

Understanding Introspection

Alla Choifer

Abstract

Introspection is a crucial tool for understanding consciousness and the workings of the human mind, but despite its central role, a consensus on the nature of introspection remains elusive. This paper aims to offer a coherent understanding of introspection. It argues for the existence of two distinct levels of introspection rooted in different ways of being self-related. At the primary, non-reflective level of introspection, I am acquainted with my mental states, such as maintaining my balance. Conversely, the reflective level of introspection permits me to contemplate holding my balance and say, for example, 'I feel dizzy'. The disparity in the ways by which we access our mental states at each level speaks for a form of introspective pluralism. This paper also argues for the idea of introspective pluralism by drawing on insights from developmental psychology and neuropsychology. In conclusion, it speculates that the lowest level of introspection may be underpinned by the phenomenon of 'priming'.

Keywords: introspection; self-knowledge; epistemic relation, priming

Introduction

The phenomenon of introspection has been dealt with for long in psychology, psychiatry, and philosophy, and has generally been regarded as a fundamental aspect of human consciousness and self-knowledge. There are various accounts of introspection, and disagreements among philosophers underscore the fact that critical aspects of this phenomenon remain ambiguously defined.

As I see it, four core concepts are often used in explaining what introspection is. "Most philosophers hold that introspection yields something like *beliefs* or judgments about one's own mind, but others prefer to characterize the products of introspection as 'thoughts', 'representations', '*awareness*', 'acquaintance', and so on." (Schwitzgebel, 2024, italics mine). Researchers further discuss introspection in terms of *self-knowledge*, which is

in turn by some regarded as particularly secure and sometimes even immune to skeptical doubt: "... each individual's introspective capacity seems to place her in a unique position to form beliefs and gain knowledge, of her mental states" (Kind, 2022). This epistemical uniqueness of our self-assertions is often referred to as *privileged access* to our mental states. Thus, to know what introspection means, we need to know more exactly what such core concepts involved in our understanding of introspection as 'belief', 'awareness', 'self-knowledge' and 'privileged access' amount to.

Numerous opinions exist on these matters, and a comprehensive treatment of each of these terms would require a separate paper. However, my goal here is of course not to provide an exhaustive analysis of the philosophical ideas related to these terms but to pay attention to a fundamental distinction that applies to each of the concepts of 'belief', 'knowledge', 'awareness', and 'privileged access' as they pertain to our comprehension of introspection.

Very briefly, there are 'perceptual beliefs' and reflective beliefs. Further, there is 'animal knowledge' and reflective knowledge. The quotation marks that I will not use in the following, indicate that some regard the quoted terms as improper. Perceptual beliefs and animal knowledge involve direct and immediate sensory contact. The mental state of being in such a contact involves a minimal pre-reflective awareness of being in the state in question. In contrast, in the case of reflective beliefs and knowledge, access to our mental states is delivered through self-scrutiny and intellectual reasoning. The latter are exercised using objectifying reflective awareness. The privilegedness of access to our mental conditions can be understood as experiential phenomenal intimacy with our feelings but also as the possibility of reflective knowledge due to contemplating our mental states.

Hence, on the one hand, we have perceptual beliefs, animal knowledge, pre-reflective awareness, and pre-reflective phenomenal access to our mental conditions. On the other hand, we talk about reflective beliefs, reflective knowledge, reflective awareness, and reflective access to our mental states. An important characteristic separates the two groups of phenomena. In reflective beliefs, knowledge, awareness, and access to our mental conditions subject and object are distinguished, while pre-reflective phenomena such as perceptual beliefs, animal knowledge, pre-reflective awareness, and phenomenal intimacy with our mental conditions are not structured in subject-object terms. Each of the mentioned phenomena involves being related to oneself in one way or other. I will distinguish between two basic ways of being self-related, or (sometimes) "two kinds of self-relation."

In accordance with the above, I propose distinguishing between two kinds of introspecting – what I call simple, minimal, or *reflexive* introspection, and

reflective introspection. Reflexive introspection is our acquaintance with ourselves manifested, for example, in the feeling of nearly falling or some other proprioceptive experience. This intimate and immediate self-relatedness stands in opposition to reflective introspection, where I address my reflexive experiential states. For example, in reflecting on my uncomfortable gut feeling I can claim that I feel uneasy in writing to my friend. My uncomfortable gut feeling involves reflexive self-relatedness, while my acknowledgment of uneasiness in writing to my friend is a case of being reflectively self-related. In this way, the different kinds of introspection – reflexive and reflective – are connected in a special way. I address my reflexive (introspective) feelings as an object in my reflective self-contemplation. This connection suggests we talk about two levels of the introspective process rather than two different kinds of introspection. I will refer to the idea that the two levels are characterized by different ways of being self-related as “pluralism about introspection.” Defending the idea of pluralism about introspection requires me to show how the two levels of introspection differ and what their special connection is like.

Thus, my paper's central thesis is that introspection is a two-level process where the levels are characterized by different ways of being self-related. I begin with a concise overview of philosophical ideas related to ‘beliefs’, ‘knowledge’, ‘awareness’, and ‘privileged access’ and then present my idea of the two-level process in introspection. I conclude this part (Part I) of my investigation by putting my proposal into the context of earlier arguments for and against introspective pluralism. I proceed then in Part II to advance my argument for the plurality of introspection by examining the interdependence and possibility of dissociation between the two levels of introspection. In conclusion, I speculate about the nature of introspection as grounded in the phenomenon of ‘priming’, a process wherein prior exposure to a stimulus influences subsequent behavior or thought patterns (Part III).

Part I. The Two Levels of Introspection

I begin by observing that the concepts we typically use to specify introspection bifurcate in an important way. (sec. 1.1). The two distinct groups of theoretical terms that I identify lead me to propose the existence of two levels within our introspective abilities: reflexive and reflective introspection. (sec. 1.2). My proposal of a two-level introspective process finds support in discussions found in established philosophical texts (sec. 1.3). The suggestion of different mechanisms that operate at different levels of introspection is a proposal for a form of pluralism concerning our introspective abilities (sec. 1.4).

1.1 Knowledge, Beliefs, Privileged Access, and Awareness

At least four core concepts – ‘knowledge’, ‘belief’, ‘privileged access’, and ‘awareness’ – are commonly used to describe introspection. What do these concepts more precisely imply?

Concerning ‘knowledge’, a number of philosophers have been talking about two opposing kinds: animal knowledge and reflective knowledge (e.g., Sosa, 1997; Lehrer, 2000; Cohen, 2002; Zagzebski, 2014; and Baehr, 2014). Animal knowledge relies roughly on a being’s perceptual discriminatory abilities mediated by its senses. This kind of knowledge is non-reflective and is manifested through a being’s ability to track or monitor relevant environmental changes automatically. In contrast, in Sosa’s (1997, 427) words, reflective knowledge requires the “awareness of how one knows... .” It requires an understanding of the origins of one’s beliefs and a critical elaboration on the grounds for holding one’s beliefs. This entails that reflective knowledge requires self-reference on the part of the cognizing subject. Regarding animal knowledge, however, some take an externalist stance and claims that self-reflectivity is superfluous: justification through the reliability of the process by which an organism interacts with its surroundings would suffice.¹

Concerning ‘beliefs’, some researchers talk about animal, perceptual beliefs (e.g., Tye, 1997; Caruthers, 2008, and Kornblith, 2007) as opposed to epistemic, reflective beliefs (e.g. Williams, 2004; Haugeland, 1998; Davidson, 1984 and Brandom, 2000). For example, in Tye’s opinion (1997, 306) it is “very plausible to suppose that fish form simple beliefs on the basis of immediate, sensory representations of their environments.” Likewise, in Kornblith’s (2002, 104) view, non-human animals “... may certainly be credited with beliefs, ... [even if] non-human animals do not reflect on the character of their beliefs and the logical relations among them.” Animal beliefs can then be discussed in terms of an animal’s ability to make a range of discriminations in its surroundings and represent relevant features in its mental states. Such beliefs are acquired through the sensory apparatus and are essentially different from reflective beliefs that require self-scrutiny.

