



In Defense of Introspective Affordances

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Abstract

Psychological and philosophical studies have extended J. J. Gibson's notion of affordances. Affordances are possibilities for bodily action presented to us by the objects of our perception. Recent work has argued that we should extend the actions afforded by perception to mental action. I argue that we can extend the notion of affordance itself. What I call 'Introspective Affordances' are possibilities for mental action presented to us by introspectively accessible states. While there are some *prima facie* worries concerning the non-perceptual nature of introspection, I will argue that our internal mental lives share enough commonalities with experiences in our environment to warrant this extension. I will demonstrate the value of introspective affordances by showing how they allow us to explain an underexplored aspect of thought insertion.

Keywords Mental affordances · Affordances · Introspective affordances · Introspection · Thought insertion · Immunity to error through misidentification · Schizophrenia · J. J. Gibson

1 Introduction

The notion of affordance is supposed to capture the relationship between a perceptually capable subject and the environment of that subject (Gibson 1979). The relationship is one in which objects, through information passed by ambient light, present or *afford* possibilities for action (Gibson 1979, 132). Additionally, affordances partially constitute the perceptual experience of the subject. This account of a subject's rela-

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tion to the environment brings perception and action into closer relation than previous structuralist and gestalt theories of perception.

Talk of affordances has not only permeated closely related fields such as developmental psychology and philosophy of psychology but also areas such as architecture and user experience/interface design (Hartson and Pyla 2019a; Hartson and Pyla 2019b).¹ We have recently seen promising work at the interface of mental action and affordances. For instance, there has been recent work on affordances guiding action (e.g., see Hall 2008; McClelland & Jorba, 2022) and perception of objects affording mental action (McClelland 2020), such as attending to a picture or counting objects. I plan to argue that affordance should not be thought of as merely our relationship with our physical environment via perception. Additionally, our relationship to our own introspectively accessible mental states can afford mental action. I will call such affordances ‘Introspective Affordance’. Mental acts afforded by introspection could include drawing a conclusion, adding numbers in your head, classifying an occurrent thought as disturbing, realizing two of your beliefs contradict, endorsing an occurrent thought, and rotating a mental image.

This extension of the notion of affordance and its relation to mental action will require much more clarification. I can start by contrasting it with McClelland’s 2020 project mentioned above. In that project, McClelland advances the Mental Affordance Hypothesis (MAH).² He claims:

MAH is thus true if and only if there are affordances to perform a mental act ϕ such that:

PERCEPTUAL REQUIREMENT: S perceives x as affording ϕ -ing, and;
POTENTIATION REQUIREMENT: S perceiving x as affording ϕ -ing potentiates S ϕ -ing (2020, 412).

For McClelland, what makes MAH a hypothesis about ‘mental affordances’ is that ϕ -ing can be a mental act. However, the notion of affordance is still Gibsonian in that it is a relationship in which information from the environment is perceived by the subject and presents or affords possibilities for action (Gibson 1979, 132). I agree with McClelland’s MAH and take for granted that there is such a thing as mental action and that perceiving objects can afford such action (I will explain what I take such action to be in Sect. 3.2). What I am arguing for here is that we are warranted in claiming that we have a non-perceptual relationship to our mental states that *also* affords possibilities for action. While some mental states are quasi-perceptual in that they are imagistic states (e.g., imagining the smell of pizza or the sound of a trumpet), many mental states need not be. So, my claim is that introspective relationships between a subject and their introspectively accessible mental states present or afford possibilities for mental action.

¹ What could lead to confusion for those of us outside of UX design is the psychologistic taxonomic names they use. “In UX designs, cognitive affordances help users with their cognitive actions. Physical affordances help users with their physical actions. Sensory affordances help users with their sensory actions (e.g., seeing, hearing, touching)” (Hartson and Pyla 2019a, 651).

² The phrase ‘mental affordances’ is ambiguous between the affordance relation being mental or the actions we take being mental. McClelland goes with the latter and, for clarity, I will follow this practice.

I will proceed as follows. In Sect. 2, I will briefly explain the concept of affordances developed by James J. Gibson. While affordances are a part of Gibson's larger ecological theory of perception, I will follow Scarantino (2003) in treating affordances as useful whether or not one adopts other aspects of Gibson's ecological theory. In Sect. 3, I will sketch what I take to be some central problems with extending the perceptual theory of affordances to phenomenally conscious mental states.³ I will argue that perceptual and introspective affordances share enough features in common to warrant the extension of the term 'affordance'. In Sect. 4, I will provide an analysis of thought insertion that is greatly helped by using introspective affordances.⁴ I will close in Sect. 5 by reviewing some key points of my arguments and further advocating for introspective affordances.

2 Affordances

I will briefly explain the concept of affordance developed by James J. Gibson. I will discuss his ecological theory of perception, contrasting it with other theories of vision. While some favor his entire ecological theory, I will just focus on the concept of affordance.

