Chapter 7
Affordances and Social Normativity: Steps Toward an Integrative View

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7.1 Introduction

Affordances are everywhere in our everyday lives. From walking to grasping a mug or opening a door, bodily action opportunities are pervasive. But if they are so common to find (maybe they are the most common object of perception), how is it that they were formulated only a few decades ago? This has to do with the development of ecological psychology, of which affordances are their main concept. Since their inception in the 1970s through this new approach to the mind, affordances have been applied to several fields of study, from architecture and design (Rietveld et al., 2015) to philosophy of mind (Chemero, 2009) and robotics (Gijón et al., 2013).

But for affordances to be proposed as an object of study, a new reformulation of perception and action was needed, and this is what ecological psychology is all about. Ecological psychology was created by James and Eleanor Gibson between the 1960s and the 1980s (Gibson, 1969, 1979). It was conceived as a reaction against both cognitivism and behaviorism: it rejected the idea of cognition as based on information-processing and representation-consuming mechanisms, but also the stimulus-response formula and the idea of perception as a passive reception of worldly impingements (Lobo et al., 2018). Ecological psychology was inspired by functionalist psychology and Jamesian pragmatism; hence, it considered that the starting point of the study of cognition was the organism–environment system, not the brain or the organism alone (Heft, 2001). The organism, an active explorer, engages with the environment thanks to ecological information, and this is why it perceives the available affordances. The idea of ecological information changes the traditional way of understanding perception (from a sensation-based account to an information-based account) and establishes the bedrock for an ecological method in experimental psychology (Richardson et al., 2008).

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One of the main aspects of debate for ecological psychology is the relation of affordances with human socionormative practices. Several authors inside and outside the ecological approach aimed to reconcile the original Gibsonian understanding of affordances, which is agent-centered, with the unavoidably social constitution of our cognitive capacities. James Gibson himself was aware of this, and even when he claimed that the cultural and the natural environments are the same one and that there are affordances with a social significance (Gibson, 1979), his death prevented him from developing these ideas. But some other authors continued this task of reuniting affordances and sociality. Paraphrasing Dewey, we are always immersed in a social environment: we are exposed to the evaluation of the members of our community, and we always receive some kind of social feedback from everything we individually do (Dewey, 1922/2007). If so, our way of dealing with affordances as individuals is also affected by this social dimension.

In this chapter, I offer the conceptual basis for establishing a comprehensive view of the entanglement of social norms and affordances from an ecological perspective. For this, I will focus on the connection among three key concepts: Costall's idea of canonical affordances, my own views on social normativity, and Reed's fields of promoted action. In Sect. 7.2, I will present the idea of canonical affordances. In Sect. 7.3, I will do the same with the idea of fields of promoted action. Section 7.4 will focus on my own views on social normativity and how norms are related to affordances. Finally, Sect. 7.5 will offer a general view of the connection among these three concepts in order to illuminate how the individual perception and taking of affordances are modulated by our social and normative practices.

7.2 Ecological Psychology, Direct Perception, and Canonical Affordances

Ecological psychology is based on three main ideas: first, organisms are not merely passive receptors of stimuli, but active explorers of their environments. Second, the main unit of analysis is not the organism per se, but the organism–environment system. And third, perception is mainly of affordances, which are directly perceived. Regarding the first claim, ecological psychology conceives organisms as agents that are always acting upon their environments, modifying them and extracting information that guides their action. Agents do not passively receive the impingements of the world: they navigate it and encounter it at all times. This shows the mutual affection between organism and environment: the organism affects the environment and the environment affects the organism, and if we adopt a diachronic perspective, we cannot fully understand organisms and their environments if we separate them. For this reason, ecological psychology does not focus on brains, nervous systems, or even organisms alone: this approach focuses on the unit or system formed by the organism and the environment. And this leads us to the third main claim: the direct perception of affordances.

