# AN ECOLOGICAL APPROACH TO EMPATHY

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**ABSTRACT**

Two restrictive habits of seeing currently dominate empathy research in psychology: 1. the *vertical worldview*, which assumes that the reality of behaviour lies in hidden levels; 2. *dualism*, which assumes a binary arrangement of organism and environment. The cognitivist perceptual model encourages these habits by explaining empathy as a brain-generated phenomenon that occurs in a private, mentally represented reality. This, I argue, is not a useful model for empathy, which presupposes context and connection. Instead, I propose an alternate model, James Gibson's ecological approach, whose *horizontal worldview* and organism-environment *mutuality* encourage us to see organisms as processual, environmentally embedded ways of being. In this model, to empathize is to coexperience directly what the environment affords another's way of being — an experience characterized, facilitated, and constrained by one's ecological niche. Niches shape the affective dimension of coexperiencing; however, they can frequently be modified through collective action.

*Keywords*: empathy, ecological psychology, perception

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**CHAPTER 1: INTRODUCTION**

Only when the sense of the pain of others begins — does man begin.

— Yevgeny Yevtushenko

When the United States passed its 200,000-death milestone in the COVID-19 pandemic, *The Atlantic* quoted University of Colorado Boulder sociologist Lori Peek: "Is our national empathy — our care and love and concern for one another — at such a low level that we are not truly feeling, in our bones, in our hearts, and in our souls, the magnitude of the loss?" (Khazan, 2020). Throughout 2020, others raised a similar outcry. They derided the lack of empathy in Donald Trump's response to the crisis (Prose, 2020; Wade, 2020; McGowan & Silva, 2020; Karni, 2020), while praising New Zealand's Jacinda Ardern for her wholly empathetic approach (Wilson, 2020; Friedman, 2020; Lux, 2020). They cited empathy as a source of people's willingness to comply with COVID-19 restrictions (McIntosh, 2020; Volpe, 2020), while similarly citing lack of empathy as an explanation for those who failed to do so (Kielburger, 2020). They called for a more cooperative, compassionate world, and deplored those who brought us short of this ideal. Many expressed a kind of searching: If the world we share is not what we might wish, what can be done?

Psychologists, too, have tried to address such questions, but as Thomas Szasz (1961/2010) says: "In the history of science, thinking in terms of entities has always tended to precede thinking in terms of processes" (p. 1). Some have proposed that so-called non-empathetic people are psychopaths, narcissists, and so forth, people whose brains and bodies do not permit them to empathize naturally. In his book, *The Science of Evil*, Simon Baron-Cohen (2007) writes:

> I am going to argue that some people are at the low end of this empathy dimension in a
> potentially permanent way, and that some (but importantly not all) of those at this

extreme end are whom we might call "evil" or cruel. That is, they never had much empathy and they may never. (p. 21)

It is undeniable that some people do behave in psychopathic, narcissistic, and even "evil" ways; nevertheless, reducing a lack of empathy to biology alone is a thorny approach for three reasons. First, it makes biology the basis for rejecting those who get in the way of the sort of world we want to make. This leaves the pathologized vulnerable to stigmatization (a particular concern for those included in Baron-Cohen's [2007] "but importantly not all") and establishes a precedent whereby further undesirable behaviours that arise in a disordered society can be similarly pathologized. Second, it excuses institutions and other social systems from responsibility for the disordered behaviours they engender, and shifts the burden of blame to individuals whose power to address such behaviours may be limited. Third, if behavioural differences are the result of essential nature rather than acquired ways of being in the world, then we have nowhere to go from here. Arguably, an imperfect world may be made better by subjecting the so-called non-empathetic to medication or empathy training, but this argument runs into an ethical dilemma: If differences are largely a matter of biology, by what right do we tell someone that their brain and body are wrong?

Psychopathic or narcissistic behaviours are not the subject of this thesis, nor do I oppose empathy training, which will be addressed again later in this introduction. Rather, I wish to call attention to the far-reaching consequences of the theories that necessarily guide psychological study and practice. Such theories, Svend Brinkmann (2004) says, "have the power to change the reality they are concerned with," or even to act as "a self-fulfilling prophecy" (p. 6). Unlike those of the natural sciences, psychology's labels change the subjects they classify. Whether or not we call Pluto a planet matters to astronomy enthusiasts, but it makes no difference to Pluto. Telling a woman she has low empathy, however, cannot help but influence her behaviour, including her

behaviour toward herself, especially if we also tell her she was born that way. Brinkmann (2004) states: "A Psychological theory is not valid when it correctly represents an independent object or process, but when it succeeds in solving practical problems that people are faced with" (p. 6). To address the practical problem of a lack of empathy in human society, then, the first step is to move away from theories and models that habituate us to see human beings as essential rather than processual, and static rather than dynamic — that make empathy a property of the individual, ignoring both the other person and the context.

Empathy, I will argue here, is not a property either of the brain or the body, though both participate when the behaviours we call empathy are occurring. These related activities are all too often taken for empathy itself, or at least its explanation, but the real explanation is more complex. To empathize means to "coexperience . . . another's situation" (Breithaupt, 2017, p. 10) — that is, to perceive the other in context, just as we experience ourselves in context. However, as Szasz (1961/2010) says: "The context in which the observation is made is part of the observation" (p. 83). To coexperience with another necessarily includes not only *their* context, but also our own. As a result, one person's empathizing may not look the way another person expects. I will explore these different faces of empathy in Chapter 4. To begin, however, I will address another context, the one in which psychology's study of empathy occurs, whose pressures shape what we are able to see and not see. These pressures, as much as empathy itself, will be the subject of this thesis.

## 1.1 Theory as Behaviour: An Introduction to Deweyan Habits

> It is the theory which first determines what can be observed.
>
> — Albert Einstein, in Werner Heisenberg's *Encounters with Einstein*

We typically think of theory as an abstract concept — an intellectual position from which to view evidence. We do not typically think of theory as *behaviour*. In this thesis, however, I will understand theory as *a habit of seeing*. For John Dewey (1922/2007), a habit is not the mere repetition of particular acts, but a "working adaptation of personal capacities with environing forces" (Dewey, 1922/2007, p. 16). In other words, Deweyan habits do not come from a person, nor are they put into a person by the environment. Instead, they emerge from the interaction of organism and environment together, "incorporat[ing] an environment within themselves" (Dewey, 1922/2007, p. 52), particularly the social environment of our fellow humans:

> [A] society or some specific group of fellow-men, is always accessory before and after the fact. Some activity proceeds from a man; then it sets up reactions in the surroundings. Others approve, disapprove, protest, encourage, share and resist. Even letting a man alone is a definite response. (Dewey, 1922/2007, pp. 16-17)

Deweyan habits, then, represent not only how a person handles the world, but also how the world handles the person. Whatever "activity proceeds from [us]" does not become habitual without support. We all have accomplices, and we all are accomplices.

Dewey (1922/2007) offers the example of a habitually angry man who murders someone in a rage. The man's rage is a behaviour his environment has hitherto approved — perhaps by bowing to his will, or by affording him the satisfaction that others find him powerful enough to be feared. It has cultivated (or at least not resisted) his angry behaviours. More precisely, man and environment together have organized for him an angry *way of being*. The act of murder is unprecedented because the situation in which it occurs is unprecedented, but the set of angry behaviours the man puts to use in this context is the same set of angry behaviours he routinely puts to use in myriad other contexts — that is, any context in which the potential for such action arises.

Anger, I maintain, is this man's theory of life — his *habit of seeing* the world. In ways that will become clear later in this thesis, his habit of anger selects what each new situation affords him. It gives him a "special sensitiveness or accessibility to certain classes of stimuli, standing predilections and aversions" (Dewey, 1922/2007, p. 42). Because anger is his way of being, he will actively search for more things to be angry about, and unless he has other intersecting habits that conflict with this one, he may become very good at finding them. It is no surprise, therefore, that Dewey (1922/2007) refers to habits as "arts" (p. 15). An art is not a concept we intellectually adopt and impose from the top down, but an acquired, practiced way of interacting with the environment and reshaping it in ways we find pleasing. It can be practiced anywhere the environment permits — anywhere there is material with which to work. A habit, similarly, can flourish anywhere its "artist" finds malleable stuff to use, unless "the environment obstinately rejects it" (Dewey, 1922/2007, p. 125). In short, a man whose theory of life is anger will persist in his theory until he deliberately seeks contexts and influences that break it down, or, until life pushes back against him so hard that he is compelled to form new, more appropriate behaviours — new habits of seeing.

Throughout their careers, scientists, too, develop their own theories of life that determine their ways of being in the world of science. As they engage in scientific behaviours and interact with scientific environments, they form habits of seeing that select from their field of experience whatever affords them curiosity, interest, certainty, credibility, and so on. Further, they inevitably bring their pre-existing, non-scientific habits of seeing into the scientific realm — habits often formed long before they became scientists; habits that serve them in other environments, and may also serve them in this one, but that do not necessarily serve science. Unlike the angry man in Dewey's (1922/2007) example, however, the threshold at which the

environment pushes back against habit is supposedly much lower for scientists. They are duty-bound to reject their habits of seeing when the evidence begins to suggest their theory is unsuited to the real world. Unfortunately, it is not easy to separate the habits of the scientist from those of the human animal who wears the lab coat and hangs the diploma on the wall. The human may be unable to stop clinging to a habit of seeing long after the scientist should have called it into question. As such, dominant yet outdated scientific theories tend to give way only when the academic environment alters through a changing of the institutional guard. Old theories, like old habits, die hard.

To gain a complete understanding of any subject, then, we must take note of the theories — the habits of seeing — of those who research it. Habits that work successfully in one field may create obstacles to evaluating data in another field. It is wise, therefore, for empathy researchers to ask continually: Do our present theories help us understand and explain empathy, or do they complicate our analysis? Could we look at the same data in a different way, with different habits, and find an entirely unexpected interpretation?

**1.2 Two Habits of Psychology**

> There is nothing more difficult than to become critically aware of the presuppositions of one's thought. Everything can be seen directly except the eye through which we see.

> — E.F. Schumacher, *A Guide for the Perplexed*

This thesis will address two habits of seeing that often permeate psychology's understanding of human beings and how we are in the world, including how we empathize — the *vertical worldview* and *dualism*. Both of these habits tend toward stealth rather than overtness: The vertical worldview, Ludger van Dijk and Rob Withagen (2014) state, is implicit rather than

explicit, while Alan Costall (1995) jokes that psychologists may be divided into those who are aware they are dualists and those who are unaware.

### 1.2.1 The Vertical Worldview

When we adopt a vertical worldview, we presume that the world we see is not the world as it *really* is. We seek reality "in (hidden) layers below the apparent one" (van Dijk & Withagen, 2014, p. 4). Tables are not really tables, but atoms (van Dijk & Withagen, 2014); romantic love is not really love, but hormones; behaviour is not really behaviour, but the outward effect of some inner impelling. We peer inside the brain not because we wish to understand the less visible components of experience, but because we mistake them for the *essence* of experience. Van Dijk and Withagen (2014) explain:

> The objects of psychology are treated roughly like one would physical objects. We *have* thoughts, much like we *have* brains. Considered as states or as processes, thoughts or other mental states are equally compounded and built up from simpler elements like sensations, values, and memories. (p. 4)

In other words, a vertical worldview invites us to reify mental states and behaviours, to convert them from verbs to nouns, and to speak of emergent phenomena as belonging to the organism, rather than emanating from the interaction of organism *and* environment. Empathy research can be particularly vulnerable to such errors, with grave consequences for real-world problems.

For psychologists with a vertical worldview, empathy is not something we do (or do not do), but something we have (or do not have). It is not a habit or behaviour, but a *thing*, the property of a particular kind of brain. Logically, if empathy belongs to the individual rather than emerging from the interaction of individual and environment, then a society's level of empathy is not a consequence of that society's structure, but the sum of its empathetic individuals. From this, it follows that a society's level of empathy must be more or less fixed (short of adding or subtracting individuals). Social structures are flexible, and can be reordered to encourage or

discourage empathetic behaviours, but in the vertical worldview, individuals are constrained by biology. Yes, the brain is plastic, so empathy remains mutable to some extent, but plasticity has its limits, which means that human nature must have limits, too.

The vertical worldview, therefore, sets up a contradiction. On the one hand, because empathy is the property of individuals, the burden of responsibility falls upon them when society as a whole is not empathetic. A typical solution is empathy training, whereby low-empathy trainees perform exercises meant to increase their sensitivity to other people, usually through such techniques as mindfulness and perspective-taking (Block-Lerner et al., 2007), or sometimes through novel, innovative methods like watching episodes in the life of another person through virtual reality (Roswell et al., 2020). Presumably, if enough people can be trained to increase their individual level of empathy through such interventions, the overall level of empathy in society as a whole will also increase. However, in the vertical worldview (and herein lies the contradiction), those with so-called low-empathy brains are presumably attempting this training against their natures, limiting their chance of success. The lowest-empathy people may refuse to take the training in the first place, unless compelled. Altogether then, the habit of seeing vertically creates a situation in which individuals are responsible to change what they may be incapable of changing, and also to bear the burden of blame when they fail.

The alternative to the vertical worldview is the *horizontal worldview* — a "flat attitude" in which psychologists "look more closely at the concrete situation in which a phenomenon occurs . . . rather than abstracting away from it by searching for its cause at a lower or higher level of description" (van Dijk & Withagen, 2014, p. 5). In other words, the immediate context matters. Without denying the existence of the so-called higher or lower levels, the horizontal worldview removes the hierarchy of values that says their truths are truer than others. Certainly

tables are atoms (van Dijk & Withagen, 2014), for instance, but from the horizontal worldview, they are also tables. They are built by humans of a certain size with particular habits of sitting, eating, writing, working, and other actions for which tables are useful — humans of different cultures with unique tastes about how tall, how ornamented, and of what material tables should be. These things, too, are what a table is. Similarly, while behaviour certainly involves neural processes in the brain, the horizontal worldview suggests that knowledge of these processes does not *get at* reality more nearly than other types of data that consider the broader picture.

For a psychologist with a horizontal worldview, empathy is not something we *have* (or do not have), but something we *do* (or do not do). As such, our behaviour is based not only upon the kinds of organisms we are, but also upon the contingencies of the environment in which we live. From such an assumption, it follows that the level of empathy in any society is not fixed, but variable. Society is a dynamic, living system, more than the sum of its individuals, capable of giving rise to emergent phenomena found in none of its components. Its structure and institutions are far more powerful forces to encourage or discourage behaviours than a single person's own (almost certainly ineffectual) willpower. From the vertical worldview, empathy training is an uphill struggle, but from a horizontal worldview, it has a much better chance to succeed because this approach distributes the burdens of responsibility and blame more evenly. It acknowledges that the empathy trainee who fails to see long-term behavioural change may not be encountering the limits of human nature, biology, or moral fortitude, but the resistance of an environment that endorses (at best) or evokes (at worst) their non-empathetic behaviours. Indeed, from the horizontal worldview, phrases like *human nature* are somewhat useless, for they describe rather than define, and what they describe is more accurately the nature and limitations of existing environments than the nature and limitations of humans or their potential (Barker, 2015).

In short, if the boat of a society is full of holes, teaching the citizens to bail faster is not the ideal countermeasure. If a society lacks empathy, our solution should not be restricted to identifying "bad apples" and training them to more effectively bear the pressures of a system against which they may be powerless (Purser, 2019). Empathy training has value, but we must give its practitioners a chance to succeed by looking horizontally to their contexts and addressing the environment as well as the individual, including the institutions that are a formative part of the concrete situations in which they daily behave.

