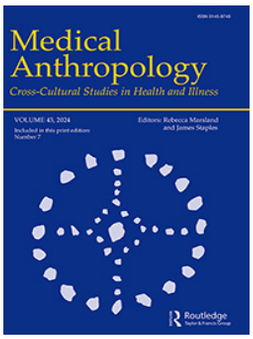

Routledge
Taylor & Francis Group

Medical Anthropology

Cross-Cultural Studies in Health and Illness

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/gmea20

On the Affectivity of Touch: Enacting Bodies in Dutch Osteopathy

Irene Groenevelt & Jenny Slatman

To cite this article: Irene Groenevelt & Jenny Slatman (2024) On the Affectivity of Touch: Enacting Bodies in Dutch Osteopathy, Medical Anthropology, 43:7, 641-654, DOI: 10.1080/01459740.2024.2410251

To link to this article: https://doi.org/10.1080/01459740.2024.2410251

© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.

Published online: 08 Oct 2024.

Submit your article to this journal

Article views: 419

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=gmea20

MEDICAL ANTHROPOLOGY
2024, VOL. 43, NO. 7, 641–654
https://doi.org/10.1080/01459740.2024.2410251

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

On the Affectivity of Touch: Enacting Bodies in Dutch Osteopathy

Irene Groenevelt and Jenny Slatman

Culture Studies Department, Tilburg School of Humanities and Digital Sciences, Tilburg University, Tilburg, Netherlands

ABSTRACT

Osteopathy is a complementary treatment method that targets motor restrictions and enhances motility through touch. While recent studies have explored the functions, dimensions, and effects of touch in osteopathy, there is a lack of research on how touch renders bodies intelligible – or *what* bodies, for that matter. In this article, we use the verb *to affect/to be affected* to explore how bodies become known by and to Dutch osteopaths, and how the senses play a role in this. Our analysis shows how touch allows osteopaths to affect and be affected by their patients' bodies – as well as by their own.

RESUMEN

Osteopathie is een complementaire geneeswijze die gericht is de behandeling van bewegingsbeperkingen en de verbetering van mobiliteit door aanraking. Hoewel recente studies hebben gekeken naar de functies, aspecten en effecten van aanraking in de osteopathie, is er weinig onderzoek gedaan naar de wijze waarop aanraking lichamen waarneembaar maakt – of om wat voor lichamen het hierbij gaat. In dit artikel gebruiken wij het werkwoord *to affect-to be affected* om te onderzoeken hoe lichamen gekend worden door en voor osteopaten, alsook hoe de zintuigen hier een rol in spelen. Onze analyze laat zien hoe aanraking osteopaten in staat stelt om de lichamen van hun patiënten te beroeren en erdoor geraakt te worden.

KEYWORDS

Enactment; osteopathy; the body and embodiment; the Netherlands; to affect/to be affected; touch

Osteopathy is described as a treatment practice that centers on a set of holistic principles, including the unity of mind, body, and spirit (Turner and Holroyd 2016). Osteopaths endorse the understanding that the body is an autonomous whole that is capable of self-healing and self-regulation. By the use of various manual techniques, osteopaths seek to alleviate "blockages" or motor restrictions, thereby aiming to restore the capacity of body to heal and regulate itself. In the Dutch occupational profile of osteopaths it is stressed that, compared to other professions that focus on the treatment of non-acute or functional complaints (e.g., physical therapists, manual therapists and chiropractors), osteopaths are more explicitly focused on working at a "local, regional and systemic" level, and that they treat "the total sum of structures" that might influence any given complaint (2018:5–6). This manual and holistic way of treating the body is seen as more expedient for non-acute functional health complaints than treatment methods that invade bodily systems and structures, such as pharmaceuticals or surgery.

In the Netherlands, the national health care system categorizes osteopathy as an alternative or complementary treatment method (Zorgwijzer 2024). Contrary to other professions in the field of

CONTACT Jenny Slatman J.Slatman@tilburguniversity.edu Culture Studies Department, Tilburg School of Humanities and Digital Sciences, Tilburg University, Dante Building, Room 213, PO Box 90153, Tilburg 5000 LE, Netherlands.

Media teaser: We explore how touch is practiced and understood by Dutch osteopaths, and what (kinds of) bodies it allows them to perceive.

Supplemental data for this article can be accessed online at https://doi.org/10.1080/01459740.2024.2410251

© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

individual health care (e.g., dentists, nurses, physical therapists, etc.) – osteopathy does not fall under the national public register for Individual Healthcare Professionals [Dutch: Beroepen in de Individuele Gezondheidszorg or BIG] (CIBG 2022). This means that osteopathy is not a protected professional title or considered part of conventional medicine. This also means that those who have a basic health insurance do not receive financial compensation if they visit an osteopath, and people with a supplementary insurance [Dutch: aanvullende verzekering] get close to half of their expenses reimbursed. Since most osteopaths have enjoyed more extensive schooling than physical therapists, and because osteopathic treatment sessions often last 45–60 minutes, it is considered to be a relatively expensive and exclusive treatment option (Macmillan 2023). At the time data collection took place, prices ranged between 90 and 115 euros per treatment session. The total number of osteopaths is estimated at 850 (compared to over 35,000 physical therapists) (CIBG 2024; College-Sutherland 2023), for a total population of just under 18 million people (CBS 2024).

The origin of osteopathy can be traced back to the middle of the 19th century and to the person of Andrew Taylor Still (Miller 2004). Working as a physician during the American Civil War, Still became increasingly disillusioned by the state of medicine at that time, with its use of crude methods such as bloodletting, unanesthetized surgery, and the prescription of invasive chemicals. He developed a new system based on the Christian idea that God has endowed the human body with a capacity for self-healing, self-regulation, and an intrinsic directedness at attaining health. Physicians, Still argued, should not aspire to invade or change the interiority of the body, but rather to manipulate the musculoskeletal system from the outside, and in such a way that the natural state of the body can be restored. Although Still was stern in his disavowal of regular medicine and forbade his patients from seeking health elsewhere, this discrepancy between biomedicine and osteopathy has become less prominent (Baer 1987). In the Netherlands, most osteopaths have a background in conventional physical therapy, and are thus initially trained within the biomedical paradigm (Zweedijk 2022). However, the "guiding principles" of osteopathy, as well as the manual approach to the body, have remained the same (WHO 2010).

