

3

On Tact and Touching

Reach hither thy finger, and behold my hands; and reach hither thy hand, and thrust it into my side: and be not faithless, but believing.
(John 20: 27)

In this biblical reference, vision is insufficient for the doubting Thomas, who does not trust his eyes (to whom, ‘seeing’ is not ‘believing’). It is through tact, the sense of touch, that he ascertains the truth of the world. Touch is more important than the other senses, for it brings us into contact with the world more clearly than the other senses. In the same section of the New Testament, there is another expression relating to tact, which, in its Latin version, has inspired many painters: *Noli me tangere*, do not touch me or do not hang onto me.¹ This scene, this very expression, has inspired the extended philosophical reflection – on a major taboo in (nearly) all cultures: tact and touching – published under the same name by one of the foremost phenomenological thinkers of the postmodern era: ‘You see but this vision is not, cannot be a touch, if touch itself had to figure as the immediacy of a presence; you see what is not present, you touch the untouchable that keeps itself out of reach of the hands exactly like the one you see before you, already departing from this place of the encounter’ (Nancy 2003: 39).

Tact and touching take a special place among the senses, even though vision constitutes not only the dominant one in our culture but also the one privileged as a metaphor for understanding. In chapter 2, I describe how the movements of the eyes constitute the world that is apparent to us in our perception. Whatever it is that we see – whether psychologists call it truth or illusion – precisely *is* what we use for making any decision. I begin the present investigations with the sense of vision because, in our world and epistemological ideology, it is the way in which we talk and think about knowing in the everyday world. Many everyday expres-

¹ Touch-me-not is also the common name of a plant genus, the Latin name of which is *Impatiens*, that is, a word derived from the prefix *in[m]-*, not + *patiēns, tis*, suffering, the present participle of the verb *patī*, to bear, undergo, suffer, allow. Touching, or being touched, thereby comes to be related to suffering. See chapter 8.

sions testify to this. We say ‘I see’ when we come to understand something or ‘I can’t see it’ when we do not follow the argument of another person. Some explanation may be ‘clear’ or ‘unclear’, just as perceptual objects are, or perception through dirty glasses. In many ways, however, and for many purposes and reasons, vision and visual experiences do not constitute the best starting point for thinking about how we know and learn, for the interactional aspects between the subject of knowing and the object (world) it knows about is all too easily obfuscated. Vision is not a good metaphor for conducting research. Especially among scientists and like-minded philosophers, mind (knowledge) came to be seen as a mirror of the world – an idea that goes back to the ancient Greek who thought that ‘sense is that which is receptive of sensible forms apart from their matter, as wax receives the imprint of the signet-ring apart from the iron or gold of which it is made’ (Aristotle 1907: 424a)]. Although the visual sense has come to be the dominant one in our culture – ours is characterized as a visual culture and the mind as mirror of has been the touchstone of the dominant epistemology – touch was for Aristotle the sense that distinguishes humans from animals: ‘In the other senses man is inferior to many of the animals, but in delicacy of touch he is far superior to the rest. *And to this he owes his superior intelligence.* This may be seen from the fact that it is this organ of sense and nothing else which makes all the difference in the human race between the natural endowments of man and man’ (ibid: 421a, emphasis added).

Two millennia later, the hand, the primary touch organ, also became the distinguishing feature in the philosophy of Karl Marx because of its capacity to make tools and to transform the world. Here, then, both the pathic aspect of the hand as the place where nature leaves its imprint and the agential aspects where human intentions get transformed into nature-transforming actions, are highlighted simultaneously. In this chapter, I show how the two moments, the pathic and the agential, are irremediably intertwined. Learning from and about nature always already has pathic moments that remain un(der)theorized when we think about learning using a constructivist metaphor.

Investigating Tact

Tact, the sense of touch, plays an important role in the imagery of the English language. Etymologically, the term derives from the Latin *tact-us*, the participial stem of *tangere*, to touch. All tact requires contact, pointing us to the reciprocal relation between touching and being touched. Tact and contact are also at the base of the word *contingency*, a quality of being subject to the situation or to chance. The same root is at work in the terms *contiguous* – touching, in contact, adjacent, having a common boundary – and *tangent* – line touching a curve. I may be touching and be touched at the same time, physically and emotionally – diseases, moods, and affect are *contagious*. There is a lot that we can learn through first-person investigations of touch, tact, and the related phenomena of contact, contingency, and contamination.



Fig. 3.1 Finding out about the texture of a surface through touch requires the hand to move.

To explore the sense of touch, it is best to be in the dark, where our sense of vision is eliminated, or to close the eyes. In this way, our ongoing investigation is not contaminated by the sense of vision.² School children in their early years frequently begin their science and even mathematics lessons by exploring ‘mystery’ objects that are hidden in boxes or bags. Do the present investigation in the same spirit. Take any object or surface and engage in an experiment of the kind described in chapter 2. For example, you may take the mouse pad, book or newspaper page, or tablecloth. Stop and find out about touch before reading on.

As you begin exploring the chosen object, you may notice immediately that to sense the nature of a surface – I am taking for this experimentation a mouse pad (Fig. 3.1) – it does not suffice to place one’s fingers on it. If you place the finger pad down, within an instant, all sensation of the surface has disappeared unless you move in one or another way. To feel something, I actually have to move my hand laterally away from me (Fig. 3.1) and slide the tip of the fingers across the surface. As a result, I have a sensation that I associate with a surface that is not polished like a mirror or some metal but that has some coarseness to it. The dual nature of the sense is actually confounded, as only what we feel on the outside tends to become salient and the resistance felt in the succession of the tactile impressions.