*1.2.2 Dualism*

The second habit of seeing that permeates psychology's understanding of human beings and how we are in the world is *dualism*. Most psychologists today readily deny Cartesian dualism — Descartes's assertion that the soul or a spirit-like *mind* exists separately from the body, with no adequate explanation as to how they might influence one another. Nevertheless, many of these same psychologists also assert that organisms exist separately from their environments, with no adequate explanation as to how they might influence one another. Louise Barrett (2011) explains:

> Nowadays, "substance dualism" . . . has fallen by the wayside in favour of materialism (basically, the position that the mind is the brain, and therefore of essentially the same physical stuff as the body), but we still retain the idea that we possess "minds" with which we look out at a world that is completely external to us and that we can access only indirectly via our representations of it. This is itself a form of dualism because it makes a clear demarcation between an organism and the world in which it lives, and . . . this form of dualism is just as misleading as substance dualism. (p. 149)

An external world accessible only through representations is the central principle of the cognitivist model of perception, of which I will have more to say in the following chapter. This model is troublesome for empathy because it raises the problem of *other minds*. If organisms are detached from their environments, then they are not only detached from objects in nature, but

also from other organisms. How can I, isolated from my environment, reach across to you, similarly isolated? If empathy means understanding someone else's viewpoint and seeing the world through their eyes, then under this perceptual model, empathy becomes a puzzle.

Cognitive psychology's answer to its own problem is *theory of mind*, the ability to mentally represent other people's ability to mentally represent (Costall & Leudar, 2007). In other words, theory of mind means we can ascribe mental states to others that differ from our own, a faculty which necessarily entails the ability to ascribe mental states to ourselves (Premack & Woodruff, 1978). The concept is widely accepted, but not without critics. Theory of mind, Alva Noë (2009) explains, presents a world in which people are "real for us only as a kind of theoretical device to help us manage our dealings with others" (p. 30). We account for the behaviour of their bodies, he says, much as astronomers account for peculiarities in the orbital behaviour of planets. Astronomers can deduce from a planet's behaviour that a yet-undiscovered planet exists nearby, interfering with the first planet's trajectory (Noë, 2009). In theory of mind, similarly, we deduce from other people's behaviour the undiscovered states of their unseen minds. In this case, however, the undiscovered planets are undiscover*able*. We can never truly know what goes on inside one another. We can only infer, simulate, or surmise.

As with the vertical worldview, there is a built-in contradiction here — or, as Alan Costall and Ivan Leudar (2007) describe it, a "terminally bewildered" state of affairs (p. 292). On the one hand, Noë (2009) states, theory of mind adherents explain that we bridge these unbridgeable gaps between us by using other people's behaviour to make calculations about their states. On the other hand, the very gulf that theory of mind purports to bridge also splits *mind* from *behaviour* (Costall & Leudar, 2007). Remember, the cognitivist model of perception separates organism from environment, treating the world as external, accessible to us only

through mental representations (Barrett, 2011). Thus, it consigns all experience to the domain of the mental:

> Given this dualistic conception of behaviour, the mental could only be relegated to a hidden realm, concealed *behind* behaviour, and related to it in an arbitrary, rather than constitutive, way. (Costall & Leudar, 2007, p. 292)

If behaviour is only arbitrarily related to mental states, Costall and Leudar (2007) argue, it can no longer provide much useful evidence of them. On what basis, then, do we speculate and make predictions about what others are thinking and feeling?

The alternative to the dualist habit of seeing complements the horizontal worldview discussed in the last section — organism-environment "*mutuality*" (Gibson, 1986, p. 4, emphasis added). From the perspective of organism-environment mutuality, organisms are not in their environments the way cereal is in a box, but rather, as Dewey (1922/2007) puts it, the way plants are in soil. You can remove cereal from a box and it will still be cereal, but if you remove a plant from soil, the plant will die. Moreover, without the plant, even the soil will erode, losing access to the sugars the plant produces that enrich it and provide food for soil microbes (Winger et al., n.d.). Organisms and their environments have a similar interdependent relationship, which Dewey (1922/2007) describes as follows:

> Breathing is an affair of the air as truly as of the lungs; digesting is an affair of food as truly as of tissues of [the] stomach. Seeing involves light just as certainly as it does the eye and optic nerve. Walking implicates the ground as well as the legs; speech demands physical air and human companionship and audience as well as vocal organs. (p. 14)

Environments provide context for behaviour, but not as mere containers. Rather, as Dewey (1922/2007) said of habits, environments are co-constituents of behaviour. They not only *affect* behaviour, but *effect* it. Organism and environment form an inseparable, interdependent unity — a tangle of relations that cannot be unwound.

From a horizontal, mutualistic viewpoint, then, constructs such as theory of mind are not wrong, only unnecessary. In a world in which we and our environment are inextricably entangled, others are necessarily entangled, too. They are embedded in the environment as we are, and (as we will see in Chapters 3 and 4) these relations can be directly perceived. Instead of experiencing others as bundles of inferences, we can perceive them directly as bundles of organism-environment relations like ourselves, a view consistent with the *direct perception theory of empathy*, which states that "we already have immediate experiential access to the minds of others" (Kiverstein, 2015, p. 533). Of course, some components of others' experience may be out of view (e.g., their personal histories); nevertheless, in a mutualistic approach, the other planets in our galaxy of relations are no longer undiscoverable, even if the distance between us is sometimes too great to travel.

**1.3 Where We're Going: A Road Map for the Reader**

Let me explain. No, there is too much. Let me sum up.

— *The Princess Bride*, 1987

How, then, do we change these habits of seeing? How can we make empathy research less vertical and more horizontal, less dualistic and more mutualistic? In Dewey's (1922/2007) example, the angry man's habit of anger persists until the "objective conditions which enter into his habits" change (p. 19). Similarly, trying to build new habits of seeing without first addressing the environment that constitutes them would be like trying to change your diet without changing your grocery list. Arguably, it can be done, but only with great difficulty. Fortunately, however, humans often have the power to choose or change our environments, enabling us to alter our habits of seeing in more effective ways.

The total environmental conditions that enter into these habits are beyond the scope of this thesis. One condition of immediate importance to empathy research, however, I have already mentioned: The cognitivist model of perception. All models are wrong, runs the adage, but some models are useful. In this thesis, I will argue, the cognitivist model of perception is not useful to explain empathy; further, it may create obstacles to understanding by unwittingly encouraging vertical and dualist habits of seeing — habits especially pernicious for a subject that is, by definition, about context and connection.

My objective for this thesis is to propose a model of empathy based on James J. Gibson's (1986) ecological approach to perception, a model which takes the horizontal worldview and organism-environment mutuality as its central principles, and which cultivates habits of seeing that aid rather than impede our understanding of empathy. In the next chapter (Chapter 2), I will review the cognitivist model of perception more extensively, identifying the impediments its vertical and dualist habits create for empathy research. In Chapter 3, I will propose an alternate model — the ecological approach to perception, whose horizontal, mutualistic ethos effectively removes these impediments. In Chapter 4, I will explore empathy from this ecological perspective, drawing upon the *direct perception theory of empathy* and ecological niches to demonstrate the usefulness of the ecological approach in making sense of how empathy works in the real world, including the ways it is often misused, misunderstood, or even interpreted as non-empathetic. In closing, I will submit that the ecological approach affords insight into how empathy looks from other points of view, and thus into which remedies are appropriate or inappropriate for non-empathetic behaviour. In short, it affords us a means to approach the so-called non-empathetic with empathy.

**CHAPTER 2: BACKGROUND — THE COGNITIVIST APPROACH TO EMPATHY**

> The word has gone over into its opposite, which is the case with so many of our
> words.
>
> — Henry Miller, *The Wisdom of the Heart*

*Empathy* is a relative newcomer to the English language, barely over a century old, but its
current meaning is even newer. Coined in 1908 by American psychologist Edward B. Titchener,
*empathy* was Titchener's translation of the German word *Einfühlung* (literally, "in-feeling"), a
term first used by father and son Friedrich and Robert Vischer in the 1870s, but which Theodor
Lipps defined at the end of the nineteenth century (Ganczarek et al., 2013; Lanzoni, 2018). For
*Einfühlung* enthusiasts, "in-feeling" had less to do with understanding the thoughts or feelings of
others and more to do with how we feel our way into works of art. Its proper domain was
aesthetics. Philosophers examined how the human body engages with the form of artistic objects
— how it draws upon muscles, bodily position, breathing, circulation, and so forth to experience
a particular work. To experience *Einfühlung*, you did not look upon the suffering of other people.
You looked at the upward sweep of a line and felt your body drawing upward with it. You
looked at a blockish sculpture and sensed the weightiness of your own physical form. You
listened to a sprightly piece of music and felt your pulse approximate its beat. These sensations
were mostly unconscious, but Lipps and his colleagues were fascinated by them. To them,
*Einfühlung* was a "kinesthetic, imaginative entry to painting, poetry, sculpture, and modern
dance" (Lanzoni, 2018, p. 10). It acknowledged that we experience art actively and intimately,
and proposed that this happens through projecting oneself into a work rather than merely
observing it from the outside.

In English, however, *empathy*'s meaning began to shift, swayed by the pull of influences
different from those that tugged at its German ancestor. In the decades following its English

debut, *empathy* began to appear in psychology texts as a descriptor for copying behaviours. A 1939 textbook, for example, depicted *empathy* with a photograph in which a coach watching his athlete performing a high jump raised his own leg in accord (Lanzoni, 2018). In psychiatry, similarly, an early "empathic index" developed by E. Ernest Southard did not assess the empathy of psychiatric patients (as some modern psychometric instruments purport to do), but the empathy of their examiners — that is, the examiners' ability to imagine themselves behaving in the same way as the patient. Patients whose behaviour was beyond the realm of such imaginings were "deemed . . . beyond empathy" (Lanzoni, 2018, p. 10). Thus, where psychiatrists today might say that a man with Autism Spectrum Disorder lacks empathy, by Southard's index, instead of saying, "He lacks empathy," they would say, "I cannot empathize with him."

    *Empathy*'s aesthetic origins were further obscured by psychologists like Rosalind Dymond Cartwright, who rejected *Einfühlung*'s self-projection and recast *empathy* as "the *accurate* prediction of another's opinion or preference," discarding the intimacy of "in-feeling" in favour of the more distant, intellectual perspective of an outsider (Lanzoni, 2018, p. 11). For Cartwright, empathy was appraisal, a morally neutral skill that could be measured. "It might be a quality of a good used car salesman, for all I know," she said (as cited in Lanzoni, 2018, p. 172). Few salesmen, however, had yet heard of *empathy*. At the time of her research in the 1940s, Cartwright reports, she had to explain continually what the word meant and what she was doing, but she had a passion for "pinning down fuzzy concepts" like this one (Lanzoni, 2018, p. 171). She was the first to operationalize empathy and conduct experiments in it.

    About the same time Cartwright was taking *empathy* in the direction of appraisal and prediction, another more interpersonal branch of *empathy* was growing. It appears to have begun with social workers, most of whom were women (Lanzoni, 2018). Jessie Taft, for instance,

developed a kind of "relationship therapy" whose focus was the emotional bond between therapist and patient. Her work became the basis of more famous relational therapeutic practices, such as the person-centered approach popularized by Carl Rogers around the World War II-era. Rogers's method involved a resistance to "labelling, judging, or even diagnosing clients' maladies in favour of more deeply engaging with clients' experiences" (Lanzoni, 2018, p. 11). Like Cartwright, Rogers abandoned *Einfühlung*'s self-projection, though he took *empathy* in a morally positive rather than neutral direction. *Empathy* was now about "listening to feelings and 'reflecting' them" (Rogers, 1975, p. 1), becoming another person's "alternate self," helping them to feel understood, and enabling them to grow (Lanzoni, 2018, p. 148). In short, *empathy* was no longer about the extension of the self, but its active effacement.

Public interest in psychology burgeoned in the postwar era, and *empathy* began to appear in advice columns and other suburban fare, such as the 1955 *Reader's Digest* article "How's Your Empathy?" The term was still novel. Susan Lanzoni (2018) states that it was "nearly always accompanied by a definition, spelled in different ways, and often asterisked and explained in a footnote to puzzled readers" (p. 12). Nevertheless, the word slowly moved into the mainstream, where it came to mean much what it does today, a "deeper-going ability to engage with a variety of feelings and to inhabit, sometimes even bodily, the other's perspective" (Lanzoni, 2018, p. 6). Madison Avenue even touted it as an effective advertising technique. If it could put you inside the skin of the man on the street in order to commiserate with him, it could put you inside his skin in order to sell him something.

In the 1960s, *empathy*'s social dimensions expanded beyond the personal and therapeutic. Kenneth B. Clark, who became the first African-American president of the American Psychological Association in 1970, prescribed empathy as "political intervention" (Lanzoni,

2020). He defined the word as "that unique capacity of the human being to feel the experiences, needs, aspirations, frustrations, sorrows, joys, anxieties, hurt, or hunger of others as if they were his or her own" (Clark, 1980, p. 187). He believed this capacity could be trained, and proposed it as a solution to the problem of white prejudice — not only of white bigots but also of white liberals, whose "fantasy of purity" from racism he sometimes found harder to deal with than bigots' open rancour (Lanzoni, 2018, p. 240). Clark was one of the first to suggest that racial segregation damaged black children psychologically (Freeman, 2011). He also called for empathy training in schools as a way to offset America's increasingly anxious, competitive culture (Lanzoni, 2018).

Around the mid-twentieth century, as the term was taking hold in everyday English, perhaps the most telling sign of the extent of *empathy*'s transformation from *Einfühlung* occurred. *Empathy* was translated back into German as *Empathie*, despite the fact that *empathy* was coined to refer to a concept the Germans already had — a concept we took from them in the first place. Lanzoni (2018) observes:

> . . . empathy was no longer predominantly an expressive projection of the self into things, nature, or objects. Rather than an expansion of the self into a form or shape, empathy came to mean the very opposite: the reining in of the self's expressiveness to grasp another's emotion in service to a therapeutic goal or moral imperative. (p. 14)

To empathize no longer meant to project oneself into an empathetic target. Rather, one brought the target into oneself, a reversal which complemented the perceptual model that was also taking hold in the mid-twentieth century.

## 2.1 Out of the Black Box and into the Brain Vat

> Science explained people, but could not understand them. After long centuries among the bones and muscles it might be advancing to knowledge of the nerves, but this would never give understanding. . . . They wanted everything down in black and white, and black and white was exactly what they were left with.

Cognitivism began as a multidisciplinary movement of psychologists, philosophers, linguists, computer scientists, and others in the mid-twentieth century (Watrin & Darwich, 2012) — in part, as a reaction against their understanding of behaviorists' treatment of the "mind" as a *black box*, a device whose inputs and outputs can be observed, but whose inner workings, supposedly, are unknown. According to this (mis)understanding of behaviorism, we can observe the stimuli that arouse a person's sensations, and we can see the behaviour a person performs, but what goes on between, if anything, we cannot know. For those who regard behaviorism as part of psychology's "demonology" — as Costall once humorously called it (2004, p. 179) — this argument may be taken as a behaviorist claim that what goes on between is irrelevant. More precisely, however, the behaviorists, particularly radical behaviorists (Watrin & Darwich, 2012), were hanging a question mark on the word *between*, suggesting that perception, cognition, and even the action that "follows" them may not be such separate, sequential processes as they appear — that so-called "inner" processes were "irrelevant" not because they did not exist, but because they were as much the result of environmental contingencies as so-called "outer" processes.

The cognitivists, on the other hand, had no doubt of the existence of the *between*, and regarded the black box not as a metaphor, but as a reality to be cracked open. Computer science, an important part of the movement, was on the rise in the mid-twentieth century, and the computer easily became the central metaphor for human cognition, just as Freud had used hydraulics to describe emotional processes half a century earlier (Solomon, 1976/1993). Sensory inputs and behavioural outputs were how the organism interfaced with the environment, but these were merely "the entrance and exit doors of what really matter[s]: the inner processing"

(Heras-Escribano, 2019, p. 2). Cognition, the *between*, held the answer to who we are, and for the cognitivists, that answer was brains.