Rather than approaching the senses as particular to individual bodies, recent scholarship in the field of sensory anthropology explores how the senses are "spatially extended:" as emerging in and through embodied engagements with the environments in which they are embedded (Eisenlohr 2024:37). By engaging with the concept of sensory mediation, this scholarship departs from previous approaches to cultural practices as representational (Howes 2019), which is arguably in line with a more general shift from representations to enactments in the humanities and social sciences (Hafermalz et al. 2016). A core insight in the field of sensory anthropology is that, in our contemporary society, the so-called distant senses (i.e., sight and hearing) enjoy a superior position compared to the proximate senses (i.e., taste, touch and smell) (Speed and Majid 2020). Related, contemporary knowledge practices have been characterized as "occularcentric" (Jay 1993), which has arguably resulted in touch being "routinely debased and ignored" (Paterson 2007:7). In this paper, we focus on touch, whilst also exploring whether and how it differs from these occularcentric ways of knowing.

Even though the anthropological interest in the senses has been substantial in recent decades (Howes 2019), touch continues to be an understudied sensory modality in ethnographic explorations of medical practices (Blake 2011; Christensen et al. 2023). By contrast, the role of touch in assessing and treating the human body is more explicitly stipulated in qualitative studies about (osteopathic) treatment practices (Christensen et al. 2023). In a focus group study of 12 Italian osteopaths, Andrea Bergna and colleagues observe how the ability to do perceptual palpations – to detect indicators of somatic dysfunction(s) by touching – is seen as a defining feature for osteopaths' professional identity, whilst also observing that the exact use and meaning of perceptual palpations varies among practitioners (2022). In another study, Francesca Baroni and colleagues zoom into the various uses and effects of touch (2021). Based on a literature review, they suggest that touch allows for (embodied) interaction and communication with patients; that it is a tool for clinical reasoning; and that it affects both patients and osteopaths at a biological and physiological level. And lastly, Seth Consedine and colleagues adopt a phenomenological lens to show how patients experience touch as central to the

therapeutic relationship, the treatment process, and for validation, recognition, and trust (2016). These qualitative studies highlight both the importance of touch to osteopathy, and suggest that both practitioners and patients are affected by it.

What these studies do not explore, however, is how bodies are enacted or configured through the use of touch. Phrased differently: while the prior scholarship explores the various functions, dimensions or effects of touch, it does not explore how, to osteopaths, it renders the body intelligible – or *what* body is rendered intelligible, for that matter. In this paper, we use the verb *to affect/to be affected* to explore how bodies become known by and to Dutch osteopaths, and how the senses play a role in this.

First we explain how vision and visualization are commonly understood to be the main avenues for knowing the body, and contrast this with insights from empirical and historical studies that allow us to conceive of the body and the senses as contingent. After explaining our methodology and data, we start our analysis with describing the structure of an osteopathic treatment session. We describe how such sessions are oriented at understanding bodily tissues, and in the remainder of our analysis we elaborate on how this entails (1) learning touch, (2) knowing anatomy, (3) working effectively and (4) solving puzzles. We conclude by exploring to what extent the osteopath's gaze is consistent with, and different from, the classical medical gaze.

Sensing bodies

When you are trained as a doctor or therapist these days, you learn about the body through anatomy. The anatomical body is seen as the place where diseases reside. Therefore, within contemporary medicine and various forms of therapies, the examination and treatment of diseases is mainly about locating a defect or lesion somewhere in the anatomy. Even though it seems common sense to us to trace pathology back to anatomy, this way of looking at the diseased body did not emerge until the early nineteenth century, and is the subject matter of Michel Foucault's *The Birth of the Clinic* (2003). In it, he describes how the development of modern medicine gave rise to a particular way of tracing the "seat of disease" (French: siège du mal) within bodily tissues, which he describes as the medical gaze (2003:135). Note that this gaze, traveling from the bodily surface into bodily depths, is not exclusively determined by the sense of looking. Rather than a quality that medical specialists become endowed with, the medical gaze comprises a way of scrutinizing bodies that assumes that internal manifestations can be rendered intelligible if one has the means to look or listen well enough (2003:121) The invention of the stethoscope in the beginning of the 19th century was one of the first tools of the medical gaze (2003:163–166). While searching for a located "seat of disease" the medical gaze emphasizes the spatiality of illnesses, arguably downplaying their temporality and, as such, disregards patients' stories (Casey 1987).

It is important to underline here that the idea of the medical gaze that Foucault developed in *The Birth of the Clinic* (2003) differs from the idea of the gaze he developed in *Discipline and Punish* (1977). Whereas the latter idea of the gaze (most referred to in social sciences and humanities) implies the constant internalization of experiences of being seen, and thus regulates disciplining power relations in society, the emergence of the medical gaze predominantly implies an epistemological rupture. As fundament of the modern clinic, the "medical gaze" involves a "discursive practice, a language of health and disease" (Long 1992:120) As such, it pertains to a particular (modern, Western, biomedical) type of knowledge production of the body which became the foundation for conventional medicine. According to this epistemology, the body is configurated as an individual and delimited material and spatial entity existing entirely on its own disconnected from its physical, cultural and social environment. As a result, in biomedicine, "the body" is conceived as something universal – even though human anatomy books are exclusively populated with white and, predominantly, male bodies (Parker et al. 2017).

Unsurprisingly, this biomedical idea of the body has been critiqued in medical anthropology. First of all, the technologies used, such as imaging technologies, are not neutral. As Margaret Lock and

Vinh-Kim Nguyen write (2011:17), technologies "enable manipulations that intervene in animal and human bodies to make previously unknown or inaccessible 'objects' factual reality." This argumentative line is a core characteristic of many studies in the field of feminist science and technology studies that seek to explain how visualization necessarily occurs from a vantage point (Haraway 1988), and that many subjective decisions are taken in the process of visualizing "objective" bodily interiors (see, for example, Aurora Hoel 2022)

Another argument against the universality and visual intelligibility of the human body, is the empirical observation that different cultures simply conceive of the body in different ways – and not even always as bounded entities (Yates-Doerr 2017). What is more, Western culture itself has different ways of conceiving the body. Because there is variation when it comes to the things that are asked of bodies in clinical settings, there is also variation when it comes to the ways in which bodies respond (Mol 2002). While the body might be conceptualized as a coherent object in biomedicine – as an object that can be measured in a variety of ways – this wholeness is not self-evident when we zoom into how the body is done in daily practices. Here, the body becomes a configuration that extends beyond the skin and into sociocultural life, where it might affect the bodies of others. These *bodies-we-do*, as Annemarie Mol and John Law call them, are not boundless or fragmented (2004). Rather, they are premised on the need to navigate a plethora of tensions, such as those "between the interests of various organs," as well as those between "the exigencies of dealing with [disease] and other demands and desires" (2004:57). Because navigating such tensions is something we, as bodies, are necessarily occupied with, they conclude that "keeping ourselves together is one of the tasks of life" (2004:57).

