

# Analytic Phenomenology and the Inseparatism Thesis

*Christopher Stratman*

*The University of Texas at San Antonio*

## *Abstract*

A phenomenological turn has occurred in contemporary philosophy of mind. Some philosophers working on the nature of intentionality and consciousness have turned away from views that construe the basic ingredients of intentionality in terms of naturalistic tracking relations that hold between thinkers and external conditions in their environment in favor of what has been called the “Phenomenal Intentionality Theory” (PIT). According to PIT, all “original” intentionality is either identical to or partly grounded in phenomenal consciousness. A central claim for PIT is the inseparatism thesis, which asserts that the phenomenal and the intentional are inseparable. In this article, I will situate this thesis within a methodological context I call “analytic phenomenology” and then show why proponents of PIT should take seriously our phenomenology of temporal experience. But I am not aiming to disprove PIT or defend it against views of intentionality that reject inseparatism. Rather, I want to understand what PIT says and how to approach the view, assuming that our goal is to test the theory using the assumptions and methods endorsed by proponents of the theory.

*Keywords:* Intentionality, Phenomenal intentionality, Analytic phenomenology, Inseparatism, Temporal experience.

## 1. Introduction

A phenomenological turn has occurred in contemporary philosophy of mind. Some philosophers working on the nature of intentionality and consciousness have turned away from views that construe the basic ingredients of intentionality in terms of naturalistic tracking relations that hold between thinkers and external conditions in their environment in favor of what has been called the “Phenomenal Intentionality Theory” (PIT).<sup>1</sup> Most versions of PIT hold that the deep, metaphysical nature of all “original” intentionality is either identical to or partly grounded

<sup>1</sup> I take intentionality generically to mean the aboutness or directedness of mental phenomena.

in phenomenal consciousness.<sup>2</sup> On this approach to the nature of intentionality, a subject's conscious experiences are taken to be explanatorily prior to intentional mental states. This reversal of the explanatory direction constitutes a nascent research program, increasingly viewed as a competitor to widely accepted naturalistic, tracking theories of intentionality.<sup>3</sup>

Now, it is important to distinguish between what proponents of PIT take to be the deep, metaphysical nature of intentionality and the explanatory asymmetry between phenomenal consciousness and intentionality. The former need not be construed strictly in terms of a grounding relationship, whereby intentionality is metaphysically grounded in or supervenes on phenomenality, if for example it turns out that intentionality and phenomenality are metaphysically identical.<sup>4</sup> The latter is generally understood in terms of an asymmetric explanatory relation between intentionality and phenomenality, whereby phenomenal consciousness is explanatorily prior to intentional content. For instance, it could be the case that an Identity view of PIT is metaphysically compatible with various strong versions of representationalism. But these views would differ with regard to what explains what—that is, representationalism is typically thought of as explaining phenomenality in terms of intentionality, while PIT is generally thought of as explaining intentionality in terms of phenomenality.<sup>5</sup>

Now, in order to properly evaluate this consciousness-first approach to intentionality, we need to consider the following questions:

**The Inseparability Question:** Is there a significant relationship or connection between phenomenal consciousness and intentionality—are they inseparable?

**The Nature Question:** What would have to be the case regarding the nature of this relation, such that intentionality is dependent on phenomenal consciousness?

Proponents of PIT disagree about how to answer the second question but they generally agree that an important relationship unites phenomenal consciousness and intentionality. In what follows, I will focus on the first question by testing arguments advocates of PIT have offered in support of *inseparatism*—the view that the phenomenal and the intentional are in a philosophically important sense metaphysically inseparable.<sup>6</sup> My primary goal in this article is to situate the inseparatism thesis within a methodological context I call “analytic phenomenology”, and then show why proponents of PIT should take seriously our phenomenology of

<sup>2</sup> For an overview of PIT, see e.g., Kriegel 2013b; see also Bourget & Mendelovici 2019 and Mendelovici & Bourget 2020. It is worth mentioning that Kriegel (2013b: 5) recognizes that the term “grounding” is being used in an atypical fashion; the relation need not be asymmetric. For instance, Mendelovici (2018) claims that it is an identity relation. We can give a relatively neutral formulation in terms of a counterfactual dependence relation as follows: “An intentional state has phenomenal intentionality just in case if it were not phenomenal it would not be intentional” (Kriegel 2013a: 437).