Gibson's developed account of affordances can be seen in *The Ecological Approach to Visual Perception* (1979) although its precursors can be traced through earlier works (Gibson 1950, 1951, 1952, 1958, 1963, 1971; Gibson and Gibson 1955). We can take Gibson's initial coining of the term as a starting point:

The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill. The verb *to afford* is found in the dictionary, but the noun *affordance is not*. *I have made it up*.... It implies the complementarity of the animal and the environment. (1979, 119)

Realizing both the novel and cryptic nature of the claim, Gibson immediately provides examples. He distinguishes between objects we perceive that are *attached* (large and often unmoving with respect to the animal) and *detached* (usually smaller and manipulable with respect to the animal). His examples of what attached objects afford *persons* normally have the following form: BODILY-LOCOMOTION VERB—RELEVANT PREPOSITION—“able”. For instance, a road is “walk-on-able” or “run-over-able” whereas a body of water is “sink-in-able” (Gibson 1979,

³ I should note that by ‘phenomenally conscious’ I mean what Block would call P-consciousness (1995). That is to say that a mental state is phenomenally conscious just in case there is something it is like to be in that state. I take being able to veridically report the mental state that you are in as sufficient evidence that you are P-conscious of that state. To say that there is something it is like to be in that state does not require that only mental states with robust phenomenology (e.g., sensory experiences or mental imagery) can be experienced (for a discussions of non-imagistic phenomenology see Strawson 2010; Siewert 1998; Horgan and Tienson 2003; Pitt 2004; Gray 2013; Kriegel 2013; Chudnoff 2015; Montague 2016; Mendelovici 2018).

⁴ I should note that this is not the only paper that discusses affordances and thought insertion. For a discussion informed by an enactivist and phenomenological approach, see (Maiese 2023).

119). Talking about affordances in this way captures the feature that animals normally are not manipulating attachable objects but moving over or through them. Detached objects normally afford manipulation. As such Gibson talks about the affordances using gerunds: a hammer affords hitting or throwing because it is graspable and portable, respectively (Gibson 1979, 125).

Gibson further characterizes affordances with the following claims:

- The information for perceiving affordances is presented in our Ambient Optical Array (AOA)⁵.
- Affordances present themselves as we navigate our habitat (although a ‘niche’ is better thought of as the affordances in a particular habitat) (120).
- we can afford both objects and regions (128).
- Most affordances are perceived directly (i.e., non-inferentially) (134).
- We can misperceive objects and thus affordances (133–34).

Gibson fully acknowledges his indebtedness to the Gestalt concept of “Demand Character”, i.e., a characteristic that we perceive that can place demands on us (Koffka, 1935). However, Gibson was skeptical of the strict divide that Gestalt theorists saw between the physical or objective and the phenomenal or subjective. He took commitment to this bifurcation as the reason the concept of Demand Character was classified as phenomenal. We can see what that error would look like if we took affordances to be observer relative in the following way. It is not the case that affordances change as the needs of an observer change (130). This differs from the concept of Demand Character, where a Gestalt theorist might say that a mailbox might have a particular demand character when I need to mail something that it loses when I do not (130). For Gibson, affordances are “invariant features of perceived objects” (130). Nevertheless, affordances are “properties of things *taken with reference to an observer* but not properties of the experiences of the observer” (129). This makes affordances dependent on both environmental and behavioral factors (121). As such, Gibson thought that to study affordances, new scientific techniques had to be developed to accommodate their neither purely physical nor subjective nature (132).

3 Why Introspective Affordances are Affordances

3.1 Preliminary Concerns

An explanatory essay on Gibson’s intellectual development by Mace (1977) is informatively subtitled, “Ask Not What’s Inside Your Head, But What Your Head Is Inside of”. Gibson’s approach to the study of perception was primarily focused on explaining its role as a biological adaptive phenomenon for navigating one’s environment.

⁵ Gibson coined this term to capture the idea of optical information provided in light. The “optical array” captures the idea of light sensed at a point of observation. The array is “ambient” because the sources of light sensed from this point can come from any or all angles.

Considering this, my proposal that there are introspective affordances seems, at first glance, anti-Gibsonian in spirit.

Additionally, talking of introspective affordances also appears to be anti-Gibsonian in letter. Namely, we should not expect an account of introspection to be perceptual or even quasi-perceptual as introspection need not involve sensory systems. This point requires clarification.