Affordances are the main objects of perception for organisms according to ecological psychology. Affordances are peculiar objects of perception, as they are agent-related: mugs are perceived as graspable by humans (or apes) because of the combination of the cylindrical form of the mug itself and the ability to grasp of apes possess due to the opposable thumbs they have as part of their bodily equipment. This aspect of being *properties of objects related to bodily and action capacities* of organisms is what defines affordances. Another essential aspect that defines affordances is that they are *directly perceived*. This is because the way in which the perception of affordances is studied is not based on sensations (which has to be processed so as to form a representation in the brain and/or the mind), but on ecological information(Reed, 1991). This ecological information should not be confused with information in the Shannon-Weaver sense of the word, which also implies information processing. According to James Gibson, perception does not work that way. In the ecological view, information for perception does not need to be processed, disambiguated, or enriched to form a representation that replicates the environment (Turvey et al., 1981). On the contrary, ecological information is directly detected, and it is necessary and sufficient to perceive the environment as such—no representations or any other kinds of mediations are needed (Reed, 1996). Ecological information is the result of the energy arrays of the environment forming a heterogeneous pattern (due to reverberations in a given space) such that it reveals the surfaces of the environment and the available affordances (Glotzbach & Heft, 1982). Take, for example, a room in which a light bulb is shining: the light fills the medium (the air) with ambient light as rays of light reflect in the surfaces of the room, forming a structure that corresponds to the structure of the objects and surfaces of the room. The pattern is informative of the structure of the room itself. The organism encounters this informational structure, and this is enough for perceiving the room and its affordances directly from a given location or point of view. There is no need to postulate any kind of processing mechanism, representations, or any other kind of mediational entity or process for perceiving affordances (Chemero, 2009; Heras-Escribano, 2019).

Ecological information specifies the environment and its affordances because the informational pattern takes the structure of the environment, so the structure of the information corresponds to the structure of the environment. In this sense, the sole presence of ecological information is sufficient to perceive the available affordances. If there is a mug in the room and the organism that observes the room is one with opposable thumbs, ecological information specifies the possibility of grasping the affordance for that organism (Turvey, 2019).

As we can see, there is no need to appeal to either sensations or representations to explain how affordances are *directly perceived*. Unlike behaviorism, cognitivism, or enactivism, ecological psychology does not refer to sensations that need to be transformed or processed. It relies on information on the structure of the ambient optic array that reveals the shape of the environment that the organism is exploring. This is why the ambient optic array is informative about the environment: it is ecological information of the available affordances because that pattern or array is related to the bodily dimensions and abilities of the organisms that perceive the

environment. Perception is based on ecological information, not on sensations—and this is why it is directly detected.

We can see that affordances, being agent-related aspects of the environment, cut across the dichotomy between subjective and objective. However, according to Costall (1995), there is one dichotomy that Gibson could not overcome: the dichotomy of the natural and the sociocultural. This is because, according to Costall, Gibson aimed to explain perception as a universal trait of organisms, but he did not emphasize the fundamental contribution of sociality in the picture: he presented direct perception as essentially asocial (Costall, 1995: 474). Costall aimed to socialize affordances by including in the picture the essential social aspects that shape our cognition, which is the difference that humans make in nature (Costall, 1995: 478). One example of this is the introduction of the idea of canonical affordances as opposed to affordances in general. While affordances in general are available everywhere, canonical affordances are conventional and normative (Costall, 2012). This is why canonical affordances, according to Costall, are so tightly related to artifacts: technological objects are designed so as to facilitate one particular affordance, and this *facilitation* is shaped by our own sociocultural norms. For example, chairs are specifically designed to be sat on, and although they can afford some other actions (throwing them, for example), they are perceived as sit-on-able objects because our sociocultural background emphasizes that use. Just like we predefine the use of a technological artifact, we also predefine its affordances; or better: it is because we predefine in a normative way the affordances that a technological object has that we define the technological object per se. As Costall claimed: "The concept of *canonical affordances* itself alerts us to those important cases where the affordances of something are not simply shared between people but also normatively predefined" (Costall, 2012: 91). Normative predefinition has a major distinctive prescriptive force than merely sharing something: while sharedness could imply the random establishment of a convention (think of, for example, the way in which humans randomly create walkways or tracks that are followed spontaneously until they become part of the landscape), the normative predefinition implies a well-thought, deliberate previous step of thinking of the design of the artifact so as to optimize its usability—and this implies a designer that has considered what affordances they wish to make salient, hence the idea that some technological objects or devices have a function that is shown via their affordances. This is shown through the claim that "[a] theoretical understanding of *canonical affordances* will not be achieved by fixation upon the object in isolation, nor the individual-object dyad. The object needs to be understood within a network of relations not only among different people, but also a *constellation* of other objects drawn into a shared practice" (Costall, 2012: 92). The canon of canonical affordances is deliberate and socially shaped: not in the sense that all affordances are social, but in the sense in which sociality is part of reality—having a role that is as important as ecological information (Costall, 1995: 478). In this sense, "[c]anonical affordances still imply us, but in the plurality rather than the singular" (Costall & Richards, 2013: 87), and this plurality is constituted by social norms.