However, other philosophers are searching for more stringent requirements to acknowledge a being as a believer. To rely on the reliability of the process

¹ As Dretske puts it

Who needs it [justification], and why?: ‘If an animal inherits a perfectly reliable belief-generating mechanism, and it also inherits a disposition, everything being equal, to act on the basis of the beliefs so generated, what additional benefits are conferred by a justification that the beliefs are being produced in some reliable way? (Dretske 1989, 95, italics in original).

Understanding Introspection

by which an organism monitors its surroundings is not enough. As Williams (2004, 201) problematizes the point, “The fundamental issue is whether being a believer requires a measure of rational self-awareness: the capacity to access beliefs for their epistemic credentials.”

‘Privileged access’ refers to the supposed fact that other persons do not have the same kind of access as we have to our sensations, thoughts, and attitudes.² Access to our sensations and thoughts is often characterized as immediate and non-observational, while access to our attitudes requires observation and contemplation of what is asserted. The nature of privileged access is not a clear-cut issue:

Introspective privilege is akin to the privilege of having a unique and advantageous sensory perspective on something. Metaphorically speaking, we are the only ones who can gaze directly at our attitudes or our stream of experience, while others must rely on us or on outward signs. (Schwitzgebel, 2024)

Importantly, “having a unique and advantageous sensory perspective on something” is not the same as gazing “directly at our attitudes or our stream of experience.” As Schwitzgebel (2024) notes, the process of generating introspective judgments fundamentally differs from just receiving unique sensory experiences, “Introspection involves some sort of special reflection on one’s own mental life that differs from the ordinary un-self-reflective flow of thought and action.” Notably, our advantageous sensory perspective, available to no one else, does not say much about the uniqueness of the process by which we detect our sensory experiences. Or differently, the privilege of our unique and advantageous sensory perspective is not yet an epistemic privilege so we have to distinguish between different kinds of privileged access, reflective and non-reflective.

Regarding self-awareness, phenomenologists have argued that its reflective form presupposes a more primitive form of awareness. One version of this thesis is that such a primitive immediate self-awareness or self-acquaintance is necessary for the reflecting individual to identify the object she reflects upon as *herself* (Fichte 1794/1982, Shoemaker 1984, Zahavi 2007a). As Zahavi (2007b) puts it, to be in a more primitive form of awareness is not, “to interrupt

² As Moran (2001) notes, there are two basic categories of mental states to which our “ordinary assumption of ‘privileged access’ is meant to apply: occurrent states such as sensations and passing thoughts, and various standing attitudes of the person, such as beliefs, emotional attitudes, and intentions” (ibid., 9-10).

the experiential interaction with the world in order to turn one's gaze inwards; on the contrary, self-experience is the self-experience of a world-immersed self" (ibid., 189). Generally, a minimal or simple self-relation does not require an organism to objectify its behavior. At such a low level of processing, there is not yet any evaluation of one's responsiveness in foreseeing, planning, and redirecting it. In the state of primitive awareness an organism is not relating to itself as an object, while in the case of reflective awareness, one stands in an objectifying relation to one's own mental state.

1.2 The two groups of phenomena: distinction and interconnection

I want to pay attention to an essential characteristic that unambiguously distinguishes the two ways of being self-aware.

In the intrinsic non-objectifying form (that could be called reflexive self-relating), there is no distinction for an organism between itself and anything that is accessed; here, "the experiential states are rather aware of themselves in a non-dual manner" (Zahavi, 2020, 639). This primitive form of awareness is without any subject-object structure; therefore, strictly speaking, it would be incorrect to see it as being *about* or *of* any mental state.

The expression "being aware of something" implies a distinction between an organism and something that this organism is aware *of*. However, due to its non-dual nature, the preposition 'of' or 'about' does not apply to reflexive mental states such as my unconscious self-monitoring of holding my balance while sitting at a table and writing to a friend. Or, differently, the expression 'self-relating' implies a certain relationship between two mental states of a person (a mental state of being a subject and a mental state of being an object).

Therefore, the designation 'reflexive self-relating' can be misleading so I propose using the term 'reflexive mental states' to avoid imprecision.

The two modes of self-awareness prompt me to propose two distinct modes of introspection.³

The intrinsic non-objectifying form of self-acquaintance is what I would call "reflexive introspective awareness." It is not yet a state of being

³ Other contributions have certainly been made in this direction. Authors such as Peacocke (2004), O'Brien (2007), and Boyle (2019) all emphasized that fully-fledged self-ascriptions are rooted in a form of prior awareness intrinsic to the subject. This prior awareness enables direct access to our mental states, in turn forming the basis for self-knowledge and reflective thought. My contributions in this respect are that I pay special attention to the self-referential aspect of each form of awareness and suggest seeing the two types of self-relation as manifestations of a two-level process in our introspective abilities. The different mechanisms of being self-related on each level imply a possibility for a dissociation in our abilities to introspect. To defend my proposal, I present (Part II) novel arguments for introspective pluralism, drawing on insights from developmental psychology and neuropsychology.

aware/conscious/self-aware/self-conscious *of anything*, even if the terms just mentioned tend to imply that they have an ‘of’-nature in relation to some object.⁴ In contrast, I would use the words “reflective, introspective awareness” for my awareness of some object or state of affairs, when I, for example, reflect on holding my balance and utter, ‘I feel dizzy’. Reflective, introspective awareness is always an awareness *of* something and, therefore, it is an epistemic endeavor, in contrast to non-reflective self-acquaintance.

The distinction between dual (reflective) and non-dual (reflexive) introspective awareness can be generalized to all other concepts – ‘belief’, ‘knowledge’, and ‘privileged access’ – that we use to describe introspection. In reflective introspecting, there is a subject-object duality in reflective beliefs, knowledge, and access brought about by means of the epistemic act of seeing one’s mental state as an object. In contrast, reflexive introspecting exemplified by perceptual beliefs, animal knowledge, and access to our mental states through phenomenality is not structured in subject-object terms.

To change from a non-objectifying form of self-acquaintance to a reflective form of it requires me to regard myself as an experiencing subject. Through reflective self-contemplation, a duality is thus imposed on my reality. Mental phenomena on a minimal reflexive level serve here as objects to reflect upon by beings capable of reflective thought. This is the case when I, for example, try to figure out what I was daydreaming about just a moment ago or when I realize that I, for some time, have been in pain.⁵

To summarize, reflective introspecting is accomplished by means of reflective thought and reasoning upon one’s reflexive mental states – that is the process that connects the two different levels of introspection. Relating to epistemology: the reflective way of introspecting is an epistemic endeavor, while the reflexive way of introspecting is without any subject-object structure and therefore non-epistemic.⁶

1.3 Earlier suggestions relating to the two varieties of introspecting

The idea of two different ways of introspecting has been intimated earlier. Armstrong (1981) presented the following scenario. “After driving for long periods of time, particularly at night it is possible to ‘come to’ and realize that for some time past one has been driving without being aware of what one has been doing” (ibid., 59). What the long-distance truck driver lacks, Armstrong

⁴ The need to make this comment reflects our ambiguous usage of terms such as awareness/consciousness/self-awareness/self-consciousness.

⁵ On pain see further section 2.3.

⁶ For different ways of drawing the line between the epistemic and the non-epistemic phenomena, see footnote 15.

reasons, is introspective awareness. Still, a mental activity is going on and even if it is “not a total awareness”, it nevertheless “bears a particularly close formal resemblance to introspection. This is bodily perception or proprioception, the perception of our own current bodily states and activities” (ibid., 61).

The driver’s skilled and purposive action guided by perception presents us, in Armstrong’s (1981) words, with “a relatively simple, and in evolutionary terms relatively primitive, level of mental functioning” (ibid., 60). “I imagine” Armstrong notes, “that many animals, particularly those whose central nervous system is less developed than ours, are continually, or at least normally, in the state in which the long-distance driver is in temporarily” (ibid., 60). Armstrong adds, “Only sometimes do we carefully scrutinize our own current state of mind. We can mark the distinction by speaking of ‘reflex’ introspective awareness and opposing it to ‘introspection proper’” (ibid., 63).