To sense by means of touch requires *being in contact with* (intransitive form of ‘to contact’). I actually have to *establish contact* (transitive form of ‘to contact’) so that I can *come into contact* (intransitive form of ‘to contact’). There is something exceeding me, when I have to do something to get into a situation that is other than myself.

I can also push downward, which makes my fingers push into the spongy material until I can feel the resistance in me (fingers, hand). In fact, the video I am recording shows that the fingers themselves flatten a bit as they sink into the material (Fig. 3.1, right). I can feel the surface give in to the pressure until the pad stops – or rather, when the muscles and tendons in my hand and arm begin to hurt. What I

² Our sense of vision is involved even though we might not realize it. I began noticing its presence even in walking and in carrying things when I walked in the dark from the kitchen to my office only to realize later that I had left a trail of spills. I subsequently realized that in the dark, the cup might be tipping without my conscious awareness that my hand had rotated so that the coffee spilled from the cup. That is, for the cup to be steady, it is insufficient to have a steady hand. The hand is not steady in itself. It is steady and steadied simultaneously – and the eye has an important role in this.

sense *within me* is a resistance to my movement. This resistance is directed against the effort that I intentionally expend to pushing the fingers down into the pad. What I do not sense is the hardness of the material but the resistance, in my body, to the effort intended by my body.

When my fingers glide across the surface, there are actually two different sensations depending on my orientation. On the one hand, if I intend sensing the surface of the mouse pad, I can feel a coarseness that lies on the *outside* of the skin. But I can also change the intentional orientation toward the inside: and now it is as if the mouse pad is scratching me, a sensation that I feel *within*. If you have difficulties generating this experience, scratch yourself – e.g., your lower arm – with the finger of the other hand, a pen, a ruler, or any other object. Where do you feel something as a result? In and under the skin! Hold the object steady and move the underarm that you want to ‘scratch’, and you have a feeling in the skin, which, if you really had felt an itch, would have relieved you. But you can take the same underarm and move it across the mouse pad surface: You will feel the surface outside of you. In fact, at this very instant – I am working on a draft of this paragraph – I can feel the itch that remains from a bee sting I received the day before while gathering the vegetables for dinner. I can relieve the itch temporarily by pushing with my right-hand fingers on the spot and rubbing back and forth; but I can also go to any other object, like the door to my office or a bookshelf and rub my upper arm as if I wanted to explore the object. Yet I feel relieved at the place underneath my skin where I locate the itch.

In this instant, I feel the itch: I am itching and feeling the itch from the sting. In this itch, the distance between contact and noncontact, the untouchable and touch are in contact. My flesh is in contact with itself: contiguity of contact without contact. Here, ‘contamination then becomes what it is not; it disidentifies itself. It disidentifies everything even before it disidentifies *itself*. It disappropriates, it disappropriates itself, it attains what it should never signify: an interruption of relations and ex-propriety of the proper’ (Derrida 2000: 90). Tact here exhibits itself as a limit figure, as a non-distance of distance, right here where it is closest with and to itself. But this limit figure is synoptic, as touching and the touched separate in contact: I feel some *thing* and it is *I* who feels. The thing is felt as external, as other, and as not belonging to me who feels.

We immediately can make a number of further observations (second part of the phenomenological epoché). First, there is an essential agential moment to learning about the surface by means of tact. I instantly and without a second thought move my fingers along the surface of the objects I encounter. This intention, rather than accepting it as a given, requires an exploration and explanation in its own right. I pursue this question of intention in chapter 6: How is it possible to have an intention? What is required to be able to have an intention for doing something? Where does this intention come from? (Is there an intention to have an intention?) For the moment we simply take the capacity to intend as given and pursue the present inquiry about touch.

When I intend to learn about the surface of the mouse pad, I have a sensation at the surface of my skin. It is relatively smooth for the mouse pad that I use right now – the slight coarseness distinguishes this surface from a completely smooth one, such as the melamine surface of the desk on which the mouse pad rests. As in

the case of the visual perception, tact involves movement. But in visual perception, we easily forget that there is an interaction. Tact on the other hand, always involves contact and, therefore, contiguity and contingency. Pursuing the etymological roots of tact, with contact there is contamination, from Latin *con-*, with, + *tangĕre*, to touch. In touch, I relate to the other; but this other relates to me. It is through the self-relation to the other that I come to be myself, for ‘the relation to another flesh is a component of the sense of my own flesh’ (Franck 1981: 167). This is so because ‘the flesh as ordinarily one’s own and origin of oneself originally is improper and the origin of the improper’ (ibid: 167). Touch teaches us that the self cannot be the starting point of who I am but that I am always ‘contaminated’ by the other. That is, as Arthur Rimbaud said, *JE est un autre* (‘I is another’).

A new question arises then: If tact is contact – and therefore contingency, contiguity, contamination, and contagion – can I ever touch something that is tangible in itself? Moreover, is it not precisely because of the possibility of contagion and contamination that some god could experience if we were actually able to touch him/her? Does not the idea of contact between humans and their gods require a form of contact with an intangible such that the Being/beings touched are not compromised in their integrity? This is why we can say that ‘to affirm the presence within us of the idea of the infinite means considering as purely abstract and formal the contradiction that the idea of a metaphysics conceals’ (Levinas 1971: 21). Metaphysics approaches but never actually is able to touch the physical, for this would require contact and the possibility of the contamination of the ideal by the real. It is not surprising, therefore, that there is a symbol grounding problem in the cognitive sciences: How can anything conceived of as abstract, like representations, relate to anything in the material world? How can there be ‘meanings’ of ‘meaningless’ symbols (words, discourse, language) that relate to nothing but other symbols (words, discourse, language). This inquiry into the sense of touch teaches us that there has to be more to knowing than abstract formulations and representations; and it teaches us that what and how we know is contingent upon con/tact and contamination of the proper by the non-proper (i.e., the other).