<sup>3</sup> See e.g., Kriegel 2013b.

<sup>4</sup> See e.g., Mendelovici's (2018: 93-5, 109-13) discussion of these points.

<sup>5</sup> See e.g., Mendelovici 2018: 110.

<sup>6</sup> Until recently, it was widely accepted that consciousness and intentionality are not merely conceptually distinct, they were taken to be metaphysically independent. For a discussion of this point, see e.g., Kriegel 2013b: 5; see also Horgan and Tienson 2002; and Pautz 2008.

temporal experience. But I am not aiming to disprove PIT or defend it against views of intentionality that reject inseparatism. Rather, I want to understand what PIT says and how to approach the view, given that our goal is to test the theory using the assumptions and methods endorsed by proponents of the theory.

I begin by clarifying some motivations for inseparatism and what is meant by “analytic phenomenology”. I then explain why this methodological approach to conscious experience matters for the inseparatism thesis at the core of PIT (Sections 2 & 3). I will argue that conscious experience has an important kind of temporal structure I call its “temporal shape” (Section 4). I will then show why arguments for inseparatism hinge on recognizing the temporal shape of conscious experience (Section 5), prior to concluding (Section 6).

## 2. Inseparatism

According to Horgan & Tienson, inseparatism is the negation of separatism, which says:

Beliefs and desires are the paradigm cases of intentional mental states. Although they are intentionally directed—i.e., they have aboutness—these mental states are not inherently phenomenal. There is nothing that it is like to be in such a state by virtue of which it is directed toward what it is about (Horgan & Tienson 2002: 520).

And Kriegel describes inseparatism as follows: “The phenomenal and the intentional do not form two separate mental realms, but are instead inseparably intertwined” (Kriegel 2013b: 5). So, we can think of the inseparatism thesis as giving a positive answer to the separability question stated above. Let us define the thesis as follows:

**The Inseparatism Thesis:** There exists a *sui generis*, counterfactual relationship that holds between the phenomenal and the intentional.

The goal of this section is to further elaborate on what this thesis means and explain some of the motivations for why proponents of PIT accept this claim.

In contemporary philosophy of mind, intentionality is typically construed in terms of what have been called propositional attitudes, like a subject’s belief that *p*. And the central task of a theory of intentionality has often been understood as giving a plausible account of the truth-conditions for such mental states or propositional attitudes. Some add to this task the desideratum that a theory of intentionality must be naturalized by explicating a subject’s propositional attitudes in terms of their causal-functional role or some naturalistic tracking relation that holds between the thinking subject and her environment.<sup>7</sup> In an attempt to make sense of the mental ontology required for this sort of approach to be plausible, some philosophers posit mental representations or representational content as the basic ingredient for intentionality. Building on this idea of representational content, one could thereby explain a subject’s conscious mental states in terms of her

<sup>7</sup> There are two leading approaches to intentionality that attempts to naturalize it in physical or functional terms. The first are functional role theories, which claim that intentionality arises from the functional role of states internal to the subject in conjunction with other causal relations and ingredients. See e.g., Harman 1987. The second are tracking theories, which claim that intentionality arises from a suitably natural relation that holds between a subject and her environment and carry or track the appropriate information. See e.g., Dretske 1993, 1995; Millikan 1984.

representational mental states. If this is correct, then a theory of intentionality could arguably serve as the basis for a theory of consciousness.