The truck driver's case is spectacular: it highlights the two ways of self-relatedness between which we, as beings capable of reflective thought, constantly switch in our daily lives. In an important sense, we share our non-self-reflectively conscious but still self-regulatory mode of being in the world with other members of the animal kingdom. This self-regulation is like that of driving on autopilot or being lost in thought while playing an instrument.⁷ However, our ability to reflect on ourselves and our surroundings is an advanced mental activity upon which all further progress in evolution rests. In my view, such an ability is exclusively developed by humans from a certain age of cognitive maturity (sec. 2.1 and 2.2).

The two ways of introspecting find further support in how ‘introspection’ is featured in two established philosophical encyclopedias. In the *Stanford Encyclopedia of Philosophy*, Schwitzgebel (2024) distinguishes between different accounts of introspection. Depending on whether the target of introspection is seen as one’s current or one’s immediate past experience, Schwitzgebel distinguishes between what he calls *self-containment* and *self-detection* models, respectively. According to the self-containment models, current mental states are embedded parts of the introspective process (e.g., feeling pain is an embedded part of the awareness of pain).⁸

⁷ In relation to non-human animals, if a monkey is swinging from tree to tree, it must implicitly be aware of the length of its arms and the movements of its body. Such a monkey uses its self-reflexive scanning of its bodily state of mind to coordinate perception and action. This self-reflexive scanning, which I term “reflexive introspection,” is unquestionably distinct from reflective knowledge of one’s own mental states.

⁸ The notion of self-containment is a disputable issue. Philosophers have had different ideas about this phenomenon, ideas that could also change over time. For example, Husserl (1913/1982) offered an early containment approach, arguing that self-perceiving can contain as a part the phenomenal experience toward which it is directed and from which it is incapable of being

Understanding Introspection

In contrast, self-detection models describe introspection as a process of detecting the target mental state. Detection occurs after some brief lapse of time, which implies that the introspective process, so understood, has two disjoint components: that of the introspective target and that of an introspective judgment (e.g., one's pain and one's introspective awareness of one's pain).

In *The Internet Encyclopedia of Philosophy*, Kind discusses two models of introspection: non-observational and observational. According to non-observational models, there is a constitutive connection and overlap between being in a mental state and having introspective knowledge about that state. In contrast, according to observational models, our introspective capacity enables us to observe our inner world in a way where the introspective state and the introspected state are distinct states.

In my understanding, when there is a containment or overlap between two simultaneously existing mental parts (Schwitzgebel), or a constitutive relation between these parts (Kind), we are dealing with primitive reflexive introspection. However, when the relation between mental parts is structured in subject-object terms such that there is a clear distinction between the introspective and the introspected state – self-detection models (Schwitzgebel) or observational models (Kind) – then we are dealing with reflective introspection.

My distinction between reflexive and reflective introspection does not directly align with the self-containment/self-detection and non-observational/observational distinctions. However, I see Schwitzgebel' and Kind's models as capturing the main structural characteristics of reflexive and reflective introspection. Specifically, the formation of reflexive introspection, characterized by a non-subject-object structure, aligns with the self-containment and non-observational models, while the formation of reflective

distinguished. Later, Burge (1998) proposed to characterize the relation of self-containment, as having a “reflexive, self-referential character” where a judgment is “locked (self-referentially) onto the first-order content which it both contains and takes as its subject matter” (ibid., 659-660). In a series of articles Shoemaker (1994a, 1994b, 1994c) in his turn suggested his own understanding of containment so that the containment relation between the two constituents (a target state and self-ascriptive state) would hold on the level of neural realization in the brain. Such philosophers as Gertler (2001), Papineau (2002), Chalmers (2003), Horgan and Kriegel (2007), and Balog (2012) were then more inclined to follow Burge-type content-containment models in their works rather than Shoemaker's realization-containment models.

In my view, self-containment should not be understood as if my experiencing a tree contains the tree as its part. When I absentmindedly touch the tree, the tree is represented through its sensible qualities and is an indistinguishable component of my pre-reflective experience. However, in my reflexive thought, the thought, and the thing that my thought concerns seems to merge and are phenomenally inseparable.

introspection, characterized by a subject-object structure, corresponds to the self-detection and observational models.

According to self-detection models (Schwitzgebel, 2024), introspection is a process of detecting a target mental state. Such an introspective process meets what Schwitzgebel calls the ‘detection condition’⁹:

Introspection involves some sort of *attunement to* or *detection of a pre-existing* mental state or event, where the introspective judgment or knowledge is (when all goes well) *causally* but not *ontologically* dependent on the target mental state. (Schwitzgebel 2024, italics in original)

An important component of the detection condition is that there is a time interval (however small) between the two mental states. As we will see, this time interval can make the object (introspective target) and the introspective judgment disjoined (sec. 2.3). Moreover, the detection condition is a condition for the reflective way of introspecting, but can also be seen as displaying the connection between different introspective processes. When staying in a reflective relation to my mental states (self-detection or observational models of introspection), I address my sensations, emotions, and perceptions, in which I am self-reflexively conscious (self-containment or non-observational models of introspection).

As mentioned above, on the reflexive level of introspection, there is no distinction between the subject and object of knowledge – one introspects one’s condition reflexively. On the reflective level of introspection, there is a distinction between the subject and object of knowledge – one contemplates one’s mental condition reflectively. Thus, different methods or mechanisms are involved at different levels of the introspective process. This is pluralism regarding introspection. Below, I put my proposal in the context of other suggestions about the plurality of introspection. Defenders of such pluralism include philosophers such as Prinz (2004), Boyle (2009), Hill (2009), Coliva (2016), Samoilova (2016), and Schwitzgebel (2012).

1.4 Pluralism about introspection

A central issue concerning the possibility of pluralism about introspection is whether we introspect all our mental states in the same way (introspection is unified) or whether there is a disparity in the way by which we access our

⁹ Schwitzgebel (2024) puts forward six conditions that have to be fulfilled for self-knowledge to be introspective.

Understanding Introspection

mental conditions (pluralism about introspection). Here are some opinions on the matter.

Different reasons have been suggested for the view that there is no unified faculty of introspection. For example, Coliva (2016) pays attention to the vast variety of mental states addressed in introspection. We can be immediately aware of our sensations and enjoy perceptions and emotions, but we can also have propositional attitudes such as beliefs, desires, and intentions. Hence, Coliva suggests, “the methods whereby one gets to know in a first-personal way one’s own mind can vary depending on the kind of mental state at issue” (ibid., 2), and this, according to Coliva, opens for the possibility of pluralism about the methods whereby we gain self-knowledge.

Coliva sees the variety of the mental as offering a *prima facie* obstacle to introspective unification and thus making pluralism into “a plausible framework for thinking about introspection” (ibid., 3366). Coliva’s (2016) reasoning is in accord with Samoilova’s (2016). Prinz (2004), in his turn, suggests distinguishing different species of introspection based on conceptual differences. Prinz gives the example, “A retrograde amnesic cannot access memories, but can report on current perceptual experiences” (ibid., 43). Therefore, Prinz continues, we cannot assume, that the same processes are involved in the workings of episodic and working memory access, “On the face of it, there is reason to think that the processes are disjoint. ... Conceptually, introspection is a mixed bag” (ibid., 45).

Now, in what sense do the conceptual differences (Prinz) or the vast variety of mental states (Coliva and Samoilova) inform us about different methods of introspecting? Even if mechanisms that underpin episodic memory might be quite different from the mechanisms required for the normal functioning of working, semantic, or procedural memory, what reasons do we have in claiming that different introspective processes are behind these different mechanisms? Is there a direct correspondence or are just certain mechanisms relevant for considering the variety in introspecting? More generally, what principles should we follow in claiming that there are different types of introspection?

“One way to help settle this question,” Samoilova (2016, 3365) reasons, “is to consider whether it is possible for our introspective capacities to come apart, or dissociate, across different mental states (or more generally, across different conditions).”