The classic example of the cognitivist model of perception is an outfielder catching a fly ball (Gallagher, 2017). According to this account, the outfielder first pulls sensory information from the world around her to perceive the ball flying through the air in her direction (*sensation*). Next, her brain compiles these sensations into a mental representation of the ball (*perception*). She identifies and classifies it *as* a ball, notes its speed and trajectory, and calculates what her own speed and position must be in order to catch it (*cognition*). Finally, her brain signals her limbs to move accordingly (*response*). Barring errors in sensing, processing, or transmission, she catches it — a successful outcome, and thus an adaptive one for her particular environment.

Shaun Gallagher (2017) calls this example the *strong* version of representationalist cognition, which, he says, few now accept. More recent research has shown that "outfielders who are standing still are unable to reliably predict where the ball will land" (Gallagher, 2017, p. 13). For some reason, humans seem to think better while moving (a point to which I will return in the following chapter). Thus, a weaker, *action-oriented representation* account has taken over from the strong one. In this weaker version, the outfielder's mental representation of the ball is continuously updated by new sensory input. This allows the outfielder's body to move *online* in the real world while tiny microbursts of *offline* representation in her brain continuously update her movements, making fine-tuned adjustments and corrections while her body is already active, increasing her chances of a successful catch (Gallagher, 2017). The more practiced she is, the better her ability to anticipate. The better she can anticipate, the more successful her catches are likely to be.

In sum, in the strong version, we solve the problem in our heads before our body begins to move; in the weak version, cognition happens *as* we move (Gallagher, 2017). In the strong version, our brain is entirely offline from the real world; in the weak version, the brain makes offline calculations while the body remains online. Both versions, however, assume that the explanation of the behaviour of catching a ball lies not at the level of organism-environment together, but at the level of neurons. Further, both versions assume that there are two distinct worlds — the world outside your skin (your environment) and the world inside it (you).

## 2.2 The Habits of Seeing of the Cognitivist Model

> I have too much brain for my head. It cannot play comfortably in its box.
>
> — Joseph Joubert, translated by Paul Auster, *The Notebooks*

For our purposes, there were two important consequences of the cognitivists' efforts. First, they equated the concept of "mind" with the structure of "brain." This was not the behaviorists' position. For the behaviorists, no thing called the "mind" actually existed: At best, it might have been a catch-all term for everything contextualizing behaviour, both bodily processes and environmental ones. Such a context encompasses a great deal more than brain activity alone. By equating "mind" with "brain," however, cognitivists effectively *reduced* "mind" to "brain." All things that "mind" did, they assumed, "brain" had first generated (Barrett, 2016). Consequently, much that emerged from the organism's processual relations with the environment was presumed to be the work of this inner processing. To explain these emergent behaviours, constructs had to be invented, and many of these, such as empathy or intelligence, are now treated as properties of the organism rather than a characterization of the organism's way of being in its environment. In short, the horizontal, processual nature of the organism was lost, and a vertical habit of seeing took its place.

Second, rather than regarding the organism as a set of processes incorporating both body and environment, the cognitivists demarcated inside from outside, internal from external. Instead of a fuzzy, processual overlap between organism and environment — like Dewey's (1922/2007) plants in soil — the boundaries of the organism became the boundaries of its physical form, while the boundaries of so-called "mind" shrank to the circumference of the skull. In effect, the cognitivists traded minds as black boxes for what Noë (2009) calls "brains in vats on life support" (p. 4). The organism was no longer a mutualistic collection of body-environment relations, interacting directly, but a dualistic arrangement in which the inside brain could communicate with the outside world only indirectly through the medium of the senses.

**2.3 The First Problem: Verticality**

> Try to see yourself through another person's eyes. They're mostly opaque once removed, but it's worth a shot.

> — @NightValeRadio, Twitter, Sep. 15, 2013

In the cognitivist approach, the dominant model of empathy is the *perception-action model of empathy*, which states that empathy occurs when two brains share the same mental representation — that is, when "observing or imagining others in a particular emotional state activates a representation of that state in the observer" (Guo et al., 2012, p. 535). According to Stephanie Preston and Frans de Waal (2002), who proposed this model, representation-sharing occurs when

> . . . attended perception of the object's state automatically activates the subject's representations of the state, situation, and object, and that activation of these representations automatically primes or generates the associated autonomic and somatic responses, unless inhibited. (Preston & de Waal, 2002, p. 4, emphasis removed)

In other words, in this model, when we sense another person's state — say, happiness — that sensation automatically creates a mental representation of happiness in our own brain, which

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stirs our nervous system to generate a corresponding happy state in us. This corresponding state need not be identical. Preston and de Waal (2002) identify two types of empathetic response: response *with*, and response *to*. One who responds *with* shares the happiness or suffering of another — in effect, rejoicing with those who rejoice, and weeping with those who weep. One who responds *to* replies with a different emotion, perhaps sympathizing with a person who is suffering or fearing a person who is angry.

Both types of empathetic response are possible, Preston and de Waal (2002) claim, because of the evolution of the perception-action type of nervous system organization, which they identify as the "precursor to empathy" (p. 6). This type of nervous system organization "us[es] the same representations to code objects and their associated actions," thus laying the groundwork for any phenomenon that relies upon state-matching, including empathy (Preston & de Waal, 2002, p. 6). In other words, because perception and action are coded similarly in the brain, my brain's representation of a particular phenomenon will be approximately the same whether I participate in it or merely witness it.

In short, in the perception-action model, empathy occurs inside the brain, where cognitivists locate all human experience. Empathetic behaviour is not merely accompanied by within-body phenomena, but explained by them. Its reality, as van Dijk and Withagen (2014) said of the vertical worldview, lies "in (hidden) layers below the apparent one" (p. 4). Based on this assumption, cognitivists search inside the brain for neural mechanisms to explain empathy, and two of the most commonly cited are *mirror neurons* and the *empathy brain circuit*.

### 2.3.1 Mirror Neurons

Giacomo Rizzolatti and colleagues discovered mirror neurons in macaques in the early 1990s (Coplan & Goldie, 2011). Mirror neurons are generally understood as a subset of motor

neurons that fire not only when a macaque performs an action, like reaching out and grabbing a peanut, but also when it sits perfectly still and watches another macaque perform the same action. V. S. Ramachandran calls this a "virtual reality simulation" of peanut-grasping for the observing macaque (as cited in Marsh, 2012). Marco Iacoboni (2011) hails mirror neurons as the basis for imitation — a form of social learning credited with driving human culture (Laland, 2017) — and jokingly refers to them as our "'monkey see, monkey do' cells" (Iacoboni, 2011, p. 55). However, humans presumably have far more of these cells than monkeys (Kolb & Whishaw, 2015), which (also presumably) may be why monkeys have yet to produce a Maya Angelou, Frida Kahlo, Pyotr Ilyich Tchaikovsky, or even a Michael Bay.

Iacoboni (2011) divides mirror neurons into two types: *strictly* congruent and *broadly* congruent. The strict type, already described, discharge both when an organism performs an action, and when it witnesses another organism perform it. The broad type discharge not only for the same actions, but also for different actions that accomplish the same goal (Iacoboni, 2011). For instance, mirror neurons in brain regions associated with the act of breaking a peanut discharge not only when a macaque breaks a peanut, but also when it *listens to* (without seeing) another macaque break a peanut (Kohler et al., 2002). This suggests that mirror neurons are multimodal, that is, capable of responding to stimulus information from multiple sensory pathways.

So, do vertical approaches to empathy equate it with the firing of mirror neurons, or with some other activity "downstream" of this activation? Is empathy perceptive or cognitive in the cognitivist model? Alvin Goldman (2011) proposes two routes to empathy, the *mirroring* route and the *reconstructive* route — which appear to overlap, more or less, with Preston and de Waal's (2002) responding *with* and responding *to*. Mirroring, which aligns with responding *with*,

is mostly automatic and occurs at so-called lower levels of consciousness. When mirroring, we unwittingly copy other people's body language. We inadvertently "catch" their moods. We are unaware (or only minimally aware) that we are replicating their bodily actions with our own bodies; nevertheless, our mimicry allows us to experience a version of the feelings they are experiencing. They smile because they are happy, so we smile back, and, because we are smiling, we also feel happy. We copy their behaviour, but we feel because we experience our own behaviour.

Some researchers have called this process *emotional empathy* (Bloom, 2016) or *affective empathy* (Zahn-Waxler et al., 1992). Others, more cautiously, call it *emotional contagion*, arguing that the emotions we experience are not the other person's, but our own (Coplan, 2011). For such mimicry to count as empathy, Goldman (2011) says, the empathizer must have "some sort of *intentional attitude* toward the target by which the resonating state is linked to him" (p. 34, emphasis added). Presumably, then, since the relationship between mimicry and liking is modulated by whether or not we *already* like the other person (Stel et al., 2010), this is why it harder to empathize with those we dislike.

In the mirroring route, empathy (responding *with*) occurs when one or more sensory modalities have activated mirror neurons. Thus, mirroring empathy appears to be perceptive or bottom-up in the cognitivist model. Nevertheless, the precondition of an intentional attitude makes this classification somewhat untidy. Intentional attitudes, presumably, are cognitive or top-down in the cognitivist model of perception, and require a pre-existing mental representation of the other person. In this model, then, at least part of empathizing must also be cognitive.

Goldman (2011) explains cognitive empathy with his second empathetic route — the reconstructive route. Reconstructive empathy, which parallels Preston and de Waal's (2002)

responding *to*, is not automatic, and occurs at a higher level of consciousness. In reconstructive empathy, we draw upon our pre-existing knowledge of the target and their situation and "attempt to replicate or re-experience the target's state via a constructive process" (Goldman, 2011, p. 38). At this level, we're not mimicking, but mindreading (Kiverstein, 2015); however, much like a charlatan fortune teller doing a cold reading, we may not be very good at it. Reconstructive empathy supposedly draws on more brain systems than mirroring, including "remembering the past, thinking about the future (prospection), conceiving the viewpoint of others (theory of mind), and navigation" (Goldman, 2011, p. 39). Consequently, Goldman (2011) says, it is less reliable than mirroring at recognizing another person's feelings, though often better at detecting what those feelings are *about*.

Taken together, mirror neurons are not identical with empathy, since they are insufficient to explain its more complex forms (Iacoboni, 2011). Instead, it is proposed that mirror neurons facilitate imitation, which is not empathy, but "the bridge *leading* to empathy" (van Baaren et al., 2009, p. 33, emphasis added). Ramachandran (2000), who once predicted that "mirror neurons will do for psychology what DNA did for biology and open up a whole new field of investigation," has since declared that interest in them is "overdone" (as cited in Marsh, 2012). Mirror neurons are "obviously the starting point for things like empathy," Ramachandran says, "but that's all it is — I mean, you need much more" (as cited in Marsh, 2012). They may be associated with empathetic behaviours, but they are not enough to *explain* them.

Indeed, scholars who take a more horizontal approach to behaviour are skeptical of the proposed link between mirror neurons and understanding the feelings or actions of others. Cecilia Heyes (2010) states that "mirror neurons contribute to a range of social cognitive functions, but do not play a dominant, specialized role in action understanding" (p. 576). She

contends that the ability to match an observed action to an action one performs oneself is a consequence of associative learning, which typically depends upon the observation of events in the environment. Her proposal, known as the *associative hypothesis*, states that individual mirror neurons are a byproduct of the correlation of observing and experiencing (Heyes, 2010) — a rather different argument from one which posits mirror neurons as the *source* of such correlations. Mirror neurons are not special entities, she says, but ordinary neurons that have taken on a mirroring function, gaining "additional, matching properties" as a result of the organism's associative learning (Heyes, 2010, p. 577). They are not born, but made. Once formed, they may help us to understand each other's actions, but theirs is "a minor, non-specialized, rather than a major, specialized contribution" (Heyes, 2010, p. 579). To truly explain empathy, you need more.

### 2.3.2 The Empathy Brain Circuit

Rather than looking outside the body for the rest of the story, however, cognitivists have continued to search for a vertical, brain-bound explanation, offering the *empathy brain circuit* as another proposed neural mechanism for empathy. As described by Simon Baron-Cohen (2011), the circuit includes, but is not limited to, the following regions:

- Medial prefrontal cortex, whose activity has been correlated to processing social information and to the comparison of perspectives;
- Orbito-frontal cortex, whose activity has been correlated to knowing when one has committed a "faux pas";
- Inferior frontal gyrus, whose activity has been correlated to emotion recognition;
- Anterior cingulate cortex, whose activity has been correlated both to the experience of pain and the observation of others' pain;
- Temporoparietal junction, whose activity has been correlated to theory of mind — the capacity to recognize others' intentions or beliefs as different from our own;
- Amygdala, whose activity has been correlated to emotional learning and emotion regulation.

Neuroscientists have identified these regions by scanning participants' brains during empathizing tasks (e.g., looking at photographs of people's ears being pierced or pricked [Guo et al., 2010]) and noting which regions exhibit a BOLD response — that is, a *blood-oxygen-level-dependent response*. Oxygenated blood has a different magnetic response from de-oxygenated blood; therefore, because fMRI is basically a giant magnet, it can use changes in the flow of blood throughout the brain during a task to identify which neural regions are receiving oxygenated blood (Kolb & Whishaw, 2015). This, in turn, may reveal which areas are most active. In short, because neuroscientists can *directly* measure blood oxygenation, they can also *indirectly* measure the neural activity to which the oxygenated blood flow correlates.

It is important, however, to remember precisely what a brain scan reveals and what it does not. Noë (2009) explains:

> Brain scans . . . represent the mind at three steps of removal: [1] they represent physical magnitudes correlated to *blood flow*; [2] the blood flow in turn is correlated to the *neural activity*; [3] the neural activity in turn is supposed to correlate to *mental activity*. (p. 24, emphasis added)

In other words, in order to understand empathy, scientists first presume (appropriately) that neural activity is correlated with an empathizing task. Then, they indirectly measure this neural activity by directly measuring BOLD-signal magnitudes, which correlate not to the task, nor to the neural activity, but to the blood flow. The resulting scan gives us "information about neural activity *related* to a cognitive process," which is not the same thing as showing us the process itself (Noë, 2009, p. 24, emphasis added). In short, brain scans tell us exactly what is happening in the brain *during* empathizing behaviour, but it is imprecise to take this measure of magnitude correlated to blood flow, correlated to neural activity, correlated to the task, and claim to have a picture of the behaviour.

Jerome Kagan (2017) points out an additional complication, which we may identify as a neglect of the horizontal context. The environment, he says, is an often-overlooked part of the observation:

> Adults lying supine and still in the narrow tube of a magnetic scanner in an unfamiliar room are in an unusual psychological and bodily state. The compromised sense of agency, awareness of being evaluated, confinement in a narrow space, and the demand to suppress all movement affect brain and psychological processes (Civile & Obhi, 2016; Hobson & Inzlicht, 2016). It is unlikely that the brain's reaction to a gray-scale male face with a fearful expression, devoid of a body and a background, would resemble the pattern generated, if it could be measured, when these same subjects saw a man with a fearful facial expression running out of an office building (Lee & Siegle, 2014). (p. 14)

In other words, brain scans can tell us what happens in the brain during an artificial experiment that simulates an everyday behaviour, but they do not tell us what that behaviour is, nor what the BOLD signals represent. Kagan (2013) reports that BOLD signals may be influenced by social class, general health, personal history, and posture (e.g., standing vs. sitting). Further, these signals may not correlate to the phenomenon we are actually studying, but to some other portion of the experimental task. Kagan (2013) offers Emile Bruneau and Rebecca Saxe's (2010) study of Arab and Israeli participants reading emotionally charged, partisan statements about Arabs or Israelis as an example. Unsurprisingly, participants reported more sympathy for statements supporting their own ethnic group than for those of the other group, yet their BOLD signals in empathy-correlated brain regions, Kagan (2013) notes, registered similar patterns of activity for both. This activity, he argues, could be attributed to the meaningfulness of the statements rather than to empathy for their subjects.

