

Agency in behavior settings: A mindshaping perspective on ecological psychology

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Abstract

This chapter focuses on Heft's ecological interpretation of behavior settings, and specifically on the question how to understand individual agency within this framework. We will argue that although Heft's remarks about agency offer promising suggestions, they do not yet provide a full-fledged account of how agency can be understood as being situated in behavior settings. Elaborating on the work of McGeer, we aim to show how the mindshaping view can contribute to an explanation of how behavior settings shape agency, without determining it (thus leaving room for individual freedom). Thus, we propose an outline for a situated theory of agency that combines Gibson's ecological psychology, Barker's eco-behavioral science, and McGeer's mindshaping approach.

1. Introduction

In this chapter, we aim to examine the account of individual agency that Harry Heft advances in relation to Barker's theory of behavior settings. Our main hypothesis is that the mindshaping view put forward by Victoria McGeer (2015, 2021) provides useful tools for understanding agency as an individual feature that is nonetheless situated in the context of behavior settings.

The structure of the chapter is as follows. In section 2, we provide the background on eco-behavioral science, focusing on the main characteristics of behavior settings. In section 3 we analyze Heft's interpretation of this notion, as well as his concern with understanding the relationship between behavior settings and individual agency. Even though we believe that Heft's approach offers promising suggestions to build a situated theory of agency, we find his proposal wanting. Subsequently, in section 4, we will develop the outline of a situated account of agency that explains how behavior settings shape individual agency without determining it. To do so, we will draw from McGeer's mindshaping perspective on agency. As we will show, the mindshaping view can complement the Gibsonian approach favored by Heft, giving us the resources needed to understand how agency can be an irreducible feature of individuals and thoroughly situated at the same time.

2. A primer on behavior settings

The notion of "behavior setting" was first coined by psychologist Roger Barker (Barker, 1975, 1978) and his collaborator Herbert Wright to account for the observed variability in children's behavior in different contexts. In 1947, Barker and Wright inaugurated The Midwest Psychological Field Station, a research station devoted to collecting data about the daily behavior of a group of children from Oskaloosa, Kansas. At first, Barker and his collaborators found that the children's actions over their day were structured (e.g., regarding their frequency, distribution, and so on), and assumed that this structure should be a consequence of identifiable social stimuli, such as specific actions or calls by their peers and caretakers (1975, p. 147).¹ Consequently, they thought that by discovering these social stimuli they could formulate laws of behavior.

This assumption, however, proved wrong, as researchers were unable to find social cues that could serve as reliable predictors for the behavioral episodes under scrutiny. Alternatively, Barker and his collaborators noticed a crucial aspect: namely, that the behavior of different children varied

¹ For Barker, behavior occurs in molar units. These units consist of goal-oriented activities (behavior episodes) with a beginning, a direction, and an end.

less within specific places than the behavior of a single child across different locations.² This made the researchers shift their focus from seeking individual social inputs to investigating the characteristics of the places where the behavioral episodes occurred. This was the beginning of what later came to be named “eco-behavioral science”:

We found that we could predict many aspects of children’s behavior more adequately from knowledge of the behavior characteristics of the drugstores, arithmetic classes, and basketball games that they inhabited than from knowledge of the behavior tendencies of the particular children. (Barker, 1978, p. 42)

A new hypothesis followed this discovery: if the behavior of children is structured depending on where it takes place, this structure most likely stems from the structure of the place itself. Barker referred to these extra-individual environmental structures as “behavior settings.” A behavior setting is a group-level phenomenon that occurs at the scale of lecture theatres, grocery stores, churches, and so on, and that involves individual agents interacting with specific aspects of their environment and peers in a patterned way:

A behavior setting is a standing behavior pattern *together with* the part of the milieu to which the behavior is attached and with which it has a synomorphic relation [...] Behavior settings are behavior-milieu phenomena; the milieu is circumjacent to the standing pattern of behavior. (Barker, 1978, p. 27, emphasis in original)