If it is possible for someone to possess the capacity to introspect one’s beliefs but fail to possess this capacity with regard to one’s intentions,

for example, this would provide some evidence that introspection is not a single, unified capacity ... (Samoilova, 2016, 3365)

The idea of dissociation is central here. However, Byrne (2011, 213) does not think that such a dissociation occurs. It is implausible, he argues, to see people introspecting their beliefs but struggling to introspect their desires. This suggests, Byrne concludes, that our introspective abilities do not come apart and, consequently, there is a need for a unified account of introspection. In his polemic with Byrne, Boyle (2011, 238, fn. 16) replies: "This is mistaken. To claim that there are *different* kinds of self-knowledge is not necessarily to claim that the relevant kinds are *independent*, and thus potentially dissociable" (italics in the original).

In Samoilova's view, the possibility of introspective pluralism is "empirically plausible" (ibid., 3380), although she notes:

To my knowledge, it is not empirically established, or even thoroughly investigated, whether there are in fact any dissociations in our abilities to access different mental states. The claim that there are such dissociations should seem equally likely to be true as it should seem false at this stage. ...It may be the burden of those who reject the possibility of a unified account of introspection to establish such dissociations, but it is by no means obvious that they are absent. (Samoilova, 2016, 3378)

Samoilova (2016) further adds, "If we take the metaphysical heterogeneity of the mental seriously it is difficult to see how a reasoning-based account of introspection alone can explain our access to all the mental states we can apparently access" (ibid., 3379, my italics)

In my opinion, introspection should not be "assimilated to reasoning" (Samoilova, 2016, 3365), for, in agreement with Samoilova, our reasoning-based account of introspection alone cannot explain our access to all the mental states we can possibly access. I suggest widening our search for dissociation in introspecting by including our reflexive experiences. Together with the philosophers mentioned so far, I will focus on the heterogeneity of the mental, although not across different mental states but across the different ways of accessing them. Such an approach will enable us not only to posit distinct mechanisms for accessing various mental states but also to directly investigate these mechanisms by exploring the dissociation between different levels of access to our mental conditions. Specifically, I will differentiate between

experiencing our mental states (reflexive self-relation) and reasoning about our experiences (reflective self-relation).

Boyle (2009) argues in this direction when he suggests that a satisfactory account of self-knowledge should recognize at least two fundamentally different kinds of knowledge: “an active kind through which we know our own judgments and a passive kind through which we know our sensations” (ibid., 133). In this way, Boyle reasons, we should be able to account for “... cases in which a creature acts in a way that manifests, not just pain, but grasps *that* it is in pain i.e., grasps that a certain subject is in a certain kind of condition” (ibid., 143, italics in the original). In my interpretation, Boyle’s passive self-knowledge is what I have called simple introspection, while Boyle’s active self-knowledge is what I have called reflective introspection. When a being not only lives through its pain but also can grasp itself as the subject of that pain, then this being, in addition to reflexive self-relation, also exercises reflective self-relation and thereby is capable of reflective introspection.¹⁰

Boyle’s (2009) understanding of active and passive knowledge can be situated within Coliva’s (2016) theoretical framework. According to Coliva, ‘active knowledge’ involves “an epistemic relation between a subject and her own mental states” (ibid., 17). In contrast, ‘passive knowledge’ is not regarded as a cognitive achievement, as there is no genuine epistemic relation between a subject and a proposition or state of affairs. In this context, using the term ‘knowledge’ is “somewhat a misnomer,” Coliva (2016, 11) notes.

Coliva’s ideas can be applied to so-called animal knowledge, then, strictly speaking, animal ‘knowledge’ is not knowledge at all. Coliva’s thoughts are here in agreement with the idea discussed above (sec. 1.1), namely, that reflexive and reflective introspection belong to non-epistemic and epistemic domains, respectively.

Below, I will defend my proposal by presenting some reasons why the possibility of introspective pluralism, as Samoilova (2016, 3380) puts it, is indeed “empirically plausible.”

Part II. Dissociation and interdependence between the two levels of introspection

I will now discuss some instances where, I argue, reflexive and reflective introspecting are disjointed. The two ways of introspecting are separated in the ontogeny of our development (sec. 2.1). They can also be disjointed as a result of some traumatic experience (sec. 2.3). The developmental succession of the

¹⁰ I do not understand the active/passive distinction in terms of whether the subject actively reasons about their mental state. As for Boyle, the distinction rather concerns whether we have a conscious relation to the target mental state itself.

two ways of self-relating brings us to the question of when in their development do human beings acquire the ability to self-refer in a reflective way (sec. 2.2).

2.1 Developmental psychology

Let me quote some findings from developmental psychology. These findings indicate that, until they reach a certain developmental maturity, infants and young children live exclusively in the state of what I have called a “reflexive introspecting” of their mental conditions:

What characterizes [three-months-old] infants’ self-exploration when they watch themselves kicking in front of a TV is the direct experience of visual-proprioceptive correspondences, not the reflection that it might be themselves live on the screen. If they prefer to look at a view displaying the legs of another baby, it is because the visual perception of these legs does not correspond to the proprioceptive perception of their own legs moving, not because they recognize that it is another child kicking. For them to recognize that it is their own legs or, on the contrary, that they are the legs of someone else, would take an additional reflective step, namely the step toward an objectification of the self. (Rochat, 2001, 70)

There is another study by Rochat and Hespos (1997) showing how neonates can distinguish between touching their own cheeks and other people’s touch. However, as Rochat (2001) points out, these observations of infants’ behavior are “just accounts of discrimination. They do not really explore what this discrimination entails in terms of infants’ understanding of their own bodies” (ibid., 43-44). There is also the result of still another piece of research (Rochat & Striano, 2002) indicating that by 4 months of age, infants show signs of perceptual discrimination of their own versus someone else’s specular image. But, as Rochat and Striano observe: “Signs of such discrimination do not mean that infants from 4 months actually recognize themselves ...” (ibid., 44).

The findings just quoted seem to indicate that there are two successive developmental ‘achievements’: sensory-motor discrimination between self-related and other-related information and the later-developed reflective self- and other-objectification. Importantly, young children’s discrimination between self-related and other-related stimuli is a kind of non-objectifying self-identification that is already at work at the lower level of processing: when information is self-related it *feels* in a special way, and when it is other-related it is *felt* differently. Thus, even if non-self-reflective children cannot yet

discriminate themselves from others on the reflective level of processing, they show signs of self-identification on the primitive proprioceptive level of feeling. This identification/discrimination is non-dual and subject-object-less. Children's reflexive mental states form an uninterrupted flow of thought and action like that of non-human animals and states of adults lost in thought.

One can reasonably argue, though, that the mental flow of young children, and of drivers driving on autopilot, and the interactions of non-human animals are dualistic and full of thought with subject-object structure. However, such an observation could be just an expression of the observer's capability to see non-reflective beings as interacting with different objects. The ability of such an observer is surely not yet the observed being's capacity to differentiate itself from an object in its focus. Indeed, non-self-reflective beings differentiate between and interact with vast numbers of different objects in their environment. This differentiation allows daydreaming adults to manage driving on autopilot, young children to orient themselves in their egocentric world, and bees, ants, or rats to find their way back to their homes. Still, there is an immense difference between distinguishing the various objects in one's perceptual field and distinguishing oneself from an object in one's focus. The former does not require reflective self-relation and is accomplished in a non-dual manner. The latter is a demanding cognitive achievement that requires a self-reflective stance. Through the ability to self-relate reflectively, one's world becomes structured in dual, subject-object terms. Such dual structuring is achieved exclusively by humans from a certain age of their development (see sec. 2.2).

I see the abilities of infants to distinguish between self-related and other-related stimuli as a sign of their ability for reflexive introspecting. Reflective introspecting would require that a self-related stimulus is taken as an object to reflect upon and as a result (in normal cases) acknowledged as belonging to the self. Human adults routinely, on an everyday basis, practice such a reflective self-relating. However, lacking a reflective stance towards themselves, the young children cannot yet see the mental states that they are in as their own mental states. The question arises: when in their development do human children acquire the ability to self-refer reflectively?