My sensing of the mouse pad surface already exhibits the affective being-affected, something has come close and thereby relevant to me. But this smoothness is not the sum total of my sense impressions. Rather, ‘it is the manner in which the surface uses the time of our tactile exploration or modulates the movement of our hand’ (Merleau-Ponty 1945: 364). If my hand moves across a different mouse pad surface – the one I keep in my drawer because, being of hard plastic, it does not work so well – the sensation changes. If I push harder onto its surface, a change in the reaction of my hand and arm muscles also occurs.

I begin to sense the effect of moving along the surface as affecting me on the inside. Tact means contact, and effect of the other on me. Vulnerability. If I stop moving my finger across the surface, the sensation stops. I realize: In touching something else, I in fact come to sense myself. In touching something else, I touch and feel myself. The distance between the Other and myself is, in fact, undecidable. At the point of contact, the difference between myself and Other is syn-copic, undecidable: myself and the Other mutually affecting each other, contaminating each other. For Kant, this shift in sensation had meant a shift of

consciousness, now emphasizing the (inner) sense organ rather than the external object so that external representations (*Vorstellungen*) are changed into internal ones.³ But tact precisely means contact and therefore proximity and non-distance that mediated access and representation bring with them. Tact and touching throw into relief the entire project of metaphysics: ‘The style of these modulations defines an equal number of appearances of the tactile phenomena, which cannot be reduced one to the other and which cannot be deduced from an elementary tactile phenomenon’ (Merleau-Ponty 1945: 364).

If you find creating this sensation with the hand and fingers difficult then think about what you do when you feel an itch somewhere – like the one that I can sense in my arm right now. You scratch or rub yourself hard on a corner of a wall or doorframe. The itch is on the inside of your skin and moving along an object removes the itch. That is, depending on your intention, to feel or to scratch, the interaction of moving along an object that you already know comes to lie outside or inside of your skin. That is, the intention changes what happens and what you learn (about surfaces, about how to deal with itches). But in any event, the sensation created first and foremost is an auto-affection, created at the interface between an intention to sense or scratch and the touch, which requires a movement of my hand (body) along an object. I cannot anticipate the contents of my touching unless I have seen it before. This result therefore is a pathic experience. That is, to understand the real living act, we require the concept of auto-affection, which is the ‘self-reflection of life in motion, of life in its actual aliveness’ (Bakhtin 1993: 15). The itch I feel in my arm is a form of auto-affection: the universal structure of experience as such. It is my self-same body that creates and feels the itch: itching and feeling the itch are but two sides of the same coin. The fact that we may find ourselves scratching shows that this itch is present pre-reflectively so that deal wit it even before ‘constructing’ the itch as itch: The itch is experienced pre-noetically (pre-reflectively) and without the representations that are so dear to constructivist scholars. Without auto-affection, there is no knowing the itch or anything else, there is no Being: ‘Only a being that is capable of symbolizing, that is to say, to auto-affect itself, can let itself be affected by the other in general’ (Derrida 1967b: 236). Only because I move my hand across the mouse pad can I feel, and this intentional movement that allows me explore the mouse pad surface by means of touch requires auto-affection from which intention emerges. Tact and contact thereby teach me that auto-affection is the condition of experience in general, a possibility that we may also call *Life*. Auto-affection emerges from the encounter of the touching and the touched, the touching-touched, in the ‘minute difference that separates acting from passioning’ (ibid: 235). This separation, actually, is a *différance*, because the difference between acting and passioning is undecidable, synoptic: perception and self-movement pertain to the same (dialectical) unit and they constitute one another, contact and non-contact are one.

³ Kant’s term *Vorstellungen* (representations) literally means ‘things that are made to stand’ (*Stellungen*) before (*Vor-*) ourselves. Representations therefore are estranged from ourselves, other than ourselves, inherently unable to capture that which is most intimate to ourselves, our processes of thinking (Marion 2010).

In everyday language we say, ‘I feel the cloth-covered surface of the mouse pad, its slight coarseness’. This sentence structure makes me the agent of the feeling. But when I do this for a first time, when I do not know what some surface *feels* like, pretending that it is all about agency does not capture the essence of touch specifically and the sense of touch generally. When I reach out, place my fingers on the mouse pad, and slide them across (Fig. 3.1), I actually have to open up so that I can be affected. To feel by means of touch, I have to open up to allow myself to be affected – even though the movement itself is already part of my ‘I can’. But this intending does not teach me anything. It is the way in which my senses are affected by the pad that teaches me about the surface. Without prior experience, I cannot construct the surface of the mouse pad: it affects me. As I do not know what to expect, I cannot but allow the world to act upon me all the while I intentionally move my hand across the mouse pad surface to sample its texture. The world itself exhibits itself to me. That is, although I intend to sample the surface, I actually have to allow the mouse pad surface to affect me, as it is only through this affection that I can have a sensation at all. To intend to touch means allowing oneself to be touched, as the contact of tact is symmetrical: the mouse pad is in contact with the hand, as the hand is in contact with the mouse pad. Sensing, therefore, is essentially pathic: I open up to the world allowing it to affect me. When I say ‘I allow myself to be affected’, I express in fact this double relation of affecting and being affected, of touching and being touched. We also say ‘I am touched’ in the passive voice when something emotionally affects us. But for this to happen, we have to allow ourselves to be touched. Something is *intact* when it has not been touched and therefore affected by something else. Surgeons, for example, have all sorts of strategies that allow them to operate without getting involved in the suffering of the people they operate on: They use physical (covering but the tiny piece they are working on) and emotional screens and barriers that separate them (emotionally) from the very thing that they are in contact with. It is in such contact that healthcare workers may be contaminated in more than one way, and thereby be affected (physically, emotionally).