The issue of whether mental states can be quasi-perceptual is distinct from the issue of whether our method of directly accessing mental states is quasi-perceptual. For instance, the functional mechanisms used to produce mental imagery are largely those used in visual perception. As we ascend in the visual processing hierarchy, the activity patterns between visual perception and visual imagery are increasingly similar. However, even the use of low-level visual processing can be seen in mental imagery. For instance, spatial orientation and location of objects in both mental imagery and perception activate the V1 area of the primary visual cortex (Song et al. 2013, 2015; Naselaris et al. 2015; Bergmann et al. 2016; Pearson 2019). So, in this respect, we might call our introspectively accessible mental imagery quasi-perceptual. But this claim is distinct from positing a singular introspective mechanism that acts as an ‘inner eye’. For instance, a higher-order perception (HOP) theory of consciousness (e.g., Armstrong 1968) treats introspection as a quasi-perceptual system. Such views have been subject to substantial criticism (e.g., Shoemaker 1994a, b, c) – a survey of which is beyond the scope of this paper. However, the key point is that we can accept the claim that mental imagery is quasi-perceptual (concerning its production) while remaining neutral on the question of whether introspection itself is quasi-perceptual.

Even if we don’t preserve the Gibsonian letter by remaining neutral on the issue of whether introspective affordances require a perceptual or quasi-perceptual relationship between ourselves and our occurrent mental states, we can preserve the Gibsonian spirit. After briefly saying what I take mental action to be in Sect. 3.2, and providing some examples of introspectively accessible mental states and what they could afford in Sect. 3.3, I will argue for the commonality of perceptual and introspective affordances in Sect. 3.4.

3.2 Mental Action

I will not present a theory of mental action here as my primary goal is to argue for introspective affordances. However, as many of the actions introspective processes can afford are mental actions, it will be useful to provide a characterization of mental action. A few points can be made to help distinguish mental actions from mental events – and both from physical actions and events.

First, we can distinguish mental actions as a subtype of mental events. Mental events that are not mental actions can be further subdivided into unconscious and conscious varieties. Unconscious mental events may include processes by which we retrieve memories or consolidate visual information into perceptual experiences. If those examples seem too ‘low-level’, consider the following case of belief revision. Say you know the names of many types of warm-blooded feathered creatures such as condors, hawks, herons, etc. However, you mistakenly believe that warm-blooded animals with fur *or* feathers are mammals. One day, someone corrects you and lets

you know that the warm-blooded feathered creatures are a different species called ‘birds’. All at once, your beliefs that condors are mammals, hawks are mammals, etc. all change to new beliefs (e.g., that condors are birds, hawks are birds, etc.). Additionally, your beliefs about what your favorite mammals are also change. You do not have to have a conscious thought about each of these animals which you then correct. Both the low and high-level examples of mental events, like mental actions, are cognitive mental phenomena. But unlike mental actions, none of the mental events mentioned are things we are aware of. But mental events, like mental actions, can be things we are aware of, such as hearing a song, having a headache, realizing that you missed your 1 o’clock meeting, and having an unwanted thought.

One feature that distinguishes mental acts from conscious mental events that are not actions is that of direct control. I can move away from music or take an aspirin for the headache, but I can’t just choose to stop having them. The idea of control being central to mental action has gained popularity in the philosophy of psychology (e.g., see Wu 2013, 2016; Levy 2016; McClelland 2020). One way we exercise control is by intending to perform a mental action. Doing mental arithmetic, deciding what to write a paper on, and making a (mental) to-do list for the day are such mental acts. Such intentionality requires that mental acts are voluntary. I can’t intend not to have a migraine. And, very often, forming or revising beliefs is not something I choose to do (Williams 1973). For instance, if I see a coffee cup in front of me, I can’t choose to believe that it is not there. Another way to exercise control is by stopping a conscious mental event or allowing it to continue. Levy defines action (broadly to include bodily action) as an agent having the ability to ‘intentionally and directly stop and continue the event identical with, or partly constitutive of’ the action (2016, 79). McClelland, citing Levy, agrees with this broader view of action and divides mental acts into intentional and non-intentional varieties (2020, 404). While such an account has the feature of increasing what we could count as a mental action, it has some counter-intuitive implications. For instance, if I can stop my daydreaming or rid myself of unwanted thoughts by thinking of something else, daydreaming and having unwanted thoughts would be taken to be mental actions (albeit, non-intentional). This account seems stranger if we consider bodily action. If I have a benign essential tremor in my left hand and stop the shaking by grabbing it with my right hand it seems strange to character the shaking as a bodily action (albeit, non-intentional). While being able to rid oneself of a tremor or unwanted thought both strike me as actions, being able to stop an event does not make the event a kind of action.

So far, I have characterized mental actions as involving conscious, voluntary, direct, and intentional control. But what separates mental acts from bodily ones? One difference is that mental action *can* be hidden or covert (e.g., see Metzinger 2017; McClelland 2020; Peacocke 2021). However, any advocates of an extended mind thesis ought to have a problem with this. If Clark and Chalmers (1998) are right – and Otto’s use of his notebook of reminders is functionally equivalent to a person accessing memories – then some bodily movement will be constitutive of mental action.

But to acknowledge problem cases or the lack of a clear boundary between mental action and bodily action does not mean that there is no distinction to draw. While not all mental actions are covert, a good deal of them are. This fuzzy boundary is perhaps less of a problem given my current project. As I am concerned with introspective

affordances, the introspectively accessible mental states that afford mental action are covert. As such, this account of central features of mental action will suffice for illuminating my account of introspective affordances.