Behavior settings have the following characteristics. First, they occur naturally in the sense of not being created by the experimenter. They have specific locations, both spatially and temporally. They are composed of particular patterns of behavior and specific topological features and objects of the environment. Behavior patterns and environmental features stand in a complementary or “synomorphic” relation. Fourth, there exists a crucial interdependence between the actions of individuals and the behavior settings. On the one hand, behavior settings are generated and maintained by the collective actions of individuals. For instance, although the store may exist physically as a location, it does not exist as a behavior setting if no people purchase items, replace them, etc. On the other hand, the existence of the settings affects the behavior of the individuals as well. They do so in the first place because they make possible the performance of some actions; but they also constrain the actions of their “inhabitants.” Crucially, this constraining is sometimes

² An example of this is aggressivity. Barker and colleagues found that some children displayed different levels of aggressivity when exposed to different social situations, but these changes were congruent with the places where children were at the different times.

due to the intervention of some inhabitants who correct behavioral deviations of others, but it is often the case that the individuals correct themselves. Lastly, individuals who “inhabit” a behavior setting often play specific roles (the teacher, the waiter), although they can be replaced sometimes (e.g., another person can play the role of teacher). It follows that behavior settings have some degree of flexibility, in the sense that some aspects can be altered without destroying or dissolving it.

As we see it, the theory of behavior settings can be considered a precursor of what we nowadays refer to as “situated cognition” (McGann, 2014; Heft, 2018, 2020; Gallagher & Varga, 2020). Barker’s hypothesis is that the behavior of individuals should be accounted for, at least partially, in terms of supra-individual elements of the environment. It follows from his theory that the main unit of analysis for psychologists is no longer the individual’s mind, but an extended system that includes both the individual and the characteristics of the behavior setting (including other agents and the *milieu*). In this sense, these extra-individual elements cannot be interpreted as being just the normal ecological backdrop that an agent’s internal cognitive machinery needs to achieve goal-oriented action coordination. Rather, they must be seen as constitutive parts of the cognitive machinery itself. Action, so Barker’s eco-behavioral science suggests, is irreducibly situated.

3. Agency in behavior settings: Heft’s proposal

Barker’s eco-behavioral approach constitutes a genuine innovation in scientific psychology due to its emphasis on the relevance of the supra-individual structures in understanding human behavior. Nonetheless, some authors have criticized Barker for putting too much emphasis on describing the dynamics at the level of behavior settings while at the same time forgetting to account for how individual agency intertwines with the setting’s constraints. For instance, it is a fact that behavior settings do not provide strict programs or scripts, and that the same individual can play different roles in the same setting at different moments. Similarly, explanations at the setting-level cannot account for the fact that individuals enter, leave, create, and modify settings according to their particular goals.

One of these critical voices is Harry Heft.³ As he observed:

³ A different kind of critical approach has been developed by Wicker (1992, 2002). Unlike Heft, Wicker’s solution is thoroughly internalistic.

[T]he resulting account [of Barker’s eco-behavioral science] does not offer predictions at the level of any particular individual. Instead, it provides an analysis of the ecobehavioral resources of a place at an extra-individual level. [...] A question, then, that Barker needed to confront was how to understand the relation between behavior settings and the actions of individuals. (Heft, 2001, p. 258)⁴

In order to answer this question, Heft has proposed to take inspiration from J. J. Gibson’s ecological psychology (Gibson, 1966, 1979[2015]). One of the core ideas of Gibsonian psychology is that individuals make their way in the world by acting on perceived affordances. Affordances, however, are *not* private entities that exist on the mind of the perceiver. Contrariwise, Gibsonian psychologists hold that the perceptual information available in the ambient array of a location – i.e., the temporally extended structures and patterns present in ambient light within a room – provides individuals with the right kind of perceptual systems with information about the possibilities for actions afforded by the objects therein – whether they can be grasped, reached, if they are throwable, and so on. Thus, when individuals detect this perceptual information, they perceive the objects’ affordances. Taking Gibson’s ecological psychology as its starting point, Heft proposes to understand agency as the “selective control” that individuals have in perceiving and acting upon affordances (2001, p. 198; see also Reed, 1996).