When I intend feeling the hardness of the mouse pad surface, I actually stop and now push down on the surface using my finger like a stylus and push with arm and hand. In the case of a mouse pad, I can sense how the surface folds around the finger, which moves a bit into the surface (Fig. 3.1, right) and then I can feel resistance within my muscles to the effort they expend while pushing downward. That is, what I initially sense is a resistance not of the substance to my finger but within the muscles that enact the downward push. When I do the same with the melamine-covered desktop right next to the mouse pad, my finger does not penetrate and there is an immediate resistance I feel in the muscles of my fingers, hand, and arm right into my shoulder and upper body.

Up to this point in this inquiry, I have focused on intending to explore the texture of a surface. But I may change the form of experience once I change my intention to feel the shapes of things. For example, I may run my fingers along a coffee mug to feel the texture of its surface. In comparison with the mouse pad, there is a different sensation: it is entirely smooth, as if polished. But I may change my intentionality and run the fingers along, for example, the handle (Fig. 3.2). As my hand runs down the handle, I can feel my fingers begin to move with respect to

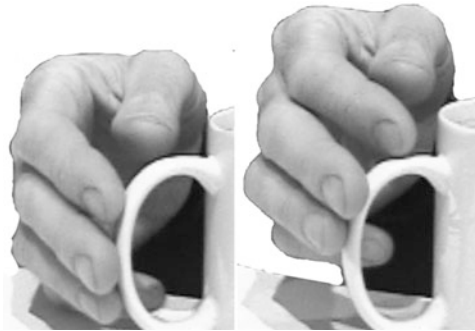


Fig. 3.2 Exploring shapes by means of the sense of touch requires the movement of the hand and opening up to be affected.

each other and the hand moves with respect to the remainder of my body. As I move my hand along what I know to be the handle of the coffee mug, the thumb and index finger begin to move with respect to the middle finger, which itself approximately stays in the same position for a while. From these changes, I know based on experience how to name the underlying shape (topology) as a curve – or, after feeling the other parts of the object, as the handle of a mug. In fact, I may do this blindfolded and I feel ‘a coffee mug’. My hand *feels* the mug: I do not have to stop and ‘interpret’ whatever ‘stimuli’ affect my sense of touch. It is only through *the contingency of this* contact that I can feel and recognize the thing as mug. If my understanding of mugs did not also imply a bodily experience, I would not be able to know that I am touching a mug, as there is no relation between the sound /mʌg/ or letter combination in ‘mug’, the feeling in my hand of a MUG, and the abstract concept of a mug. Touch teaches us that there is more to knowing than words and language. Without this and the other senses, ideas (words, language) would not make sense. We can make sense precisely because we are always already in contact (with) and remain in touch with a world. This also means that there is no ideal knowledge as such, for it is always already contaminated in contiguity with the world.

As before, I can slide my hand along some object in the dark. My intention to feel shapes requires my hand to move and to open up to receive the impressions that arise from the interactions between my hand and the object. It is only because there are impressions that I can be impressed. The something gives itself as a mug. But because I cannot anticipate (foresee) what the shape is, I cannot but be a welcoming recipient of what happens to me as I move my fingers and hand *following* the shape. The shape of the object determines the direction of my hand movements. ‘I make myself passive with respect to [the objects] and that they are revealed to me from the point of view of this passivity, in and through it’ (Sartre 1956: 392). In feeling something as something, I discover the other. When my sense tells my consciousness that there is a *mug*, then the other in me has already named what it is that I hold in my hand. It is in the intention to sense what is there, that is, ‘in my desiring perception’ that ‘I discover something like a *flesh* of objects’ (ibid: 392). Importantly, what I feel is not the shape. What I feel are changes in the position of

my hand and fingers with respect to each other and with respect to my overall body as a frame of reference. What is interesting about this is has been recognized long ago by a philosopher of incarnate knowing: ‘all these movements that the hand executes, all the positions it has taken in running over the solid, can be repeated voluntarily in the absence of this solid. These movements are the signs of diverse elementary perceptions, relative to the primary qualities that are inseparable from resistance; they can therefore serve to reveal ideas, and this call, executed by means of the available signs, constitute the memory properly speaking; there is therefore a true memory of tangible forms’ (Maine de Biran 1859: 147).

In all of these explorations by means of touch, we notice the interplay between the agential and pathic moments of learning. The perceptions *are given to me*, in person, in the flesh, as Merleau-Ponty says, not to some abstract mind. The smooth and rough surfaces of the different mouse pads or the handle of my coffee mug resonate within me. They are first and foremost experiences in and of the living flesh, which integrates the auto-affection of its own movement and the unanticipated sensations that are aroused in the process. Although I can intend to learn (find out more about the world I inhabit), I cannot intend and directly aim at the contents of this learning. I cannot construct the surface because the sensation is an entirely pathic experience. Because I do not know what a surface texture will be, I cannot construct its nature. Whereas I can intend to learn by touching, requiring the ability to move my hands, I cannot in a strong sense construct the knowledge about the surface as I can only open up and let it (the surface) affect me. Learning arises from this concurrence of affection and auto-affection in movement. ‘The perceptual . . . is always given with the feeling, with the phenomenal, with the silent transcendence. Yet *a Piaget absolutely ignores this*, has completely converted his perception into a cultural Euclidean perception’ (Merleau-Ponty 1964: 262, emphasis added). The philosopher therefore challenges us with the task to accurately describe how perception masks itself, how it makes itself Euclidean – which is precisely part of the task I accomplish in this book. In contrast to Gestalt psychologists, Piaget views perception as probabilistic in nature, so that a sensorial datum comes to be the product of an equilibration that depends on innate factors that are external to each other and that interfere with one other.