It is important to note that not all mental actions can be thought of as resulting from affordances. Recalling a phone number is a mental act, but the phone number does not occur as the content of an introspectively accessible mental state until the recalling is done. Similarly, I might try to entertain myself by singing a song in my head, but the mental act of entertaining myself is why I am singing the song.

3.3 Introspectively Accessible Mental States and Introspective Affordances

With the account of mental action provided, we can now talk about what mental states can afford mental action. Mental states that are not introspectively accessible, such as beliefs and other dispositional states, cannot afford action.⁶ Mental states that can afford action include qualitative states such as inner sensations (e.g., pain and hunger), perceptual experiences, emotions, and some motivational states (e.g., feeling thirsty). Additionally, many propositional attitudes are also introspectively accessible. For example, propositional attitudes such as those involved in complex motivational states (e.g., wishing, hoping, intending) as well as merely entertaining propositional content are accessible. Finally, mental imagery (voluntary and non-voluntary) can also be introspectively accessed.

Before arguing in the next section that the notion of affordance should be extended from perception to introspection, I will provide some examples of the kinds of mental actions introspectively accessible mental states could afford. Inner sensations, emotions, and some motivational states can afford further attending to or ignoring. Many of our conscious thoughts afford categorizing. Some thoughts are categorized as comforting, disturbing, entertaining, or useless. Categorizing thought can also serve our epistemic purposes. In weighing reasons for a political belief, I can categorize some propositions I entertain as justifying or defeating evidence for the belief. Additionally, if I am entertaining propositional contents that are highly plausible they afford endorsing. Less plausible contents afford denying. Lastly, mental imagery involving shapes affords unique kinds of mental action such as rotating and enlarging.

3.4 Commonalities of Perceptual and Introspective Affordances

Returning to the question of whether we can extend the spirit of Gibson's project to the idea that introspectively accessible mental states can afford action, I think there are features these phenomena share. Some commonalities will only hold by analogy (e.g., perception and space). However, other features such as directness, misperception, and the affordance relationship itself will be shared features of perceptual and introspective affordances.

⁶ The party line in philosophy is that beliefs are dispositional states. Thus, they cannot be conscious and are not introspectively accessible. There are dissenters. For example, Pitt (2016; 2024) holds that beliefs are best understood in terms of the conscious affirmation of their contents. In this paper I will follow the party line, exemplified in Crane (2014). We can say that the conscious correlate of a belief is a judgement (or endorsing a propositional content).

First, we can draw an analogy between Gibson's notions of AOA's and our introspective access to the mind. Like the multifaceted features of an AOA, our conscious experience is shaped by a variety of perceptual experiences, inner sensations, and non-sensory cognitive states that can modify one another (e.g., the smell of food has a different effect on me when I am nauseous).

Second, we can also draw an analogy between our access to our habitat and our access to our mind (I will use the idea of a mental 'arena' as analogous to a habitat). Both perception and introspection only allow access to a limited amount of our habitat and mental arena, respectively, at any given moment. Much like a habitat, we experience some mental states spontaneously as they demand our attention (e.g., realizing you are late to a meeting). Additionally, perception and introspection only present us with information that is amenable to particular kinds of perceptual and introspective access. We lack certain perceptual modalities – such as the magneto-sensitivity of fruit flies (Bradlaugh et al. 2023) and the electrosensitivity of bees (Sutton et al. 2016) – which narrows actions afforded to us within our habitat. Similarly, many of our cognitive states are not accessible to introspection, limiting the mental actions afforded to us within our mental arena.

The epistemic navigation of our minds has much in common with how information is presented to us and how we find things in our environment. For instance, certain mental queries (say thinking about which claims justify a belief) can cause new thoughts to be entertained. As these thoughts present themselves, new opportunities for mental action become available. Navigation in our habitat similarly provides new possibilities for action. These new possibilities for action in our habitat and mental arena further illustrate the commonality between perceptual and introspective affordances.

Third, regarding Gibson's claim that we can afford both objects and regions, we see more commonality with conscious mental states. As previously mentioned, introspective affordances are describable in the same way as perceptual affordances for detachable objects. For instance, conscious thoughts afford evaluating or classifying.⁷ Just as in the perceptual case, it is features of our mental states, relative to us as observers that allow us to act on them.

Fourth, a hallmark of introspective access is that it is immediate, or non-inferential. Gibson is adamant about the immediacy of perceptual experience, and thus affordances.

Finally, Gibson holds that if we can misperceive, then we can misperceive affordances—as they are a constitutive part of perception. He uses the example of misperceiving the affordance of a glass door as being walk-through-able when it is not. This is because the observer does not see that there is a glass door.⁸ I take Gibson's

⁷ As beliefs can manifest themselves in the form of conscious thoughts we endorse, this manifestation affords evaluating which in turn can affect whether we continue to hold on to a belief.