With this basic definition at hand, the next question concerns how behavior settings relate to individual agency. Importantly, Heft believes that, for human beings, agency is always and everywhere socially situated. This means that “the ways individuals engage the environment, in large measure, grow out of an ongoing developmental history of participation in social practices within their community” (Heft, 2020, p. 814). According to him, if we understand behavior settings as higher-order structures that emerge through the coordinated actions of individuals, we can postulate that “inhabitants” of behavior settings can perceive affordances related to these settings (see Heft, 2001, p. 296; Heft et al., 2014).

However, the story is more complicated than it may look at first sight. On the one hand, as Heft acknowledges, behavior settings do not simply afford particular actions to their inhabitants. Instead, they somehow “coerce” how the individuals act. On the other hand, this coercion is not absolute, for individuals can still behave relatively freely within behavior settings. Moreover, they can choose whether or not they want to inhabit them. This leads to the fundamental question of

⁴ According to Heft, Barker offers a sketch of an answer drawing upon Heider’s distinction between “thing” and “medium” (Heft 2001, pp. 258-261). Heft is nonetheless critical of this solution, for he considers that it perpetuates undue dualisms in psychology.

how to develop a unified understanding of agency that covers both individual selective control upon affordances, and the environmental structuring and constraining that takes place in a behavior setting. As Heft puts it: “How can the operations (e.g., control processes) of an autonomous agent in a complex system be conceptualized in a manner that is consistent with the operations of the broader, dynamic system with multiple determinants?” (2001, p. 317). In short, Heft is after a *situated* notion of agency.

To face this challenge, Heft refers to the work of Hutchins (Hutchins, 1995) and proposes to understand behavior settings from the point of view of distributed cognition. Distributed cognition is “a framework for thinking about cognition which seeks to understand how the cognitive properties of aggregates emerge from the interaction of component parts” (Hutchins, 2001). When applied to specific cognitive abilities – e.g., the capacity of pilots to remember the range of speeds at which landing is safe –, this framework predicts that the cognitive activity is not performed by any single element in isolation. Instead, it emerges from the complex interaction of the different parts of the system – encompassing not only the individual pilots but also other crew members and the artifacts in the cockpit. Following Hutchins, Heft proposes that individual agency emerges⁵ within the constraints of a distributed cognitive system that is the behavior setting:

The individual conceptualized as part of a person-environment system is an *adaptive agent*. Actions reflect an ongoing selective engagement of particular features of a setting, an attunement to some dynamic structures rather than others [...]. The individual is functionally flexible, adaptively shifting in the focus of intentional action and shifting with respect to contextual frames. In the case of a distributed cognitive system, the individual functions selectively and coordinately to maintain operations that encompass artifacts, representations, and other individuals. (2001, p. 366)⁶

Although we wholeheartedly agree that agency involves adaptation to the situational constraints imposed by behavior settings, it is not clear to us how agency could be conceptualized

⁵ The language of “emergence” is explicitly used by Heft: “psychological functions at any given moment emerge from a confluence of multiple dispositions to act expressed in conjunction with the multiple and changing conditions of the environment confronting the individual over time. And considering the active character of animate processes and the changing character of environmental conditions, this is a dynamic, ceaselessly shifting process” (2001, p. 317).

⁶ In line with Heft, McGann has proposed that agency is in itself distributed (McGann, 2014). As he puts it, “agency is not circumscribed by the organism,” rather, he contends, “it is distributed through the physical, and particularly the social, environment in which the organism is operating” (p. 224). To this, he adds: “From such a perspective agency is something that holds in situations” (p. 229).

as an emerging property of distributed cognitive systems. For one thing, Heft recognizes (2001, p. 365) that Hutchins' view is in tension with Gibson's ecological approach, as Hutchins explicitly embraces the view that cognition consists of the manipulation of representations. This tension motivates Heft to interpret distributed cognition and behavior settings through the lens of Dynamical Systems Theory (DST) (pp. 329-322). However, we hold that this second move is also problematic. As noted by Chemero (2009, pp. 96-97) and Beer (2014, p. 135), DST comprises a set of mathematical tools that help us model the behavior of systems that change over time in a lawful way, but these tools do not by itself constitute a theory of cognition. It follows that although cognitive systems can be modelled using DST, DST *alone* cannot tell apart a cognitive system from any other physical system that can also be modelled using the same mathematical formalism (e.g., a hurricane, a pair of pendulums, a neural network, etc.). We hold that the same conclusion follows with respect to agency. Even if DST might be a useful tool to model the behavior of agents, it can't tell us what agency is. Hence, we do not think that DST is the right tool for analyzing the kind of situated "intentional selective operations" that Heft is trying to account for, and which we agree are central for understanding human agency and action.