From very different theoretical backgrounds, theoretical biologists, physiologists, and phenomenological philosophers have come to the same conclusion: perception is self-movement and self-affection. Perception and self-movement emerge from each other: they are made from the same cloth. This is so because the flesh (living body) is not the sum total of tactile sensations and kinesthetic experiences but the effect of a unitary ‘I can’ (to which I return in chapter 6). The flesh is the source of an auto-affection that is at the source of the ‘I can’, which subsequently allows intention to emerge. This auto-affection also precedes any sensorimotor schema. The living body, the flesh, is the condition of the self-apperception that allows me to be conscious of a sensation or pain; and this self-relation allows the self of movement and perception to coincide and to weave with and from it the world that we know. The flesh is the living/lived body, which is not the body thought by mind (soul) as its own, but the sensible body in a double sense: it is what I sense, the sensible world including the body, and what senses, a body given to itself in auto-affection that is further affected through its senses.

Interlacement

In chapter 2, I note that vision has become the dominant metaphor for thinking about knowing, even though there have been philosophers – ever-since ancient times – who proposed touch as a more suitable replacement. In the preceding section, I use and exemplify experiments that employ touch as the basis for exploring the role of the senses in the making of sense and, in this, articulate the first-person method for investigating learning. In this section, I further articulate the first-person method related to touch for the purpose of extending this analysis. I describe a first-person experiment readers should do on their own while reading along, because it allows us to establish a fundamental sense of the very possibility of knowing. This is so, because touch – or, rather, self-touching – provides the possibility to study the relationship of the knower and the known, the sensing and the sensed in their simultaneity.

Consider again the exploration of the mouse pad surface. Now, however, I have added a second one to my desktop. It has a smooth synthetic surface. After bringing it home, it had turned out not to work very well with my optical mouse and so I have put it to the side. At present I explore it rather than the one I normally use. Similar to what we see in the preceding section, my hand explores an aspect of the world on my desktop that it comes to exteriorize once the sensed property of the pad is recognizably repeatable. That is, when I am interested in the mouse pad surface, intentionally oriented toward sensing its texture, I exteriorize this world. It comes to stand out: it has an *ek-static* existence. In fact, etymologically, ‘ek-static existence’ is a redundant expression, for the latter term derives from Latin *existēre*, to stand out, from *ex-*, out + *sistēre*, to stand. To stand out is to stand outside, not necessarily outside of the body but *outside of itself*.⁴ Exteriorizing means making it stand out; the properties of the mouse pad surface are *ekstatic* in nature when its coarse, tissue-like surface comes to stand out as such, *as* coarse, rather than being an immanent feature of my relating to the world – e.g., when I walk more rapidly on a coarse surface than on a sheet of ice. When it stands out, the sensation no longer is a property of my sensing but a property of the world. It has become detached, made to stand out and apart. In this case, my hand has learned to recognize *a kind of* surface. In fact, in contact, the mouse pad surface has taught my tact so that the latter can *recognize* the thing that has shaped the sensing perception. I can refer to the coarseness because my tact *recognizes* the kind of surface as something that it has felt before. In the experience, tact itself has changed. Because of its changed nature, I now feel a mouse pad rather than having to interpret some raw input – a feeling of coarseness at my fingertips. That is, I no longer experience a something that I then interpret to be a mouse pad; I immediately, that is, without mediation by reflexive pondering, experience a mouse pad – in the way I hear a motorcycle rather than a sound that I only interpret to be a motorcycle. The sensation has created an opening upon a world. But for the exploration of the mouse pad surface to be able to teach me anything at all, there initially has to be a fundamental relation between the movements of the hand and finger, on the one hand, and

⁴ I return to this concept in chapter 7 on being and flow and in chapter 8 on passions.



Fig. 3.3 The left hand explores the mouse pad, thereby learning about the world, whereas the right hand touches the hand that touches. The subject of knowing comes to know itself as an object of knowledge.

the thing I touch, on the other hand. This then requires an interlacing of the internal self-affection that relates movement and sensation with the possibility to be a body that can be touched simultaneously (or in turn). I already note in chapter 2 how the very fact that there has to be movement to see anything at all intertwines my body and the world I perceive. Let us pursue this by means of a first-person investigation.

I can experience such interlacing when I use the right hand to touch the left hand in the course of touching the mouse pad surface (Fig. 3.3). Read the following instructions and then stop for a moment and engage in the experiment described. With one hand explore the surface of an object – such as I do right now with my mouse pad. Then take the other hand and touch the first. Focus on touching and feeling the surface while the other hand touches your touching hand. Attempt to understand the *process* of phenomenalization. Focus on the other hand, the one that touches the touching. What is being phenomenalized? What does this tell us about the process of phenomenalization? Stop here and explore before reading on.

You will have noticed that either you experience feeling the surface with your left hand, being able to describe it in more or less vivid terms, but simultaneously, what the right hand feels is not present in the same way. Its touch is present, but only vaguely and in the background. Conversely, if you intend feeling with the right hand what your exploring left hand does, then the sensation of the hand comes to the foreground, you can describe the surface of the hand, but now the surface of the mouse pad moves to the background, constituting but a minor modulation of the sensation that predominates your perception. Simultaneously, there is a strange crossing over. You sense with your right hand, and the left hand lying on the mouse pad itself becomes a strange corpus. The reverse is also true, if you focus on the left hand no longer exploring but experiencing the right hand its brushing movement as a caress, then the sensation from the exploration has stopped and the caress pervades the experience.

We can push this experiment even further by having the two hands explore each other, the pinnacle of contact, where each part is intended to touch the other hand



Fig. 3.4 The left hand explores the right hand, which is in the course of exploring the left hand.

touch (Fig. 3.4). *You do notice that we are engaging here in a systematic variation of experience to provide the basis for finding out the invariants!* Stop for a moment for an experiment, in which the left explores the right hand, which itself is in the process of exploring the left hand.

