Moral affordance, moral expertise, and virtue

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Abstract
We extend “4E” cognition to moral psychology. Since acting on affordances typically requires expertise, moral expertise, or virtue, is needed to act on moral affordances and to shape moral agency. Ethical rules and codes, often selected through a process of constraint satisfaction, are also involved in the detection and selection of moral affordances. We argue that individuals who act prudently possess moral expertise that allows them to remain in the “metastable zone” between mind and world, giving them an optimal grip on moral affordances and permitting wise judgement and action. We show how this can be explained via a noncognitivist, affordance-based account of the virtue phronesis (prudence). Our overall approach creates space for reciprocally causal accounts and prospection in explanations of human moral activity.

Keywords
affordance, expertise, moral psychology, phronesis, virtue

The affordances of the environment are what it offers . . . what it provides or furnishes, either for good or ill. (Gibson, 1979/1986)

After the rise of modern science and the Enlightenment, the Western intellectual tradition began to objectify the physical world while simultaneously emphasizing the subjective experience of the individual. More recently, the focus on the cognitively isolated individual has permeated nearly every domain of thought—philosophical, legal, economic, political, and psychological. In early modern philosophy, it contributed to the dualist
notion that humans are autonomous subjects standing over and against a passive world; a world that may be only perceived, understood, and engaged through mental constructions or internal representations. Perception, then, is not of things themselves but rather representations created by neuronal processing of sensory stimuli (Metzinger, 2009). This reduces experience to simulations, devoid of inherent meaning; phenomenal experience must be “in the mind” or even just an epiphenomenon.

Pushing the mind inside the head, however, distorts our understanding of human cognition. Dubbing this “the Cartesian error,” Damasio (1994) and others have presented a more integrative model of cognition, subsequently dubbed “4E” theory. 4E theorists assert that, rather than internal representations, cognitions are embodied, extended, embedded, and enactive (Gallagher, 2005; Newen et al., 2018; Varela et al., 1993). Instead of a Cartesian mind possessing a model of the environment, the structure of the environment becomes the structure of our minds (Bruineberg & Rietveld, 2014). Humans are physical entities (embodied), with minds that can be supported and partly constituted by the environment (extended), situated within physical and social environments (embedded), who shape as well as act in those environments (enactive). From this perspective, we are embodied and situated creatures, embedded within physical, intellectual, social, cultural, moral, and spiritual worlds. We are always in relation, rooted in sociocultural practices wherein actions depend on abilities available in differing ecological settings (Rietveld & Kiverstein, 2014), constrained by physical limitations, but compelled to act. An interesting if not immediately obvious question follows: Can the 4E approach to cognition further our understanding of moral psychology?

An early and important aspect of the 4E approach derives from J. J. Gibson’s (1979/1986) concept of affordance. Gibson (1979/1986) defined affordances as those possibilities for action provided by the intersection of the environment and the individual’s capacities. Working in the 1950s and ‘60s, Gibson established a model of perception that involves more than how we (or our brains) change light, sound, or other energy into representations of the world. In his account, perception occurs directly, without mediation by mental representations. For him, perception is a function of organism–environment fit, enacted via the sensory detection of immediate action possibilities (aka affordances; Gibson, 1979/1986).

Gibson’s nonmentalist approach sets the affordance approach squarely against the traditional cognitive model of mental representation of sensory–perceptual experience. Gibson observed that we are inextricably embedded in the same world as the things we perceive. Our perceptions are of a world available to us for interaction. Reality is not external to us, nor artificially created within us, but constantly realized or actualized by our interactions with the environment. Experience and meaning emerge from interaction with a world replete with possibility. Environments are then engaged according to what is meaningful and relevant, allowing us to make distinctions that do not exist at the level of the merely physical (Fuchs, 2018). Using colour as an example, Fuchs (2018) notes, “Color is neither an objective characteristic of the material world (‘naïve realism’), nor is it a mere product of an inner world (neuroconstructivism). Colors and other sensory qualities are rather the expression of a complementarity of living beings and their environment” (p. 25).
One criticism of Gibson’s model is that, while it may account for perceptual experiences of the physical world, it cannot be applied to social perception. Since engagement with the social world necessarily involves nonphysical, socially constructed interpretations, the argument goes, the detection of action possibilities in social situations (affordances) must rely on mental representations. Presti (2020) argues that, to the contrary, persons offer affordances and that these are directly available to us. He states, “others can be seen to be socially and normatively involved, affording and enabling proper, responsible, interaction” (p. 36). Similarly, R. A. Jones (1999) observed that social cues may serve as symbolic affordances, relying on “human displays” to determine their psychological value to the perceiver. Symbolic affordances assign particular properties to social situations, setting the parameters for both the perception of social affordances and potential responses. If, she argues, these cues provide access to the particular referential properties of social circumstances, that counts as direct perception in the social realm (R. A. Jones, 1999).

We maintain that social and moral affordances are meaningful because of the environmental niches we inhabit and the sorts of lives those niches require us to lead. We do not respond to elements of our social and moral worlds as individual bits of perceptual stimuli, aggregating them finally into coherent concepts. Rather, we perceive them as relevant and meaningful because they have certain properties in relation to us (R. A. Jones, 1999). Interactions with the affordances of the moral world contribute to meaning already established by previous interactions, because of the nested and connected nature of affordances. While neural events certainly accompany these interactions, they do not represent them as such but instead assist in their transaction (Fuchs, 2018).

