Wiley, Chichester.

Malterud, K., Guassora, A.D., Graungaard, A.H., Reventlow, S., 2015. Understanding medical symptoms: a conceptual review and analysis. Theor. Med. Bioeth. 36, 411–424. https://doi.org/10.1007/s11017-015-9347-3.

Melzack, R., Wall, P., 1965. Pain mechanisms: a new theory. Science 150, 971–979. https://doi.org/10.1126/science.150.3699.971.

Modanloo, M., 2010. Comparison of pain assessment by patients and triage nurses. Iran. J. Crit. Care Nurs. 3, 23–28.

Morris, D.B., 1993. The Culture of Pain. University of California Press, Berkeley.

Pager, D., Karafin, D., 2009. Bayesian bigot? Statistical discrimination, stereotypes, and employer decision making. Ann. Am. Acad. Pol. Soc. Sci. 621, 70–93. https://doi.org/10.1177/0002716208324628.

Pierik, J.G.J., IJzerman, M.J., Gaakeer, M.I., Vollenbroek-Hutten, M.M.R., Doggen, C.J.M., 2017. Painful discrimination in the emergency department: risk factors for underassessment of patients' pain by nurses. J. Emerg. Nurs. https://doi.org/10.1016/j.jen.2016.10.007.

Porter, T.M., 1996. Trust in Numbers, Reprint edition. Princeton University Press, Princeton, N.J.

Prkachin, K.M., Solomon, P.E., Ross, J., 2007. Underestimation of pain by health-care providers: towards a model of the process of inferring pain in others. Can. J. Nurs. Res. 39, 88–106.

Puntillo, K., Neighbor, M., O'Neil, N., Nixon, R., 2003. Accuracy of emergency nurses in assessment of patients' pain. Pain Manag. Nurs. 4, 171–175. https://doi.org/10.1016/S1524-9042(03)00033-X.

Samiolo, R., 2012. Commensuration and styles of reasoning: venice, cost–benefit, and the defence of place. Account. Organ. Soc. 37, 382–402. https://doi.org/10.1016/j.aos.2012.04.001.

Scarry, E., 1985. The Body in Pain: the Making and Unmaking of the World. Oxford University Press, New York.

Shapin, S., 2012. The sciences of subjectivity. Soc. Stud. Sci. 42, 170–184. https://doi.org/10.1177/0306312711435375.

Shapin, S., 1995. A Social History of Truth: Civility and Science in Seventeenth-Century England, 1 edition. University Of Chicago Press, Chicago.

Simmel, G., 1978. The Philosophy of Money. Routledge & Kegan Paul, London.

Solomon, P., 2001. Congruence between health professionals' and patients' pain ratings: a review of the literature. Scand. J. Caring Sci. 15, 174–180. https://doi.org/10.1046/j.1471-6712.2001.00027.x.

Sudnow, D., 1965. Normal crimes: sociological features of the penal code in a public defender office. Soc. Probl. 12, 255–276. https://doi.org/10.2307/798932.

Swedberg, R., 2017. Theorizing in sociological research: a new perspective, a new departure? Annu. Rev. Sociol. 43, 189–206. https://doi.org/10.1146/annurev-soc-060116-053604.

Tavory, I., Timmermans, S., 2014. Abductive Analysis: Theorizing Qualitative Research. University of Chicago Press, Chicago.

Teanby, S., 2003. A literature review into pain assessment at triage in accident and emergency departments. Accid. Emerg. Nurs. 11, 12–17. https://doi.org/10.1016/S0965-2302(02)00132-7.

Timmermans, S., Berg, M., 2003. The Gold Standard: the Challenge of Evidence-Based Medicine and Standardization in Health Care. Temple University Press, Philadelphia, Pa.

Timmermans, S., Epstein, S., 2010. A world of standards but not a standard world: toward a sociology of standards and standardization. Annu. Rev. Sociol. 36, 69–89. https://doi.org/10.1146/annurev.soc.012809.102629.

Tolich, M., 2004. Internal confidentiality: when confidentiality assurances fail relational informants. Qual. Sociol. 27, 101–106. https://doi.org/10.1023/B:QUAS.0000015546.20441.4a.

Turco, C.J., Zuckerman, E.W., 2017. Verstehen for sociology: comment on Watts. Am. J. Sociol. 122, 1272–1291. https://doi.org/10.1086/690762.

Vassy, C., 2014. Emergency departments. In: Cockerham, W., Dingwall, R., Quah, S. (Eds.), The Wiley Blackwell Encyclopedia of Health, Illness, Behavior, and Society. Wiley-Blackwell, Chichester.

Velthuis, O., 2003. Symbolic meanings of prices: constructing the value of contemporary art in Amsterdam and New York galleries. Theor. Soc. 32, 181–215. https://doi.org/10.1023/A:1023995520369.

Vrancken, M.A.E., 1989. Schools of thought on pain. Soc. Sci. Med. 29, 435–444. https://doi.org/10.1016/0277-9536(89)90292-X.

Vuille, M., Foerster, M., Foucault, E., Hugli, O., 2017. Pain assessment by emergency nurses at triage in the emergency department: a qualitative study. J. Clin. Nurs. https://doi.org/10.1111/jocn.13992.

Weber, M., 1978. Economy and Society: an Outline of Interpretive Sociology. University of California Press, Berkeley, Calif.

Whooley, O., 2016. Measuring mental disorders: the failed commensuration project of DSM-5. Soc. Sci. Med. 166, 33–40. https://doi.org/10.1016/j.socscimed.2016.08.006.

Woodrow, P., 2002. Intensive Care Nursing: A Framework for Practice. Routledge.

Yuille, J.C., 2013. Credibility Assessment. Springer Science & Business Media.

Zborowski, M., 1952. Cultural components in responses to pain. J. Soc. Issues 8, 16–30. https://doi.org/10.1111/j.1540-4560.1952.tb01860.x.

Zola, I.K., 1966. Culture and symptoms–an analysis of patient's presenting complaints. Am. Sociol. Rev. 31, 615–630. https://doi.org/10.2307/2091854.