Secondly, we have some difficulties with the use of the distributed cognition framework to explain agency. Recall Hutchins' example of pilots remembering the speed range at which landing the aircraft is safe. This cognitive task is explained by combining the cognitive properties of different "aggregates". However, some of these aggregates are themselves agents. The pilots, for example, can choose whether they want to follow the ready-made protocols, or whether they will improvise new techniques to calculate the speeds. Distributed cognition, then, already implies the existence of agents who, together with other agents and specific artifacts, can achieve cognitive tasks. But if agents are required for distributed cognition, it is hard to see how distributed cognition can account for agency in the first place.

These shortcomings motivate us to seek for other resources that could help build a situated theory of agency. The following section is devoted to this task.

4. In what sense is human agency situated?

We finished the previous section by claiming that the frameworks of distributed cognition and DST are not adequate to explain in what sense human agency is situated. To repeat, for us the challenge consists of understanding how the individual's agency and the dynamics of behavior settings intertwine. Remember, too, that this relationship is two-fold. When individuals participate in behavior settings, their perception-action gets shaped by the dynamics of the setting. Yet, at the same time, the constraint imposed by the setting is not absolute, for a behavior setting depends

on individuals willing to participate and comply with its norms. This analysis opens up two different questions. First: how do behavior settings shape individual agency? And second: how does the behavior settings framework deal with individual freedom?

Before we provide an answer to these questions, we submit to the reader the idea that agency, far from being a single feature of biological organisms, consists of a set of capacities that together enable individuals to act in a goal-directed way. Among these capacities is the “selective control” that individuals have in perceiving and acting upon affordances, but also others that serve to complement and scaffold this basic capacity, including our abilities to make plans and reflect on the course of our actions. Moreover, what makes our analysis of agency a *situated* analysis is that it understands this set of capacities as being at least partially constituted by socio-normative practices (De Bruin, 2017; De Jaegher & Froese, 2009; Maiese, 2021). These socio-normative practices, however, are anchored to (or situated in) specific behavior settings. Our claim is then that human agency must be understood in relation to behavior settings. Importantly, our proposal echoes more recent ideas put forward by Heft concerning perceptual learning and development (see Heft, 2018),⁷ but introduces a new element in the discussion: we draw upon McGeer’s view of “mindshaping” (McGeer, 2015, 2021) to develop a concrete proposal on how to understand the relationship between human agency and behavior settings.

According to McGeer, a crucial feature of human agency is the fact that it develops within a normative, social context. From birth on, humans shape each other’s behavior and thought by means of folk-psychological regulative practices. This can be as basic as a parent telling her child that if they say they want a sandwich, we expect them to eat it. By means of such simple exchanges, we teach children how to believe, desire or act in appropriate ways. Moreover, by becoming enculturated in such mindshaping practices, we don’t simply become more prone to correct other people when they violate our expectations, but learn to hold ourselves accountable for norm transgressions too (McGeer & Pettit, 2002). As McGeer puts it:

The central insight of the mindshaping view is that agents learn to become well-behaved folk-psychological agents, shaping their thought and action to conform to locally relevant norms of recognizable kind-and-context-appropriate agency (where kinds of agents may be differentiated along any of a number of dimensions: gender, class, role, and so on.). (2021, p. 1058)

⁷ See section five for an elaboration of this connection.

The core idea of the mindshaping view is thus that our folk psychological practice of ascribing beliefs, desires and intentions to each other and ourselves should be understood, first and foremost, as a *regulative practice*. Its primary function is not, as was traditionally thought, to understand and explain what others do in folk-psychological terms, but to regulate or shape our own minds.⁸ It follows that in learning how to engage in folk-psychological normative practices – e.g., learning what ‘believing something’ entails – we learn how to shape our own thought and action to accord with the myriad of norms that are proper to our cultural milieu. These norms involve, among other things, what is appropriate to believe, what is appropriate to desire and intend, and, most importantly, what is appropriate to do in light of one’s beliefs and desires. Moreover, the mindshaping view proposes that by learning how to operate within these folk-psychological norms “[w]e learn how to be interpretable, according to those norms – and thereby how to interpret others who shape their thought and behavior likewise” (2021, p. 1050). Therefore, folk-psychological mastery is essential for achieving social coordination in human communities.