Applying the concept of affordance to moral action helps address gaps in our understanding of moral psychology. A key theme throughout our approach is that the possibilities for moral action are provided by the intersection of aspects of moral environments and a person’s abilities or propensities (see also Jayawickreme & Chemero, 2008; Withey et al., 2005). The activation of potentials for action is inherent in the detection of affordances and not necessarily dependent on the ability to articulate explicitly our awareness of affordances or our aim in interacting with them (Rietveld, 2010). Detecting affordances, however, relies on a person’s abilities. We shall unpack this later; for now, the reader might like to think of abilities as aptitudes or skills, or, when properly developed, as “expertise.” A shorthand way to characterize our approach is that affordances require skills to be actualized and so recognizing and engaging with moral affordances requires moral skills, and ultimately moral expertise.

Skill or expertise comprises a variety of psychological functions that develop and become habit-like through practice, though sometimes acquired through teaching and imitation in an (initially) declarative manner. Many fully learned skills become partly or wholly automated with practice. To relearn or override such a well-learned skill, therefore, can involve the inhibition of overlearned behaviours, or emotional evaluations, and their intentional replacement with alternatives. Moral activity will sometimes require this as well. As Feinberg et al. (2012) point out, while many moral responses are initially driven by intuitive emotional responses, reappraisal can weaken their effects and result in more deliberative judgements. In our terms, a well-learned skill is interrupted, and alternatives reevaluated.
While we are under no illusion that our approach provides a “theory of everything” for moral psychology, we contend that it illuminates connections among existing explanations of moral perception, attention, understanding, decision-making, and moral actions. In particular, we argue that increasingly sophisticated apprehension of moral affordances helps shape moral agency, an important aspect of moral expertise that allows us to act routinely and habitually in some situations and in a more intentional and less automatic fashion when the need arises.

**Affordance**

Working with U.S. navy pilots in the Second World War, Gibson discovered that many of the difficulties that pilots had in landing on grey aircraft carriers in grey seas had much less to do with their ability or inability to process information and much more to do with the structure or lack of it in the world. Paint a few lines on the deck to provide more depth, distance, and height cues, and perception during landing is much improved. In a similar way, the approaches to some UK roundabouts on fast dual carriageways are enriched in Gibsonian fashion with parallel yellow lines across the road that give speed information for free. These tap into the affordances of texture gradients (unlike traffic lights, which are learned affordances). There is no need to tell drivers to slow down, they just do. The affordance concept takes these ideas further. Environments, objects, and entities in the world are not arbitrary or intrinsically meaningless configurations onto which we project meanings and purposes. Rather, they come already configured in certain ways and suit certain actions and cognitive engagements better than others.

To put this at its simplest, chairs afford sitting on (among other things), spoons afford eating or stirring, canoes afford paddling, mug handles afford grasping, guns afford killing (there are negatively valenced affordances) and so on. Notice what we have is a match between the structure of objects, their forms if you like, and our potential actions and responses. One of Gibson’s favourite sayings is reputed to have been, “ask not what’s inside your head, but what your head’s inside of” (Mace, 1977). And, of course, it’s inside a richly detailed and structured world. To engage with affordances requires a person with the abilities or capacities to interact with their world. This is not to reintroduce a division of subject from object with abilities interiorized and affordances situated in the environment. As we keep emphasizing, affordances are the relations between aspects of the environment and a person’s propensities or abilities. Taken together, these relations provide possibilities for action. To speak of either a person’s abilities or environmental affordances is to focus on one or the other pole rather than their interactive relationship (Chemero, 2003). Because the notion of affordance is relational, the structure of our actions, including skilled perception, meshes with the structure of the world, and does so meaningfully, by which we mean that our actions and the world both matter and have significance for us (Chemero, 2003; K. S. Jones, 2003; Ramstead et al., 2016; Rietveld et al., 2018; Rietveld & Kiverstein, 2014). In Rietveld and Kiverstein’s (2014) terms, we become better able to perceive the resourcefulness of our environment.

Bruineberg and Rietveld (2014) also note that we make predictions about the world, as skilled agents, that tend toward improvements in the fit between the expected result of our actions and the actual result. They ask how it is that we respond selectively to certain
possibilities for action, but not others. The kernel of their answer lies in an understanding of the brain as a self-organizing system that co-ordinates “action-readiness patterns to deal with relevant affordances” (p. 2). For them, affordances are best understood as a set of nested structures of connected and implicative opportunities. Relevant affordances create and prioritize particular action potentials. The resulting “affordance gradients” prime us to consider certain aspects of the environment over others. The sum of our affordances, nested together, create our models of the world. Our minds, they note, do not contain models of the world, rather, they simply are a model of our world, in terms, we suggest, of its potentialities.

It is worth emphasizing that this process is not simply correlational. Mind and world are dynamically entangled in a circular, reciprocally causal fashion. As models of the world, our minds select (from) the world that they model, conversely the world impresses itself on our minds (Fuchs, 2018). This binds perception and action together. Neisser (1976) partly anticipated this issue when he noted that,

the difference between a skilled and unskilled perceiver is not that the former adds anything to the stimulus but that he [sic] is able to gain more information from it: he [sic] detects features and higher-order structure to which the naïve viewer is not sensitive. (p. 20)

To do so, Neisser explains, the perceiver must explore the environment. They must move eyes, head, or body. In such perception–action cycles, the perceiver attempts to anticipate certain sorts of information. Attending, exploring, and anticipating are central both to the awareness of and the engagement with affordances. Again, from Neisser (1976), “The term perception applies properly to the entire cycle and not to any detached part of it” (p. 23).