⁸ Gibson (1979) does not think misperceptions are indistinguishable from cases of veridical perception and, correspondingly, he does not think misperceptions are akin to cases of hallucination and illusion—as used in the arguments from illusion and hallucination. The arguments attempt to demonstrate that the immediate objects of perception are not objects in the world given that what appears to us both in the case of veridical perception and a 'perfect' hallucination or illusion are indistinguishable. See Ayer (1940) and Moore (Baldwin 1993) for the traditional arguments against direct perception.

use of misperception to be misleading here. Arguably, to perceive a clean glass door as walk-through-able is to perceive it accurately. What Gibson has in mind is that perceiving affordances accurately is to perceive the possible action one could successfully take. As such, I would misperceive the door if I tried to walk through it and failed.

I think other cases of misperception might clarify what can go wrong in the perception of affordances. For instance, I might misperceive a screw as a nail—evidenced by my reaching for a hammer. In this case, we can say I mistook one kind of affordance for another.

In the case of mental states, similar kinds of errors are made. We can misclassify many classifiable mental states. For instance, I might misclassify my exhaustion as hunger or a common thought as unusual.

I hope this section has presented enough cases of similarity to take seriously the idea of introspective affordances. In the next section, I will present a different case of misidentification known as thought insertion. The phenomenon of thought insertion, as well as its analysis, is complex. I will take care to set out the example with enough detail so that we can see how affordances can help provide a solution to interpreting the phenomenon. This will provide further evidence for the importance and explanatory use of introspective affordances.

4 An Argument for Introspective Affordances

4.1 Thought Insertion

Thought insertion is characterized as a bizarre delusion (American Psychiatric Association 2022, 101). Whereas delusions are characterized as non-revisable in the face of conflicting evidence, *bizarre* delusions are characterized as being implausible to one's cultural peers. Thought insertion, the delusion that thoughts have been inserted into one's mind by alien forces, is a symptom of schizophrenia spectrum disorders in the DSM V-TR (American Psychiatric Association 2022, 101–138). Thought insertion can occur in most schizophrenia spectrum disorders: Brief Psychotic Disorder (F23), Schizophreniform Disorder (F20.81), Schizophrenia (F20.9), and Schizoaffective Disorder. Delusions, broadly speaking, are not required for any of the spectrum disorders just described. Thought insertion is not a common delusion but it is well-known and has been documented for over a century.

The content of thought insertion reports can vary radically from one person to another. Here is an instance of a thought insertion report with unusual content:

He said he was getting 'queer ideas that are not of myself,' 'thoughts were given', ideas that were not in my nature.' Subsequently he said he 'received mind suggestions,' these came many times a day and dwelt on 'lewd low sub-

jects.’ [The she-spirit would] throw lewd pictures into his mind. (Meyer and Kirby 1910, 22)⁹

In Schneider’s collection of first-rank symptoms of schizophrenia, he provides an example of a thought insertion report that is a running commentary:

A schizophrenic woman heard a voice say, whenever she wanted to eat, “Now she is eating, here she is munching again,” or when she patted the dog, she heard, “What is she up to now, fondling the dog”; on another occasion she heard, “Here she is at the window again; she is letting the light in as it costs nothing” (Schneider 1959, 96–97).

More recently, Allison-Bolger (1999) has provided some insightful patient reports analyzing the experience of thought insertion:

... it seemed to be her own thought “...but I don’t get the feeling that it is.” She said her “own thoughts might say the same thing.. but the *feeling* isn’t the same.. the *feeling* is that it is somebody else’s..” (#8).
All of a sudden these strange thoughts came into my head...I thought to kill the cat. I shrugged it away and walked off. Thoughts like that came into my head. It wasn’t me that was thinking them, it was as though it was put there. When it first started I thought it was some kind of force of some sort (#82).

Often, prolonged experience of thought insertion involves the attribution of thoughts to particular people (alive or dead) or spirits. At other times, as in some of the cases described by Allison-Bolger, there is the failure to assign a thought to somebody else while still claiming that it is not one’s own.

It is no surprise that thought insertion has been extensively commented on by psychologists and philosophers alike.¹⁰ I take the major point of interest to lie in both facets of what we take to be interesting about our introspection-based self-knowledge. One facet is the high degree of epistemic authority we have regarding our introspectively accessible thoughts.¹¹ This authority extends to both the content of thoughts and our relation to them. However, thought insertion challenges this epistemic authority by presenting cases where someone who has introspective access to their thoughts incorrectly assigns them to someone else (i.e., an error of mis-ascription). The other facet of our introspection-based self-knowledge is the psychological

⁹ Note this, along with Frith’s (2015) citation of a patient reporting that Eamon Andrews would flash thoughts in his mind like a movie flashes on a screen, both support the idea that thought insertion need not be linked to thoughts with auditory imagery, subvocalized thoughts, or auditory verbal hallucination.