2.2 The development of self-reference

In reflective introspection, we turn our gaze upon ourselves. When and how has this ability developed? An accepted view in developmental psychology is that to be able to self-refer the child needs the vantage point of another person. The locus of the other will serve as a point of reference, allowing the child to pivot her attention back toward herself. The child needs to reach "an awareness

of self as an object of others' attention" (Reddy, 2003, p. 397), or as Hobson (1990) puts it,

... [the child's] experience of being an "object" in the world of others, leads the child to realize his or her potential for taking an outside perspective on him- or herself and his or her own attitudes, and so to acquire self-reflective awareness (Hobson 1990, p. 173).

Thus, by using the other as providing a necessary vantage point to direct her gaze inward the child discovers herself.¹¹ Let us follow this development of the child's self-understanding.

First, an observation. If in self-referring, the child needs to take the other person's point of view upon herself, then the viewpoints of the self and that of the other must be separated. In any other case, the child's self-references would be of the kind where she closes her eyes and imagines herself as not being seen. The latter kind of self-reference is egocentric or improper self-reference: the child's point of view and that of the other are not kept apart.

The concept of egocentrism is pivotal in this context. Swiss psychologist and epistemologist Jean Piaget (1962/1926) extensively studied childish egocentrism. However, unlike the conventional view of egocentrism as an excessive self-focus, Piaget used the term to describe precisely the opposite: an inability to self-refer. Piaget observed that in the early stages of their development, children could not distinguish between different persons' perspectives and exclusively experienced reality from their own point of view. Children's viewpoints were non-reversible and all-encompassing, leading them to believe that everyone around them shared their views. Consequently, such young children could not adopt another person's perspective to view themselves properly, thus remaining trapped in childish egocentrism.

When do young children manage to self-refer properly? To some extent, this question is equivalent to asking when children begin to understand that people have different points of view.

In this context, insights from Theory of Mind research are illuminating. A significant tool in this research is the so-called false-belief test. The false-belief test is a perspective-taking test designed to assess children's comprehension of others' mental states. During the false-belief test, a child is presented with a scenario in which another person first sees how an object becomes hidden but,

¹¹ While the other plays a crucial role in the initial development of self-reference, its impact seems to become less evident as our self-referential abilities become more ingrained and automatic. Nonetheless, as I see it, the influence of the other is still present, albeit less explicit, in our everyday introspective experiences.

on a later occasion, is unaware that the same object has been moved to a new location. Such a procedure places a cognitive demand on the child: the child's knowledge of the situation differs from that of the other person. The child is then asked to predict where the other person will search for the object. If a child, in response to the false-belief question, recognizes the other's perception of reality as different from the state of affairs and responds accordingly, she passes the test. Conversely, if the child attributes her own perspective to the other, she fails the test. In this way, the child's success in the false-belief test demonstrates her awareness of different points of view while failing indicates her tendency to conflate her own viewpoint with that of the other.

Focusing on children's uneven perspective-taking abilities, Choifer (2021) suggested that to master the critical false-belief question the child needs to engage in two different types of perspective-taking: *non-subject-related* and *subject-related* perspective-taking. Non-subject-related perspective-taking is manifested in the young child's switching between different vantage points without considering to whom (what subject) they belong. Such perspective-taking is egocentric in Piaget's sense and is already developed in the second year of life. In contrast, subject-related perspective-taking is developed later and is an expression of the child's appreciation of another person's vantage point as belonging to this other.

In the proposed interpretation (Choifer, 2021), the classical false-belief test becomes crucial in measuring a child's capacity to distinguish herself from another person and thus pass the boundaries of her childish egocentrism.¹² By passing this test, the child demonstrates her ability to understand the other's point of view as different from reality and thus as belonging to this other. This cognitive achievement further presents the child with the possibility to use the other person's perspective to view herself and, thereby, engage in self-referential thinking. So acquired, the ability to self-refer allows the child to perceive herself as an object for her reflective thought.

The successful completion of the false-belief test serves thus as a developmental milestone, marking the point at which a child achieves proper self-reference. This milestone is typically reached at around 4.5 to 5 years of

¹² It can be objected that Piaget's investigation and theoretical reasoning are outdated in some important respects and that children's understanding of others' points of view as belonging to these others has been shown to have already developed in their second year of life. Choifer (2021) investigates this issue thoroughly, arguing that there has been a crucial misunderstanding of Piaget's teachings. One of the most important contributing factors to this misunderstanding is the confusion between childish egocentrism (with its inability to self-refer) and our commonly shared understanding of egocentrism as an excessive inclination to self-refer.

age (Wellman, Cross, and Watson, 2001).¹³ Consequently, the capacity for self-reference, attained through success in false-belief scenarios, becomes a necessary prerequisite for engaging in reflective introspection.

Following the line of reasoning above, we can identify a developmental lag between the two ways of self-relating. Before success in the false-belief settings, children's self-referential abilities are still egocentric in the Piagetian sense while passing the test highlights children's cognitive maturity to reflective self-relatedness. We see here a succession from non-objectifying self-acquaintance (reflexive introspecting) to a subject-object structured self-relation (reflective introspecting). If the former seems to be undertaken by all members of the animal kingdom, the latter is a challenging cognitive achievement accomplished exclusively by normally developed human children around 5 years of age.¹⁴ Thus, in the case of humans, we have a developmental leap from non-epistemic to epistemic relations with their surroundings.¹⁵ I see this leap as legitimizing our talking in terms of dissociation between experiencing (self-reflexivity) and reasoning (self-reflectivity).

Importantly, even if there is a developmental lag and thus a dissociation between the two modes of self-relating, there is also an interdependence. Subject-object-less reflexive mental states will serve as an object to reflect upon for beings capable of reflective thought. I will now investigate the interplay between the two ways of self-relating by paying attention to the *detection condition* introduced in section 1.3 above.

2.3 Neuropsychology. Some clinical cases

As noted in section 1.3, the detection condition entails a certain connection between different introspective processes: in my reflective relation to my mental states (reflective introspecting), I address my sensations and

¹³ Concerning children's early (before their success in the false-belief settings) mentalizing abilities see further discussion in Choifer (2021, pp. 945 – 947).

¹⁴ If one objects here that before their 5th birthday children not only experience but undoubtedly reason. I would agree, but I also note that before children succeed in false-belief settings, their reasoning is built on egocentric self-references and, therefore, is not a proper kind of reasoning.

¹⁵ Many terms and pairs of terms have been used to distinguish epistemic and non-epistemic mental phenomena. Among alternatives to "epistemic" are "objectifying," "having subject-object-structure," "being about something," "reflective," and "awareness of" (sec. 1.2). Instead of "objectifying introspection," Armstrong says "introspection proper" (sec. 1.3). Schwitzgebel's "self-detection models" are models for reflective introspection, as are Kind's "observational models" (sec. 1.3). Boyle's related term is "active knowledge" (sec. 1.5). In section 2.2, I referred to Choifer's "subject-related perspective-taking," that stands for an epistemic attitude. This might seem paradoxical but note that what is meant by "subject-relatedness" is appreciating another person as a subject with *her own* view on reality. This is essentially the same as being "non-egocentric" in Piaget's sense (sec. 2.2).

Understanding Introspection

perceptions in which I am self-reflexively conscious (reflexive introspecting). The detection condition also implies that the introspective judgment and the introspective target are temporally separated: it takes some time for reflective awareness to detect a pre-existing (self-reflexive) mental state. As we will see, this time interval is responsible not only for the interconnection but also for the dissociation between the two levels of self-relating.