Recently, the affordance concept has gained attention in other disciplines, including product design, anthropology, cultural geography, ethics and moral philosophy, and, to a lesser extent, theology (Keane, 2016; MacFarlane, 2016; Norman, 2013; Ramstead et al., 2016; Williams, 2014). The result has been the extension of the concept to include social, cultural, and moral affordances (Herman, 1985; Jayawickreme & Chemero, 2008; Ramstead et al., 2016; Rietveld et al., 2018). The concept of affordance has also been extended from its primary reference to the external world to include matters such as imagery, usually thought of as quintessentially cognitive (see Shepard, 1984). Imagery-based thoughts can both be affected by and in turn become interpreted as affordances. As Shepard (1984) explained, we imagine the things we do in the way we do because we have had prior experience of the possibilities and constraints of dealing with objects and situations in the real world; what we think carries its own possibilities for action: “What we imagine, as much as what we perceive, are external objects” (p. 420).

The affordance concept itself has also been refined. In particular, there has been a growing appreciation that not all affordances are easily available, singular, or unambiguous. Hence, we might say, perception is often not so much direct as discerned. Jastrow’s duck–rabbit illusion—beloved by Wittgenstein—can be seen as a duck or a rabbit; it affords seeing both. Likewise, Escher’s staircases afford descending or ascending depending how we engage with them. Divergent thinking tasks such as the Alternative Uses Test (How many uses can you think of for a paperclip, or brick?; Guilford, 1967;
Silvia et al., 2008) can be thought of as testing the ability to understand that objects and situations in the world exhibit multiple affordances.

That people engage with aspects of the world that exhibit multiple affordances need not imply that affordances are arbitrary or randomly interchangeable, however. It is not the case that everything affords anything. To borrow a mathematical analogy, both sets and functions can be infinite, yet bounded. There is an infinite set of real numbers between 0 and 1, but they can only fall between these limits. Likewise, affordances in general are constrained by their relation to finite, bounded objects and situations. A cup has many possible uses, but these do not normally include drilling holes in a wall; a seminar has many variants, but these do not normally include the signing of legal contracts.

Detecting affordances also depends on the education of attention and ways of seeing (Ramstead et al., 2016; Rietveld & Kiverstein, 2014). What one sees is influenced by a range of factors such as knowledge and understanding, motivation, personality, moral training, and so on (McGregor et al., 2015). Moreover, what we can see involves both first-person and multiple-person perspectives, as those who study the collective or “we,” and second person “you” perspectives will attest (Schilbach et al., 2013; Shhteynberg, 2018; Shhteynberg et al., 2020; Weichold & Thonhauser, 2020). This focus on viewpoint and perspective aligns us with Rietveld and Kiverstein’s (2014) claim that we move through a rich landscape of affordances—landscapes we have originally evolved to inhabit, even if now understood more metaphorically. We also agree that only a subset of the landscape at any given time will be relevant for a given individual in a particular situation. Affordances from this subset solicit engagement and make up the field of affordances (Bruineberg & Rietveld, 2014). And, we add, we often learn to interpret fields of affordances with the help of others.

How this entire process of landscape navigation arises is partly a matter for evolutionary developmental psychology to examine in more detail, but we can discern its main features here. Phylogenetically, a given species will have navigated through and adapted to actual environments in the past. Adaptive traits will have been naturally selected over time. They will have moulded and shaped the genetic propensity to respond to this or that affordance in a given situation. We come predisposed (if not quite “hard-wired”) to respond to the affordances of hominid-suitable environments (i.e., our niches in shared affordance landscapes). Ontogenetically, however, through maturation and learning, developing persons acquire various and variously different skills needed to access affordances in their physical, social, cultural, and corresponding moral worlds. The fine details of our affordance routes are laid down as a result of navigations characterized by (nonidentically) repeated affordance–action cycles. Thus, certain skills of affordance interpretation become, if not automatic, at least well learned and highly likely to be activated in triggering contexts. From this, we can surmise that certain affordance interpretation patterns will restrict further development unless additional learning or maturation takes place.

**Affordances and moral life**

Gibson’s (1979/1986) concept of affordance allows us to see how moral cognition relies on perceptual affordances. It supports the possibilities for pursuing moral action embedded
within unpredictable, unstable, and malleable social environments. And, it reveals the enactive nature of cognition in constant interaction with physical and social worlds (as well as internal states). Improving moral decision-making is impossible without recognizing and acting upon affordances within sociomoral environments (what we deem “moral affordances”). For this, we need relevant expertise. The development of moral discernment, decision-making, and morally skilled action constitutes virtue or moral expertise. Integral to virtue is the habitual ability to utilize moral affordances in ways that sometimes go beyond convention, employing prudence in the service of moral decision-making by attentiveness, imagination, and nuanced responses to novel situations.