This is not to suggest that what neuroimaging reveals is irrelevant. When assessed from a horizontal approach, what happens in the brain during behaviour is an important part of the picture; however, it is not the *reality* of behaviour. Unfortunately, the vertical habits of seeing

built into the cognitivist model of perception encourage us to privilege brain activity over other types of data that may be critical to understanding, and to reduce real-world behaviours to solely mechanistic terms.

Certainly there are mechanistic components to all human processes, and it is essential (not to mention fascinating) to study and understand them, but the components must not stand in for the whole. When they do, the result is rather like showing your mother an x-ray when she asks to see a picture of your new boyfriend. Yes, the x-ray depicts the boyfriend accurately, but not at a level that is meaningful. A proper photograph would show his face, his features, perhaps part of his body, the clothes he has chosen, his expressiveness, his manner of holding himself, and, most importantly, how they all fit together. To understand behaviour, similarly, requires a horizontal approach in which we study not only the mechanistic components of experience, but also the relationships between the components, and the relationships between the components and the environment in which they operate.

### 2.3.3 The EQ: Empathy Minus the Other

In addition to encouraging us to see ourselves as "brains in vats on life support" (Noë, 2009, p. 4), the vertical worldview embedded in the cognitivist model of perception also encourages us to reify empathy and other abstract concepts or descriptions of behaviour (van Dijk & Withagen, 2014). We are not considered empathetic because we behave in empathetic ways; instead, we are considered to behave in empathetic ways because we *are* empathetic. Our empathetic-*ness*, it is presumed, can even be measured, allowing us to gauge exactly how much empathy we "have." Thus, ironically, psychologists sometimes measure empathy by methods that target only the person doing the empathizing, and exclude the person the empathetic process is supposed to be about — the *other*.

One of the more famous instruments designed to measure empathy as a property is Simon Baron-Cohen's (2011) empathy quotient (EQ) test — similar to the IQ test for intelligence (another reified, supposedly brain-bound phenomenon). The EQ asks respondents to *Strongly Agree*, *Slightly Agree*, *Slightly Disagree*, or *Strongly Disagree* with 40 separate statements, each designed to assess the respondents' empathy levels and assign them a corresponding score. For example:

1. I can easily tell if someone else wants to enter a conversation.
2. I find it hard to know what to do in a social situation.
3. When I was a child, I enjoyed cutting up worms to see what would happen.
4. I can sense if I am intruding, even if the other person doesn't tell me.
5. I tend to get emotionally involved with a friend's problems.

Based on respondents' total scores, the EQ rates them on a scale of 0 (no empathy) to 6 (maximum empathy), though the majority fall reliably into the middle. Those who score 0 may be rated as 0 positive or 0 negative. The former category is for people on the autism spectrum, while the latter is further subdivided into three types: Type B (borderline personality disorder), Type N (narcissistic personality disorder), and Type P (psychopathy).

Baron-Cohen's (2011) test is well known, and its test-retest reliability has been favourably assessed (Lawrence et al., 2004). But does it measure what it says it does? To answer this, we must first look to Baron-Cohen's (2011) definition of empathy to see how he defines the ability his test is meant to measure:

> Empathy is our ability to identify what someone else is thinking or feeling and to respond to their thoughts and feelings with an appropriate emotion.
> This suggests there are at least two stages in empathy: recognition and response. (p. 18, emphasis removed)

The word *appropriate* here is puzzling. What is an appropriate emotion? It is impossible to reply without asking further questions: Who am I in this situation? With whom (or what) am I

empathizing? Where are we? How are we connected to each other? Do we share the same culture? What are our histories — both separate and in relation to each other? Imagine, for example, that a person in front of me is crying. If this person is a four-year-old girl who skinned her knee in the backyard, and I am the mother who loves her, consolation seems the appropriate response for a parent of my gender, background, and culture. However, if this person is a drug-addicted young man, sobbing and pounding on my door in the middle of the night, asking for money for the third time this year, and I am the ex-girlfriend from whom he has repeatedly stolen property, consolation is probably inappropriate for both of us.

The word *appropriate* presupposes context. Unfortunately, context is largely absent from the EQ. For example, consider the statement, "I am good at predicting what someone will do." Who is *someone*, and what is the environment in which the respondent is observing them? A respondent who typically interacts with a small familiar social circle in a small familiar environment might answer this item with a confident affirmative, scoring more empathy points. A respondent with regular exposure to strangers who frequents new, unknown environments might answer with less certainty, gaining fewer points. Both responses are truthful, but neither necessarily tells us whether the respondent is likely to behave empathetically. In fact, the second respondent, who scored lower, could actually be the more consistently empathetic individual because the unpredictability of their environment(s) may require them to be sensitive to smaller and smaller social and emotional cues. Meanwhile, the first respondent, who scored higher, may be prone to hindsight bias. The EQ has no way to detect this.

Arguably, then, what this item ("I am good at predicting what someone will do") really measures is the behavioural consistency of the people who help to make up the respondent's social environment. Further, this consistency is often less attributable to the individuals

themselves than to the structure of the environments in which they behave. For instance, I may reliably predict what my coworkers will do in the office, but I may have greater difficulty at a party or some other less formal gathering. Throughout 2020, similarly, various websites featured tweets from couples watching each other conduct business over Zoom as they observed their government's COVID-19 stay-at-home guidelines. "Turns out my husband can actually small talk, just not with anyone we know in non-work life," tweeted Dr. Jacqueline Sievert Hardt (2020). "My husband has learned I am the 'let's make sure that this is brand-aligned' person and is mildly horrified," tweeted Victoria Barbieri (2020). In discovering their partners' work personae for the first time, these couples witnessed unpredictable behaviour from the people they typically found most predictable.

Behavioural predictability, as Roger Barker observed, is not the property of an individual alone, but of individuals behaving within environments (Heft, 2001). In his studies with children, for instance, Barker determined that "some attributes of behaviour varied less across children within settings than across settings within children" (Heft, 2001, p. 252) — that is, the children's behaviour was more likely to align itself predictably to a *setting* than to some inner, trait-like consistency. A group of children behave more or less alike in a playground, for example, and more or less alike in a classroom, but an *individual* child's playground behaviour typically resembles other children's playground behaviour more closely than it resembles that child's own classroom behaviour. The ability to predict behaviour, then, often says more about the physical and sociocultural structure of the environments in which behaviour occurs than the robustness (or even the *existence*) of a predictor's empathetic trait.

Let us look at another example from the EQ: "It doesn't bother me too much if I am late meeting a friend." Again, who are the respondent's friends? Where are they meeting? Is the

respondent late for drinks and appetizers, or are they late for a wedding? The setting and punctuality standards of the respondent's friends affect the answer, but even the notion of punctuality itself is not fixed. White et al. (2011) found that punctuality is sociocultural in nature, and alters with such variables as age, social status, or the collectivist values of one's society. Mormons in Utah, for instance, are reportedly some of the most precise people in the United States, while the Navajo have far greater flexibility, and can arrive an hour after the appointed time without discourtesy (White et al., 2011). Similarly, several years ago, BBC Travel told the story of Manchester native Lucy Bryson's great embarrassment at arriving *on time* for a party in Rio de Janeiro. Her startled hostess, clad only "in a towel and dripping wet from the shower," politely switched on the television for her guest and left her alone with it for an uncomfortable hour before the revellers began to trickle in (Bryson, 2018). Three hours later, the party truly began. "By turning up virtually on time," Bryson said, "I had made a grave social faux pas" (2018).

There may also be instances in which feeling bothered is the *non*-empathetic response. Imagine, for instance, that I am late for a coffee chat in a café with a friend with whom I share the same culture and punctuality rules. I arrive feeling terrible for my lateness, but my friend is not upset. In fact, she arrived early to enjoy a few uninterrupted minutes with a book and became so engrossed she never noticed my absence. Suppose, however, that I fear she is only being polite, and continue to be distressed and apologetic anyway. I may even begin to upset my friend, who would prefer me to drop the matter so as not to spoil our time together. In such a situation, the "appropriate" response for me is *not* to be bothered — to let myself off the hook and forget the whole thing. Instead, my distress ruins our coffee chat. Such a response, though inappropriate in both intensity and in kind, would get me full points on an EQ questionnaire;

nevertheless, my bother over my lateness is not what we would typically consider empathetic behaviour. It is self-involved, and does not include my friend.

Even when an emotion *is* appropriate in kind, it may yet be inappropriate. In Anton Chekhov's (1883/2001) darkly comic story, "The Death of a Civil Servant," the eponymous protagonist, Ivan Dmitrich Kreepikov, is watching a performance of *The Chimes of Normandy* at his local opera house when he is suddenly overtaken by a powerful sneeze. Afterward, to his consternation, he notices the gentleman in the row in front of him muttering and wiping his bald head with a glove. Worse, he recognizes him as the Number 2 official in his ministry. Kreepikov apologizes profusely for "spattering" the gentleman, and continues to annoy him further throughout the performance with obsequious *mea culpas* (p. 1). The following morning, feeling insufficiently forgiven, he goes to Number 2's office to repeat his contrition. Irritated by the disturbance (not the sneeze), the official throws him out, cementing Kreepikov's conviction that the sneeze *must* be atoned. He follows the official throughout the office, grovelling. Number 2 angrily rebuffs him as a jokester and troublemaker, and Kreepikov, alarmed, reappears in the official's office on the third day to emend the second misunderstanding and affirm his reverence. The now-apoplectic official throws him out again, this time with such rage that "[s]omething snap[s] in Kreepikov's stomach" (p. 3). He staggers home and falls down dead.

Chekhov's (1883/2001) story is absurd, but it illustrates an important point for the EQ. Shame may be an appropriate emotional response for a civil servant who has sneezed on his superior, but it is not necessarily an empathetic response. Kreepikov's emotions are far too intense, yes, but even if he had managed to contain their excessiveness, his embarrassment seems born not of empathy for the official, but of obsession with his own transgression. Thus, Chekhov

(1883/2001) illustrates that an emotional response may be appropriate in kind without being empathetic, and it may be appropriate in kind without being appropriate in intensity or display.

This, then, is another problem that vertical habits of seeing create for understanding empathy. By treating empathy as a property of the individual, the vertical worldview ignores the broader context in which the individual lives and behaves. By definition, empathy (and perception itself, I will presently argue) is contextually dependent, and requires a horizontal approach. It is not about feeling a specific set of emotions or following a specific series of behaviours, but about "reading the room." Rooms differ in size, shape, contents, inhabitants, and the events that occur within them. Consequently, if we want to measure empathy, we are unlikely to be successful with instruments that do not include rooms as part of their methodology.

## 2.4 The Second Problem: Dualism

> Come sit down beside me
> I said to myself
> And although it doesn't make sense,
> I held my own hand
> As a small sign of trust
> And together I sat on the fence.

— Michael Leunig, "Sitting on the Fence"

The second problem the cognitivist model of perception creates for empathy is its built-in dualism. By dividing perception and cognition, organism and environment, self and other, it unwittingly describes (even *evokes*) a world in which humans are inherently separate from each other and their environments — a world in which we are undiscovered planets, making inferences about each other's behaviours that are only arbitrarily related to the "minds" hidden behind them (Noë, 2009; Costall & Leudar, 2007). This environment/organism, self/other dualism is particularly problematic for empathy. If self and other cannot truly meet, then

separateness and misunderstanding are built into the system. We operate in the world as individuals (from the Latin *individuus*, "not divisible"), in the words of Tennessee Williams, "[s]entenced . . . to solitary confinement inside our own skins" (1940/2000, p. 224). From such an understanding, empathy becomes either a threat to the integrity of the self, or a lifeline out of its constraints.

Fritz Breithaupt (2017) associates philosopher Friedrich Nietzsche with the former view. According to Breithaupt (2017), Nietzschean empathy occurs only when we cast off our own essential self and become self-*less*. This selflessness is not virtuous, however, but a negation — a state in which we are vacant, absent, uninhabited. Lacking an identity or strong passions of our own, we compulsively seek others who have retained theirs, and we empathize with them, vicariously experiencing their self to console us for the loss of ours. However, in Nietzsche's view, the dualistic gulf remains. We cannot truly know the other person, so the self we see in them is not real, but an imaginary being we have projected onto them. The more we empathize, the harder we project; the harder we project, the more we lose our own identity and power. Thus, for Nietzsche, "empathy is, structurally, resentment" (Breithaupt, 2017, p. 55). The only solution is to abolish it entirely, using irony to create distance between ourselves and others in order to avoid such asymmetrical relationships.

An example of the latter view (empathy as a lifeline) is Frans de Waal, who opened the preface of his 2009 book, *The Age of Empathy*, with the words: "Greed is out, empathy is in" (p. ix). One year previously, the market crash of 2008 had shaken the American status quo, and the United States, de Waal (2009) claimed, was awakening from the realization that the trickle-down economics of Reagan, Thatcher, and the "Me" Generation had failed. The West was "poised for a new epoch" (p. ix), and empathy would be the "grand theme" of a brave new world of

"cooperation and social responsibility" (de Waal, 2009, p. ix). Empathy, he argued, could

provide our incentive to overcome ourselves:

> Since empathy binds individuals together and gives each a stake in the welfare of others, it bridges the world of direct "what's in it for me?" benefits and collective benefits, which take a bit more reflection to grasp. Empathy has the power to open our eyes to the latter by attaching emotional value to them. (de Waal, 2009, p. 223)

In this account, then, empathy is the source of a new, enlightened self-interest and the hope for a

more just and cooperative society. Citing Petr Kropotkin, de Waal (2009) argues that our

struggle is not with each other, but with the "hostile environment" in which we all live, and

against which we can all help one another (p. 32). Threatened from without, faced with the same

challenges for survival, we are all in the same boat, and so we empathize in order to survive.

Some see a cynical, opportunistic side to this, as de Waal (2009) acknowledges, citing the

sociobiological proverb: "Scratch an 'altruist,' and watch a 'hypocrite bleed'" (p. 43).

Selfishness is still selfishness, the proverb implies, even when enlarged and expanded to include

others. De Waal (2009) disagrees. Selfishness may be part of human nature, but so is empathy:

"We're preprogrammed to reach out" (de Waal, 2009, p. 43). Over a decade later, in a world of

Trumpism, COVID-19, and Black Lives Matter, his optimism seems somewhat misplaced.

Nevertheless, it illustrates a view of empathy diametrically opposed to Nietzsche's.

Opposite though they may be, both of these views are predicated on the self/other

dualism latent in the cognitivist model of perception. In Nietzsche's view, the self in solitary

confinement loses itself in imagining an unreachable other, jeopardizing its own integrity. In de

Waal's (2009) view, the self cooperates with others for aid in endeavours it may wish to pursue

to improve its chances for survival and well-being, but it still exists apart from them. It does not

depend upon these others for its very existence *as a self*. George Herbert Mead's (1934/2015)

mutualistic conception of the self as something which emerges only through an organism's

relation to other individuals is absent. According to Mead (1934/2015), the self is not innate; it is a "social structure, and it arises in social experience" (Mead, 1934/2015, p. 140). Without others to look at us, talk to us, move around us, and call us by name, we may continue to exist as bodies, but our experience of ourselves *as a self* does not develop. In other words, in a mutualistic worldview, the self is not separate from others, but exists only by them and through them.

Under a dualistic self/other viewpoint, on the other hand, the social interactions of self and other are optional. I may choose to work closely with other creatures, but we are not necessary to each other's identity, only to each other's (optional) endeavours. Cooperation is not inherently rewarding, but requires incentives. As such, those responsible for maintaining stability within social groups will have a vested interest in adopting an adversarial approach to Petr Kropotkin's aforementioned hostile environment, either social or physical, in order to keep us united. However, a collective of humans in a hostile relationship with themselves or with nature has already failed to understand that the adversarial character of this relationship is itself a threat to their survival. Psychologist Paul Bloom (2016) came to a similar conclusion. "When some people think about empathy, they think about kindness," he writes: "I think about war" (p. 188). Like Nietzsche, Bloom (2016) sees empathy (specifically, emotional empathy) as a threat, but the rationale for his conclusion more closely resembles de Waal's (2009) humanistic arguments. For Bloom (2016), empathy is a threat not to the integrity of the self, but to the stability of the planet. For instance, he says, warmongers appeal to citizens by preying upon empathy for their own children, allowing them to forget that their enemies have children, too; thus, empathy allows us to commit great evil while believing we are committing the greatest good. He proposes we

reject emotional forms of empathy in favour of cognitive ones, practicing rational compassion instead.