There are some specific aspects of the mindshaping view that deserve further consideration. First of all, it does not assume the existence of such folk-psychological states prior to the acquisition of the relevant folk-psychological vocabulary and the norms that regulate its use. Secondly, the norms that regulate individuals’ thought and action are not private entities. Instead, they are publicly shared and negotiated whenever individuals call each other to account. Summing up these features together, McGeer writes: “The regulative view conceptualizes folk-psychology as a fundamentally *interpersonal* (versus individualistic) *mind-making* (versus mind-detecting) enterprise” (2015, p. 261, emphasis original). Third, the regulative view takes inspiration from Ryle and Dreyfus, as it understands folk-psychological mastery in terms of *know-how*. McGeer makes this point explicit when she compares our ability to think and behave as well-regulated folk-psychological agents with our ability to play chess (2015, p. 263). As she tells us, even though at the beginning we may need to think explicitly of the rules that are at play in chess, mastery is only acquired when we develop the right embodied dispositions to behave according to these rules. In this sense, the regulative view is also explicitly *non-intellectualist*:

[E]xpert performance depends on rule-abiding (and rule-governed) procedures become embedded in bodily schemas—i.e., motor and cognitive routines (ways of thinking/acting)

⁸ Importantly, McGeer does not deny the reality of our capacity to interpret and even predict the behavior of others in folk-psychological terms. Instead, she holds that this epistemic capacity is a consequence of our capacity to regulate our own behavior in such terms. In this sense, our capacity for mind-reading is not pre-existing but depends on particular forms of enculturation and is limited to the degree to which we participate in cultural mind-making practices.

that just operate in accordance with the rule. This is what makes skilled performance fast, fluid, effortless and intuitive. (2021, p. 1048)

In sum, the idea is that human agency develops within folk-psychological practices that shape our minds by teaching us how our beliefs, desires and actions are governed by norms. By making folk-psychology a primary regulative enterprise, this view suggests that individuals incorporate into their behavioral repertoire a series of capacities to employ, both in thought and in action, folk psychological normative notions.

We can now come back to our previous proposal that agency consists of a set of capacities that together enable individuals to act in a goal-directed way. Whereas Heft focused on the capacity of exerting control upon what affordances are perceived and acted, we want to emphasize the additional importance of the capacity of regulating thought and action in normative folk-psychological terms. This second capacity, we believe, is exclusively human, but it serves to scaffold the other, more basic, capacity proposed by Heft.

To see the connection between folk-psychological thinking and ecological psychology consider the proposal advanced by Brancazio & Segundo-Ortin (2020; see also Segundo-Ortin & Kalis, *under review*) that mastering the use of the concept of ‘intention’ is a useful tool to coordinate our perception and action upon the affordances currently present to achieve distal goals. An example of this is Louise’s plan to take a trip to the consulate to renew her visa tomorrow. There are a number of steps she must take care of in order to achieve this, some of which must be attended to in an orderly fashion – e.g., first, she must check the train schedule and see whether it conflicts with her work, after this, she should register the absence in her work roster, then, make sure she can get to the station in time to catch the train, and so on. Successfully carrying out these steps requires one to perceive and take advantage of the relevant affordances in the environment. According to Brancazio and Segundo-Ortin, when individuals learn how to formulate explicit intentions, they develop the capacity to make plans, and, with it, the capacity to exert control upon the affordances they seek to perceive and actualize at each moment in relation to distal goals. Intentional thinking, they hold, is a useful means to link individual perception-action cycles into coherent wholes. Following this view, Segundo-Ortin (2022, pp. 8-9) argues that intentional thinking is also useful for individuals to learn what affordances are appropriate to them to actualize.⁹