Traditionally, the affordance concept was used to describe interactions with the material world (i.e., the capacities for action given specific physical objects in an environment), focusing on the embodiment and embeddedness of cognition within the physical world. Moral affordances, however, depend on the social world (i.e., the capacities for virtuous action given relationships with real others), emphasizing the embodiment and embeddedness of cognition within sociocultural frameworks and the demands of particular moral situations (Cameron et al., 2015; see also Ellemers et al., 2019, for more on the influence of social factors on moral behaviour).

In referring to sociocultural frameworks, we are not simply talking about people adopting roles, as with theorists such as Goffman (1959). Moral frameworks instead provide domains within which we are to act, but at the same time set constraints on which actions are permitted. They can also emotionally affect or “move” us in various ways. Bruineberg and Rietveld’s (2014) account fits neatly within this as it involves responding to exigent affect directed at recognizably moral situations, or at least those that invoke the notion of fairness (Chapman et al., 2009; Gummerum et al., 2016; Haidt, 2012; Rozin et al., 1999).

In his monograph, *Ethical Life*, anthropologist Webb Keane (2016) extended the idea of affordance to connect the biopsychological and the sociocultural. Keane noted that all affordances are ultimately grounded in the potentialities of the world. This allows them to serve as explanatory constructs located between the causal claims of biological reductionism and the relativism of social constructivism. Affordances thus function, Keane argues, as useful bridges between causality and meaning. This is helpful to our account as we wish to demonstrate some functional continuity between physical affordances and sociocultural meanings, while avoiding the trap of social constructivist relativism.

We acknowledge that some may still raise residual objections to our approach: namely, that sociomoral affordances are nothing but social constructions, and hence, if they exist at all, bear only an analogical resemblance to real, situated, physical affordances. There has already been a considerable discussion of this issue in the literature relating to social affordances. For instance, Costall (1995) suggested that even physical artefacts, such as coffee mugs, are already effectively rendered social in that their use is typically constrained by social practices. Moreover, as he pointed out, such artefacts exist within a moral order—objects are meant to be trustworthy, are often owned, or are even sometimes immorally designed to preclude usage by certain persons. Human activity too (even, say, strolling or marching) is always socially and culturally infused. As such its affordances are inevitably sociocultural. Others, however, take the view that two theories are needed, one for perception and another for cognition, with the latter required to cope
with the social (see Davis & Chouinard, 2016; Schmidt, 2007, for useful discussions). Rather than recapitulating all these debates here, we think it more useful to highlight aspects of recent work that bolster the idea of social (and hence moral) affordance. We build on these while welcoming critiques from those who remain committed to representational or cognitivist accounts of social meaning.

First, following Schmidt (2007), we take the social world to be real and embodied. Human social life involves persons who interact in actual, physical settings. Such interactions also take place in time, but, more importantly, human social life unfolds as a series of temporally sequenced events. Unless one adopts a reductive physicalist reading of affordances as those aspects of an object or situation given only by the present ambient light, event-based temporality need not be an insuperable barrier to claims that affordances cope with more than the physical in the here and now. As Schmidt (2007) reminds us, Gibson himself acknowledged the importance of ecological events, distinguishing them from the abstract passage of time. Schmidt (2007) explores the logic of this claim by considering how one might know, say, that a mug is a gift from one’s daughter. The nested series of affordances in his example involves prior experiences of gift-giving, events involving one’s daughter, and earlier interactions with the mug in question. At all points these are, or have been, grounded in spatio-temporality such that the focally attended object and its affordances, in this case the mug, is “never out of the context of the past or rather the stream of ongoing events that make up our past” (p. 148).

Davis and Chouinard (2016) note that artefacts variously request, demand, allow, encourage, discourage, or refuse engagement. Requests and demands refer to “bids” by the artefact on the user, while encouragements, discouragements, and refusals refer to “the way the artifact responds to a subject’s desired action” (p. 242). Affordances that allow relate to both subject and artefact. All these affordance characteristics not only have implications for perception and dexterity, but also for whether an accompanying action is “culturally valid and institutionally supported” (p. 245). Moreover, the relationship between affordance and subject is dynamic and sensitive to “shifting material and cultural landscapes, and with subjects who evolve and change in their own lives” (p. 247). We add that these various solicitations matter to both individuals and groups, and hence typically help transact moral meaning, value, or significance. A gun licence application may well, if granted, afford permission to an individual legally to possess a firearm, but its widespread take up would be strongly discouraged as morally unacceptable in most parts of the world, based on the accumulated real events of culture, history, and biography.

Finally, and consistent with our emphasis on skilled engagement, we take seriously the idea that skills, including moral skills, are embedded in real and situated forms of life, and that forms of life are the means by and through which we access or unlock affordances. Following Rietveld and Kiverstein (2014) we see forms of life as applying at three levels: the human in general, specific practices, and particular engagements with affordances. We also adopt their corresponding definition of affordance:

Affordances are possibilities for action the environment offers to a form of life, and an ecological niche is a network of interrelated affordances available in a particular form of life on
the basis of the abilities manifested in its practices—its stable ways of doing things. An individual affordance is an aspect of such a niche. (p. 330)

This highly situated quality fixes affordances in concrete settings, yoked to their particular forms of life. This is important when it comes to skill acquisition where skills embedded in forms of life are often assessed by others, for example, as poor, more or less satisfactory, or excelling, relative to the specific demands of a situation. This is what Rietveld and Kiverstein (2014) mean by “situated normativity” and which we take to apply to the moral case too.