It is an established neurophysiological fact that it takes some time for subliminal processing to bring sensory stimuli to the threshold of consciousness. That is, some time is required to complete the process of becoming self-aware and becoming conscious of one's mental condition. Zahavi (1999) can here object:

... the temporal distance would imply that it takes time to become aware of oneself, and this does not seem to correspond with the *immediate* and *instantaneous* character of our self-awareness. To be in pain is to be (self-)aware of it. It is so to speak both a way of being and a way of being aware. If somebody asks us whether we are in pain, we *know* so immediately, and do not have to check it out first. (Zahavi, 1999, 18-19, italics in the original)

In section 1.3 I distinguished between reflective and reflexive introspection. Reflective introspection proceeds in accordance with the detection condition: the pre-existing mental state is followed by the introspecting state. Thus, when Zahavi writes, "To be in pain is... so to speak both a way of being and a way of being aware." he exploits the idea of *reflexive* introspection. However, Zahavi, in the very last sentence, refers to the *reflective* awareness of knowing whether one is in pain. He uses the terms "immediate" and "instantaneous" to describe reflexive awareness and, surprisingly, adds that introspective *knowledge* – i.e., reflective self-awareness – is also "immediate".

"Immediate" can be used in many senses. What I would like to call "phenomenological immediateness" may be relevant to the interpretation of Zahavi here. It is when the knower neither notices any temporal gap between the pain and her knowledge about it, nor is aware of any inference leading to her knowing. The emphasis is on "noticing", so phenomenological immediateness does not exclude a temporal gap or an inference. To illuminate my points let me cite a clinical case.

Russell and Nathan (1946) presented a case of retrograde amnesia (the inability to remember events that took place before the onset of amnesia) when a patient's memory could be recovered:

Association of ideas may assist the reduction of R.A. [Retrograde Amnesia], as in the case of a soldier who, after recovering consciousness, had an R.A. of over an hour – his last memory was setting out on his journey driving a truck in the dark. Some months later at the cinema he was watching the picture of an aeroplane crashing with the appropriate sounds. The patient found this a very upsetting experience, and suddenly the noise brought back to his mind the noise he heard as his truck crashed. (Russell & Nathan, 1946, 295)

Russell and Nathan continue:

The almost constant occurrence of R.A. indicates that the injury, though it cannot have time to prevent what is last seen or heard from reaching the sensorium, does completely prevent its retention for future recall. The latter process presumably requires a few seconds of time for completion. (Ibid., 298)

Completing the process of remembering requires two sequential events, the first of which is registering the experience at the sensorial level. I argue that the second necessary event is a reflective consideration of oneself as undergoing the experience. The latter is crucial for any awareness of what has been experienced on the subliminal level of processing.¹⁶ The tragic wartime incident disengaged these two consciously unnoticeable and (in our everyday life) inseparably unified events so that the process of reflective self-awareness (reflective introspection) could not be completed. What reached the sensorium was covered by amnesia since it was not given to the soldier as *his* experience – there was simply no time to apprehend this fact.

By watching the film, the soldier underwent a mental experience that, in a certain respect, was like the one he, some months before, had lived through. The new element on this later occasion was, though, that the picture of an airplane crashing not only revived the experience that the soldier implicitly registered, but also supplied him with the time he needed to *redirect his attention* toward himself and recognize the experience *as his own*. We usually have this phenomenally “instantaneous” time to infer and become aware of,

¹⁶ Compare this to Kim’s description of driving on autopilot:

Consider again the experience of driving on “automatic pilot”: You perceive the conditions of the road and traffic, but there is a sense in which your perceptions are not fully conscious. That is, you are not aware of what you see and hear, although you do see and hear, and you are unable to recall much of anything about the condition of the traffic for several minutes at a time. (Kim, 2011, 284)

for example, the pain we have just experienced (cf. Zahavi quoted at the beginning of this section)¹⁷

Moreover, the temporal separateness between the state of *being* and the state of *being aware of* agrees with the intuitions behind the idea of a detection mechanism (Schwitzgebel 2024). However, contrary to Schwitzgebel (2024, quoted in sec. 1.3), we can also conclude that the process of (reflective) introspection is *ontologically dependent* on the target mental state.

We can ask: What distinguishes all the other people sitting in the cinema watching the picture of an airplane crashing from the soldier who leaves the cinema reflectively self-aware about his crash? Unlike the others, the soldier has had a certain traumatic experience. During the appropriate film sequence, his reflexive being in the state in question is revived, and an undisturbed process of consciousness results in completing the act of *being aware of* his state.

Epistemic access is not the only issue involved here. In agreement with the insight of the phenomenologists (Fichte 1794/1982, Shoemaker 1984, Zahavi 2007a), the soldier's earlier reflexive experience was necessary for him to identify the experience as his own. Such primitive, reflexive awareness was missing for the others sitting in the cinema.

The idea of there being two separate mental events behind the act of reflective awareness is supported by other neuropsychological evidence. A nice illustration is the case of a painter (Sacks & Wasserman 1987, Sacks 1995), who, after his brain injury, lost his ability to perceive colors. A mere couple of months later the painter could not even remember what different colours looked like. Losing his ability to be *in* certain phenomenal states, the painter lost the ability to understand *what kinds of properties* we are talking about when we use the word 'colour'. He just knew that colours existed as a statement of fact (see further below).

Generally, considering clinical cases of neuropsychology, brain lesions and their effects on higher mental functions can make us aware, Gulick (2025) notes, "of aspects of phenomenal structure that escape our normal introspective

¹⁷ It is perfectly possible to be in pain beneath the threshold of consciousness, even though, we almost always associate feeling pain with a reflective awareness about this state. "There is an ambiguity, and a dialect difference, in our use of the word 'pain'. ... pain, is by *definition* a feeling; the notion of an 'unfelt pain' is contradictory" (Gertler 2003, 23, italics in the original). However, as Kim exemplifies:

In the heat of competition or combat, an injured athlete or wounded soldier can be entirely unaware of pain. His attention is wholly occupied with other tasks, and he is not conscious of pain. In such a case we may have an instance of pain that is not a conscious pain, and the reason may be that there is no awareness, or internal scanning, of the pain. (Kim, 2011, 284).

awareness. As such case studies show, things can come apart in experience that seem inseparably unified or singular from our normal first-person point of view.” To this, I would like to add that we need to be cautious in generalizing observations of individual cases. However, when evaluated in the wider context of other evidence, these cases can be indispensable for our understanding of the structure and features of mental phenomena.

I would further suggest that the *phenomenal* simultaneity of the state of *being* and the succeeding state of *being aware of* is a result of an ongoing and consciously unnoticed alternation between the state of feeling (self-reflexivity) and the state of reflective awareness about this feeling (self-reflectivity). As clinical cases in neuropsychology suggest, the experienced continuity of one’s conscious experience, and thus the conscious introspective experience itself, will cease to exist if one of its two components is missing, or when the process of switching from one state to another is not supported by an alternation between the two.

Imagine being in pain and a couple of milliseconds later being aware of being in pain. Imagine then that only one of these two states exists. If reflective awareness is missing, we are trapped in our reflexive interactions in the way of non-human animals, egocentric children, or our daydreaming states. If, on the contrary, experience is missing, we are deprived of its phenomenal impact on our awareness and unsuccessfully try to introspect our mental conditions in the way the painter (Sacks & Wasserman 1987, Sacks 1995) did.¹⁸

Hence, I would like to conclude that in normal cases, reflective introspection is dependent on an ongoing and consciously unnoticed alternation between the reflexive and reflective ways of self-relating. Because this alternation is unnoticed, the state of being and the state of being aware appear *phenomenally* simultaneous.

Part III. Introspection and priming

Above, I suggested distinguishing between two kinds of introspecting – *reflexive* and *reflective* introspection – and proposed that we see reflexive introspection as a special kind of immediate, unconscious, and automatic self-relatedness.

Unconscious self-monitoring or self-scanning seems to be essential in feedback loops, such as those involved in holding our balance and in adjusting other proprioceptive states in relation to constantly changing incoming information. I see here a critical connection between our ability to introspect

¹⁸ A third possible outcome is when both reflexive and reflective self-relations are intact, but the process of switching from one to another is disrupted (see also footnote 19).

Understanding Introspection

reflexively and the neural processing manifested through the phenomena of priming.