Moreover, vision and visualization have not always been the primary avenues for knowing the body. This is eloquently described in the comparative work of Shigehisa Kuriyama (1999). His focus is on the different ways in which the body was understood in ancient Greek and ancient China. While the former was marked by a preoccupation with (the movement of) muscles, the latter was more concerned with tracks and points of acupuncture – in ancient China there was not even a word for muscles. Given these different understandings of the body, it seems remarkable that both traditions conceived of touch as the most important sense for medicine. How is it that these two contexts allowed for such different ways of knowing the body, Kuriyama asks? Rather than resorting to dualist understandings of holism and reductionism, he argues that the senses *themselves* were done and thought about differently (see also Howes 2011). As Kuriyama writes: "conceptions of the body owe as much to particular uses of the senses as to particular "ways of thinking" (1999:12). In other words, different ways of sensing bodies allow for "different ways of *being* bodies" (1999:13), emphasis in original), and hence to different ways of knowing bodies. What becomes clear through these cultural comparisons is that there is no evident or straightforward answer to what the body is or what touch might entail. They underline the importance of approaching the body and touch ethnographically, and to explore how both emerge in situated practices.

In this paper, we use the notion of affectivity, and especially the verb *to affect/to be affected*. This verb is introduced by Tim Ingold to capture how we "respond to things or [are] affected by them in the world" (2018:84). Because touching mediates both perceptive experiences of oneself *and* of things other than oneself, it arguably defies dualistic interpretations (Kearney 2020). In their work about the (human) skin, Jackie Stacey and Sara Ahmed similarly suggest that the skin cannot be understood in dualistic terms, i.e., as either of (part of) oneself or (part of) another (2001). Rather, so they write, the skin "opens our bodies to other bodies: through touch, the separation of self and other is undermined in the very intimacy or proximity of the encounter" (2001:9). A similar sentiment is expressed by phenomenologist Matthew Ratcliffe (2008:77), who describes touch as "a matter of relatedness between body and world, rather than experiencing one in isolation from the other." What comes to the fore in these studies is that touch allows various differentiations to come into being and allows for particular configurations of (human) bodies (see also Harris 2016).

Of course, our affective engagements with the world are informed by past experiences and practices, for, as Sara Ahmed writes, "the process of recognition (of this feeling, or that feeling) is bound up with what we already know" (2014:24). While any number of experiences and practices

might bear upon the latter, the focus of this paper is on how osteopaths have been trained to perceive to bodies a certain way. This notion of training also comes to the fore in Bruno Latour's writing about (human) bodies (2004). In it, he develops the argument that that bodies progressively come into being through affective engagements with their surroundings. He defines the human body as "an interface that becomes more and more discernible as it learns to be affected by many more elements" (2004:2). Because the latter can only happen interactionally, Latour contends that it makes little sense to separate a body from its material environment. To illustrate this, he describes "the training of 'noses' for the perfume industry" (2004:3). Through extensive training, and in interaction with an "odor kit," trainees come to inhabit a world that is richly and differentially scented; a world that can be contrasted with the world they inhabited before. He contends that "acquiring a body is thus a progressive enterprise that produces at once a sensory medium *and* a sensitive world" (2004:3), italics in original). Latour's example can be understood as a particular cultivation of embodied attention through which the world appears a certain way (see also Csordas 1993). What we take from these studies, then, is an approach to touch as an embodied skill that allows osteopaths to perceive and attend to the bodies of others, as well as to their own.

Methodology and data

This paper draws on the field notes of ten days of observations with three practicing osteopaths, as written up and sketched by the first author. During these observations, the first author witnessed a total of 41 treatment sessions. In light of the explorative aims of the research project "Mind the Body: Rethinking embodiment in health care," in which this study is embedded, we did not make a selection in terms of patient population. Prior to treatment sessions, osteopaths asked whether their patient agreed to a researcher being present, and an information letter was handed out with more information about the study. Sometimes, osteopaths asked the researcher to skip a consultation without asking the patient first, for example when they felt that the researcher's attendance jeopardized the relationship of trust between a patient and a caregiver. Most patients, however, were comfortable with the researcher being present, and none of the patients reached out to ask questions or to withdraw consent. In these sessions, the researcher was introduced by the osteopaths, and sometimes the osteopaths explained things to the researcher, for example what they observed in a physical examination or what they aimed to do with particular manual techniques. In the short breaks between consultations, the osteopaths and the researcher engaged in informal conversations.

In addition, the first author conducted 15 interviews with practicing osteopaths. Participants were selected by using snowballing strategies. The first author asked osteopaths whether they knew colleagues who might like to participate in an interview. Interviews addressed how osteopaths understand and treat their patients' bodies and their symptoms, and especially addressed what "touch" means; how it is learned and carried out in osteopathic treatment settings. Most of the interview data was gathered during a COVID-19 lockdown. Three interviews were conducted prior to and after the lockdown. These took place in the osteopaths' practice and were recorded. The 12 interviews that were conducted during the lockdown, were done on Zoom. Compared to face-to-face interviews, the Zoom interviews were more strictly aligned with the topic list and were shorter (60 minutes compared to 2–3 hours). All interviews were transcribed and analyzed in the qualitative data analysis software MaxQDA. The first author delineated initial codes and themes, which the first and second author discussed and interpreted the light of the theoretical concern of knowledge production. Our joint thematic analysis was guided by the question of how knowledge about the body is articulated in interviews and in osteopathic consultations (Braun and Clarke 2012). The first author drafted a first version of the results which was subsequently supplemented by the second author.