The introduction of sociality within the picture of the direct perception of affordances raises several questions: how intricate is the connection between social norms and affordances? Are there canonical affordances beyond the case of technological artifacts or devices? If so, how are they established if it is not by design? These questions will be dealt with in the upcoming sections. In the next one, we will take a look at Reed's fields of promoted action.

7.3 Reed's Fields of Promoted Action

The philosopher E. S. Reed aimed to explore all the implications of ecological psychology to the philosophy of mind. For that, he took into account the importance of development, and the work of Eleanor Gibson was key for that field. She aimed to analyze psychological development from an ecological standpoint, and her contributions to the field were outstanding. Reed applied that developmental view to his philosophical writings, and the results were exceptional. Among all the contributions, for the purposes of this chapter, we can highlight the idea of fields of promoted action as a key aspect of any child's development. He defined the idea in the following way:

> The field of promoted action includes all the affordances made available to or emphasized for the child by other people and excludes those affordances forbidden to the child by other people. The field of promoted action also includes those different actions that are encouraged or even scaffolded for the infant at different times (e.g., aiding to help sit or stand). The field of promoted action is a powerful force in human development, but it cannot shape the infant except through the windows of these interactive frames (Reed, 1996: 130).

So, as we can see, fields of promoted action emerge during the interaction of the infant and the adult in interactive frames. Reed establishes different interactive frames: the primal one (0–3 months), in which facial expressions and gaze at another's face is key; the performatory frame (3–9 months), in which infants start to see themselves as agents and show appreciation for different surfaces, substances, and textures, which leads to free action and learning about affordances; and the true interaction frame (3–9 months), in which the infant's response to caregiver activity (gazes, movements, but also speech) is crucial, as "infants will come to shape their behavior according to local cultural proprieties, for these proprieties will define how effective their gazes, smiles, and vocalizations are at eliciting interaction" (Reed, 1996: 133). In this period, from 3 to 9 months, interaction becomes crucial for understanding the infant's behavior:

> In the period from 3 to 9 months, human infants are becoming complete interactors—ones who combine vocalization and bodily movements with face-to-face interaction. They are beginning to make their own choices as to whether or not to interact. They are starting to master the intricate art of turn taking, the first of the complex of reciprocities that are necessary for successful social interaction. They have become game players, who not only undergo affective surges but do so in a shared context, linking the phases of their actions with those of their caregivers (Reed, 1996: 135).

These interactive frames are crucial for shaping the basic agency of human beings in their development. These are the frames in which human nature becomes sensitive to sociality, hence including this aspect as an essential feature of our way of being agents in the world. According to Reed, it is in these interaction frames in which the fields of promoted action appear, and they are presented to the agent as social invitations or prohibitions (implicit or explicit) for taking particular affordances (among other things). In this sense, sociality systematizes the infants' taking of affordances by exerting social pressures for promoting the taking of some affordances and the prohibition of taking some others, all of this because of purely socio-normative reasons.

My proposal here is to expand Reed's idea of fields of promoted action beyond infancy. I think these fields of promoted action are clearly present not only during development, but also in our everyday lives. We humans are always learning until we die, and every agent is constantly learning how to engage in particular situations in a more efficient way; thus, we must recognize that our experience of fields of promoted action continues to evolve across our lifespan. For this, the agent makes use of both the responsiveness to affordances and the responsiveness to social norms. There is a triadic interaction (to use Reed's apt phrase) for making sense of human nature in its completitude. And the framework of fields of promoted action is very useful when it comes to understanding the interaction of norms and affordances. These fields of promoted action should be understood as the specific contexts of interaction in which social norms are exerting their pressure; agents aim to act in the right way and, for that purpose, they make use of the available affordances. We find these frameworks for triadic interaction full of affordances and fields of promoted action constantly, so it is important to analyze how social norms and affordances are entangled. But, for that purpose, it is important to offer a clear definition of social norms.