⁹ “For instance, I can deliberate about what it is more appropriate to do if I have a deadline in two days and my friends are asking me out and reach the conclusion that I should stay at home to finish the paper. In this situation, I use self-directed speech to control my attention, focusing on the specific aspects of the environment that are relevant to what I intend to do” (Segundo-Ortin, 2022, p. 8)

This idea, we believe, fits hand in glove with the claim by McGeer that mastery of folk-psychological concepts “shapes how agents perceive the world around them” (2021, p. 1058). Even though she focuses her analysis on how the development of folk-psychological expertise improves our ability to perceive “agency-indicative information”— e.g., people’s movements, gestures, facial expressions, etc. —, we believe that it also enables us to make better use of the environment’s information about affordances. In sum, our claim is that becoming an effective agent involves regulating not only our thought and action, but also our perception of affordances in goal-oriented and normative ways.

Now that we have explained in which sense mindshaping scaffolds the development of individual agency in human beings, it is time to come back to the questions we enounced at the beginning of the section: How do behavior settings shape individual agency? And, how does the behavior settings framework deal with individual freedom? By answering these questions we hope to show that the mindshaping view of folk-psychology can play a valuable role in understanding situated (human) agency.

In responding to these questions, it is important to understand the role that normativity plays in mindshaping. As we mentioned before, the key idea is that individuals learn how to shape and regulate their thought and action (and perception, we add) in accordance with norms. Complying with these norms is essential for making us understandable to others. However, these norms do not ‘float free.’ Instead, they are anchored to specific *places* or *behavior settings* outside of which the behavior will be perceived as incomprehensible. This point is highlighted in an example put forth by McGeer (2021) concerning rugby. At first sight, it is obvious that learning how to play and appreciate rugby requires developing both a set of athletic skills and a cognitive repertoire to *understand* the game. This involves, first and foremost, an understanding of the rules (knowing them, and, more importantly, knowing how to apply them), but also the capacity to predict what the players are likely to do in different circumstances, as well as the ability to adapt your actions to these foreseen possibilities. However, the point we want to stress here is that both rugby playing and rugby understanding also require “certain culturally produced and culturally maintained environmental resources: e.g., the ball; the pitch with its various designated zones (e.g. midline, goal line, out lines and so on); even the existence of other players [...] exercising rugby know-how depends on the continuing persistence of these cultural practices in the surrounding environment” (p. 1045). In other words, both rugby-playing and rugby-observing expertise require the existence of behavior settings where these activities make sense.

The important thing to note is that, for McGeer, rugby is not an exception. On the contrary, all kinds of everyday practices are dependent on the existence of culturally produced and culturally

maintained behavior settings where the practices make sense. This means that we can only behave as *experts* – understanding and predicting others and making ourselves understandable at the same time – in the context of concrete behavior settings. Acting and thinking as a rugby player only makes sense in a rugby pitch (or something near enough), with other agents that can behave as teammates and opponents, and so on, and, by the same token, acting and thinking as a grocery shopper only makes sense in the context of a store or a market.

This allows us to offer an answer to our first question. As we see it, behavior settings shape individual agency by supporting the learning and practicing of specific folk-psychological norms. These norms concern, first and foremost, how we (and the others) should behave, but also what it is appropriate to believe, desire, and so on. Therefore, some of the capacities that are constitutive of human agency – our capacity to make plans and understand our actions and those of others in folk-psychological terms – only make sense in the context of our participation in particular behavior settings. The norms that make possible expert agency in particular domains only exist insofar as they are anchored to specific behavior settings.

But, moving on to the second question, how does the behavior settings framework deal with individual freedom? As pointed out earlier, the constraints imposed by behavior settings are far from absolute, and the ‘mindshaping’ brought about by participation in behavior settings not only enables agents to adhere to the relevant rules, but also to criticize or ignore those rules. In other words, its account of agency is built on the assumption that human beings are not determined by their environment. This is why our folk psychological practices are characterized by an elaborate system containing numerous ways to motivate, prod, rebuke and sanction those who fail to adhere to folk psychological norms:

Thus, competent folk-psychologists not only know how to regulate their thought and action in accord with such norms [...] they also know how to enter into negotiations about normatively untoward behavior and to offer excuses, explanations, apologies and adjustments when these are seen on all sides to be merited. (2015, p. 266)

Folk psychological practices that are grounded in behavior settings thus enable participants to become ‘enculturated free agents’, in the sense of regulating their behavior and thought in relation to social norms. However, even if rejecting or ignoring folk psychological norms is always a possibility, it must be noted that being comprehensible to others and ourselves is something human beings generally deeply care about (McGeer, 2015). Behavior settings offer the concrete contexts in which we can make ourselves comprehensible to others. So even if individual agents always have the genuine option to violate or ignore norms, the regulative power of behavior settings should not be underestimated.