From a dualistic perspective, Bloom's (2016) call seems justified. In this approach, empathy offers little real escape from the self/other, organism/environment duality, only an exacerbation of existing problems. If we can remove emotion from empathy, then perhaps we should. Giovanna Colombetti's (2014) work on affective science, however, suggests that such an ideal is not possible. An enactivist, Colombetti (2014) presents a different understanding of cognition from that of the cognitivist model we have thus far explored: Emotions, she says, are not episodes of affectivity that take place on a "nonaffective background" (p. 77); rather, all "cognition is, necessarily, always already affective" (p. xvii). Every part of our existence, including our so-called rationality, is inescapably tinged with emotion simply because we care about our lives and what happens to us. Even to value rationality or compassion is already an affect-laden preference. It is true, as Bloom (2016) suggests, that the types or intensity of the emotions with which we have to deal are frequently not helpful. Nevertheless, to return to my introductory remarks, I suggest that the problem lies not with the emotions themselves, but with our Deweyan habits in regard to them. A man who expresses anger will not form a *habit* of anger without the support of environing conditions. To break unhelpful emotional habits, then, we must address not only the selves who display them, but also the environmental conditions that deem such behaviours appropriate.

In sum, a more mutualistic approach to the practical problem of empathy is needed — one that acknowledges our embeddedness in each other, and takes our emotions themselves as evidence of this. Such an approach is possible if we leave behind the understanding of human beings as entities, brains, or bodies, and take up a new perceptual model that treats them as

collections of open, dynamic, environmentally embedded processes (Nicholson, 2018). In the past several decades, many cognitivists have already begun to move in this direction, as discoveries like epigenetics, for instance, have demonstrated that "inputs" from the "outside" are capable of adjusting our so-called "neural hardware." Such processes, they argue, allow genes and culture to co-evolve (Laland, 2017). This more interactionist approach to organism and environment is a welcome shift; however, it does not quite go far enough to eradicate psychology's vertical and dualistic habits of seeing.

In Chapter 3, I will propose an alternate perceptual model based on James J. Gibson's ecological psychology, which posits that experience is not located inside the body, that we are not our brains, and that human nature is not as limited as the self/other, organism/environment binaries make it out to be. This ecological model enables us to circumvent the verticality and dualism latent in psychology's current understanding of perception, and assess human beings and their behaviour at a more appropriate level, that of *organism-environment* together (Heft, 2013).

# CHAPTER 3: METHODS — EXPLORING THE ECOLOGICAL APPROACH

> The idea that surroundings will mold a man is always mixed up with the totally
> different idea that they will mold him in one particular way. . . . To be born
> among pine-trees might mean loving pine-trees. It might mean loathing pine-trees.
> It might quite seriously mean never having seen a pine-tree. Or it might mean any
> mixture of these or any degree of any of them.
>
> — G. K. Chesterton, *What's Wrong with the World*

What is an organism? According to Daniel J. Nicholson (2014), biologists and philosophers have answered this question since the seventeenth century with the "*machine conception of the organism* (MCO)," literally, the conception of organisms as machines (p. 163). Descartes, for example, depicts nature as mechanical (Nicholson, 2014); biologists describe cells as biochemical factories (Nicholson, 2014); geneticists characterize genes as computer programs (Nicholson, 2018); and cognitive psychologists, as we have seen, conceptualize the brain as a computer. These metaphors, Nicholson (2018) says, are not mere tricks or ornaments of speech; rather, they are habits of seeing and engaging with our environments that both facilitate and limit what we are able to perceive.

Scientists with a habit of seeing organisms as machine-like entities will find it easier to think in terms of entities rather than processes (Szasz, 1961/2010). Indeed, Nicholson (2018) credits the uncritical acceptance of mechanistic worldviews with the persistence of substance metaphysics in most of the natural sciences, with the notable exception of physics. In that discipline, he says, the quantum revolution created an academic environment unsuitable for reductionist, deterministic ways of investigating and engaging with data (Nicholson, 2018). As more and more physicists grew into the habits of seeing encouraged by quantum theory, the disciplinary environment pushed back against more outdated habits, compelling others to change their behaviour by incorporating the new environment into it.

As we saw in Chapter 2, psychology also enjoyed a twentieth-century revolution, but ours was cognitive rather than quantum, and its embedded habits encouraged, rather than opposed, vertical and dualistic ways of investigating and engaging with data. Today, many psychologists approach human organisms as essential entities, separate from their environments, and treat those organisms (defined as brains and bodies) as the proper unit of study (Heft, 2013). The organisms' everyday context is often ignored in experimentation, or, when it is acknowledged, it may be "regarded as no longer an important issue for research but a contaminant" (Costall & Leudar, 2004, p. 623). Whatever a de-contextualized brain or body generates, many believe, can get at the reality of a person or their behaviour more nearly than a brain or a body in the context that typically co-constitutes that person or elicits that behaviour.

In this chapter, however, I will adopt a processual theory of organisms, one that encompasses not only the material substance of our bodies, but also their processes, behaviour, and habits, each of which is embedded in the environment at every level, and all of which, taken together, comprise an organism's way of being in the world. This way of being, I will argue, is what an organism *is*. From such an understanding, to de-contextualize organisms from environments is not possible. Move a body out of one environment, and another will rush to fill the gaps, and whatever fills the gaps will act in turn upon the body, reshaping its processes, behaviour, and habits in ways large or small. This presents a problem for much of psychological research. If psychologists, in order to study an organism, remove that organism from the typical environment that makes its typical behaviour, and place it in a carefully controlled experimental environment (which they incorrectly regard as neutral), then the behaviour they observe and measure will not be the organism's typical behaviour, but its experimental behaviour. Much may still be learned from this if the environment itself is measured. Unfortunately, as Tal Yarkoni

(2021) states, psychologists rarely model the experimental environment — its "stimuli, experimenters, research sites, and so on" — despite the fact that it often differs from one experiment to another more than the participants do (Yarkoni, 2021, p. 8). The result, he says, is a generalizability crisis, to which he attributes psychology's current replication crisis.

How, then, can we study organisms processually, as ways of being embedded in environments, rather than as brains or bodies alone? This chapter will propose an alternate theory of perception, the ecological approach — a horizontal, mutualistic theory that takes *organism-environment* rather than organism alone as its proper unit of study (Heft, 2013). Such an approach holds great promise for empathy, for it affords psychologists a look at how people coexperience one other in context. In Chapter 4, I will examine the unexpected ways these contexts affect how and with whom we empathize. For the present, however, I will begin with a closer examination of the processual, environmentally embedded character of organisms and the active character of their perceptions, then move on to explore the ecological approach to the perceptual processes that constitute empathetic coexperiencing.

**3.1 Toward a Processual Theory of Organisms**

> There are no fixtures in nature. The universe is fluid and volatile. Permanence is but a word of degrees.

> — Ralph Waldo Emerson, "Circles," *Essays: First Series*

In the cognitivist model of perception, Costall (2004) says, "'reality' *excludes* us" (p. 190). The brain waits "in here" to be stimulated by what is "out there." It waits for representations, waits for meaning to be added to those representations, and only then orders the body to respond — to behave upon reality. From a processual understanding of organisms, on the other hand, there is no "in here" and "out there." We are not pulled through life by a "series of jerks, the origin of each jerk to be sought outside the process of experience itself" — as if all

experience occurred only inside us, and the environment existed only to initiate the jerks (Dewey, 1896, p. 360). Reality *includes* us. We are not bodies alone, nor consciousnesses trapped in skulls, but *ways of being*, and these ways of being include not only our bodies, but also their processes, behaviour, and habits, each of which is embedded in the environment at every level. Organism and environment, Dewey (1896) states, are interdependent components in "a comprehensive, or organic unity" (p. 358).

The laws of thermodynamics, as Nicholson (2018) explains, provide an excellent example of this unity, particularly the second law, which states that "the amount of free energy (i.e. energy capable of performing work) is constantly decreasing, while the amount of dissipated energy (measured in terms of entropy) is correspondingly increasing" (Nicholson, 2018, p. 143). Unlike machines, organisms must "constantly exchange energy and matter with their surroundings in order to maintain themselves far from thermodynamic equilibrium [i.e., death]" (Nicholson, 2018, p. 144, emphasis removed). If we do not maintain this continuous exchange throughout the course of our lives, we will cease to *have* a life. Even our physical bodies, then, are not closed, static systems like machines, but open, dynamic ones. They are collections of environmentally embedded processes, a flow of matter and energy in continuous exchange with the world around us. This exchange, however, is not like that of a machine, which takes in fuel from its operators and gives off energy without being materially changed. What we consume as breath or food or drink transforms us both at the level of cells and the level of behaviour.

A more appropriate model for organisms than the MCO, Nicholson (2018) argues, is Ludwig von Bertalanffy's *stream of life conception,* which proposes that organisms are not entities, but *happenings*. Bertalanffy compares organisms to rivers, whose currents are in a continuous state of change. In the same way, he says, "living forms . . . are the expression of a

perpetual stream of matter and energy which passes the organism and at the same time

constitutes it" (1952, as cited in Nicholson, 2018, p. 148). A river is an event, and it is defined

not only by its water molecules, but also by the way those molecules respond to the

contingencies of an environment that compels them to move and to flow in a particular way.

Less visibly, the river is also the riverbank, which constrains it on either side, determining its

habitual form, channelling its currents, and being eroded by them. The movements of the waves

are how the river "behaves," either rough or calm, and this behaviour, too, occurs in concert with

the contingencies of the environment. In short, the river is not only *in* its environment, but *of* its

environment.

In the same way, the form of an organism's body and the form of its behaviour and habits

are a confluence — a flowing together of bodily and environmental processes that cannot be

separated as long as the organism remains alive. From a horizontal, mutualistic understanding,

then, to demarcate the boundaries of the organism at the skull or the skin is a contrivance. Brain,

body, and behaviour alike are part of a wider stream of open, dynamic, environmentally

embedded processes.

**3.2 Toward an Active Theory of Perception**

> "We do not know what things *look* like, as you say," the beast said. "We know
> what things *are* like. It must be a very limiting thing, this seeing."

> — Madeleine L'Engle, *A Wrinkle in Time*

From a processual understanding of the organism, perception and action form a similar

organic unity to that of organism and environment. Imagine, for instance, that we see an object

on a table — say, a lighted candle — and reach for it (Dewey, 1896). According to the

cognitivist model of perception, we are able to do this through the aforementioned "series of

jerks." The visual stimulus (the candle) jerks our nervous system, which sends a message to jerk

our brain into creating a representation of the candle, which jerks our nervous system to send a message back again, jerking our motor functions to respond (the reaching). The process is passive and sequential.

Dewey (1896) suggests a different understanding. The process "begins" (if any living process may be said to "begin") not with sensation, but with action — the act of seeing. We see not because the light strikes our retina, but because we *look*. Action is not merely a response to sensation/perception; rather, perception itself is active. When we hear a frightening sound, for instance, how we move our heads or how we tense the muscles in our ears helps to create the experience of hearing (Dewey, 1896). Even when we do "respond" to what we perceive, like reaching for the lighted candle, we are not trading a sensory stimulus for a motor response: The same act of seeing is still occurring; it simply becomes "seeing-for-reaching purposes" (Dewey, 1896, p. 359). We see the lighted candle, so our hand is able to constrain its movements. It grasps the candle rather than burning itself in the flame, grabbing some other object, or reaching blindly for nothing at all. Seeing controls reaching. As we reach, however, our action demands our gaze. We watch our target in order to grasp it successfully. Reaching also controls seeing. Our perception is active, and our action is perceptive.

Previous studies demonstrate that motor systems do not develop properly when perception is artificially constrained so as to render it passive, and movement (which cannot be called "action" in this context) ceases to be perceptive. In a now-classic experiment, Richard Held and Alan Hein (1963) raised ten pairs of kittens in separate carousels. In each pair, one kitten had contact with the ground and was capable of self-propelling around the carousel (Figure 1). The other sat in a gondola on the opposite side that restricted its movements. The carousel connected the animals so that the movement of the active kitten around the circle also propelled

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the passive kitten's gondola along the same path, ensuring both kittens had equivalent visual

stimulation. However, what the kittens' differing experiences actually afforded them proved

quite different. Only the active kitten developed proper paw-eye coordination and depth

perception; the passive kitten failed to develop either correctly. The experiment, Heras-Escribano

(2019) states, demonstrates that "perception cannot be disentangled from action if one aims to

offer a full-blown account of our perceptual capacities" (p. 26). When mere passive sensory

experience occurs without active perception — without *looking* — the ability to act is similarly

impaired.



**Figure 1.** Held and Hein's (1963) kitten carousel.
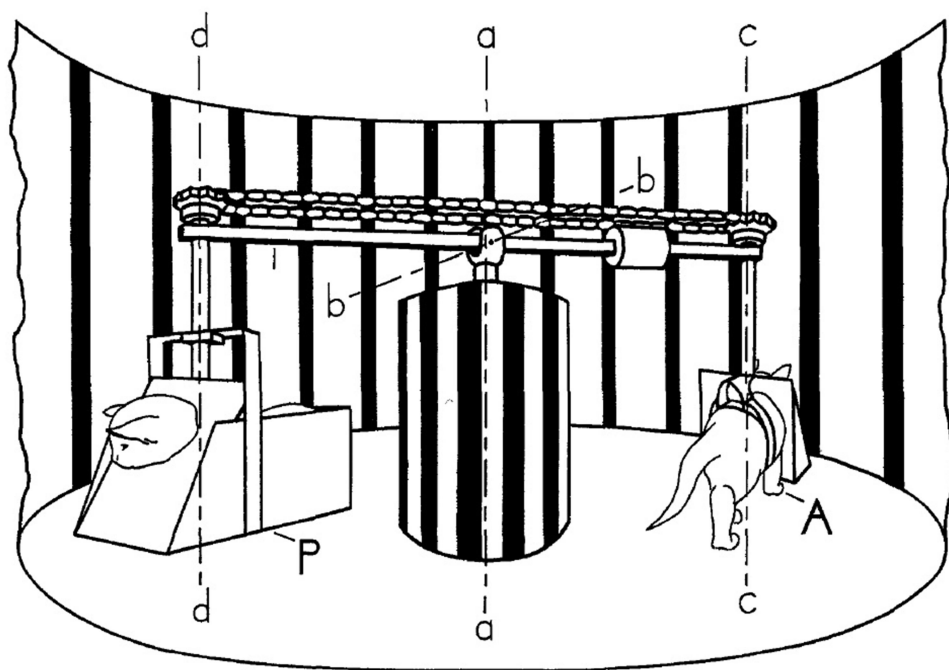
Louise Barrett (2011) makes another argument for the coordination of perception and

action in her discussion of *perceptual control theory*, which states that, "ultimately, behaviour is

about controlling one's perceptions" (p. 99). When we study behaviour in a lab, Barrett (2011)

says, we assume that the "right" stimulus will produce the "right" action. In the real world,

however, it tends to be the other way around: The "right" action will produce the "right" stimulus. We perceive that our stomach is empty, for instance, so we act (i.e., eat) in order that our next perception will be a feeling of satiety (Barrett, 2011). Similarly, she states, if we are driving and notice that the speedometer has risen above a safe level, we act *in order* that our next perception will be the speedometer falling. Perception is both active and purposeful, and action enables us to choose our next perception from among the available potentials for action our environment offers. In the ecological approach, these potentials for action are called *affordances*.