Recent ecological-enactive accounts have also challenged the supposed dichotomy between higher and lower cognition (Kiverstein & Rietveld, 2018; Rietveld et al., 2018). Lower cognition is typically said to involve perceptual-motor interactions with the physical world and basic memory functions. Higher cognition is the province of more complex aspects of memory, reasoning, inference, imagery, language, and creativity. The conventional distinction between the two tends to reinforce the dichotomy between nature and culture: one the realm of the concrete, the real, the biophysical; the other conceptual, symbolic, (sometimes) virtual, and more disconnected from the world. The Skilled Intentionality Framework (SIF; Rietveld et al., 2018; van Dijk & Rietveld, 2017) by contrast, “dissolves the dichotomy between ‘lower’ and ‘higher’ cognition by interpreting . . . skilled activities [in general] as just more affordances available in our human ecological niche” (Rietveld et al., 2018, p. 43). These problematic divisions are then removed, “because we are able to understand human ‘higher’ cognition along the same lines as skilled ‘lower’ cognition: both are . . . forms of skilled engagement with affordances offered by the sociomaterial environment in the context of the human ecological niche” (Rietveld et al., 2018, p. 49). Rietveld et al. (2018) see responsiveness to affordances as manifestations of “skilled intentionality” in context. For them, “A key aspect of so-called ‘higher’ cognition regards the way in which persons are oriented towards the possible” (p. 43). Kiverstein and Rietveld (2018) have further argued that higher cognition is characterized by its ability to deal with the abstract and possible over extended time periods. As we implied earlier, their work comprises a major part of the foundation for ours.

Affordances are thus crucial to both the constraints and freedoms within which our physical and sociocultural lives take place. The world, including its sociocultural manifestations, is neither a causal straitjacket nor a completely malleable construct. We reject, in particular, the suggestion that social and moral affordances are nothing but social constructions dependent on some idealized perspective divorced from reality. Nevertheless, the tendencies to conform to cultural expectations (Bond, 2005; Gerard et al., 1968; Latané & Wolf, 1981), to favour the ingroup at the expense of the outgroup (Tajfel & Turner, 1979; Turner et al., 1987; Turner et al., 1994), to entrench within moral tribes (Greene, 2013), and to use morality to justify violence and coercion (Fiske & Rai, 2015; Hulsey & Frost, 2004) represent impediments to the skilled perception and realization of moral affordances.

Like Keane, we too maintain that understanding moral actions can be improved through a systematic exploration of situational (and we add, bodily) affordances and their associated potentialities in moral and ethical situations. In general terms, our
argument rests on a wider assumption that many “higher” psychological functions, among which moral activity must be included, rest on “lower” ones that are more basic (in the ontogenetic and phylogenetic sense). It further implies that we, and therefore our brains, are primarily action-oriented rather than perception-oriented (Anderson, 2016; Neisser, 1976). This strengthens the connection between affordance and skill for both lower and higher functions, including moral ones.

Affordances, especially moral ones, are further implicated in the triadic structure of world, mind, and linguistic–symbolic communication (see Fuchs, 2018; Williams, 2014, for further discussion). The world affords certain action possibilities, agents are variously adept at detecting, exploring, and exploiting them, and individuals within language communities deploy linguistic and symbolic communication to pick out and heighten those relevant to their purposes in specific contexts. In the ethical sphere there are thus moral orders, variously skilled moral agents, and ethical languages or codes. Moral orders are macrosocial frameworks within which ethical life takes place; they prescribe, proscribe, and instantiate in general terms (customs, practices, norms, rules, dicta, etc.) what is morally permissible or impermissible (Smith, 2003).

Within a moral order, differentially skilled moral agents are informed by shared and socially transmitted ethical codes, or “rules of moral salience” (Herman, 1985, p. 418), which they eventually internalize. In our framework, rules of moral salience provide ways of directing attention to significant or important aspects of particular situations so that their affordances are perceived, learned to be ones that matter, and allowed routinely to take control of moral action. Just as literary criticism gives us insight into the affordances of texts, moral and ethical language allows us to “read” the moral affordances of the world and navigate routes through its landscape of affordances (Rietveld & Kiverstein, 2014). Bringing together mind, moral codes, and moral situations in this way begins to articulate, “the interplay between the thoughts people have about moral ideals (captured in principles, judgements and reasoning) . . . [and] the realities they experience (embodied behaviours, emotions)” (Ellemers et al., 2019, p. 336).

Stated like this, the process of directing attention and guiding moral actions may seem smooth and unproblematic, and the “reading” of moral affordances straightforward. In practice, individuals frequently need to reconcile multiple and often competing rights, duties, moral norms, and other culturally transmitted moral codes. In these complex situations, it becomes necessary to discern which, or which combination of, codes should direct attention. Holyoak and Powell (2016) address this directly in their deontological coherence model. For them, moral judgement proceeds according to deontic rules that provide “soft constraints” for choosing among options. In their view, selecting among competing moral aims is resolved via coherence-based reasoning, wherein we reason according to “permission schemas.” A permission schema “is not simply a list of social rules that apply in particular circumstances, but rather a general and abstract conceptual structure employed on reasoning” (p. 1183). Accordingly, moral agents don’t simply choose among available options. Rather, they highlight particular values to cohere with their final reading of the situation.