Ethical clearance was given by the Research Ethics Committee at Tilburg School of Humanities and Digital Sciences. All the data was pseudonymized prior to the analysis, and participants are denoted numerically as O1 to O15. Together with website data, teaching material and books, the field notes and interview transcripts form the basis of the following analysis.

Enacting bodies in osteopathy

In our analysis, we first offer a fictional description of an osteopathic consultation, and then explain that consultations are oriented at the aim to "understand materials." In the remainder of our analysis, we suggest that the latter entails (1) learning touch, (2) knowing physiology, (3) working affectively and (4) solving puzzles.

> I start with paying close attention to how a patient enters the room. If someone comes across as particularly hasty or stressed, I will do my best to help that patient slow down and to become more present. After some small talk, I will do the anamnesis. I will encourage my patient to discuss the symptoms in greater depth: when did they start? What things did the patient do to alleviate them? What helped and what not? And how about lifestyle? Does the patient move enough? Eat well enough? Rest enough? And what does the patient expect from the treatment? After the anamnesis, I will explain what I do as an osteopath: that I do necessarily treat where it hurts, but that I explore the entire body through touch and seek to establish where things are wrong. And that it might be so that where I treat is not where the patient expects me to treat. After this, I will kindly ask my patient to undress until they are in their underwear.

> Then I begin the physical examination. I ask the patient to do particular movements: to stand, lift their arms, flex their legs, touch their toes, among other things. I watch attentively how the movements are conducted, and will touch certain areas of the patient's body to get a greater understanding of the movements. I will ask the patient to sit on the treatment bank, close their eyes and sigh deeply, and will then sense where the body "pulls" to. After this, I ask the patient to lie on the treatment bench. I might bend and flex and rotate the limbs. I might ask the patient to move their head sideways and up and down, whilst feeling the neck or the ears or the jaw. These things I do so as to make a differential diagnosis, which allows me to decide what (myofascial) manipulations I can best use to enhance motility. These manipulations can be painful for patients. During treatment and after, I will check whether the patient is alright, and stimulate them to become more aware of how the body feels through targeted questions. After treatment, I might give some lifestyle advice – usually more relaxation, more healthy eating, and more exercise – and will make a plan for further treatment.

Of course, the description does not do justice to the intricacies of an osteopathic consultation – rather it combines things that were written down during observations with themes that came up in interviews. But what also came up, is that no consultation is alike. This was phrased rather paradoxically by O6 when he stated "I treat everyone the same, but I treat everyone differently in all respects." In all interviews, osteopaths underlined that every patient is unique in the way their symptoms manifest and hence requires a personalized approach. As O5 described:

> Our selection of means to assess and investigate is vast. And so it depends on the way a patient presents in anamnesis, in inspection and in the first test, what your selection will be and what direction you will take in the remainder of your investigation. And if some comes with a whiplash, or with chronic fatigues, or with fibromyalgia; all those things require different ways of investigating.

Osteopaths stressed the need to be aware that patients themselves change over time and during their treatment trajectory. As O7 described, "every time a person walks through the door, that person is sitting there differently compared to the way they did three weeks ago." To cater to this change, osteopaths underlined the importance of never assuming that the things they found in a prior consultation are necessarily relevant in a follow-up. And so, even though every consultation is built around a more or less fixed sequence of events – a welcome, anamnesis, undressing, assessing, manipulating, closing – the content of any specific consultation is contextual.

Bearing these contingencies in mind, we now turn to the question: what understandings of the human body come to the fore in osteopathic treatment? To answer this, we present a short vignette about O2: an experienced osteopath with a spacious treatment room in the middle of a bustling city center. She agreed to be interviewed during a lunch break and, if needed, to continue after work. During lunch, the first author turned on the recorder and started the interview with a question about previous employment. Soon, however, the topic list lay forgotten on the table as O2 was talking freely about her profession. She was an exceptionally talkative person, and the conversation moved fluently from past work experiences, to recent developments in osteopathy, to family life, interesting books, and future aspirations. At some point, O2 switched back to her love for osteopathy. She explained:

> My profession is really about getting an understanding of materials [Dutch: materiaalkennis opdoen]. So what does tissue that is too supple do when it ages? What does that tissue do when it been through the mill a couple of times? Or when it is been cut into, so to say, over time? […] And that knowledge is located in the tactility of the hands, because that is, *that* is what an osteopath knows how to do well: to feel and assess how the tissue feels, and to search for *why* that might be the case.

This quote is important to our analysis, and illustrative in several respects. First, it shows that *assessing* the body through touch and *understanding* why tissue feels the way it does are two different things. Touching allows osteopaths to assess tissue and thus to assess the workings of bodies. But this assessment does not necessarily answer the question "why" tissue feels the way it does. The latter requires a "search" for factors that might account the tissues current state. Second, a number of processes and events act on the tissues of the body, and allow those tissues to "do" things differently. As O2 described, tissue changes when it ages, when it is exposed to strain and after surgery, and the body can go "through the mill" in any number of ways. Third, the combination of touching and assessing is framed as a practice or a skill: it is what "an osteopath knows *how* to do well." This indicates that it is learned, and that one might get better at it over time. In sum, understanding materials is a craft that requires practice; is based on knowledge of physiological and mechanical processes; it considers how bodies act in response to external forces (including touch); and seeks for reasons that can explain the sensorial findings. In the remainder of our analysis, we elaborate on these four different aspects of understanding materials (1) learning touch, (2) knowing physiology, (3) affecting bodies and (4) solving puzzles.

Learning touch

Even though osteopaths underlined that everyone can learn to touch like they can, they also underlined that the touching that takes place in an osteopathic consultation is not something that people are naturally endowed with. Rather it is something that requires a lot of theoretical knowledge and a lot of practice. In interviews osteopaths readily reminisced about the many hours that went into learning to feel any specific part of the human body, and of how they would awkwardly practice on each other to learn to discern different body parts and tissues. Take O10, for example, who recollects how he learned to feel a bladder:

> The first organ you get is the bladder. And the bladder is located at a very silly spot [Dutch: lullige plek]. So you start feeling people's bladders with unpracticed fingers. And your theoretical background is up to standard: you know where the thing is [situated] and how it hangs [in the fascia], and you know all the reference points. But you're not there yet, because you do not know what is *normal*. And so you need to feel a huge amount of bladders until you feel anything at all. And then you still need [to learn] to interpret whether what you feel is normal or whether it is not.