¹⁰ It would be impossible to cite all the relevant literature, but a highlight of important work includes (Frith 1987; Blakemore et al. 1998; Campbell 1999; Hoerl 2001; Coliva 2002; Gallagher 2004; Bortolotti and Broome 2008; Frith 2012; Gallagher 2012; Martin and Pacherie 2013; Gray 2014; Humpston and Broome 2015; López-Silva 2018; Frith 2019; Pienkos et al. 2019; López-Silva et al. 2022).

¹¹ The Nisbett and Wilson (1977) study that is often cited as psychological evidence that casts doubt on our self-knowledge was clearly restricting its claims to our abilities to know our psychological *processes* as opposed to occurrent mental states.

mechanism by which we gain knowledge of our mental states. This mechanism is unusual in that, unlike external sensory mechanisms that give us information that is available to others in our environment, each of us only has access to our mental arenas, so to speak. This brings up the second peculiarity of thought insertion: the delusion suggests that someone else has gained access to our exclusive mental arenas.

4.2 Immunity to Error through Misidentification

Inspired by the work of Wittgenstein in *The Blue and Brown Books* (1958), Shoemaker (1968) developed the idea of Immunity to Error Through Misidentification (IEM). Wittgenstein distinguishes two uses of “I” and “my” which he calls “the use as subject” and “the use as object” (Wittgenstein 1958, 66). The former is exemplified in statements such as “I have a toothache” or “I see a hammer.” The latter is exemplified in statements such as “my foot is sprained” or “I am wearing a red tie.” While these statements ascribe properties to myself, there is a difference between the uses of I as subject and I as object. For the uses of “I” as object, it is possible to misidentify my foot or that it is me wearing a red tie (say if I think I am standing in front of what I take to be a mirror, but it is my doppelgänger on the opposite side of a glass pane wearing the red tie). The uses of “I” as subject are different. Shoemaker takes it that we are immune to making an error through misidentification. This is not because we are excellent at identifying ourselves when making introspective judgments. Rather, we are immune to misidentification because there is no attempt at making an identification at all. Wittgenstein famously notes:

...it is as impossible that in making the statement “I have toothache” I should have mistaken another person for myself, as it is to moan with pain by mistake, having mistaken someone else for me. To say, “I have pain” is no more a statement *about* a particular person than moaning is. (1958, 67)

Just as no error of identification is made in moaning, Wittgenstein and Shoemaker claim that no error is made in self-ascribing states based on introspective experience.

Thought insertion appears to work as a counterexample to IEM. One might think that having a thought in one’s mental arena, that is, having introspective access to a thought, is sufficient for the self-ascription of the thought. For instance, John Campbell claims, “I began by describing the experience of thought insertion as an error of identification, though it is sometimes taken to be a logical point that judgments about one’s own current thoughts are immune to errors of identification.” (Campbell 1999, 619). However, Coliva (2002) correctly observes, in response to Campbell, that Wittgenstein’s and Shoemaker’s *thesis* concerning IEM has to deal with a special feature of uses of first-person indexicals like ‘I’ and ‘my’. This is clear when Shoemaker says,

“I feel pain” is not subject to error through misidentification relative to ‘I’: it cannot happen that I am mistaken in saying “I feel pain” because, although I do know of someone that feels pain, I am mistaken in thinking that person to be myself” (1968, 557).

The error thought insertion involves is mis-ascribing one's own thought to *someone else*. Since experiences of thought insertion result in the ascription of one's thoughts to others instead of self-ascription, these cases do not threaten Wittgenstein's and Shoemaker's IEM *thesis*. Therefore, thought insertion is not a counterexample to the thesis that *first-person* introspection-based ascriptions are IEM.

Nevertheless, Campbell is introducing a novel point. This point becomes clearer if we separate Wittgenstein and Shoemaker's IEM *thesis* about the uses of 'I' and 'my', from the claim that certain mechanisms of accessing thought make us IEM. The latter is Campbell's primary concern (e.g., see Campbell (2002). His explanation of what is interesting about thought insertion introduces a broader idea than immunity to error through misidentification: "So thought insertion seems to be a counterexample to the thesis that present-tense introspectively based reports of psychological state cannot involve errors of identification" (1999, 610). In other words, if we are concerned with the reason we enjoy IEM, we need to give some account of the source of the immunity. One might mistakenly think that introspective access guarantees that the ascription of our thoughts will be immune from error. And since the self-ascription of introspectively accessed thoughts does not normally involve an act of identification, one might mistakenly infer that introspective access removes the possibility of identifying the states we self-ascribe.¹² It is to this account of immunity to error (as a feature of a mechanism) that thought insertion does serve as a counterexample.

After I discuss a common framework for explaining delusions such as thought insertion, I will explain how the discussion of IEM helps us explain the phenomenon of thought insertion.