Moral agents decide which reading to adopt, or, in Herman’s (1985) terms, which “rules of moral salience” (p. 418) should be activated in particular contexts. While full examination of this is beyond the scope of this paper, it is interesting to note that in the
default case such discernment appears to entail a process of constraint satisfaction, or “best fit” leading to a temporary coherence of salient rules and codes. To make sense of the world, the moral reasoner often depends on overlearned pragmatic and heuristic reasoning that occurs via the type of self-organizing networks proposed by embodied cognition theorists. This allows moral judgements to be made quickly rather than through the more deliberative, formal processes of ethical reasoning based on a priori principles (Holyoak & Powell, 2016). Nonetheless, the direction of attention to relevant aspects of the world is an intentional process, orienting the person actively in and to the web of meanings and values to be discerned, actualized, and expressed, which raises the question of the source(s) of moral agency.

**Agency and affordances in virtue acquisition**

The role (and, indeed, existence) of moral agency has been the topic of much debate (see, e.g., Blasi, 1980; Greene & Haidt, 2002; Haidt, 2001, 2010; Narvaez, 2010). Here, we offer a model of how humans develop as moral agents. In particular, we focus on how we develop what has been dubbed “moral expertise” (Hulsey & Hampson, 2014; Narvaez & Lapsley, 2005). By our reckoning, moral expertise develops through the practice of those actions wherein the virtues (defined variously, but always centred on the conditions that best facilitate human flourishing) find expression. Practice eventually instils habit and, as habits become patterns of responding, into what Aquinas, following Aristotle, termed a *habitus*.

It is commonplace in Thomist circles to argue that acquired virtues depend on *habitus*, the deepening, repeated, participation in the good until virtuous acts become dispositional or “second nature.” The repeated habits that form a *habitus* also define our identities, facilitating self-integration, and increasing striving toward an ideal self (Verplanken & Sui, 2019). Expertise, though, requires more than practice. We suggest that moral expertise arises via moral salience attuned to the affordances contained within moral contexts.

Though well represented in philosophical discussions of morality, the virtue concept has been slow to catch on in psychology. There, work on moral behaviour has typically been dominated by Kant’s deontology (e.g., Kohlberg) and Hume’s emotivism (e.g., Haidt). The account we (and Narvaez & Lapsley, 2005) have advanced applies the virtue concept directly to psychological explanations of moral behaviour. We have referred to virtues (and *habitus*) under the general rubric of moral expertise. In our account, moral expertise requires the ability to ascertain what courses of action the environment affords (its moral affordances) and the ability to respond effectively to novel moral situations. As moral agents, we can either excel or be deficient in our ability to do so.

Considering the status of the learner vis-à-vis the fully developed virtuous agent, based on a close reading of the *Nicomachean Ethics*, M. R. Hampson (2019) argues that although the learner may be performing virtuous actions, they cannot yet be said to be a fully virtuous agent. She suggests that we reframe the question from, “How is the state of moral virtue acquired?” to “How do we become virtuous agents?” This approach shifts the focus from thinking about how we acquire a certain virtuous state, toward the question of how we become a virtuous person, and, in our terms, aware of ourselves and goals as moral actors.
Becoming a virtuous person depends on the development of practical wisdom (prudence or *phronesis*). *Phronesis* is necessary for the correct exercise of any virtue (Hursthouse, 2012). *Phronesis* informs us of both what we are doing and what we *should* do (Anscombe, 1957). Our virtuous (or nonvirtuous) actions are then expressed in our choices (Hertig, 2015). This understanding of *phronesis* allows for the application of practical knowledge (wisdom) to the moral domain. While there is a debate among Aristotle scholars about whether *phronesis* merely facilitates moral deliberation or instead plays an active role in guiding moral behaviour, it is generally agreed that the intellectual understanding of moral principles is a function of *phronesis* itself (Hertig, 2015). Practical knowledge helps both determine our moral goals and motivates our actions toward (or away from) them; moral goals (and the actions that aim at them) are determined not by reason, but by character.

In Aristotle’s view, virtues are acquired through a process of habituation. He is, however, frustratingly vague as to how one becomes a virtuous *agent*. M. R. Hampson (2019) argues that this occurs through a process she calls *emulative imitation*. On her account, emulative imitation is not mere mimesis. Rather, it is the learner’s effort to emulate the intentional actions of a virtuous agent that leads to the acquisition of a predisposition to act in virtuous ways. The learner is not merely imitating another’s actions, they are internalizing a way of acting in the world that is married to beliefs about what is right or wrong (Kagan, 2018).

Importantly, the learner then comes to *mean* their moral statements, judgements, and actions and hence can claim authorship of them (Lovibond, 2002). Modelling oneself and one’s behaviour on another involves taking their point of view or adopting their perspective. In our terms, this not only exposes them to otherwise potentially overlooked or unseen affordances, it also, via guidance, modelling, and instruction, alerts them to their potential significance and relevant responses (i.e., those that enhance their goal of seeking the good).

This process is certainly perceptual and physical—we see what the world looks like when we’re standing where you are, or can hear what you do, and so on. But we also may “see” what you mean, allowing us to “appreciate” what you do or say. It helps us simulate action within a moral situation in a manner similar to that described by Seligman et al. (2013) when they speak of prospection. The prospective thinker considers what a virtuous agent would do in a given situation, tacitly subsuming the desire to be that virtuous agent. One may even use a prospective approach to imagine what an “ideal” virtuous agent would do, even in the absence of any direct experience of an emulative case on which to draw. And imagining can draw on affordance as indicated earlier.