Apart from describing the difficulty of localizing a particular organ – in this case the bladder – the quote also captures the difficulty of learning to feel whether a particular body part or tissue feels right or not. For what might be normal for someone, might be abnormal for someone else. As O6 explains, it matters whether the patient is an older man who has worked hard as a farmer for his entire life, or whether the patient is "a girl of 18 who is practicing ballet." From the former you can expect that he feels "sinewy" and "tough," whereas the latter might already suffer greatly from "a very minor motorial restriction." Being able to take these variations into account whilst assessing bladders (or any other set of tissues) is thus perceived as a craft – as is epitomized by the fact that many osteopaths jokingly stress how they would not have liked to be treated by themselves as novices.

But *what* is felt in a consultation? How is the practice of assessing the body through touching it, put into words? Let's return here to O10, who, in response to the question to describe how he assesses whether a bladder feels normal or not, told the following:

> Well, the important thing is: you start with a particular idea. […] You lay down your hands and it's good or it's not so good [Dutch: het valt mee of het valt tegen]. […] You start pushing gently and then you feel that left feels

> different from right, right feels harder than left. That is what we are looking for: for motor restrictions. You just start feeling: is it thicker or harder or perhaps fuller? A little bloated there? And then you look [further], you lay down your hands and start trying to scoop a bit of the bowel out of the groin duct, to shift, and that goes easily or not. Or it might hurt or not, you look into the patient's eyes and check whether they are blinking. And then you try to make sense of it all: alright, so I laid down my hands and I expected this, but I was disappointed, right feels much harder hand left, and if I try to slide [the bowel] I cannot move it from the groin duct at all, and the patient indicates that it is painful. So chances are that the bladder is causing the problems.

In this rather detailed quote, it becomes clear that specific tissues feel specific ways. Adjectives are used to describe tissue as "hard," "thick," and "full." Verbs describe how tissues move: if it can be "scooped" or "shifted." Lastly, patients themselves will give clues as to how palpations and mobilizations are experienced: whether they are uncomfortable or painful. Taken together, these data allow the osteopath to distill whether tissue feels normal or not.

Notable here is that the interpretative step where O10 tries to "make sense of it all" is described in terms of "disappointment," which is an affective state toward something or someone. Disappointment is a visceral sensation; it is something that is felt interoceptively. In the quote, the things that are sensed – i.e., the hardness of the tissue, lack of mobility, and signs of pain – are listed to account for the sense of disappointment. What this quote indicates, then, is that touching is a practice that not only allows osteopaths to get insight into the bodies of others through their own affective/affecting abilities, but that also sparks affective sensations in osteopaths themselves.

Knowing physiology

What also becomes clear in the previous quote, is that osteopaths "start with a particular idea" of how tissues ought to feel. Touching and feeling the body is informed by various knowledge systems. For without knowing about anatomy, one does not know where an organ "hangs" in the fascial system. And without knowing about physiology, one does not know how the organ functions. And without knowing about embryology, one does not know how an organ developed and at what point things might have gone askew. These models are informed by a wide variety of disciplines – anatomy, physiology, neurology, cardiology, et cetera – and are important for articulating a particular body; that is, a body that is comprised of multiple interrelated organic systems and whose boundaries extend beyond the organism, into the social, psychological, and even spiritual domains. We thus see that osteopaths tend to conceive of the body in terms of different systems, chains, or wholes instead of a composite of clearly delineated parts or tissues.

Underlying the practice of touching, then, is the knowledge that there is something to touch. This is exemplified in the following quote by O5, where he reminisces about how as a teacher he would explain touch to a class full of aspiring osteopaths:

> When I was teaching I always asked: do you remember [the experience of] being with your hands in a viewing box at nursery school? You would feel a piece of felt and a marble and a piece of Lego, and then you had to guess. O, this is the eraser, this is the pen. How do you know? Because you have seen and felt it before! […] The same is true for a liver and a sacrum, it's the same. […] Osteopaths simply throw in a whole shelf of anatomical pictures and then start pushing onto bodies to do so.

In the quote, O5 claims that touching organs and bones is similar to touching stationery, but he also adds that there is an important difference: touching bodies requires a "whole shelf of anatomical pictures." Along similar lines, O2 explained how, as an osteopath, she seeks to feel "the architecture of the body" from the outside. She added: "that is why we need to know our anatomy really well, and that is why all those dissection classes in our follow-up education are super important: go open it up and look what is underneath."

In the treatment room of O2, the visual importance of what can be seen underneath the skin is materially manifested in classical torsos of the human body with muscles, veins, nervous tracts, and organs. These models do not *feel* the way that real bodies do, but they do *look* the same. Moreover, teaching materials are clad with illustrations of how bodies, tissues, bones and cells

(ought to) look, and schemas that explain how the different systems (ought to) function. All this knowledge is needed to be able to feel what is hidden under the skin. In this sense, biomedical visuals are like the "odor kit" in Latour's example: through intimate acquaintance and extensive practice, they ultimately allow osteopaths to inhabit a world with a rich and expansive palpatory repertoire.

Working affectively

What is important to underline at this point that touching is not understood as a unilinear activity – i.e., something that osteopaths do to a patients – but that osteopaths stressed that bodies also *push back* to varying degrees. Take the example of a bladder: a hollow organ that fills and empties, and, in its cyclicity, ought to feel a particular way. More generally, osteopaths underline that many systems in the body are cyclical: hormones increase and decrease over time and depending on age and life style, air flows in and out of the lungs, specific foods enter the stomach at specific times, bowels fill, contract, and discharge, et cetera. Bodies change during pregnancy and childbirth, as they age and fall ill. All these processes inform the degree to which bodies are expected – or allowed – to push back.

To facilitate optimal palpatory perception, patients are asked to undress, stand in particular poses, flex particular body parts, and lie on a treatment bench whilst they are felt. Touching is easier on skin than through thickly layered jeans, as O3 phrased, and so most osteopaths will ask their patients to undress until they are in their underwear. Because bodies can only be adequately felt when they are relaxed, effort is put into helping patients feel comfortable and at ease. In interviews, osteopath explained how this involves taking a lot of time for a consultation, listening attentively, explaining techniques, asking permission to touch, minimizing stimuli, talking softly, and checking whether a patient is doing ok. All these measures are taken so as to establish a bond of trust and, related, to allow bodies and their separate parts to be effectively felt and mobilized by the osteopath.