7.4 Social Norms

Social norms are pervasive in our everyday lives. There are several appeals to social normativity by philosophers of mind and social cognition, but there are only a few definitions of what these social norms are. I have tried in some previous writings to offer a systematic definition of social normativity in human nature starting from the work of some authors in the pragmatist and post-analytic traditions, such as Dewey, Ryle, or Wittgenstein (Heras-Escribano, 2019; Heras-Escribano & de Pinedo-García, 2018). Here I show the main aspects of this view on social normativity.[1]

[1] In previous writings I have also analyzed the difference between the normative and the nomological, where I stated that the title "normativity" should be restricted to a social phenomenon and that we should not confuse the peculiar aspects of social normativity with non-social aspects that, while labeled as normative as well, they refer to subpersonal lawful regularities. For a detailed discussion on the issue, see Heras-Escribano (2020a, b), Raja and Chemero (2020), and Mojica (2020).

First of all, it is worth distinguishing between being right and being successful. My point with this is that the success–failure distinction does not exhaust the right–wrong distinction: we apply the predicate "successful" when a goal is achieved, but we reserve the predicate "right" when a goal is achieved correctly. This means that, among all possible ways to succeed, there is one that is the right one. And the impact of this distinction for agency is key because in this picture an agent becomes aware of how he or she is acting: the agent acquires epistemic responsibility for his or her actions. This is because someone who does the right thing is normally aware of her way of doing things and also because she aims to act in that way. In this picture, normative practices are equated with rational or intelligent practices, as the agent willingly aims to do things right, acquiring that responsibility for her performance. This is something stressed by authors such as Ryle:

> The well-regulated clock keeps good time and the well-drilled circus seal performs its tricks flawlessly, yet we do not call them 'intelligent'. We reserve this title for the persons responsible for their performances. To be intelligent is not merely to satisfy criteria, but to apply them; to regulate one's actions and not merely to be well-regulated (Ryle, 1949/2009: 17).

So, when an organism is aiming to act in a right or correct way, this means that the organism is aware of a certain norm or procedure and aims to act accordingly, which means that the agent acquires certain responsibility in her performance via social attribution or expectancy (although it can be self-ascribed as well, but first you have to be part of a social environment for acquiring this capacity of self-ascribing oneself an epistemic responsibility regarding the following of social norms). This acquisition of epistemic responsibility for doing the right thing when following a rule implies that the agent is rational or intelligent. This attribution of intelligence should not be understood in the intellectualist way, i.e., the way in which agents follow norms as if they repeat an explicit general instruction in their heads, leaving aside the particularities of the surrounding situation. We are intelligent not because we repeat general maxims in our head and follow them blindly, but because we acquire responsibility for our performances and aim to act rightly, taking into account the particularities of our current situation. As Ryle (1949/2009: 41) claimed, "understanding is a part of knowing how," which means that understanding is highly practical, that we are situated and the exercise of our cognitive capacities is context-sensitive.

Regarding this point, I proposed the idea of *pertinence* as key for understanding how social normativity is situated and highly practical. Once we acknowledge that norm-following is always online or situated, then we realize that being sensitive to the particularities of the context is an essential aspect of human agency. Then, the triadic interaction of agents, norms, and affordances demands a specific notion for evaluating an agent's performance. This comes with the idea of pertinence: one action would be more or less pertinent depending on a combination of the aim or goal to be achieved, the layout of the environment, and the correctness of the action according to the rules being followed for achieving the goal. Thus, "pertinence" is a key notion for describing normative actions because of its usefulness to assess the adequacy of a particular action given the goal, the norms, and the constraints and

facilitations of the environment. We claim that an action is "pertinent" when such action fulfills its goal by applying the correctness criteria in a successful way, solving the problems offered by the specific particularities of the environment. This is why the pertinence of an action is always context-dependent.

In sum, all human actions are subjected to social scrutiny since the earliest stages of human cognitive development, and they never cease to be. As Dewey claimed, "[s]ome activity proceeds from a man; then it sets up reactions in the surroundings. Others approve, disapprove, protest, encourage, share and resist" (Dewey, 1922/2007: 16–7). Individual behavior is shaped by these social reactions, which means that, in general, individual habits are formed through these socionormative institutions that shape the individual's dispositions, and tendencies to act in a certain way (Dewey, 1922/2007: 58). As we can see, a systematized approach to the main features of social normativity allows us to understand the main details of this phenomenon. Social norms are present since the earliest stages of our cognitive development, and they shape our behavior in the form of pressures and encouragements that promote social conformism in individual behavior.

7.5 Integrating Social Norms, Canonical Affordances, and Fields of Promoted Action

How can we disentangle the intricacy of affordances and social norms in our everyday life? From a first-person point of view, the direct perception of affordances and the social pressures for norm-following happen at the same time, but we should understand how they interact. As I wrote before, several questions arise: Are there canonical affordances beyond the case of technological artifacts or devices? How do social norms affect our dealing with affordances? Do fields of promoted action make us "blind" to certain affordances?