By adopting another’s perspective, we see what the other sees as good (or “the fine,” as Aristotle puts it) in the world. Following McDowell, Lovibond (2002) points out that, “the virtuous person has a *distinctive way of seeing* situations, persons, courses of action or anything else that we regard as a logically appropriate object of moral evaluation” (p. 13). Further, the acquisition of a skill by a novice involves what Gibson called the “education of attention.” The process of educating attention crucially involves models who selectively introduce the novice to the relevant aspects of the environment and their affordances. In the process, the novice is brought to a selected aspect of the world that is of significance to the given practice and shown landmarks that orient their activities. In this way, the
novice learns what possibilities for action the environment provides (Rietveld & Kiverstein, 2014). Thus, by learning to see what was previously unattended or unnoticed, we bring into relation aspects of the world previously seen as disconnected.

This neo-Aristotelian framework dovetails neatly with Ramstead et al.’s (2016) claim that, “The world we inhabit is . . . disclosed as a matrix of differentially salient affordances with their own structure and configuration” (p. 4). A fuller appreciation of this can lead the learner to appreciate the future action potentials of certain objects and situations in the moral landscape—in other words to appreciate proleptically potential affordances within their ecological niche. Anderson (2016) explores this at the neural level. When various actions are possible,

a situation posing several possible courses of action will cause multiple distributed patterns of neural activation across the brain, and the behavior of the organism in this situation will be ultimately determined by competition among the patterns . . . ; loosely speaking: Pattern competition in the brain is affordance competition in the mind [emphasis added]. (p. 8)

Identifying the salient dimensions of moral situations depends on skill and practice in reading moral affordances, which, in turn, relies on moral perception (Moss, 2012). Though habituation and modelling are sufficient to explain the development of virtuous character traits, the basis of virtuous actions is perception guided by practical knowledge (Hertig, 2015). Like phronesis, moral perception depends upon both perception and experience (Broadie, 1991). And like phronesis, moral perception must also be trained (by repetition and emulative imitation) to attend to the relevant features of situations (Nussbaum, 1986; Price, 2011). As Rietveld and Kiverstein (2014) have noted, “What the skilled person has learned to do over the years feeds back into the way the meaningful world appears to her in perception” (p. 341).

Through practice, moral perception skills become a part of one’s character (Broadie, 1991) and, if developed sufficiently, a form of expertise. Like other forms of expertise, moral expertise brings well-developed skills into new situations (Dreyfus, 2002; Rietveld & Kiverstein, 2014), allowing agents to remain in what Bruinebergen and Rietveld (2014) dub the “metastable zone”: “This optimum position is a kind of relative equilibrium in the individual–environment relationship that allows [the agent] to be ready to respond to multiple affordances simultaneously and rapidly switch from making one kind of [action] to making another” (Rietveld et al., 2018, p. 54). We claim that emplacement in the metastable zone permits the individual to overcome an otherwise too rapid tendency to establish deontological coherence via premature affordance selection. In Piagetian language this allows the person to resist both the stereotypical pull of compliance or accommodation to the socially normative world on the one hand, and prejudicial assimilation triggered by limited aspects of the world immediately salient to them on the other—for example, by ignoring a person in need’s entreaties and assuming it morally acceptable to walk past, or by noticing only the shabbiness of someone’s clothes and presuming they don’t merit attention.

An interesting question now arises as to whether it is possible to connect the skilled intentionality of moral agents and their virtues via an affordance-based account of prudence. In the classical model, living virtuously requires both the virtues themselves and the “meta-virtue” of prudence (phronesis). Plato called prudence the “charioteer” of the
other virtues, managing the other virtues and facilitating the evaluation of moral situations. Nowadays we might think of this in cognitivist terms. By the 13th century, Aquinas (synthesizing ideas from Aristotle, Tully (Cicero), Plotinus, Macrobius, and others) had itemized the eight “integral parts” of prudence: foresight, circumspection, caution, memory, understanding, reasoning, shrewdness (quickness of inferential abilities), and docility (teachability). He categorized the first three as connecting knowledge with action and the last five as cognitive virtues (Aquinas, ST, 2 2ae, Q. 48, art 1). Can a largely affordance account of phronesis begin to be developed that dispenses with a cognitivist interpretation entirely and which is based on Aquinas’s insights?

To attempt this, we remind the reader of the distinction between the affordance landscape and the affordance field, where the field is the subset of current soliciting affordances for a given individual at a particular time (Bruineberg & Rietveld, 2014, 2019). A field can have width, that is whether it involves few or many affordances, and depth, whether it is temporally extended or not. The field can also have one or more salient or dominant soliciting affordances. Returning to the eight attributes, three have obvious consequences for action. Circumspection widens the field of affordances, making more soliciting affordances available. By looking round, the circumspect individual is able to notice more moral possibilities as well as pitfalls. Foresight, on the other hand, increases the depth of the affordance field, permitting the anticipation of future moral potentials in addition to those immediately present. Memory also increases the depth of the field, bringing to bear related affordance configurations from the past. When combined with present knowledge or understanding, memory permits the expert to identify which of the many current affordances are more significant and which are less significant for their present purposes. Reasoning and shrewdness go beyond interpretation and involve inferential skills in predicting future affordances. Here, we understand inference as skill in concatenating and anticipating affordances, rather than the ability to manipulate propositions. Docility refers to an openness to instruction, modelling, and guidance both from and with others, a quality we assume the expert already to possess. Finally, the prudent also typically exercise caution, being prepared to exercise their “free won’t” as well as free will, inhibiting inappropriate actions as is fitting.