However, even when circumstances are optimized, bodies do not allow themselves to be touched entirely, and not always easily. For one, anatomy limits what an osteopath can feel. The brain and the lungs are evident examples of tissues that are encapsulated by bones and are thus not directly accessible to the osteopath through palpations. O3, being small herself, mentioned in an interview that patients can be too big and heavy to be felt and mobilized, which is why she would sometimes refer such patients to stronger colleagues. Patients can also (unintentionally) contract their muscles during examination, for example because they are in pain, stressed, traumatized, or experiencing other kinds of discomfort. In such cases, touch and treatment become a challenge. Moreover, the attitude of patients can also stand in the way of successful treatment. According to O9, patients are difficult to treat when they are stern or "rigid in terms of their assumptions." Patients are also difficult to treat when they are stuck or frozen in life. This is expressed by O12 in the following quote:

> So if … people have severe chronic symptoms … Sometimes things go ill on so many levels that what I do does not have any added value in terms of treatment. So that what I do … That the way they stand, that's how they survive. If I then decide that it is better for them to stand in another rotation – to say it like that – they respond poorly to that. So they do not have the opportunity to alter their pattern.

Note that, in her explanation of how certain patients defy mobilization, O12 is referring to *both* the tissue – for standing in another rotation requires certain tissues to be mobilized so that the body allows for this change – *and* to the patient as a person. This interlinking of tissue and person is more explicitly phrased by O13 when he describes how, in some cases, it is impossible to "move [a patient] forward or backward" and how, when this happens, it is better to give up treatment because there is "too little interaction with the tissue and with the person within." These quotes illustrate how movement is seen as a prerequisite for health, and that it is important that bodies, their separate parts, *and* the persons that inhabit those bodies, (can) allow themselves to be properly affected by the osteopaths' touch.

Solving puzzles

One of the premises that underlies osteopathic treatment is that the body is hermeneutic: it requires interpretation. In interviews, osteopaths would explain how their treatment centers on finding out what bodies are trying to say. This becomes clear in O5's framing of the body as "a diary." In the interview, he explained: "So you store what you experience, and for us [osteopaths] the pages of the diary would be the fascia." *What* is stored in the body has a lot to do with the pressures of living in a modern society. This is voiced by O4 in his statement that we "often have to adapt ourselves to our surroundings, and are not able to do what we would like." He added that "ultimately, those things express themselves in our bodies, and that is why it is so nice to take the body as a starting point." The sentiment that the demands of modern life are harmful for human bodies is shared by other osteopaths, and was voiced by O2 when she stated that "the body is fatigued and I am expected to make it nice and shiny."

Osteopaths explained how what the body is saying is often hidden from the patients' awareness. This is illustrated in the following interview quote by O3:

> I have this expression: you should listen to what your body is whispering so the body does not need to scream. And it whispered a hundred times, but well, you did not listen to that. So now you have a hernia or a frozen shoulder. And now you can't go on anymore. Well, congratulations!

Note that the complaint is framed as the consequence of not heeding the needs of one's body. If the patient had listened to those heeds earlier on, the hernia or frozen shoulder might have been prevented. In the quote, the complaint is presented as a kind of providence: it is what needed to happen for the patient to listen to their body. O15 similarly mentioned how she would sometimes ask her patient: "imagine that your body is more intelligent than your brain, what do you think your body is trying to say to you?" The exact content of the speaking body was never explicitly addressed in interviews or treatment settings – rather osteopaths would talk about the volume of the speaking, i.e. of "whispering" or "shouting" – but the general gist was that the body gives "warnings" that are best attended to.

Because the body is taken as a starting point, and because what the body is trying to say is often hidden from patients' awareness, the status of the things that patients tell is ambiguous. Osteopaths agree that attending to the words of their patients is paramount in treatment and that listening attentively is a skill that every osteopath needs, but that stories also need to be bracketed when the fascial examination starts. Explaining this to patients is part of the standard procedures, as is illustrated in the following interview quote by O10:

> [I would explain that] as I am sitting here, I am typing zealously on my computer what symptoms you have. But in a minute, on the treatment bench, I try to forget all that and we shall look at how the body moves. So we shall not necessarily look at your symptoms, but at your body as a whole.

Along similar lines, O13 remarked that for treatment "it does not matter what the story is," for an osteopath wants "to know what the condition of the body is in terms of its resilience and mobility." Because the stories of the patients can be at odds with what osteopaths find in their fascial examination, heeding those stories too much can lead to biases and can ultimately jeopardize the success of the treatment. Related, osteopaths expressed not setting too much store in functional diagnoses that patients might have received from other health care providers, such as fibromyalgia, Myalgic Encephalitis/Chronic Fatigue Syndrome and chronic Lyme. They explained that, to them, such diagnoses give indications as to what patients find important and in what respects they might seek care, but also underlined that their treatment is not directed at treating or curing such illnesses.

As a rule, osteopaths will encounter places where the body pushes back too much – so when there is a "blockage," a "knot," or too much "tension." Part of the treatment is manipulating those blockages so as to allow the body to restore itself, but another part of treatment is figuring out why those specific areas are affected. The interlinking between function and structure – one of the core principles in osteopathy – is important in this respect. In interviews and during treatment, osteopaths would

underline that any change in tissue structure can and should be explained as a bodily adaptation that fulfills a particular function. The metaphor that is used in education materials is that of a tree that, due to having been exposed to strong wind for years on end, has grown diagonally. The gist of this metaphor, which was arguably already used by Andrew Still, is that the lopsided growth should be understood as the organisms' structural adaptation to (external) strain (2022:32).

While careful looking, perceptual palpations and a keen understanding of physiology allows osteopaths to get insight into *where* the body is stuck, the consultation is also oriented at understanding *when* it happened that the body became unable to regulate and heal itself. Often this happens through targeted questions, for example by asking "oh, I notice that there is a lot of tension on you uterus, did something happen there?" (interview quote by O15). By talking about their findings to their patients and inquiring after particular events, osteopaths seek to collaboratively make sense of what they encounter. Note that the concern here is not with demarcating locality but with temporality; with figuring out what factors and events can account for what is felt. This is illustrated in the following example by O6:

> If you fall from your mountain bike and fall on your chest, your ribs will bruise. If you have a pneumonia three months later, where do you think that infection will be? On the place where you fell, that's where the terrain is weakened.