As before, your intentionality determines which sensation is in the foreground against the other sensation indeterminately residing in the background. When you attempt, for example, to feel with your right-hand fingers the surface of the fingers of the left hand, it is that sensation and the sense of what the surface is like that constitutes the foreground. You can also shift your intentionality to the left-hand fingers, feeling what it is to be touched. Either touching or being touched is in the foreground. You can revert the role of the two hands to come to the same assessment. In all these instances, it is one of the four possible permutations of the sensing-sensed relation that is in the ground, a second one is further back, and the other two are almost entirely disappearing though inherently and necessarily there and constituting the living experience as a whole. That is, my sensation of being touched requires the impressibility of my flesh, and the impressions are brought about by another part of my flesh that by now has almost completely disappeared from attention and consciousness. In your explorations, you may immediately note a phenomenon described some time ago in a phenomenological explorations: ‘If my left hand is touching my right hand, and if I should suddenly wish to apprehend with my right hand the work of my left hand in the course of touching, this reflection of the body upon itself always miscarries at the last instant: the instant that I feel my left hand with my right hand, I correspondingly cease touching my right hand with my left hand’ (Merleau-Ponty 1964: 24). We cannot have, as our present exploration shows, both experiences equally salient at the same time. This is so because consciousness is always consciousness of something, that is, there is an intentional relation to the object. As a result, the object is object only when there is a related intention; and intention is intention only because there is an object. Object and intention presuppose each other. It is this dimension that stands out, the intentional object, and everything else recedes into the ground of awareness. It does not disappear, it merely is part of the ground and therefore, as investigated in chapter 2, constitutive of the figure without being salient. This is precisely what allows the interlacement: presence and constitutive nature. It is this crossing over that we rec-

ognize. It has its equivalent in visual perception: ‘The other men who see “as we do”, whom we see seeing and who see us seeing, present us with but an amplification of the same paradox’ (ibid: 24).

Returning to our original investigation we now can say this: The touching left hand, which is in the process of feeling out the mouse pad surface, now becomes part of the same (material) world that it is touching: It is both touching, here, the mouse pad, and of the order of the touched, the world that is ek-static in and through my perception. That is, this experiment shows three views simultaneously: My living-lived body (i.e., my immanently known flesh) also is the body I know (i.e., relate to in transcendent form) and is a material body among material bodies, ek-static body among ek-static bodies. It is inhabited by an immanent sense of itself, which stands out as felt body in transcendental consciousness, and to which I relate as a material body among other material bodies. I cannot ever separate from the first body, the one that is immanently present to me. I call it ‘my’ body when this immanent body comes to stand out and is felt in a nameable manner. Finally, as a medical or physical body (also: as ‘a piece of meat’), it is completely objectified. Thus, we may relate three types of experience to the sense of touch. There is the sensation of the smoothness or roughness of the mouse pad; there is the experience of (the resistance of) my living-lived bodily Self moving itself against a resistance that derives from itself and from its movement against the objects of the world to produce the sensation at my finger tips; and there is the sensation deriving from the experience of my right hand that is touching and feeling the left hand sliding over the mouse pad surfaces.⁵ The sensation of the living-lived body moving itself intentionally also underlies perception, as I show in the preceding section. The left hand felt by the right hand as something outside itself that can also be seen. That is, both seeing and touching are sensed from the inside – i.e., immanently – having access to the same me that explores the outside. ‘We have to get used to think that everything visible is carved into the tangible, all tacit being is promised in a way to visibility, and that there is an encroachment, a crossing-over not only between the touching and the touched, but also between the tangible and the visible that is incrustated in it. . . . Because the same body sees and touches, the visible and tangible belong to the same world. . . . There is a double and crossed bearing of the visible in the tangible and of the tangible in the visible, the two maps are complete and yet they do not become confounded’ (Merleau-Ponty 1964: 175). It is precisely this crossing over that allows sighted people to have an image of the thing that they touch but cannot see; and it is this same crossing over that allows St. Thomas to attribute reality to what he has to touch – rather than see – to be able to believe. The ‘two maps’ of which Merleau-Ponty writes also operate between the sensible and the intelligible, as we can see from the following meditation on the relation of seeing – i.e., understanding and believing – and touching. These two maps allow us fathoming the reality of the seen (understood): ‘To see that which is not to see, seeing what gives itself only to the capable gaze, to the eyes that have already seen in the night of the invisible, this is at stake and *Noli me tangere* car-

⁵ The origin of the intention in the ‘I can’ of my power to act, which in fact is the result of a self-affection, has yet to be established. We get to this in chapter 6.

ries its central motif' (Nancy 2003: 38).⁶ The author then goes on with the text in the quotation that opens this chapter (p. 43), which articulates the chiasm and connection between the two orders of things: the material and the ideal.