## 3.3 The Ecological Approach

> "Sometimes it's a Boat, and sometimes it's more of an Accident. It all depends."
> "Depends on what?"
> "On whether I'm on top of it or underneath it."

> — A. A. Milne, *Winnie-the-Pooh*

Ecological psychology is a theoretical approach that takes as its central principles the horizontal worldview, the mutuality of organism and environment, and the processual character of the organism. Begun by James J. Gibson in the mid-twentieth century (if any theory or habit of seeing may be said to "begin"), it borrows its name from biology, where the term *ecology* describes the "the mutual *relations* among organisms with one another and with nonliving things" (Heft, 2013, p. 162). Ecological psychology was an attempt to recapture the "animal-environment reciprocity" and "adaptive significance of *actions*" that Charles Darwin outlined, but which Herbert Spencer and others rejected (Heft, 2013, p. 163). Spencer, in particular, argued for a dualistic view in which minds are "passively molded" by environments (Heft, 2013, p. 163), allowing evolution to produce "mental structures that *correspond* to environmental conditions" (p. 162). It was he, and not Darwin, who coined the phrase "survival of the fittest,"

and claimed evolution was progressive, an argument to which many attribute the rise of social Darwinism after Spencer's death (Weinstein, 2019).

William James, who once called Spencer "the philosopher whom those who have no other philosopher can appreciate" (as cited in Cowles, 2020, p. 172) — was a firm Darwinian who argued that Spencer neglected the mutuality of organism and environment, or, as James put it, the fact that an organism, from birth, "is *in the game*, and not a looker on" (1878, as cited in Heft, 2013, emphasis added). Early in his career, James, too, reluctantly accepted the dualistic understanding that dominated the thought of his era, but he came to reject it later in life:

> For twenty years past I have mistrusted "consciousness" as an entity; for seven or eight years past I have suggested its non-existence to my students, and tried to give them its pragmatic equivalent *in realities of experience*. (James, 1904/2012, p. 248-249, emphasis added)

James rejected the notion that experience occurs in a private, dualistic consciousness. As Heft (2001) explains:

> In such a view, individuals' meaningful existences would be consigned to so many separate worlds. If meanings arise only in individuals' private experience, and are not traceable to properties of objects, then the possibilities for a common ground of meaning become elusive, if not miraculous. Psychological encapsulation becomes the norm; common, shared experiences are rare. (p. 223)

James proposed that life is a shared stream of undifferentiated potential relations, which he called *pure experience* (Heft, 2013). From this stream, active, agential organisms — simply by virtue of *being* active, agential organisms — selectively differentiate structures over time. In other words, because we are alive, we experience things, the relations between things, the relations between relations, and ourselves in relation to all. However, we do not stand outside this stream, observing connections in our brains like "an isolated Cartesian observer standing apart from the object thought about" (Heft, 2001, p. 28). We are *in the game*. We live and act and

experience, not as a body- or brain-bound *consciousness-as-entity*, but as a *consciousness-as-function* extended into the environment (James, 1904/2012) — one in which our ways of being (i.e., our bodies, processes, behaviour, and habits) are inextricably entangled, and with which we form a "constellation of relations" (Heft, 2001, p. 28). Most importantly, these relations can be perceived *directly*.

Dualistic organisms-as-entities must receive and interpret signals from an outside world in order to "see" what is happening "out there" in the reality that excludes us, but this inside/outside binary dissolves when we approach organisms as processual, mutualistic ways of being already rooted and bound in the environment at every level. When reality includes us, the relations between our way of being and the environment need not be inferred, but can be perceived directly. Such direct experience of the environment, Gibson (1986) argues, "implies a *new theory of cognition* in general" (p. 251, emphasis added), one that abandons the vertical worldview that makes the brain the site of all experience. As we saw in Chapter 2, cognition is typically treated as a post-perceptual phenomenon — the *between* of sensation and action, which "refer[s] to the various processes of *knowing*" through which semantic meaning is inferred from (or imposed upon) mental representations cobbled together from bottom-up sensations (Heft, 2001, p. 37). However, in the ecological approach, where perception and action form the same organic unity as organism and environment, there is no need for an intermediary "inner processing" to convert sensory stimuli to motor responses. Instead, cognition becomes synonymous with perception, and like perception, it is active and never "offline," but horizontally extended into the environment, both physical and social. As such, its processes of *knowing* are not semantic, but active and intimate — a live, in-the-game exploration of the

potentials for action the environment offers. We may define ecological perception, then, as the detection of these potentials for action or *affordances* (of which I will say more in a moment).

From this horizontal, mutualistic understanding, perception/cognition is not an activity of the brain alone. Rather, the perceptual systems that detect the potentials for action available to us in our environments are "whole body activities" (Mace, 2015, p. xx). Gibson (1986) explains:

> We are told that vision depends on the eye, which is connected to the brain. I shall suggest that natural vision depends on the eyes in the head on a body supported by the ground, the brain being only the central organ of a complete visual system. (p. xiii)

In the ecological approach, eyes, heads, bodies, and ground are all part of the perceptual system. So are eyeglasses and binoculars, if we happen to use them. So are other sensory modalities (e.g., smell, taste, touch, hearing). So is locomotion. This is why the outfielder catching the fly ball in the previous chapter found it easier to detect where the ball was going while she was moving. It is why, when someone is speaking to me, I find it easier to listen if I look at, move toward, or even touch them (if appropriate). My actions afford me better listening. Similarly, if I look at a table and see an object on it, but cannot quite make it out, I move closer (Gibson, 1986). I may even manipulate it with my hands, picking it up and turning it over to see it from other angles. I perceive the potentials for action it affords me.

### 3.3.1 Affordances

According to Gibson (1986), we evolved to perceive the world at a level that is meaningful for us — that is, meaningful for our survival and well-being. For instance, I cannot perceive water molecules (at least, not without special instruments), but I can perceive water because I am an organism for whom water affords potentials for action such as drinking, washing, and drowning, all of which *matter* to my way of being in the world. The properties of drink-ability, wash-ability, and drown-ability are not *in* the water, nor are they in me. They

emerge from the relation between us. If I were a different kind of organism — say, a fish — this relation would be different. Water would not afford me drowning, but breathing.

Drink-ability, wash-ability, and drown-ability are examples of *affordances*, which are not properties of the environment, nor of the organism. Rather, they are "relational properties" that exist only at the level of *organism-environment* together, the ecological level (Mace, 2015, p. xxii). Specifically, they emerge from the relation between a particular environment and an organism's way of being. Gibson (1986) states:

> [A]n affordance is neither an objective property nor a subjective property; or it is both if you like. An affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is equally a fact of the environment and a fact of behaviour. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer. (p. 121)

Affordances are "what [the environment] *offers* the animal, what it *provides* or *furnishes*, either for good or ill" (Gibson, 1986, p. 119). Despite his verbs, Gibson (1986) is not suggesting a dualistic understanding by which affordances are transferred *from* an environment *to* an organism that stands outside or apart from it. Environments do not communicate in this way, he says; there is no transmission of "signals," no sender and receiver, no "code" to break (Gibson, 1986, pp. 56-57). Nor are affordances meanings imposed upon the environment by us; rather, they are "discovered" through our active engagement with the environment of which we are a part (Gibson, 1986, p. 28). Exploration, then, is a process of *perceptual learning* — that is, of learning to differentiate the affordances of a previously undifferentiated environment, thereby expanding the potentials for action available to us (Gibson & Pick, 2000).

Imagine, for instance, that I am walking my dog, and we encounter a rail fence obstructing our progress. The fence affords climb-ability for me, though it also affords trespass-ability and punish-ability if what lies beyond is private property and I am caught. My dog, on the

other hand, is too small to perceive the affordance of climb-ability, and too canine to perceive the affordances of trespass-ability and punish-ability. However, her smaller size and the narrow space between the bottom rail and the ground afford her crawl-ability. She can slip beneath the fence, an affordance I might fail to perceive until she has wiggled through, compelling me to act upon the affordances of climb-ability and trespass-ability by scaling the fence to retrieve her.

This example illustrates three points about affordances. First, affordances in the same environment often vary from organism to organism. Different organisms have different bodies and different ways of being; therefore, the potentials for action available to them in the same environment will also differ. Second, affordances may be social as well as physical. Walk-ability on a stretch of ground is not trespass-ability without a social environment to dictate that the ground belongs to someone who has a right to keep me out. Third, through our relations to other organisms, we can perceive what the environment affords them, even when those affordances are not available to us. In cases where we have not previously perceived these affordances, this coexperiencing can be a source of perceptual learning — of discovering more potentials for action in the environment for us to experience or coexperience.

Humans moving about in cities offer another example of affordances and how they work. City dwellers daily encounter steps and staircases and narrow passages that afford accessibility to the buildings in which myriad other potential actions may be found, such as residing, buying groceries, shopping for clothing, visiting the doctor, watching a film, or exploring art. For those who use wheelchairs, however, these steps, staircases, and narrow passages afford *in*accessibility to these potential actions. Wheelchair users can co-perceive the accessibility these structures afford to others whose ways of being differ from theirs, but they cannot use that affordance themselves. In a building with wheelchair ramps, elevators, and wider doorways, on the other

hand, accessibility is afforded to other ways of being — or more correctly, *ingress*-ability. (True accessibility is another matter, and includes not only physical affordances, but social ones.)

This example illustrates two further points. First, affordances are often gateways to other affordances. As such, any society intent upon the health and well-being of its citizens would do well to ensure that the more obvious of these gateway affordances are as salient and accessible for as many different ways of being as possible. Second, affordances are not about bodies *as bodies*, but about *fit* (Gibson & Pick, 2000). Approaches to the organism that locate disability within the body seem to imply thereby that inaccessibility is the organism's own responsibility to sort out. In the ecological approach, however, ability and disability are not in the bodies of organisms, regardless of how those bodies and their lived experiences may differ (Toro et al., 2020). Rather, ability and disability are relational properties that arise from the fit between the environment and an organism's unique way of being. Thus, in environments designed to accommodate multiple ways of being, the affordance of ability is more likely to arise, and the affordance of disability is less likely to arise.

Just as not all affordances are beneficial, so not all perceptual learning is positive. Dewey's (1922/2007) angry man from the introduction to this thesis, for instance, formed his habit of anger just as a musician forms a habit of playing well — through repeated experience in environments with a good fit. The angry man repeatedly found himself in environments where, as he engaged with the world around him, he was able to discover more and more situations that afforded him anger. The perception of *man-who-threatens-me* could be reconstituted (with a quick burst of anger) into the perception of *man-who-runs-away*, affording the angry man satisfaction, and a sense of being powerful and feared. The perception of *wife-who-nags-me* could (with a cutting word or a blow) become the perception of *wife-who-remains-silent*,

affording him a sense of control, and the ability to ignore the responsibilities of which she reminded him.

This example illustrates two final points, both of which are crucial to the ecological approach to empathy I will develop in the next chapter. First, emotions, though commonly assumed in the west to be private and interior, emerge at the ecological level. As Gibson (1986) says, affordances are "what [the environment] *provides* or *furnishes*, either for good or ill" (p. 119). By implication, then, any organism who perceives an affordance also perceives its "goodness or bad-ness in relation to her needs, motives, interests, and goals" (Carava & Scorolli, 2020, p. 2). Indeed, the emotional dimension of an experience may itself be the affordance, and not merely its accompaniment, as when we choose one flavour of ice cream over another because its taste affords more pleasure-ability. Importantly for our discussion of empathy, however, the same environment may afford different emotions to different organisms because of their different ways of being. For example, the sight of a person in pain, which we assume should afford sympathy, may afford *schadenfreude* to one observer and distress to another. As we will see in the next chapter, if we try to address the so-called non-empathetic behaviour of the first observer, but neglect the context and relations that determine what the situation affords that person's way of being, we may overlook the fact that this observer is actually coexperiencing quite well, and may resent the implication that they lack the ability to empathize.

Second, in the right environment, with the right fit, organisms can craft ecological niches for themselves in which their repeated use of an available affordance not only sensitizes them to that potential for action, but also begins to reshape the environment in such a way that a steady stream of similar affordances becomes available. In the ecological approach, the term *niche* refers to "a set of affordances" that forms in this manner (Gibson, 1986, p. 120). All organisms

already live in such niches, of which Baggs and Chemero (2018) identify two types. The first is the habitat, a set of affordances available to multiple organisms by virtue of the ways of being they share. Habitat affordances, Baggs and Chemero (2018) explain, might be called "resources," and "exert selection pressure" on a species (p. 7). Language is an example of one such resource. Whether spoken, written, or gestural, all humans use some type of language to communicate; thus, we readily perceive the affordance of language, even if we lack fluency in one another's forms. The second type of niche is the *umwelt*, which is the niche of a particular individual organism. The *umwelt* changes as an organism acquires or forgets skills (Baggs & Chemero, 2018), and is the sort of niche that Dewey's (1922/2007) angry man constructs for himself — the set of affordances of his everyday life, made salient through his "arts" or habits. These affordances may be less readily detectable for those whose umwelts differ, but what the environment offers another person's way of being can often become detectable through exploration of that person in context. Both types of niche characterize, facilitate, and constrain the potentials for action available to an organism within its environment, including their empathetic coexperiencing, and in the following chapter, I will explore their importance for dealing effectively with the practical problem of a lack of empathy in society.

## 3.4 Toward an Ecological Approach to Empathy

> Listen: you are not yourself, you are crowds of others, you are as leaky a vessel as was ever made. . . . The usual *I* we are given has all the tidy containment of the kind of character the realist novel specializes in and none of the porousness of our every waking moment.
> — Rebecca Solnit, *The Faraway Nearby*

Both the processual understanding of organisms and the ecological approach to perception undermine essentialist, individualistic ideas of self and other. From a processual understanding of organisms, the boundaries of the skin or the skull are no longer the limits of an

organism's subjective world, and ideas of "me" and "not me" become much flatter and fuzzier, especially in relation to our fellow creatures. To some extent, we understand this in real-world situations. When a stranger sits too close to us on the bus, touches our clothing, plagiarizes our work, or picks up an object in a shop that we "saw first," we perceive these acts as intrusions upon ourselves, though our physical bodies are unaffected. Our personal space, our clothing, our work, and the objects of our pursuits are also *us* because each is part of our customary, horizontal way of being. In other cultures, these boundaries may be moved, for where one of us ends and another begins is normative rather than lawful, and frequently contextually dependent. In Saudi Arabia, for example, people who stop to converse on the street tend to stand much closer to one another than North Americans do (Kreuz & Roberts, 2019), while even in North America, a stranger who sits next to us on an empty bus intrudes upon us in a way that one who sits next to us on a crowded bus does not. Unfortunately, this shifting demarcation of organism and not-organism is overlooked in much of psychological research, which continues to treat supposedly decontextualized (but actually experimentally environed) brains and bodies as the proper unit of study, rather than analyzing what the environment affords an organism's way of being at the horizontal, ecological level.

A processual, ecological approach also subverts western ideas of self-sufficient individuality. As William James (1884/2015) said: "The most important part of my environment is my fellow-man" (p. 9). From this mutualistic viewpoint, other people are not mere theoretical constructs for our interpretation, but ways of being embedded and extended into the environment like ourselves, participating in the "constellation of relations" that makes up our own way of being (Heft, 2001, p. 28). Moreover, Gibson (1986) says, organisms sharing an environment in this way afford each other "a rich and complex set of interactions, sexual, predatory, nurturing,

fighting, playing, cooperating, and communicating" (p. 120). We are each other's greatest source of ecological meaning and perceptual learning. Through our exploration of each other, we differentiate still more affordances, and cultivate new potentials for action. Our subjective experience *as a self* develops only in this bump and jostle of exploration and connection (Mead, 1934/2015).

From this horizontal, mutualistic understanding of organisms and their environments, I will return to empathy in Chapter 4, reassessing our current understanding of the subject from the viewpoint of the processual theory of organisms, the active theory of perception, and the ecological approach that embraces them both.