5. Concluding remarks

Following Heft's ecological interpretation of Barker's eco-behavioral science, we have tried to offer a situated account of human agency. At the core of our proposal is the view that agency consists of different capabilities that together enable individuals to act in goal-oriented ways. One of these is the capacity to exert control upon what affordances we perceive and act, as Heft proposes. However, this is not the complete story. Following McGeer, we have argued that agency also encompasses the capacity of thinking and acting according to folk-psychological norms – norms that prescribe, among other things, what is appropriate to believe, what is appropriate to desire and intend, and, most importantly, what is appropriate to do in light of one's beliefs, desires, and intentions. These folk-psychological norms, we have argued, are situated in the sense of being anchored to specific behavior settings outside of which they make no sense. This means that many of the norms we abide by at any specific moment in time, belong to the behavior setting where we are. In sum, our claim is that insofar as individual agency is constrained by these norms, and the norms are anchored to behavior settings, individual agency is *situated*.

This proposal, we believe, resonates well with Heft's own position, and in fact tries to extend it. For instance, in a recent paper on behavior settings, he claims that “[i]f children are to function adaptively as social beings in the community whether they develop and live from day to day, they must learn not only where such places are located but also how to participate in them” (2018, p. 100). Following the mindshaping view, we hold that learning how to participate in a behavior setting requires, among other things, making ourselves understandable to others, as well as learning how to understand and predict them. The capacity to think and act according to folk-psychological norms, we claim, is crucial to achieve this. Likewise, to the claim that “the ways individuals engage the environment, in large measure, grow out of an ongoing developmental history of participation in social practices within their community” (Heft, 2020, p. 814), we add that among these practices are those that consist of making sense of ourselves and others in folk-psychological terms.

Furthermore, we hold that this proposal opens up new possibilities for those who, starting from J. J. Gibson's ecological psychology, aim to build a theory of human agency. In particular, we think that investigating the relationship between explicit thinking – particularly thinking that incorporates folk-psychological terms – and direct perception of affordances is a promising research venue. As we have argued, it is not a wild speculation that human beings use explicit intentional thinking to regulate what affordances of the environment they seek to perceive and actualize (Brancazio & Segundo-Ortin, 2020; Segundo-Ortin, 2022). In fact, this idea is in line with the proposal of other Gibsonian theorists, including Sanches de Oliveira et al. (2021) or Reed

(1996) of incorporating explicit, linguistically-articulated thought into ecological psychology. Even Heft (2020, p. 822) seems to recognize this possibility when he suggests that concepts can contribute to our awareness of social structures and institutions.

An account of agency based on mindshaping is situated in another sense: the folk-psychological norms that shape our individual agency are publicly shared (McGeer, 2015, p. 263). This means that folk-psychological norms only come into play for individuals once they have been learned from others – often, after they have been corrected or called upon for some transgression. Moreover, in line with the emphasis on *know-how* put by McGeer, we can dispute whether norm-abiding behavior requires the representation of norms. For one thing, we often behave in normatively appropriate ways without being able to explain it (see Rietveld, 2008 for different examples of this). And even though we sometimes enounce norms – for instance, when we correct others, or when we justify our actions to others – there is no reason to think that these are acts through which we externalize a previously represented rule or norm. Contrariwise, it is possible that we create a representation of the norm *in situ*, reflecting on what we and others usually do in the same or similar circumstances (Segundo-Ortin, 2022). Therefore, we believe that McGeer’s mindshaping framework has all the required ingredients for being fruitfully combined with Heft’s ecological interpretation of behavior settings, and we look forward to further develop the resulting account of situated agency in the future.

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