While this example is of a clearly delineated event – a fall from a mountain bike – the process of matching the findings of fascial examination with particular factors and events is often diffuse and complex. This is why patients are metaphorically framed as puzzles, a term that came up in five separate interviews. As O15 described: "It's really like solving a puzzle: this piece fits into that one and these are the links."

One can describe the practice of "solving puzzles" as a form of affective attunement where the osteopath and the patient collaboratively seek to align what is sensed with factors and events. This attunement takes place in conversations, and is premised on the material context in which the treatment takes place and on the temporal situatedness of consultations that last up to an hour. This allows osteopaths to know and approach their patients' body as a hermeneutic entity: as something that can be sensed from the outside, but where more information is needed to get a thorough understanding of why the body feels the way that it does. As we illustrated in our analysis, osteopaths' making sense of patients' symptoms is further informed by the practice of skillful touching, physiological knowledge, and on bodies that are able and willing to be affected and "move along." Taken together, these elements ultimately allow osteopaths to, as O2 phrased it, understand their materials.

Conclusion

Osteopathy is known for being a treatment method that assesses and treats the body through touch. However, what touch entails, and what kind of body is enacted through touch, has remained an unexplored topic in ethnographic research. In our paper, we addressed this gap by approaching touch as an affective/affecting practice that allows human bodies to be configurated in particular ways. In our analysis, we described how osteopaths conceive of bodies as consisting of different kinds of materials. These materials can be rendered perceptible by (1) learning to touch; (2) learning how the physiological body works; (3) accommodating for the affectivity of bodies and tissues and patients; (4) and interpreting what bodies are trying to say. Certain aspects of this osteopathic way of enacting bodies are consistent with the medical gaze, including the idea that the architecture of the human body can be perceived from the outside-in (including its abdominal organs), and the consensus that the bodies can best be assessed without patients' discursive interference. Other aspects, however, point to notable points of departure, including the general attentiveness to the ways in which bodies (can) push back, and the idea that structure of the human body is fundamentally shaped and worked upon by external strain. More generally, and in line with recent studies of touch, we conclude that, to osteopaths, touch

is not a linear procedure, but rather allows for various ways of affecting and being affected by their patients' bodies, as well as by their own.

Acknowledgments

This project is indebted to all the osteopaths who were willing to spend some of their time and insights with us. A special thanks to Sander Kales, for introducing us to the field and for helping us connect with colleagues. We also thank our colleagues at Tilburg's Culture Studies Department for their excellent comments and suggestions. Many thanks, too, to the anonymous reviewers who helped embed this article more firmly in scholarship. Ethical clearance for this research was given by the Research Ethics Committee of Tilburg School of Humanities and Digital Sciences (REC#2017/39).

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This project was funded by the Dutch Research Council (NWO) and is part of the VICI project "Mind the Body" [277-20-008/2737]. Nederlandse Organisatie voor Wetenschappelijk Onderzoek [277-20-008/2737]

Notes on contributors

Irene Groenevelt is a postdoc at the Culture Studies Department at Tilburg University, the Netherlands. Her work combines insights from medical anthropology, phenomenology of illness, feminist media studies and feminist STS to explore conceptualizations of bodies in and beyond medical practices. She is currently part of the interdisciplinary research project "3D MR spirometry" (funded by Horizon Europe, no. 101099934), in which she explores how (new) imaging technologies of the lungs are experienced by patients and practitioners; how it impacts their relationships; and what impact these technologies have on cultural understandings of bodies and the lungs.

Jenny Slatman is Professor of Medical and Health Humanities in the Department of Culture Studies at Tilburg University, the Netherlands. She has published widely on issues on embodiment in art expression and contemporary medical practices. In 2017, Slatman was awarded a 1.5 million euro grant from the Netherlands Organization for Scientific Research (NWO) for her research project "Mind the Body: Rethinking embodiment in healthcare."

ORCID

Irene Groenevelt http://orcid.org/0000-0003-3443-0896
Jenny Slatman http://orcid.org/0000-0002-1451-9378

References

Ahmed, S 2014 The Cultural Politics of Emotion. Edinburgh, UK: Edinburgh University Press.

Ahmed, S, and J. Stacey 2001 Introduction: Dermographies. *In* Thinking Through the Skin. S. Ahmed and J. Stacey, eds. Pp. 1–18. London: Routledge.

Aurora Hoel, A. S. 2022 Styles of objectivity in scientific instrumentation. *In* The Oxford Handbook of Philosophy of Technology. S. Vallow, ed. Pp. 103–127. Oxford, UK: Oxford University Press.

Baer, H. A 1987 Divergence and convergence in two systems of manual medicine: Osteopathy and chiropractic in the United States. Medical Anthropology Quarterly 1(2):176–193. doi: 10.1525/maq.1987.1.2.02a00030.

Baroni, F., N. Ruffini, G. D'Alessandro, G. Consorti, and C. Lunghi 2021 The role of touch in osteopathic practice: A narrative review and integrative hypothesis. Complementary Therapies in Clinical Practice 42:101277. doi: 10.1016/j.ctcp.2020.101277.

Bergna, A., M. Galli, F. Todisco, and F. Berti 2022 Beliefs and use of palpatory findings in osteopathic clinical practice: A qualitative descriptive study among Italian osteopaths. Healthcare 10(9):1647. doi: 10.3390/healthcare10091647.

Blake, R. J. C. 2011 Ethnographies of touch and touching ethnographies: Some prospects for touch in anthropological enquiries. Anthropology Matters 13(1):1–12. doi: 10.22582/am.v13i1.224.

Braun, V., and V. Clarke 2012 Thematic analysis. *In* APA Handbook or Research Methods in Psychology, Vol. 2. Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological. H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf and K. J. Sher, eds. Pp. 57–71. American Psychological Association.

Casey, E. S 1987 The place of space in the birth of the clinic. The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine 12(4):351–356. doi: 10.1093/jmp/12.4.351.

CBS 2024 Bevolkingsteller. Den Haag, the Netherlands: Centraal Bureau voor de Statistiek. https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/bevolkingsteller.

Christensen, I. E., M. B. Risør, L. Grøn, and S. Reventlow 2023 Senses of touch: The absence and presence of touch in health care encounters of patients with mental illness. Culture, Medicine and Psychiatry 47(2):402–421. doi: 10.1007/s11013-022-09770-9.