# CHAPTER 4: RESULTS — AN ECOLOGICAL APPROACH TO EMPATHY

We make ourselves large or small, here or there, in our empathies.

— Rebecca Solnit, *The Faraway Nearby*

In the ecological approach, perception occurs when we directly perceive the affordances (potentials for action) that emerge from our way of being in the environment. In this approach, *empathy* is not a reified thing, separate from the rest of perception, confined to a discrete set of neural pathways and triggering a set of benevolent or compassionate emotional "responses." It is simply a term to describe what happens when ordinary perception becomes co-perception, or ordinary experience becomes coexperience. Empathizing occurs when we perceive not only what our fellow creatures afford us, but also what their way of being in the environment affords them, a kind of grandfathering of affordances.

In the ecological approach, empathetic perception differs in context from the rest of perception, but not in kind. Though scientists have correlated certain neural networks or brain structures with some empathetic behaviours, the activity of these circuits or regions is no more empathy than the neural activity correlated to the behaviour of bread-baking *is* bread-baking. It may be a necessary part of the performance, but it is not sufficient. Like ordinary perception, empathetic perception is a whole body activity, and may enlist any perceptual system it requires, whether that system overlaps the so-called brain empathy circuit or not.

This understanding is consistent with the *direct perception theory of empathy* (Kiverstein, 2015), a phenomenological approach which states that mentally representing or making inferences about others' behaviour is not necessary for empathy because "our encounter with another is never an encounter with an entity existing outside a specific situation, but with an agent in the middle of a pragmatic context that throws light on the intentions of that agent"

(Zahavi, 2011, p. 551). In other words, if I see you standing at a counter in a coffee shop and taking out your wallet, your act of taking out the wallet, together with the context of the coffee shop, tells me you are buying coffee. There is no need for me to make a mental inference between the coffee shop and the taking out of the wallet because the two things are already paired in the environment. I can coexperience them directly. The same is true if I see a person behaving in a frustrated manner while trying to fit an oversized box into the back of their car. I can coexperience their frustration because I can directly perceive the affordance of inaccessibility that arises between the person, the size of the box, and the size of the car doorway.

The context of the perceiver, however, cannot be neglected in this other-centred view of empathy. In the ecological approach, Gibson (1986) says, "to perceive the world is to coperceive oneself" (p. 133). When we perceive others, our "awareness of the world and of [our] complementary relations to the world are not separable" (Gibson, 1986, p. 133). To coexperience, therefore, is to pull a thread in a tapestry of relations into which we ourselves are interwoven, and we cannot tug the thread of another person without tugging ourselves along with it. In effect, we are doubly entwined in every act of coexperiencing, both as perceiver (the one who pulls the thread), and as perceived (the thread secondarily pulled). Ideally, then, while every act of coexperiencing would detect the entire set of affordances available to the person we observe (i.e., their ecological niche), because of our embeddedness in this system of relations, coexperiencing necessarily draws its character from the set of affordances available to us as perceivers. Just as the context of an observation is part of the observation in psychological experiments, so our own context is part of the observation in personal "experiments" — that is, our individual explorations of the environment in which we are embedded. This context

*characterizes* our empathizing, just as context always characterizes perception. We experience the same noise completely differently when we hear it while reading safely at home or while walking outside alone after dark (Dewey, 1896). In the same way, our coexperiencing is characterized by our environment — more precisely, our ecological niches, which encompass not only the environment, but also our way of being in relation to it.

Because empathetic perceptions necessarily occur within these ecological niches and draw their character from them — facilitating and constraining what affordances we are able to perceive — a person who is coexperiencing may not always behave the way we expect. We commonly assume that unless empathy takes a warm, compassionate, benevolent form, coexperiencing has not occurred. However, in real-world situations, coexperiencing involves whatever affective dimensions the situation affords — that is, whatever potentials for emotional activity emerge from the relationship between the environment (including the person observed) and the perceiver's own way of being, for good or ill. As Sally Planalp (1999) explains, "when emotions occur in a social context, they are shaped by whatever purpose they are serving at that time" (p. 68). For instance, she says, small children who trip and fall might wail if their mothers are nearby, but pick themselves up and be perfectly all right if other children are there instead. As we saw at the beginning of Chapter 2, the assumption that empathizing necessarily includes so-called empathetic emotions belongs to a category of *language*, which is in a constant state of change, subject to the requirements of its speakers. It does not necessarily correspond to the workings of the coexperiencing process, just as our talk of the sun "rising" and "setting" does not correspond to the reality of heliocentrism.

Even when coexperiencing has occurred, the potential for warm, compassionate actions may not exist within *that* particular situation for *that* particular perceiver, even if they may be

possible in others. Similarly, the ability to engage in perceptual learning by exploring others'

ways of being may be constrained by the affordances available or unavailable to us in our own

niches, over which we may have limited control. Fortunately, however, these limits do not lie

within individual organisms or "human nature" as vertical, dualistic habits encourage us to see;

rather, they exist at the ecological level of organism-environment together. As such, like

Deweyan habits, ecological niches may be altered by environmental pushback, effectively

expanding or contracting so-called "human nature" and potential.

In this chapter, then, I will leave behind the vertical, dualistic habits of seeing encouraged

by the cognitivist model of perception and re-evaluate empathy from the horizontal, mutualistic

approach of ecological psychology. This approach, I will argue, enables us to see more clearly

the ways in which immediate context — specifically the context of our ecological niches —

characterizes, facilitates, and constrains coexperiencing. It further enables us to discern effective

and ineffective solutions to so-called non-empathetic behaviours, and to view them not as

individual pathologies, but as predictable outcomes of particular ecological niches, which may be

modified through the collective actions of their participants.

**4.1 Ecological Niches: Facilitating and Constraining Empathy**

> [A] snowflake falling on the ground is white; falling on a man's hand becomes
> water; falling on the fire becomes steam.

> — Ralph Waldo Emerson, *Selected Journals: 1820-1842*

To reiterate, an ecological niche is the set of affordances available to an organism in a

physical or social environment. Rietveld and Kiverstein (2014) explain:

> An ecological niche is built and transformed by members of the species through the
> species' typical ways of acting. All animals actively modify their niches, tailoring the
> places they inhabit to fit with their needs. (p. 328)

Ecological niches emerge from the behaviour and habits of organisms in an environment over time. This is not a static, unidirectional relationship, but a dynamic, bidirectional one. Organisms act upon their environments, and structures or events in the environment yield to some behaviours and resist others, facilitating and constraining organisms' potentials for action. In this way, the niche "acts" back upon the bodies, behaviour, and habits of the organisms that act upon it, allowing organism and environment to co-evolve.

Thanks to this co-evolution, we inherit environments from our ancestors as well as genes, environments they have modified to serve their ways of being (Laland et al., 2000), and which we, in turn, modify to serve ours. These inheritances are not equal. Ants born into the famous thousand-year-old colony in Hokkaido, Japan, inherit an ecological niche different from that of ants only recently arrived in your backyard. Similarly, a child born into three generations of wealthy, college-educated, emotionally mature parents inherits a niche different from that of a child born into multiple generations of poor, uneducated, emotionally disordered parents. The respective niches of these children both facilitate and constrain the potentials for action available to them. If both end up in the same school or workplace later in life, the ways in which their environments have informed their ways of being may result in radically different sets of affordances within that same setting. Anthony Abraham Jack (2019) explains:

> These starkly different environments have a profound impact on children's cognitive functioning, social development and physical health. Research on concentrated disadvantage makes it abundantly clear that inequality depresses the mobility prospects of even the brightest kids, with poor black youth disproportionately exposed to neighbourhood violence.

Recounting his days as a disadvantaged, first-generation student at "Little Ivy" Amherst College in Massachusetts, Jack (2019) describes an ecological niche very different from that of his fellow students: scrambling to find food during holidays when meal services shut down; confusion over

concepts like office hours; emotional disruption when calls from home about traumatic events kept him rooted in his old life; the need to work multiple jobs where more advantaged students needed none. "I would get messages [from home] . . ." he says, "announcing that someone needed something: $75 for diabetes medicine or $100 to turn the lights back on" (Jack, 2019). In short, the more privileged environments of Amherst's more privileged members could not have prepared them to detect the set of affordances that Amherst offered Jack.

Indeed, to the extent that the niche of one organism actively excludes affordances of another, effective coexperiencing may be limited. This is not to say that coexperiencing ceases to occur. Perception necessarily goes on as long as one is in the game. However, our *knowing* of the other person will be incomplete. Such knowing (as explained in Chapter 3) is not about semantic information, but active exploration of the relations between ourselves and others, relations which can be discovered through perceptual learning — in this case, through active exploration of other people and their environments. Unfortunately, the ways in which our physical and social environments are structured often prevent such exploration. At the level of the *habitat* — that is, the ecological niche or set of affordances that relates to the evolutionary history of the organism (Baggs & Chemero, 2018) — it is relatively easy to perceive what the environment affords others because, at this level, their ways of being are similar to ours. All humans need to breathe, eat, drink, and sleep, and nearly all of us use some form of language to communicate; thus, we readily perceive and co-perceive these affordances. Many university administrators, for example, have learned to detect the affordance of food-seeking that Jack faced every holiday, and have implemented food pantries for students. However, at the level of the *umwelt* — that is, the ecological niche that relates to the personal history of the individual — what the environment affords others is less readily detectable. Two people who have inherited the same habitat may

have entirely different *umwelts*, not because they are psychologically encapsulated in private, dualistic realities (Heft, 2001), but because their individual histories of interaction with their environments have resulted in differently organized ways of being, as Jack's (2019) experience at Amherst illustrates.

In a private cognitivist reality, my knowledge of another person is semantic and hypothetical — detached from my way of being, though it may influence my behaviour if my brain imposes this top-down information upon my bottom-up perceptions. In the ecological approach, on the other hand, my *umwelt* arises directly from my way of being in the environment. As such, I am not sentenced to solitary confinement inside my own skin (Williams, 1940/2000). I can explore other people and go into their environments. Through perceptual learning, my coexperience or knowing of them can become more complete. Skill acquisition is the most obvious form of such learning. For instance, UFC fighter Felicia Spencer and I are both adult women, but being approached by a stranger in a parkade after dark affords her different potentials for action from those it affords me. Nevertheless, with training, I could gain some proficiency in Brazilian jiu-jitsu. As I train, I would learn to distinguish new potentials for action in my own body and the bodies of others. The set of affordances available to me would alter, and my abilities and limitations would develop alongside. A raised hand, in which I formerly perceived the affordance of being struck, might now afford grasp-ability — an opportunity to seize my opponent and subdue them. These changes at the ecological level would ripple outward, causing changes in my body's organization and neural systems that support my new jiu-jitsu habit (Baggs & Chemero, 2018). My way of being and my ecological niche would grow in concert, and there would be more in in my *umwelt* than there was previously (Baggs & Chemero,

2018). In time, the set of affordances available to me in the parkade would more closely resemble those of Spencer's, rendering my coexperience of her way of being more complete.

All the same, there is far more to Felicia Spencer's way of being than Brazilian jiu-jitsu, and effective coexperiencing amongst organisms is more complex than expanding each individual *umwelt* one by one, skill by skill, habit by habit. This is because each organism's *umwelt* consists of multiple niches, intersecting and overlapping, facilitating and constraining, and these niches complicate coexperiencing in two ways. First, tensions may arise between various niches as perceivers detect multiple affordances that pull them in conflicting directions. For example, the childhood of Lily Brett, poet and daughter of Holocaust survivors, afforded her daily, intimate coexperience of her parents' traumatized ways of being, illustrating Anna Veprinska's (2020) observation that "witnessing can disturb the witness into her/his own trauma" (p. 90). Nevertheless, Brett realized later in life that she had coexperienced only her parents' *post*-traumatic affordances, not the set of experiences that created them — experiences she could not share, though her own way of being was indelibly imprinted with them. In a poem to her mother, she wrote:

> It has taken me
> a long time to know
> that it was your war
> not mine
>
> that I wasn't
> in Auschwitz
> myself
>
> that I have never
> seen
> the Lodz Ghetto. . . .
>
> I thought I knew
> what bodies gnawed by rats

looked like

and how
the mattresses
smelt

and what
it felt like
to fill your lungs

with
smoke
from flesh

to
live
with death

I have had
trouble
Mother
leaving you. (Brett, 1990, as cited in Veprinska, 2020, p. 104-105)

Coexperience of trauma, Veprinska (2020) says, can be a kind of "empathetic violence" (p. 107), which creates dissonance in the co-perceiver, who is "neither quite at the traumatic event nor quite at the particular here in which she/he is situated"; instead, the co-perceiver is "unhere" (p. 86). From an ecological perspective, we might say, witnesses' perceptual learning of the traumatized person's way of being allows them to detect emotional affordances available to the other, while the laws of the physical environment (i.e., time and space) simultaneously deny them entry into the experience itself. This leaves witnesses in a state of tension, and exposes them to another danger besides that of trauma — that of appropriation (Veprinska, 2020). "Disasters become spaces of ownership," Veprinska (2020) says, in which witnesses are passersby, not residents (p. 25). Many may forget, as Brett initially did, that they are "emotionally absorbed in an experience from whose site and immediate consequences [they are]

removed" (p. 86). While coexperiencers certainly own the secondary trauma that witnessing affords them, they do not own the original experience. To overlook this lack of ownership is a particular danger for so-called allies, whose incomplete coexperience of the affordances of a minority group's situation may compel them to co-opt their experience and speak on behalf of these "voiceless" individuals or groups. When this occurs, empathy ironically becomes an additional tool of oppression, further silencing the voices for whom the empathizers presume to speak, and to whom they should yield the floor.

The second manner in which overlapping niches complicate coexperiencing arises from the fact that many of the niches that facilitate and constrain our ways of being cannot easily be modified at the individual level. If I were charged with a crime, for instance, my way of being as a white woman (despite professions of equal treatment under the law) would afford me different potentials for action within the Canadian justice system from those available to a person whose way of being is *white-but-not-woman* or *woman-but-not-white* or *not-white-and-not-woman*. These sets of affordances are historically and socially defined, and not significantly alterable through my personal exploration of the environment. By virtue of being alive (i.e., in the game), I go on participating in my historical and social niche, and it goes on facilitating and constraining my everyday perceptions, for good or ill, including my coexperience of others. I may challenge this set of affordances through my day-to-day behaviour, but ultimately, I am powerless against it as a lone individual.

Again, however, this is not a return to the vertical worldview's deterministic ideas of human nature. What was built through collective action can be altered through collective action. Niches can be reshaped, and organisms' ways of being within them can be altered. In this respect, cultures, which we may define as the historically rooted ways of being of entire social

groups, operate on the same principles as people. Just as Deweyan habits can change with consistent pushback from the environment, so cultures can change when niche-wide (occasionally cataclysmic) pressures push against them. For example, contrary to many schoolchildren's history lessons in previous decades, Rosa Parks's lone act of defiance on December 1, 1955, did not end bus segregation in Montgomery, Alabama. Parks, the legend correctly reports, was a seamstress, but she was also the secretary of her local NAACP who coexperienced the outrage of fifteen-year-old schoolgirl Claudette Colvin, who had been forcibly dragged from a bus by police for a similar refusal to surrender her seat nine months earlier (Adler, 2009; Mechanic, 2009). Charged with resisting arrest, assaulting a police officer, and breaking segregation laws, Colvin was found guilty, and local leaders mobilized. Other bus passengers, mostly women, began to resist as Colvin had, though the majority were quietly fined. Parks's case was chosen to represent the movement because Colvin was pregnant (History.com Editors, 2010), and, as Colvin later said, because Parks's "skin texture was the kind that people associate with the middle class" (Adler, 2009). After Parks herself was arrested, the Women's Political Council, led by Jo Ann Robinson, distributed flyers and organized a boycott of the Montgomery bus system (History.com Editors, 2010). Black churches made announcements from their pulpits. Altogether, approximately 40,000 black passengers participated in the boycott, representing three-quarters of the system's customary ridership. Black leaders formed the Montgomery Improvement Association, electing Martin Luther King, Jr., as its president, to continue the action. Carpools were organized to get people where they needed to go, and black taxi drivers charged boycotters no more than bus fare. For 381 days, Montgomery's African American community worked together, facing violent white resistance, which even took the form of snipers and bombs. In short, the set of affordances available to black passengers on

Montgomery buses, built through the collective action of generations, was modified through similar collective action. Without it, individuals like Colvin or Parks would certainly have remained powerless.