4.3 The Two-Factor Account of Delusions and Its Shortcomings

Monothematic delusions are specific to one topic. For instance, Capgras delusion involves the belief that someone one is close to has been replaced by an imposter, and Cotard delusion involves the belief that one is dead. Thought insertion is also considered a monothematic delusion. Max Coltheart and Martin Davies have argued that

¹² An anonymous reviewer raised an interesting concern. There could be cases where we need to identify our own mental states, aside from cases of thought insertion. For instance, I might realize in talk therapy that the negative thoughts I had been projecting onto someone else are really my own (e.g., it is not my colleague who is afraid of getting ridiculed, but me). The worry is that this kind of thought would afford identification. This would make a thought's affording identification a less useful way to individuate cases of thought insertion. In response, it is important to note differences in the cases. Projection usually involves displacing one's feelings onto another as a kind of defensive mechanism. Defense mechanisms shield one from painful experiences. These features of projection indicate significant differences between it and thought insertion. First the negativity of a projected negative thought is normally taken to be affective (e.g., worry, anger, loathing, etc.). As talk therapy teaches us, we do not always have direct access to these states (and when we do, we might not recognize them for what they are). Second, in the case of projecting a negative state to another, there is no reason to think that this involves, on the basis of introspection, correctly recognizing a thought and then attributing it to someone else. Defense mechanisms, like projection, can involve a kind of self-deception. On the Freudian model, this could suggest that I never had access to the negative thought before projecting it. However, later, I realized that the negative thought was mine. Even without a Freudian model, I might not have attended to my negative thought (even if it was possible) before a defense mechanism resulted in my projecting it to someone else. Thus, a significant difference is that, in the case of thought insertion, there is direct conscious access to the content of a thought that affords identification when it is misascribed to someone else.

explaining monothematic delusions requires explaining two features (Davies et al. 2001; Coltheart 2010; Heering et al. 2013; Coltheart and Davies 2021). Concerning a ‘delusional hypothesis’ (a potential explanation for an abnormal experience), Davies and Coltheart ask, “Can the delusional hypothesis be understood as a *prima facie* reasonable response to the subject’s experience and how does the hypothesis come to be adopted and maintained as a belief despite its implausibility” (2000, 8)? Coltheart and Davies focus on these two elements because they argue that for delusions to occur, there must be an abnormality in experience (which gives rise to the delusional hypothesis) and an abnormality in reasoning (which explains why the delusional hypothesis is accepted and maintained in the face of substantial evidence against it).

What is missing from this approach is an explanation of how the abnormal experience associated with thought insertion could give rise to a delusional hypothesis.¹³ For instance, let us say that a person has the delusion that his brother is inserting thoughts into his head. The second factor requires an explanation of why the hypothesis that his brother was inserting thoughts into his head was adopted and how it is maintained given available counterevidence (I will not address this issue here)¹⁴. The first factor involves an explanation of the neurological factors as well as what abnormal experience could reasonably be correlated. Additionally, that account of abnormal experience must be detailed enough to see how the delusional hypothesis would be a ‘*prima facie* reasonable response’. I will attempt to provide such an explanation.

4.4 A New Twist on IEM

My strategy is to see if there are features of the delusional hypothesis that appear to be the result of inferences beyond what the abnormal experience alone would warrant. If there are such inferences, we can engage in reverse engineering to uncover the simpler delusional hypothesis. The reason to do this is that a simpler hypothesis will require a simpler abnormal experience as its basis.¹⁵

As noted in 4.1, some thought insertion reports attribute particular individuals as the source of the inserted thought. I do not think there is a singular story to tell about what occurs in these cases. For instance, auditory imagery, the content of thoughts, and other delusional states might contribute to one’s warrant for ascribing an introspectively experienced thought to particular individuals. What is common to all the reports we examined is the claim that the thoughts are someone else’s. We might ask why someone would make the transition from claims like “[My] own thoughts might say the same thing.. but the *feeling* isn’t the same” or “Thoughts like that came into

¹³ Max Coltheart has mentioned to me via email that his and Davies’ two-factor account targets two pathologies that result in delusions. If normal reasoning plays an explanatory role in an explanation of how a person creates a delusional hypothesis from an abnormal experience this is not something a cognitive pathologist needs to explain. However, this (1) leaves us with an explanatory gap and (2) presupposes that the reasoning which takes one from an abnormal experience to a delusional hypothesis is itself non-pathological.

¹⁴ I say more about this issue in Gray (2014).

¹⁵ While it is beyond the scope of this paper, I have argued elsewhere (Gray 2014) that simpler abnormal experiences are more easily correlated with cognitive models that can most easily be associated with those experiences.

my head. It wasn't me that was thinking them" to a that the thoughts are somebody else's.

The inference from a thought not being mine to the claim that it is someone else's is a reasonable inference (we can call it a 'Cartesian' inference – thoughts have thinkers). But if we can assume this is an inference (most likely an unconscious one), then that means there is a simpler hypothesis that serves as its basis. This simpler delusional hypothesis would be that the thought I am experiencing is not mine. We can now ask, what would one's experience of one's own thoughts have to be like to form this hypothesis?