Perceptual priming is an enhanced identification of previously encountered objects. It is a form of memory that does not require conscious recollection. Tulving, who together with his colleagues postulated this basic form of memory (priming or the so-called perceptual representations system – PRS), described it as follows:

A perceptual encounter with an object on one occasion primes or facilitates the perception of the same or a similar object on a subsequent occasion, in the sense that the identification of the object requires less stimulus information or occurs more quickly than it does in the absence of priming. Because perceptual priming represents a rudimentary capability whose biological utility seems to be obvious, it seems reasonable to expect that it is represented across a wide spectrum of species. (Tulving, 1995, s. 841)

Working in a somewhat different tradition, Goldstone (1998) uses other terminology and denotes the phenomenon as ‘imprinting’. Imprinting is one of the mechanisms of perceptual learning when “observers become tuned to the particular instances to which they are exposed” (Ibid., 592).

The mechanism of priming brings with it a vital evolutionary gain. This gain is about the organisms’ ability to gradually hand over life-sustaining skills to unconscious processes. For example, the dream-like periods during the driving exercise (Cf. Armstrong, 1981 and Kim, 2011) are a result of long and persistent procedural learning. At some point in the past, this process required considerable attention and constant conscious self-monitoring. However, subserved by priming/imprinting mechanisms, this exercise eventually could be substituted by unconscious self-regulation.

Theoretically, preconscious processes, like all automatic processes... develop out of one’s frequent and consistent mental, emotional, and behavioral reactions to a given set of environmental features. ... Preconscious automaticity models the regularities in one’s reaction to an event, and eventually subsumes them so that the conscious mind no longer has to make decisions and understanding it always makes the same way anyway. If this were not the case, ... none of us would be capable of getting out of bed in the morning. (Bargh 1997, 10)

According to Tulving and Schacter (1990) some of the distinguishing characteristics of priming are that (i) it is unconscious, (ii) it is intact in densely amnesic patients (it is mediated by neural systems outside regions that are damaged in amnesia, and that play an important role in explicit remembering), (iii) it develops early and is preserved late in life (priming effects in 3-years-olds can be compared to college students and priming capabilities of elderly subjects are indistinguishable from those of young adults).¹⁹

Now, if a perceptual encounter with an object facilitates the perception of the same or a similar object on a subsequent occasion, then, in principle, we can be primed by any of our reflexive experiences. Through this priming, we can learn to handle the same perceptual situations automatically, using the self-monitoring ability that I have named “reflexive introspection.” I thus suggest seeing the introspective process, on its lower level, as based on the phenomenon of ‘priming’ (Tulving, 1995) or ‘imprinting’ (Goldstone, 1998).

Seeing the ability to self-relate on the non-epistemic, non-self-reflective level of consciousness as subserved by priming explains certain findings in child psychology. One unique object that we become primed for very early in our lives is our own body, and egocentric children manifest an ability to self-identify already at 3 months of age (see sec. 2.1).

Based on reflexive experiences, priming is a subtle, unconscious activation of neural pathways that prepare the body and mind for action. For example, when we skillfully manage such complex activities as driving on autopilot or absentmindedly playing an instrument, priming is a form of body memory with stored physical, emotional, or learned experiences that can influence movement, posture, and physiological responses.

Tulving (1995, s. 841) states that the priming effects manifest themselves “on a subsequent occasion” of a priming experience. We might speculate that for a priming experience to be remembered or reflected upon after a certain time and thus be brought into consciousness, the experience must have been of a certain emotional value. Such an emotional value was undoubtedly present during the dramatic war accident (Russell & Nathan, 1946). Primed by his traumatic experience, the soldier could, on a later occasion, complete his reflective awareness and consolidate his experience in episodic memory (the capacity to re-experience an event as being connected to its original context). Priming is of value here in understanding the workings of reflexive self-relation in the cases of amnesia, that is, in the cases where reflective introspection is missing.

¹⁹ Could it then be the case that the painter was primed for colors but still unable to recollect them (see footnote 18)? Cases such as that of the painter (Sacks & Wasserman 1987, Sacks 1995) would require further elaboration concerning priming mechanisms.

Understanding Introspection

Seeing reflexive self-relatedness (simple introspection) as based on the phenomenon of priming can explain the interplay between the two levels of introspection. Reflective introspection becomes then a conscious recollection of previously registered proprioceptive and emotionally laden information. By being attuned to a particular phenomenal experience through a priming-like mechanism, the introspecting individual can proceed (if certain other conditions are fulfilled, e.g., temporal continuity, temporal proximity, and emotional value) to conscious identification of this experience. So understood, reflective introspection fits Schwitzgebel's (2024) description of it as the process of "*attunement to or detection of a pre-existing mental state*" (italics in original).

I see the discussion above as providing cogent reasons for understanding reflexive introspection as subserved on the neurological level by priming mechanisms.

To summarize the discussion in these pages: I suggested seeing the introspective process as consisting of two parts: (i) a reflexive self-relation supported by the phenomenality of our experiencing (what I have called "simple introspection") and (ii) the subsequent reflective objectification of the experience in question (what I have called "reflective introspection"). Hence, I proposed that introspection operates as a two-level process, characterized by distinct forms of self-relation at each level of introspection.

The interconnection between the two ways of self-referring speaks for two levels in introspecting, while dissociation between these two levels makes pluralism regarding introspection plausible. Drawing on insights from developmental psychology and neuropsychology, I presented novel arguments for pluralism about introspection. Finally, I argued that the process of introspecting, on its lower level, is plausible to be understood as based on the phenomenon of 'priming' or 'imprinting'.

Statements and Declarations

Compliance with Ethical Standards. I confirm that there are no conflicts of interest or funding sources to report for this paper.

Acknowledgments:

I sincerely want to thank Helge Malmgren for the valuable discussions, encouragement, and support throughout my work on this manuscript.

References

- Armstrong, D. M. (1968). *A Materialist Theory of the Mind*. London: Routledge.
- Armstrong, D. M. (1981). *The Nature of Mind and Other Essays*. Ithaca, NY: Cornell University Press.
- Baehr, J. (2014). Reply to Zagzebski. In M. Steup, J. Turri, and E. Sosa (eds.). *Contemporary Debates in Epistemology*. 2nd Ed. Chichester: Wiley Blackwell, 146–148.
- Balog, K. (2012). Acquaintance and the mind-body problem. In S. Gozzano & C. S. Hill (eds.). *New Perspectives on Type Identity: The Mental and the Physical*. Cambridge: Cambridge University Press, 16–42.
- Bargh, J. A. (1997). The automaticity of everyday life. In R. S. Wyer, Jr., ed. *The automaticity of everyday life: Advances in social cognition*, 10, Lawrence Erlbaum Associates Publishers, 1–61.
- Brandom, R. (2000). *Articulating Reasons: An Introduction to Inferentialism*. Cambridge, Mass.: Harvard University Press.
- Boyle, M. (2009). Two kinds of self-knowledge, *Philosophy & Phenomenological Research*, 78, 133–164. <https://doi.org/10.1111/j.1933-1592.2008.00235.x>
- Boyle, M. (2011). Transparent Self-Knowledge. *Proceedings of the Aristotelian Society Supplementary Volume*, 85, 223–241, <https://doi.org/10.1111/j.1467-8349.2011.00204.x>
- Boyle, M. (2019). Transparency and reflection. *Canadian Journal of Philosophy*, 49(7), 1012–1039. <https://www.jstor.org/stable/10.2307/48547394>
- Burge, T. (1998). Reason and the first person. In C. Wright, B. C. Smith, and C. Macdonald, (eds.). *Knowing our own minds*, Oxford: Oxford University Press, 243–270
- Byrne, A. (2011). Transparency, Belief, Intention. *Proceedings of the Aristotelian Society Supplementary Volume* 85, 201–221, <https://doi.org/10.1111/j.1467-8349.2011.00203.x>
- Chalmers, D. J. (2003). The content and epistemology of phenomenal belief. In Q. Smith and A. Jokic, (eds.). *Consciousness: New philosophical perspectives*, Oxford: Oxford, 220–272.
- Choifer, A. (2021). Interpretational Complexities in Developmental Research and a Piagetian Reading of the False-Belief Task, *Review of Philosophy and Psychology*, 12, 923–952. <https://doi.org/10.1007/s13164-020-00519-0>