Regarding the first question, I think that the expansion of fields of promoted action to our everyday lives can be useful for illuminating whether there are canonical affordances beyond technological devices. In this view, if fields of promoted action are present everywhere (because social norms and affordances share the same space from a first-person perspective), then it is possible to establish canonical uses of affordances via social pressures and beyond technological devices. Thus, the constant pressure or promotion of certain affordances exerted by particular sociocultural norms or conventions produces the establishment of a canon for taking one affordance instead of another. To illustrate this, we could imagine context-dependent cases in which politically oppressed people perceive the throwability of stones as more salient than some other affordances for defending themselves from a tyrannical government, or that thousands of years ago, in the same scenario, the same stones could have been regarded as a source for making fire but not as a weapon for a hunter-gatherer community. In these examples, the stones remain the same, but in each example a different affordance is prioritized, and this prioritization is clearly

socially shaped and socially established. In all cases, the behavioral output of an individual is subjected to social evaluations, which applies to the taking of affordances. So imagine, with this, that the above-mentioned hunter-gatherer population discovers the use of rocks for making fire, and that given the scarcity of rocks in their environment it is established that the use of rocks is restricted to making fire, so they cannot use them as weapons to be thrown. Also, we could imagine that, eventually, the following generations would not feel inclined to use rocks as weapons because such use is not promoted or even regulated by the community. In this sense, canonical affordances are established when the society knows how to do something correctly in the most efficient way: this sets up the scenario with prescriptive force in which the agent aims to do the right thing and learns how to do it efficiently with practice. In sum, social norms work as pressure mechanisms that urge or encourage us to take some affordances instead of others. This is useful to understand how canonical affordances are established: they are not established or determined due to particular aspects of the object itself, but because of the very social norms that need to be followed in particular contexts. This can be obvious in the case of technological objects, as they are designed to satisfy particular norms. However, what is canonical may change in different contexts and depending on human needs or conventions.

As we can see, with the expansion of fields of promoted action beyond infancy and development, we can claim that there are different fields of promoted action that depend on different socionormative contexts. These fields of promoted action are the product of a particular engagement between agents regarding a particular social norm or a set of social norms. In this sense, the time frame of a particular field of promoted action is shaped by a particular social norm that is being followed at a particular time, and since agents aim to follow that norm to fulfill a goal, agents exclusively pay attention in those contexts to the affordances that allow us to act in the right way. The aspect of attention is important: given that every task is goal-directed, the attention of the agent is directed toward what is important to satisfy the goal correctly. Thus, the norm itself pushes the agent toward paying attention to the affordances that are relevant to satisfy the goal correctly. Thus, agents not only learn to act normatively in a more efficient way making use of particular affordances, which establishes a particular canonical use of them, but also educate their attention to look for the suitable affordances that allow them to perform that action. It is important to emphasize that the object of perception, the affordance, is not modified by social norms: what social norms do is to modulate our focus of attention so that we pay attention to some affordances instead of others. In this sense, social norms exert pressure in the repertoire of exploratory patterns to make us focus on the affordances that are relevant for following the norm. The rest of the affordances become irrelevant; hence, agents are said to be "blind" to the affordances that are not relevant to the goal the agent is pursuing.

7.6 Conclusion

In this chapter, I aimed to begin disentangling the concepts of social norms and affordances. From a first-person perspective, our everyday experience provides us with different available social norms and affordances. They share the same space, and they are equally demanding. Even when they are different (social norms are conventional and affordances are perceptual), they are equally real to us, just like Costall claimed. I tried to illuminate some aspects of how both are related in our experience through the analysis of the connections among them with the idea of Reed's fields of promoted action. For this, I expanded fields of promoted action from infant development to everyday experience: I think this move is reasonable because humans are always trying to improve their performance and learning how to follow norms and take affordances more efficiently. The idea of fields of promoted action could serve to highlight how social norms act like pressures for taking some affordances in different normative contexts, establishing canonical uses of affordances depending on the situation and the norm to be followed, and then educating our attention toward some specific affordances instead of some others (the ones that are relevant for satisfying a norm correctly). It is only by analyzing in detail how affordances and norms coexist and mutually affect each other that we can integrate these concepts under a single explanatory framework that does justice to our everyday experience.[2]

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