It is at this point that the notion of introspective affordances can do central work. If Wittgenstein's insight is correct, the introspective affordances we normally associate with introspectively accessible thoughts do not include identifiability (either as our own or someone else's). In so far as we do assign our introspectively accessible mental states to ourselves, the self-ascription is not a result of self-identification. We can think of this as a hallmark of introspectively accessible mental states: they do not afford identifying.

We can contrast these cases with what Wittgenstein would call uses of 'I' or 'my' as object. If I am wrestling and notice that a leg is bleeding, the leg affords identification. I could say "My leg is bleeding" (and I could be correct), but this requires an act of identification.

In the case of thought insertion, a person claims that a thought they have introspective access to is someone else's. It is a constitutive feature of such a claim that it involves misidentification as all introspectively accessible thoughts are one's own. If the delusional hypothesis involved in thought insertion can be seen as a *prima facie* reasonable response to an abnormal experience, affordances allow us to make sense of them. We can say in the case of thought insertion, an introspectively accessible thought affords identifying.

It is, possible to correctly identify mental states as our own. For instance, through therapy, I might come to realize that I have certain beliefs or desires I did not think that I had. However, in such a case, I have no direct access to these thoughts, and assigning them to myself is much like the example with the leg above.

As mentioned, in the case of direct introspective access to our mental states, not requiring identification is a hallmark. As such, an introspectively accessible thought that affords identifying would give us *prima facie* reason to think that it is someone else's. In other words, if, in the case of thought insertion, introspected thoughts have the affordance of identifiability, and it is the hallmark of introspected thoughts that they don't require identification, then the identifiability of a thought provides *prima facie* warrant for *not* assigning the identifiable thoughts to ourselves.

Given this account, we can now explain the abnormal experience that serves as the basis for the simplified delusional hypothesis that a thought is not mine: the experience of one's own thought must present the affordance of identifiability. Such a presentation provides the *prima facie* reason to assume the thought is not one's own.

Such an account has some important benefits. First, as I've argued, explaining the simplified delusional hypothesis of thought insertion requires that thoughts be identified. If we can perform the mental act of identifying a thought as not one's own, this can be explained in terms of affordances. It is a thought's identifiability

contrasted with the non-identifiability of normally introspected thought that explains why we identify the thought with someone else. Of course, this requires extending the idea of affordances to the relationship between a subject and their introspectively accessible mental states, and I have argued in Sect. 3.4 that we should. I think the case of thought insertion further warrants this extension of the traditional account of affordances. Finally, accounts of thought insertion normally try to explain the phenomenon by invoking a distinction between authorship and ownership of thought. While these terms aren't used consistently throughout the literature, we can say that ownership of a thought involves its accessibility via introspection. It is then often claimed that a thought lacks a sense of authorship. For instance, Stephens and Graham claim that "My sense that *I think* a certain thought involves more than the sense that the thought occurs in me. It also consists in a sense that I am the author of that thought, that I carry out the activity of thinking" (2000, 8–9). But it is quite difficult to spell out a sense of authorship that creates the divide between self-ascription and other-ascription present in thought insertion. Stephens and Graham suggest that thoughts that aren't authored by one seem uncharacteristic of oneself (2000, 173). Alternatively, one might think authorship involves a sense of deliberateness. While the latter might capture some of our thoughts, like those involved in mental actions, it won't capture mental events like earworms or unintentional daydreaming. The former account would have trouble with the fact that people regularly have unusual and disturbing thoughts that they nevertheless self-ascribe (Rachman and De Silva 1978).¹⁶ By focusing on the affordance of identifiability, we have a way to capture the difference between cases of thought insertion and mental states that are self-ascribed.

5 Conclusion

I have attempted to motivate the idea that Gibson's notions of affordances can and ought to be extended to include introspective affordances. In Sect. 2, I explained and outlined some central features of perceptual affordances. In Sect. 3, I argued that perceptual affordances share many of the same features as introspective affordances. Additionally, those properties that are not possible for perceptual and introspective affordances to share (e.g., spatial properties) could be understood through analogy. In Sect. 4, I examined a novel application of affordances to help aid a feature of thought insertion that is normally overlooked: How abnormal experience can lead to a delusional hypothesis (4.3–4.4). Through a process of reverse engineering, it was possible to uncover a simpler delusional hypothesis that could be correlated to a simpler abnormal experience. By describing the experience of thought as having an affordance of identifiability, we were able to see how that experience—in contrast with the normal experience of thoughts that lack such affordances—could warrant the simpler delusional hypothesis that a thought is not one's own. Affordances are particularly apt for this explanation as we take it that it is an aspect of the experience of our thoughts that is abnormal and leads to the mental act of assigning them to

¹⁶ In their study, they noted that normal college students often displayed a variety of violent and inappropriate thoughts.

someone else. I hope that the study of thought insertion in Sect. 4 further motivates the case for introspective affordances by demonstrating their explanatory value.

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