## 4.2 An Ecological Approach to Non-empathetic Behaviour

> They were careless people, Tom and Daisy — they smashed up things and creatures and then retreated back into their money or their vast carelessness or whatever it was that kept them together, and let other people clean up the mess they had made.

— F. Scott Fitzgerald, *The Great Gatsby*

When we understand empathy as the coexperience of what a person's environment affords them, we see that many so-called non-empathetic behaviours also depend upon empathizing. For instance, Breithaupt (2017) argues, *empathetic sadism* describes enjoyment afforded by coexperiencing another person's punishment, tragedy, and so forth, which cannot occur without the ability to detect accurately the pain or embarrassment these experiences afford the other. Similarly, *vampiristic empathy*, which he identifies in fans, stalkers, and helicopter parents, "occurs when a person expands their own life experiences by over-identifying with another person's experiences" (Breithaupt, 2017, p. 18) — similar to Veprinska's (2020) empathetic appropriation. In the ecological approach, therefore, the call for a more empathetic society means not a society in which everyone coexperiences, for this is the society we already have; it means a society in which coexperiencing is more complete, and in which the emotional affordances of compassion and kindness are more salient. However, altering the affective dimension of coexperiencing cannot be accomplished without altering the affordance, and as we have seen, this cannot be accomplished by acting upon the organism alone. Affordances do not arise from organisms alone, but from *organism-environment* relations. To change an affordance, then, requires action at the ecological level, like the Montgomery Bus Boycott.

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For this reason, individualized empathy training is unlikely to succeed without support from the immediate horizontal context, particularly when the set of affordances that characterizes uncompassionate, unkind coexperiencing has been built through collective action in the first place. This is the limitation of empathetic or anti-racist training techniques like Jane Elliott's famous Blue Eyes/Brown Eyes exercise, which sorts participants into groups by eye colour (a trait selected for its arbitrariness) and designates one group as a target for abuse in order to teach all participants about racism (Bloom, 2005; Gupta, 2020; Holt, 2020). As Elliott acknowledges, such exercises cannot include the entire set of affordances that members of minority racial groups have inherited (e.g., negative affordances like daily microaggressions and a history of institutional abuse or neglect, or positive affordances like a sense of community) — principally because such exercises also afford an exit door, a way for participants to walk away from the training. Blue Eyes/Brown Eyes does afford its participants temporarily hurt feelings, but such an experience is almost certainly inadequate to overcome racist ways of being, which are perpetuated far more successfully by niches than by individual organisms. Where participants' environments already push back against such attitudes, Blue Eyes/Brown Eyes is an effective way to make these already existing affordances more salient, but without such horizontal support, the exercise affords only a tourist experience of Otherness.

Education, in the sense of imparting semantic information, also has limited power to change our degree of ecological knowing. Keith Barton and Alan McCully (2012) tell of a three-year program in Northern Ireland that attempted to break down cultural barriers between Catholic and Protestant schoolchildren, grades six through eight. The students were taught history from the perspective of both groups, and were asked to learn, for instance, what experiences Protestants had historically suffered, or "the reasons why the Catholics supported the

Home Rule Bill of 1888" (Breithaupt, 2017). The program was deemed successful in that the students performed well academically; however, the authors noted, "students' identification with community historical perspectives actually became *stronger*" (Barton & McCully, 2012, p. 377). Barton later told Breithaupt (2017) he believed the program had not done enough to engage the children on an emotional level, a diagnosis in keeping with ecological psychology's perspective that perceptual learning of affordances, emotional or otherwise, can be acquired only through lived experience. Breithaupt (2017) suggests that "within this well-intentioned effort were the structures of further polarization" (p. 119). He states: "[T]he pressure from the social milieu in which the students lived, with its widespread cultural divisions, was simply too strong to give the students any real choice" (p. 119). The students gained semantic information about the Other, but it only heightened their identification with their own side, which was daily reinforced by the horizontal context — the unaddressed ecological niche that continued to inform the students' ways of being, and that deemed their affective "responses" to the other group appropriate.

As long as a so-called non-empathetic person's perceptions continue to occur within the context of their present niche, then, even if we were able make their coexperience of another person's pain more salient, we could only alter their coexperience in intensity, not in kind. In effect, we would turn up the volume on the response they are already having. However, to accuse them of "lacking empathy" — that is, of having failed to perceive the other person's pain — would be incorrect. Empathetic affordances almost certainly exist within the niches of most so-called non-empathetic people, but these niches may be arranged so that such affordances are perceivable only for some targets and not others. A story from Bloom (2016) illustrates:

> Jonathan Glover tells of a woman who lived near the death camps in Nazi Germany and who could easily see atrocities from her house, such as prisoners being shot and left to die. She wrote an angry letter: "One is often an unwilling witness to such outrages. I am anyway sickly and such a sight makes such a demand on my nerves that in the long run I

cannot bear this. I request that it be arranged that such inhuman deeds be discontinued, or else be done where one does not see it." (p. 74)

There is little question that the woman in this story was coexperiencing with the suffering of the prisoners. The "demand on [her] nerves" was real. But the affective dimension of her coexperience was not compassion. The suffering she coexperienced afforded her pain, but the culture in which she lived afforded her little potential to relieve it, except for herself. Heinrich Himmler, Hannah Arendt tells us, made an announcement in a similar vein to the men under his command who felt distressed by the outrages they committed:

> [I]t consisted in turning these instincts around, as it were, in directing them toward the self. So that instead of saying: What horrible things I did to people!, the murderers would be able to say: What horrible things I had to watch in the pursuance of my duties, how heavily the task weighed upon my shoulders! (1963, as cited in Breithaupt, 2017, p. 75)

The sets of affordances available to one's culture, class, and so forth reveal which people we deem appropriate targets for our compassion and which we do not, a conclusion supported by empirical studies. Michael Kraus and colleagues (2010), for instance, found that American participants with lower socioeconomic status had greater levels of empathetic accuracy than those with higher socioeconomic status, while Kraus and Wendy Mendes (2014) found that this was particularly true when the people with lower socioeconomic status were observing the people with (outwardly) higher socioeconomic status. In other words, when empathetic behaviours occur within hierarchically structured groups, empathy tends to flow up the hierarchical ladder. In general, Sergey Gavrilets (2012) reports, egalitarian societies are more closely associated with benevolently altruistic behaviours than despotic societies. Nevertheless, people who live in despotic societies do not cease to coexperience. Indeed, their survival depends upon their ability to detect accurately the intentions and emotions of the people who have most power to do them good or harm.

Clearly, what a social group deems appropriate is not necessarily what is morally right. In an abusive household, it is appropriate to be afraid of one's father, but a child living in fear is not right. In a sexist or racist subculture, it is appropriate to regard women or people of colour as less valuable than men or white people, but such attitudes are not right. Vertical, dualistic interpretations of empathy target these non-empathetic behaviours in the individual organism, presuming they emanate from there. Organisms with non-empathetic habits are expected to alter them in the face of pressures from family, peers, institutions, the media they consume, historically rooted traditions, and myriad other environmental factors that co-constitute their way of being. The result is like an alcoholic trying to break his addiction while continuing to spend as much time at the bar or the liquor store as he did previously — a struggle whose enormity Rachel W. Miller (2016) identified when she tweeted: "Behind every woke man is an exhausted feminist you need to thank." To walk each sexist male, one by one, out of his patriarchal niche is not the best procedure to create a more equitable society, nor is individual targeting of non-empathetic people, one by one, the best way to make a more compassionate world. From the horizontal, mutualistic perspective of the ecological viewpoint, what arises at the ecological level must be addressed at the ecological level. To give individual empathy training a chance to succeed, such efforts must be paired with collective action that targets the institutions and other social structures whose activities tug at the threads of far more lives than one person alone can pull.

**CHAPTER 5: CONCLUSION**

> All our theories of improving the world, while we are still asleep, merely intensify the sleep of humanity.

— Maurice Nicoll

As we have seen, the ecological approach rejects the vertical worldview's understanding of the organism, which says that our bodies are mechanistic entities — life support systems for brains in vats that generate our experiences and behaviours (Nicholson, 2014, 2018; Noë, 2009). It rejects a dualistic understanding of perception, which says that brains rely upon sensations as the building blocks of representations, by which we indirectly experience a reality that excludes us, even from each other (Costall, 2004). In the ecological approach, organisms are sets of environmentally embedded processes (Gibson, 1986) — not tidy and modular, but messy and variable — regularly transgressing the skin-level boundaries we have artificially marked for them (Nicholson, 2014, 2018).

An organism's way of being arises from the confluence of bodily processes with environmental ones (Nicholson, 2014), forming a network of relations with other organisms and the environing world (Heft, 2001). We perceive these relations directly through active, exploratory *knowing* — that is, detecting the affordances that arise from our way of being in the environment (Heft, 2001; Gibson, 1986). Over time, sets of affordances (niches) arise from our individual ways of being (*umwelts*), and from the collective ways of being of groups of organisms (habitats) (Baggs & Chemero, 2018). These various niches expand and contract the potentials for action available to us, facilitating and constraining what we are able to see and not to see, and characterizing every act of coexperiencing, compassionate or otherwise. In this approach, then, bringing compassion into so-called non-empathetic environments by targeting

the individual organism is unlikely to succeed. Instead, the potentials for action that arise

between the organism and environment at the ecological level must be addressed.

Efforts to change what an environment affords organisms at the ecological level face

serious challenges, chief of which is found in Ralph Waldo Emerson's (1841/1983) observation

that would-be reformers must envision the new world from the vantage point of the old one:

> For as you cannot jump from the ground without using the resistance of the ground, nor put out the boat to sea, without shoving from the shore . . . so you are under the necessity of using the Actual order of things, in order to disuse it. . . . The past has baked your loaf, and in the strength of its bread you would break up the oven. (p. 178)

From the vantage point of the existing order, many find it difficult to believe any other order is

possible. The potentials for actions that might lead to a better world are simply not detectable

within their ecological niche, and so they mistake what *is* for what *must be*.

Psychology's version of this outlook is what Gillian Barker (2015) calls *biofatalism*, "a

broad pessimism about the prospects for social change that, while not involving a commitment to

genetic determinism, is nonetheless based on a particular set of presumptions about the

biological underpinnings of human behaviour" (p. 3). Mistaking "trait averages" for "human

nature," biofatalists believe human plasticity is too limited to do away with such things as

warfare, oppressive gender roles, and so forth; nevertheless, they overlook the enormous

variation these trait averages conceal (Barker, 2015, p. 70). For instance, Barker (2015) says,

psychologists might look at consistently higher mean scores on boys' versus girls' mathematics

tests and surmise that boys are naturally better at mathematics, ignoring the diversity of scores

within these two groups, and failing to account for differences in the way boys and girls are

socialized. These assumptions, in turn, are used "to support prescriptive conclusions" about

innate differences in mathematical aptitude (Barker, 2015, p. 8), and when these conclusions are

reported, the habit of seeing boys as naturally better mathematicians than girls is reinforced in

the general population. Existing ways of teaching and socializing go on, and biofatalistic "natural truths" about gender appear validated.

Examples such as this one reveal the moral complexity of psychological research, which often incorrectly regards itself as neutral. Such neutrality is impossible, Brinkmann (2004) states, for "[h]ow can Psychological theories be objective if they change the world they are concerned with?" (p. 6). When psychologists assign limits to human nature, particularly the "nature" of certain subgroups of humans, we also assign limits to their potential — limits that have very real consequences for people's lives (e.g., their social and economic opportunities), particularly society's more vulnerable members, with whom psychology frequently has to deal.

How, then, can psychological research approach human beings more responsibly and effectively? I offer two possibilities here. First, we can resist what Ronald Purser (2019) calls "the individualization of all social phenomena." In his book, *McMindfulness: How Mindfulness Became the New Capitalist Spirituality*, Purser (2019) comments upon this individualization process in the context of corporations whose human resource departments co-opt eastern meditation practices in the name of "wellness," outsourcing organizational stresses to individual employees, implying thereby that workers' inability to bear the tensions of failing systems and toxic environments is a result of their own failures of self-care, for which mindfulness training is the ideal solution. This outsourcing, Purser (2019) argues, has grave consequences:

> Happiness, freedom and wellbeing become the products of individual effort. Such so-called "skills" can be developed without reliance on external factors, relationships, or social conditions. . . . Personal troubles are never attributed to political or socio-economic conditions, but are always psychological in nature and diagnosed as pathologies. Society therefore needs therapy, not radical change.

When system-wide pressures are laid upon the shoulders of individuals, employees may be judged "good" or "bad" for their success or failure at enduring what is not properly theirs to

endure. Additionally, corporations escape responsibility for failing to respond to environmental pressures that should compel them to change their collective ways of being.

Though Purser is a management expert and not a psychologist, his comments upon corporations and their employees resonate with Brinkmann's (2004) discussion of psychology and the human beings it observes:

> In order to restructure society . . . and produce good characters, we must overcome the ideological prejudice that interiorizes and privatizes values and morals. Furthermore . . . we must understand that mainstream individualistic Psychology has played a huge role in perpetuating a privatization of morality. . . . (p. 16)

In empathy research in particular, mainstream psychology contributes to the "individualization of social phenomena" by interiorizing empathy within the brains and bodies of individual organisms. Empathetic or non-empathetic behaviours are treated as matters of biology or personal moral fortitude, rather than affordances that arise between a coexperiencing organism and a niche that characterizes that coexperience. Non-empathetic behaviours within a broader social group are blamed on a few "bad apples," allowing the so-called "good apples" to forget that they not only participate in the maintenance of ecological niches that afford such behaviours, but are also quite capable of behaving in similarly non-empathetic ways when the target of their behaviour is culturally appropriate (Barrett, 2021, personal communication). Meanwhile, as in Purser's (2019) example, environments that readily afford such behaviours escape responsibility for co-constituting them, and the burden of fixing society's practical problems falls upon the individuals who may be least capable of addressing them. These individual failures, in turn, are taken as evidence of the limits of human nature and compassion, and once again, biofatalistic "natural truths" appear validated.

I am not arguing here for an opposite extreme to biofatalism, one which assumes environmental determinism and claims we could create an empathetic utopia if we could only

find the one perfect social system. First, one would have to ask *whose* utopia it is. When it comes to organisms, variation is the rule, and a system in which one group of humans flourishes could be harmful to another. Second, organisms are not static entities, but dynamic sets of processes. Our ways of being are fluid, and so are our ecological niches. The perfect social system of one day may become oppressive the next because the organisms within it will have gone on living and behaving, thereby changing both themselves and their niches. I do argue, however, that human potential is not as fixed as the biofatalists believe, if they would only make room for it.

The second way to conduct psychological research more responsibly and effectively is to ensure, as Brinkmann (2004) says, that "our theories and beliefs about social reality [are] experimental, not absolutistic" (p. 6). In other words, we should adopt provisional theories and flexible models that are capable of taking the processual character of human beings and the complexity of their environments into account, resisting those that essentialize organisms and interiorize their behaviour. Rather than setting prescriptive limits to human potential, such theories and such models would be responsive to organisms' fluid, dynamic relationships to their environments, and the continuously shifting bounds of their ecological niches.

I believe the horizontal, mutualistic habits of seeing embedded in the ecological approach to empathy provide this provisional, flexible framework. By understanding behaviour as a matter of organism-environment relations that occurs at the ecological level, the ecological approach gives room for the full variability of our species to flourish. When approached from this horizontal, mutualistic viewpoint, empathy research may be of real use in solving many of the practical problems currently facing our world.

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