CIBG 2022 BIG-register. Den Haag, the Netherlands: Centaal Informatiepunt Beroepen Gezondheidszorg. https://www.bigregister.nl/over-het-big-register.

CIBG 2024 Registratiecijfers. Den Haag, the Netherlands: Centaal Informatiepunt Beroepen Gezondheidszorg. https://www.bigregister.nl/over-het-big-register/cijfers.

College-Sutherland 2023 Opleiding Osteopathie: kritisch kijken en kiezen. College voor Integrale Geneeswijzen. https://college-sutherland.nl/osteopathie/opleiding-osteopathie-kritisch-kijken-en-kiezen/#:~:text=Een%20opleiding%20Osteopathie%20kies%20je%20niet%20zomaar.&text=Kritisch%20naar%20de%20pati%C3%ABnt%2C%20kritisch,juiste%20investering%20in%20je%20toekomst.

Consedine, S., C. Standen, and E. Niven 2016 Knowing hands converse with an expressive body – An experience of osteopathic touch. International Journal of Osteopathic Medicine 19:3–12. doi:10.1016/j.ijosm.2015.06.002.

Csordas, T. J 1993 Somatic modes of attention. Cultural Anthropology 8(2):135–156. doi: 10.1525/can.1993.8.2.02a00010.

Eisenlohr, P 2024 Atmospheres: The multisensoriality of spatially extended emotions. Ethos 52(1):37–50. doi: 10.1111/etho.12417.

Foucault, M 1977 Discipline and Punish: The Birth of the Prison. A. Sheridan, Trans. 2nd ed. New York: Vintage Books.

Foucault, M 2003 The Birth of the Clinic: An Archaeology of Medical Perception. A. M Sheridan Smith, Trans. 3rd ed. London: Routledge.

Hafermalz, E., K. Riemer, and S. Boell 2016 Enactment or performance? A non-dualist reading of Goffman. *In* Working Conference on Information Systems and Organizations (ISO). Dublin, Ireland. New York: Springer.

Haraway, D 1988 Situated knowledges: The science question in feminism and the privilege of partial perspective. Feminist Studies 14(3):575–599. doi: 10.2307/3178066.

Harris, A 2016 Listening-touch, affect and the crafting of medical bodies through percussion. Body & Society 22(1):31–61. doi: 10.1177/1357034X15604031.

Howes, D 2011 The Senses: Polysensoriality. *In* A Companion to the Anthropology of the Body and Embodiment. F. E. Mascia-Lees, ed. Pp. 435–450. Malden, MA: Wiley-Blackwell.

Howes, D 2019 Multisensory anthropology. Annual Review of Anthropology 48(1):17–28. doi: 10.1146/annurev-anthro-102218-011324.

Jay, M 1993 Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought. Berkeley, CA: University of California Press.

Kearney, R 2020 Philosophies of touch: From Aristotle to phenomenology. Research in Phenomenology 50(3):300–316. doi: 10.1163/15691640-12341453.

Kuriyama, S 1999 The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine. New York: Zone Books.

Latour, B 2004 How to talk about the body? The normative dimension of science studies. Body & Society 10(2–3):205–229. doi: 10.1177/1357034X04042943.

Lock, M, and V.-K. Nguyen 2011 An Anthropology of Biomedicine. Malden, MA: Wiley-Blackwell.

Long, J. C 1992 Foucault's clinic. The Journal of Medical Humanities 13(3):119–138. doi: 10.1007/bf01127371.

Macmillan, A 2023 Power and capital: In osteopathy. International Journal of Osteopathic Medicine 50:100685. doi: 10.1016/j.ijosm.2023.100685.

Miller, A 2004 A Second Voice: A Century of Osteopathic Medicine in Ohio. Athens, OH: Ohio University Press.

Mol, A 2002 The Body Multiple: Ontology in Medical Practice. Durham & London: Duke University Press.

Mol, A., and J. Law 2004 Embodied action, enacted bodies: The example of hypoglycaemia. Body & Society 10(2–3):43–62. doi: 10.1177/1357034x04042932.

NVO 2018 Beroepsprofiel Osteopaat. Utrecht, the Netherlands: Nederlandse Vereniging voor Osteopathie. https://osteopathie-nro.nl/wp-content/uploads/2022/08/NVO_Beroepscompetentieprofiel-osteopaat.pdf.

Parker, R., T. Larkin, and J. Cockburn 2017 A visual analysis of gender bias in contemporary anatomy textbooks. Social Science & Medicine 180:106–113. doi: 10.1016/j.socscimed.2017.03.032.

Paterson, M 2007 The Senses of Touch: Haptics, Affects and Technologies. Oxford, UK: Berg.

Ratcliffe, M 2008 Feelings of Being: Phenomenology, Psychiatry and the Sense of Reality. Oxford, UK: Oxford University Press. doi: 10.1093/med/9780199206469.001.0001.

Speed, L. J., and A. Majid 2020 Grounding language in the neglected senses of touch, taste, and smell. Cognitive Neuropsychology 37(5–6):363–392. doi: 10.1080/02643294.2019.1623188.
Turner, P. W. D., and E. Holroyd 2016 Holism in osteopathy – Bridging the gap between concept and practice: A grounded theory study. International Journal of Osteopathic Medicine 22:40–51. doi: 10.1016/j.ijosm.2016.05.002.
Vionnet, C., and T. Ingold 2018 From experience to language: Towards an affected and affective writing: A conversation with Tim Ingold. Swiss Journal of Sociocultural Anthropology 23:82–90.
WHO 2010 Benchmarks for Training in Osteopathy. Geneva, Switserland: World Health Organization. https://www.who.int/publications/i/item/9789241599665.
Yates-Doerr, E. 2017 Counting bodies? On future engagements with science studies in medical anthropology. Anthropology & Medicine 24(2):142–158. doi: 10.1080/13648470.2017.1317194.
Zorgwijzer 2024 Osteopathie vergoeding. Barendrecht, the Netherlands: https://www.zorgwijzer.nl/vergoeding/osteopathie.
Zweedijk, R. 2022 Osteopathie: Hoe een osteopaat te werk gaat. Yerseke, the Netherlands: Panta Rhei opleidingen.