- Cohen, S. (2002). Basic knowledge and the problem of easy knowledge. *Philosophy and Phenomenological Research* 65, 309–329. <http://www.jstor.org/stable/3070994>
- Coliva, A. (2016). *Varieties of self-knowledge*. London: Palgrave
- Davidson, D. (1984). Thought and Talk. In *Inquiries into Truth and Interpretation*. Oxford: Clarendon Press, 155–170.
- Dretske, F. (1989). The need to know. In M. Clay & K. Lehrer (eds.). *Knowledge and Skepticism*. Boulder: Westview Press.
- Fichte, J.G. (1794/1982). *Science of Knowledge, with the First and the Second Introductions*, trans. P. Heath and J. Lachs. Cambridge: Cambridge University Press.
- Gertler, B. (2001). Introspecting phenomenal states, *Philosophy and Phenomenological Research* 63, 305–328. <https://doi-org.ezproxy.ub.gu.se/10.1111/j.1933-1592.2001.tb00105.x>
- Gertler, B. (2003). *Privileged Access. Philosophical Accounts of Self-Knowledge*. Burlington: Ashgate Publishing Company.
- Goldstone, R. L. (1998). Perceptual learning. *Annual Review of Psychology* 49, 585–612. <https://doi.org/10.1146/annurev.psych.49.1.585>
- Gulick, R. (2025). Consciousness, In E.N. Zalta & U. Nodelman (eds.). *The Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/archives/spr2025/entries/consciousness/>
- Haugeland, J. (1998) *Having Thought: Essays in the Metaphysics of Mind*. Cambridge, Mass.: Harvard University Press.
- Hill, C.S. (2009). *Consciousness*. Cambridge: Cambridge University Press.
- Horgan, T., & Kriegel, U. (2007). Phenomenal epistemology: What is consciousness that we may know it so well? *Philosophical Issues* 17(1), 123–144. <https://www.jstor.org/stable/27749885>
- Husserl, E. (1913/1982), *Ideas*, Book I, T.E. Klein and W.E. Pohl (trs.), Dordrecht: Kluwer.
- Kind, A. (2022). Introspection, *The Internet Encyclopedia of Philosophy*, ISSN 2161–0002, <https://iep.utm.edu/introspe/> Mars 2025.
- Kim, J. (2011). *Philosophy of Mind*. Philadelphia: Westview Press.
- Kornblith, H. (2002) Knowledge and its place in nature. Oxford Scholarship Online: <https://doi.org/10.1093/0199246319.001.0001>
- Kornblith, H. (2007). The metaphysical status of knowledge. *Philosophical Issues* 17, 145–164. <https://www.jstor.org/stable/27749886>
- Lehrer, K. (2000). Discursive knowledge. *Philosophy and Phenomenological Research* 60(3), 637–653. <https://doi.org/10.2307/2653821>
- Moran, R. (2001). *Authority and Estrangement*. Princeton: Princeton University Press.

- O'Brien, L. (2007). *Self-knowing agents*. Oxford University Press.
- Peacocke, C. (2004). *The realm of reason*. Oxford University Press.
- Piaget, J. (1962/1926). *The Language and Thought of the Child*. London: Routledge & Kegan Paul LTD.
- Prinz, J.J. (2004). The fractionation of introspection. *Journal of Consciousness Studies* 11(7–8), 40–57.
- Rochat, P. (2001). *The Infant's World*. Cambridge, MA: Harvard University Press.
- Rochat, P., & Hespos, S. J. (1997). Differential rooting response by neonates: Evidence for an early sense of self. *Early Development and Parenting*, 6(3–4), 105–112.
[https://doi.org/10.1002/\(SICD\)1099-0917\(199709/12\)6:3/4<105::AID-EDP150>3.0.CO;2-U](https://doi.org/10.1002/(SICD)1099-0917(199709/12)6:3/4<105::AID-EDP150>3.0.CO;2-U)
- Rochat, P., & Striano, T. (2002). Who's in the mirror? Self-other discrimination in specular images by four- and nine-month-old infants. *Child Development* 73(1), 35–46.
<https://doi.org/10.1111/1467-8624.00390>
- Sacks, O. (1995). The Case of the Colorblind Painter. In *An Anthropologist on Mars*. New York: Vintage Books, 1–38.
- Sacks, O., & Wasserman, R. (1987). The case of the colorblind painter. *The New York Review of Books*, 34(18), 25–34.
- Samoilova, K. (2016). Transparency and introspective unification, *Synthese* 193, 3363–3381. <https://doi.org/10.1007/s11229-015-0936-5>
- Schwitzgebel, E. (2012). Introspection, what? In D. Smithies and D. Stoljar (eds.). *Introspection and consciousness*, Oxford: Oxford
- Schwitzgebel, E. (2024). Introspection, In E.N. Zalta & U. Nodelman (eds.). *The Stanford Encyclopedia of Philosophy*,
<https://plato.stanford.edu/archives/fall2024/entries/introspection>
- Shoemaker, S. (1984). Personal Identity: a Materialist Account. In S. Shoemaker & R. Swinburne (eds.). *Personal Identity*. Oxford: Brazil Blackwell, 67–133.
- Shoemaker, S. (1994a). Self-knowledge and 'inner sense': Lecture I: the object perception model. *Philosophy and Phenomenological Research* 54(2), 249–269. <https://www.jstor.org/stable/2108488>
- Shoemaker, S. (1994b). "Self-knowledge and 'inner sense'. Lecture II: The broad perceptual model", *Philosophy and Phenomenological Research* 54(2), 271–290. <https://www.jstor.org/stable/2108489>
- Shoemaker, S. (1994c). "Self-knowledge and 'inner sense'. Lecture III: The phenomenal character of experience", *Philosophy and Phenomenological Research* 54(2), 291–314. <https://www.jstor.org/stable/2108490>

- Sosa, E. (1997). Reflective Knowledge in the Best Circles. *The Journal of Philosophy* 94(8), 410–430. <https://doi.org/10.2307/2564607>
- Tulving, E. (1995) Organization of Memory: Quo Vadis? I M.S. Gazzaniga, (ed.), *The Cognitive neurosciences*. Cambridge: MIT Press, 839–847.
- Tulving, E. & Schacter, D.L. (1990) Priming and human memory systems. *Science* 247, 301–306.
- Tye, M. (1997). The problem of simple minds: is there anything it is like to be a honey bee? *Philosophical Studies* 88, 289–317.
<https://doi-org.ezproxy.ub.gu.se/10.1023/A:1004267709793>
- Wellman, H.M., Cross, D. & Watson, J. (2001). Meta-analysis of theory-of-mind-development: the truth about false belief. *Child Development* 72(3), 665–684. <https://www.jstor.org/stable/1132444>
- Williams, M. (2004). Is knowledge a natural phenomenon? In R. Schantz (ed.), *The Externalist Challenge*. Berlin: Walter de Gruyter, 193–209.
- Zagzebski, L. (2014). Knowledge and the motive for truth. In M. Steup, J. Turri, & E. Sosa (eds.). *Contemporary Debates in Epistemology*. Chichester: Wiley Blackwell, 140–145.
- Zahavi, D. (1999). *Self-awareness and Alterity: A Phenomenological Investigation*. Evanston: Northwestern University Press.
- Zahavi, D. (2007a). The Heidelberg School and the limits of reflection. In S. Heinämaa, V. Lähteenmäki and P. Remes (eds.). *Consciousness: From Perception to Reflection in the History of Philosophy*, 267–285, Springer.
https://doi.org/10.1007/978-1-4020-6082-3_12
- Zahavi, D. (2007b). Self and other: the limits of narrative understanding. *Royal Institute of Philosophy Supplement* 60, 179–202.
<https://doi.org/10.1017/S1358246107000094>
- Zahavi, D. (2020). Consciousness and selfhood: getting clearer on for-me-ness and mineness. In U. Kriegel (ed.), *The Oxford Handbook of the Philosophy of Consciousness*, 635–653.
<https://doi.org/10.1093/oxfordhb/9780198749677.013.29>

Alla Choifer
Philosophy, linguistics & theory of science,
The University of Gothenburg
alla.choifer@filosofi.gu.se