The morally expert thus maintain their “optimal grip” on the relevant field of affordances—a process that unfolds dynamically in time. By acting prudentially they identify and navigate moral fields that for them become richer, wider, deeper, and more nuanced, and are able to respond to those affordance-solicitations likely to achieve their strategic moral aims. Phronesis, in conjunction with other abilities, does not so much oversee the cognitive system’s selection of virtues, but rather allows multiple affordances to be read, the consequences of potential actions anticipated, and virtuous responses orchestrated and evaluated. The more prudent are then able to make wiser choices, select the right actions, thereby increasing the likelihood of their own flourishing, and fostering the common good. Although preliminary, we hope this account provides sufficient basis for and encourages future work.

Conclusion

In a recent meta-analysis of 1,278 social psychology research articles on morality, Ellemers et al. (2019) found that most morality research neglects “some key features of
human morality specified in influential theoretical perspectives, and are not well inte-
grated” (p. 358). In their judgement, “theory development . . . in morality (needs) to
consider the complexity and multifaceted nature of the psychological antecedents and
implications of moral behaviour and to connect different mechanisms—instead of study-
ing them in isolation” (p. 358). We have tried to do this by introducing a central concept,
affordance, not included in many previous approaches. We have applied the affordance
construct to moral judgement and action.

The core of our argument is that perceiving multiple affordances requires skills or ex-
pertise. In the moral domain, we have claimed pari passu that virtues constitute the expertise or
moral skills, of attention, action, emotion, memory, and cognition, needed to access and act
on the moral possibilities (affordances) of situations. Virtues, guided by socially acquired
moral codes, rules, and standard moral operating procedures such as moral imperatives,
allow us to discern and make the sometimes ambiguous, hidden, and invariably plural pos-
sibilities of moral worlds accessible. We actualize our moral environment and realize what
we should do as we navigate through moral landscapes situation by situation, often prag-
matically, just as we navigate through and select behavioural options from physical worlds.

Virtues are socially and culturally acquired. They are also embodied and situated. Our
culture, including our moral culture, emerges from our basic, bio-psycho-social nature.
Just as the physical world can be cultivated, so too our moral selves are enculturated.
Virtues develop in situations where a not-yet virtuous agent models herself on more
skilled virtuous agents, comes to see the world through their eyes, and begins to appreci-
ate the fine, which then shapes her actions. Generally speaking, perception of multiple
affordances provides opportunities through which needs can be addressed, wants satis-
fied, and desirable states achieved. Moral life entails the tempering and refinement of this
process within broader ethical systems. As such, it requires the evaluations of states of
affairs that carry emotional content as well as meaning. Future work will need to address
more fully the emotive effect of the world on us, and our feelings about and evaluations
of situations in the detection, selection, reappraisal, and use of moral affordances, without
reducing moral psychology to mere emotivism (see Feinberg et al., 2012; Wisnewski,
2019, for further discussion).

The relations between person and environment implicit in our framework are com-
plex, multicausal, and reciprocal. As such, they are not well described by linear
approaches that assume “stimuli” to impinge on an essentially passive “organism,” nor
by those that imply sequential processing, from perceptual input to motor output, such as
standard information processing accounts. The moral life involves the striving for certain
goals and moral goods, as well as simply reacting to situations. In recognizing this, our
account is not only multi- and reciprocally causal, it also creates space for formal as well
as material and efficient causality. Our approach fits well within wider accounts of eco-
logical–enactive cognition in which causal relations are seen as circular, and the embod-
ied person is an agent free from rigid determinism and with scope to choose their actions,
while still vulnerable to the vicissitudes of the world (Fuchs, 2018).

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Notes

1. By which we mean the study of moral perception, behaviour, judgement, and action by the disciplines of the human sciences.
2. This is true whether we are aware of an affordance or not (R. A. Jones, 1999).
3. Also, as we discuss more fully below, we routinely interact with human-created, culture-specific affordances (Heft, 1989).
4. See Kiverstein and Rietveld (2018) for a fuller discussion of so-called ‘representation-hungry’ cognition.
5. While Keane’s thesis works as a shorthand for many social scientists, we prefer philosopher Johannes Hoff’s more nuanced account, which challenges the entire basis of the sociocultural/biopsychological distinction. Hoff states: “In our modern mindset, we tend to reduce the ‘socio-cultural’ to something conventional—the opposite pole of biology. . . But this is misleading. We would not say affordance bridges ‘causality and meaning’. Rather affordance is an expression of our bodily ‘being in the world’. . . it marks exactly the point where meaning emerges at whatever level” (J. Hoff, personal communication, February 5, 2019).
6. For example, in one of the first bystander effect experiments (Latané & Darley, 1968), participants failed to help someone in need not because they didn’t care, but because they failed to recognize the situation as an emergency.
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