It is precisely the crossing-over that also lies at the apparent independence of the image of the world, as the perceived object, from the mode of its perception in addition to be apparently being independent of perception. The latter independence derives from the fact that I can reproduce the movements underlying visual or sensory perception in the absence of the object. This movement underlies both my 'visualization' or 'tactile sensation' and the *recognition* of the object when I see or touch it again. That is, when I envision (visualize) some object, it is not that there is a picture stored somewhere in my long-term memory, which I now pull like a book from the shelf to put into my short-term memory for closer inspection. Rather, it is the movement itself – the firing of the mirror neurons that also fire when the eyes move when I actually see the object – that allows me to make the object present again. And the same is true, as Maine de Biran realized over two centuries ago, for touch. But the resulting object permanence does not establish the manifold experiences I may have with the *same* object, that is, one and the same object that is given differently in different sensory experiences. The crossing-over experiment assists us in understanding that the intentionality is related to the same 'I can', which is the coordination itself of the different forms of sensory experiences. If someone has been blind and then becomes sighted, s/he will in fact have to acquire the crossing over between sight and other senses. This is so because seeing has not been part of the 'I can/will' that underlies all of the understanding of the world that I develop in the course of my life since birth. As we see in chapter 6, the source of the incarnate 'I can' is the result of an auto-affection that precedes all conscious cognition. I can only intend and will something when I already know the object of this intention or will that I can reach (for) this object; this knowing that 'I can' reach (for) the object is something given to me rather than being itself intended. If it were not in this way, there would have to be an infinite recursion where every intention would require another intention intending it. The received intent and will therefore antedate any intentional construction of anything that resembles knowledge of the world in the way metaphysical philosophers and psychologists describe it.

Interlacement Allows Awakening to Life

In the preceding section, I use first-person investigations to explore a hand touching a touching hand, with the limit figure of the hands touching each other touching. This is not a mere philosophical exercise.⁷ It has very concrete applications in

⁶ This reflection is extremely interesting, as it appears to be about touch, or rather, about not touching; and yet it analyzes the manner in which painters have treated the biblical encounter confronting Maria Magdalena and the Christ, who has just arisen from the dead.

⁷ During the 1970s, the works of the Dutch artist M. C. Escher tended to be distributed and viewed frequently. A Google search with his name as search term immediately produces a large

the case of afflictions such as in the education of children stricken with congenital deafness and blindness. I provide the following account from the education of deaf-blind children because of its analogical relation to the first-person explorations that I conduct in the preceding sections. This analogy is possible because there are invariants; and it is precisely these invariants that the first-person methods are intended to articulate. That is, although we are learning something about self-relation and the making of sense in and with our own bodies, the analogy shows that our findings have concrete applications in the world and, therefore, that our findings from first-person investigations *are indeed generalizable*.

A Russian psychologist working with such children provides the following account of them, who display none of the ‘natural’ ‘explorative’ behaviors that classical psychologists ascribe to children: these children do not play with and investigate unfamiliar objects placed into their hands. ‘In the manifestations and type of their behaviour children of this group resemble most closely “classical examples” of the deaf-blind, who have not experienced the “beneficial, revitalising influence of teaching, the divine spark”, as seen by Arnould, Lemoine and many other writers in this field. These “inert masses” or “frenzied animals”, as they appear to the outside observer, are shut out from ordinary life by the absence of aural and visual impressions. Passive and immobile, they would sit in the same spot for hours at a stretch, sometimes even in the same pose. They do not use their faculty of touch to investigate spatial relationships or to familiarise themselves with new objects: even the processes of eating, dressing and undressing and the satisfaction of their most basic physiological needs are only carried out after external stimulus, without which the processes concerned might be postponed in time until an extreme degree of need be reached, which in its turn would produce an outbreak of fury. They do not manifest even the most elementary urge for contact with other people’ (Meshcheryakov 1979/2009: 53).

In *Awakening to Life*, the psychologist describes how deaf-blind children actually come to behave like other human beings, through a lot of painstaking work. Some of them develop to the point of eventually becoming university professors. One interesting aspect and essential component of the process of becoming aware can be noted in the episode that tells the story of how Rita learned to scoop up food – after having learned, in a long, drawn-out process, to take food from a spoon that was already filled. The process of scooping up food was difficult because, for these children, there is no apparent link between this movement and eating, at least a much weaker link than between placing the spoon in the mouth and taking the food from it. Already, to learn to take the food, Rita’s hand holding the spoon was inside the hand of an adult, who guided the child’s hand so that the food landed in her mouth. In a speech concerning the work of Meshcheryakov, the activity theorist Alexei Leont’ev notes that in ‘these actions with objects which the child carries out jointly with the teacher and under his (manual) guidance provide the basis for acquiring gestures, the elementary language of communication’ (Levitin 1982: 102). The gesture begins as a real action, which is the same as the original one but without the object, and eventually comes to take on symbolic properties. When

collection of his iconic work. One of the drawings consists of two hands, each seemingly drawing (touching!?) the other.

Rita was taught to scoop the food from her plate, she quickly learned to establish the consistency of the food and, rather than taking solid food with the spoon in her right hand, she would pick it up with her left hand and bring it to her mouth. 'Meanwhile her right hand with the spoon in it would remain quite still or more aimlessly without in no way furthering the eating process, i.e., the little girl was using her left hand in a purposeful way, while carrying out incomprehensible manipulations with her right on the teacher's insistence. In this way Rita was carrying out two parallel processes one of which had a goal while the other remained for her no more than an incomprehensible movement performed at the behest of the teacher. Subsequently, to connect the two processes the little girl, while holding the spoon in her right hand, was allowed to put food from the plate into the spoon with her left hand and then lift it to her mouth helping it along with the left hand. In this way a certain relationship between the movements of the two hands was established, movements which differed in their closeness to the natural act of eating' (ibid: 77-78).

In this episode, we see how for Rita there were initially two hand movements that had nothing to do with each other. The movement with the left hand brought the food to her mouth, but the other movement was performed for, and on the behest of, the teacher. The teachers assisted the child to make a connection by initially using the left hand to place the food on the spoon and then to accompany the right hand's movement by holding the spoon with the left hand. The left hand then could abandon its job once Rita learned that the spoon already did what the left hand had done. Its movement became independent from the movement of the left hand, which served, by reason of the contact, as a way of sensing by touch. The left hand no longer helped the right hand but in fact sensed its movement and that of the food on its way from the plate into the mouth. Even more interesting, we find in the narrative an instance of the permanence of an object, which, in the present instance, is the permanence of a tool. In fact, the nature of the spoon as a (re-usable) tool became possible only when its independence and the independence of the movement was established. In much the same way as chimpanzees are known to drop the tools they fashioned to fish termites from their mounds, Rita dropped the spoon as soon as it no longer contained food. 'At first Rita used to let go of her spoon as soon as she had steered its contents into her mouth. Now that it no longer contained any food it had become an object with no purpose and the spoon was just dropped. She did the same with her cup: after sipping a little fruit-juice or milk from a cup, Rita would let go of it. Only after chewing and swallowing some food would she start looking for a new mouthful. Eventually Rita learnt to put down her cup on the table and to put her spoon down next to her plate. It was only through deliberately supporting the child's hand and gradually loosening that hold, that her teacher persuaded her to keep hold of her spoon, and not abandon it until she finished her first mouthful, in order then to scoop up and lift to her mouth the next one' (ibid: 78). In both instances, the cup and the spoon were just let go. Object and tool permanence was established at the moment when she could place the cup or spoon on the table only to pick it up again when she wanted to take the next sip or bite. Here we need to remember that the child is deaf-blind, and, therefore, the object is not available as soon as the child has placed it. The permanence of the spoon is the result of a social process, whereby the teacher first taught the child to

keep hold of the spoon until it could be used for the next mouthful of food. Once the re-use of the spoon was established as a practice, the child actually became able to place the spoon only to pick it up again when she needed it. At this point she had available what was required to make the formerly present and now absent spoon present again, that is, she had *representations*.

This episode exhibits the role of touch in learning to use a spoon as two movements come to be correlated, one of which senses the movement of the other. A form of signification thereby accompanies the auto-affection of the right hand through the reflected access that the touching left hand affords. When this auto-affection and crossing does not occur, the very behavioral and mental characteristics of humans as cognizing beings are absent. Because these deaf-blind children are bereft of the capacity to interact with the world by means of the long-range senses sight and sound, the special provisions required to bring them into human forms of behavior – the quotations are from the episodes of learning table manners – give us access to the process of phenomenalization normally hidden when sighted and hearing children participate in a sighted and hearing culture. The Russian psychologist suggests that whereas these children have the capacity for mental development, they are bereft of a human mind prior to the special interventions in his institution. In fact, the children in his account manifest no (social) need to be in contact with other people. Even more interestingly, they respond negatively to any attempts to touch them. They ultimately learn about objects only when adults place these in the children's hands, such as the spoon in the quotations, and, taking the children's into their own hand, guide the deaf-blind to touch and explore their feeding themselves. The children *learn to re/cognize* objects as such that make up a world while adults guide their hands to perceive through touch with one hand what they and the adult guides were doing with the other hand. In these experiments, the crossover described and explored in the preceding sections is part of the training – though not made thematic as such by the psychologist – that leads the deaf-blind children to develop a normal human mind.

From the experiment of the hands touching each other – and the parallel in M. C. Escher's hands drawing each other – we can draw even more conclusions if we attempt to understand the beginning of each relation. When there are no hands, how can one draw the other? How can such a system get itself into place? Similarly, if it takes the capability of touching (intentionally), how can one hand intend to touch another when the very intention is premised on the self-reflective awareness of the movement? To repeat, the movement can reproduce itself without requiring an ek-static form of knowing: we see this in the animal world where patterned behaviors develop without necessitating a human form of (ek-static) consciousness. The question is different. How can the movement become ek-static, for example, in the separation of the object from perception? We know that in early childhood development, this is one of the ontogenetic achievements. Meshcheryakov's work shows that something else is required: the generalized other through whose actions my own become significant.

I conclude this chapter with an excerpt from a letter that Maxim Gorki wrote to Olga Skorokhodova, a Russian writer and associate of Meshcheryakov who, very early in her life, had lost her eyesight and hearing: 'Nature has deprived you of three senses out of five, the senses with the help of which we perceive and under-

stand natural phenomena. But science, influencing your touch, one of the five senses, returned to you, as it were, what has been taken away from you. This shows at once the imperfection and chaos of Nature and the power of human reason and its ability to correct Nature's rude mistakes' (In Levitin 1982:115). It is not touch alone that provides the writer (in the view of Gorki) with access to human nature but science, that is, culture as understood by her teachers and the role and emphasis they place on culture with respect to individual cognition.

Conclusion

In this chapter, I engage in and exemplify first-person inquiries that exhibit the fundamental nature of the sense of touch. Without it, as the ancient Greek already realized, there would be nothing like animality generally and human nature specifically. The sense of touch, tact, is integral to contact, having arisen from contact. But, as I show throughout this chapter, contact also means contiguity, contagion, and contamination. This has yet-to-be explored implications for thinking and research education, on the one hand, and on the use of metaphors for learning, on the other hand. In touching, more so than in vision, we experience the passive aspects in the constitution of cognition. A full appreciation of passivity generally, and the constitutional role of radical passivity – passivity more passive than any passivity we can intend – in learning and knowing has yet to be worked out. There is a lot that first-person inquiries have to contribute to a fuller understanding of knowing and learning.

These findings are not just academic but have important practical implications in such fields as science and mathematics education. One of the great rallying cries in these fields has been calling for 'hands-on' experiences. Subsequent elaborations on the theme appeared to suggest that it is insufficient to provide for 'hands-on' experiences (alone) and that children also needed 'minds-on' experiences. In fact, most science teachers consider student laboratory tasks as a relief from what normally has to be done to really teach the subject matter: manual experience as entertainment and motivational tool rather than something constitutive of knowing itself. In this second rallying cry, it is implied that 'hands-on' does not mean learning, or does not mean learning of the kind useful in the sciences.