Proponents of PIT adopt a different approach, one that reverses the explanatory direction. Instead of explaining consciousness in terms of intentionality (e.g., representational states), intentionality is explained in terms of phenomenal consciousness. On this approach, we begin with phenomenal consciousness as basic and then identify those intentional states that are identical to or partly grounded in conscious states (i.e., phenomenal intentional states). One can then proceed to show that all other forms of alleged intentionality are dependent on this fundamental form of “original” intentionality.<sup>8</sup> Indeed, for those who take PIT to be a general theory of what intentionality is, the theoretical program of explaining all forms of intentionality in terms of phenomenal intentionality as their source is arguably the driving intuition and central motivation for the view. Thus, PIT is phenomenological insofar as it is a theoretical investigation of the nature of intentionality via an inquiry into conscious experience itself.

But some philosophers have thought that there is an unbridgeable gulf between naturalistic explanations of intentional mental states and phenomenal conscious mental states, which suggest that phenomenality and intentionality are metaphysically separate.<sup>9</sup> It is this idea of separatism that is rejected by proponents of PIT and is central to a proper understanding of what the theory says.<sup>10</sup> There are two key parts to the inseparatism thesis. The first says: “...paradigmatic sensory states in fact exhibit intentionality, which is moreover grounded by their phenomenality”; the second says: “...paradigmatic cognitive states in fact boast a phenomenality, which moreover grounds their intentionality” (Kriegel 2013b: 5). But it is not immediately obvious what is meant by these alleged mental states or their properties. And since PIT asserts that these items are the basic ingredients of intentionality, it is important to get a better grip on the mental ontology involved in such mental goings-on.

For instance, Mendelovici claims that we should “...define phenomenal properties as ways things are or might be with respect to phenomenal consciousness, or phenomenal ways things are or might be, and phenomenal states as instantiations of phenomenal properties” (Mendelovici 2018: 84). And given that this definition is, generally speaking, a reasonable representation of how proponents of PIT tend to construe what is meant by the phenomenal character of certain sensory and cognitive states, we can use this as an initial place to begin to understand what PIT says are the basic ingredients of intentionality. Hence, inseparatism should be understood as asserting the following: phenomenal properties are instantiated by certain mental states, which cannot be separated from the intentional properties they exhibit because they are metaphysically intertwined.

To my mind, the claim that a phenomenal mental state (or experience) instantiates certain phenomenal properties remains largely opaque. But if we are to evaluate the arguments offered in support of the inseparatism thesis, then we will need to clarify how proponents of PIT are using these terms. While it is too demanding to expect that one must give a full theory of states and properties (clearly,

<sup>8</sup> For instance, Kriegel (2013b: 13) says: “Perhaps the most important kind of claim made on behalf of phenomenal intentionality is that it is in some way basic among forms of intentionality”.

<sup>9</sup> See e.g., Harman 1987; and Dretske 1993, 1995.

<sup>10</sup> See e.g., Kriegel 2013b: 3.

I will not do so here), it is reasonable to make some clarifications regarding how we should interpret these terms as they relate to PIT and the inseparatism thesis.

First, proponents of PIT often take the term “conscious state” to be synonymous with “conscious experience”, which suggests that such states or experiences have an important internal structure with other states/properties as constituents. On this interpretation, the conscious mental state can be understood as a complex state/property, rather than a simple, unanalyzable state/property.<sup>11</sup> So, for example, to say that Alex is undergoing an experience of déjà vu would be construed as meaning that Alex is in an internally structured conscious state that instantiates various phenomenal properties.

Now, some philosophers take phenomenal conscious states and phenomenal properties to be basically the same thing; others argue that there is an important difference between phenomenal consciousness, phenomenal states, and phenomenal character. For example, Dretske (1995), Pautz (2010), Bourget (2010), and Tye (2015) defend a relational account of phenomenal consciousness, whereby phenomenal properties are understood not as phenomenal states with distinct qualia but as mental states construed as relations to distinct phenomenal characters (e.g., surface properties of objects, abstract phenomenal properties, sense data, etc.).<sup>12</sup> Still, someone might think that the real issue here is how to understand what is meant by the contents of conscious states or conscious experiences. For instance, some proponents of PIT construe intentional contents to be the instantiations of phenomenal properties not the phenomenal properties themselves. Of course, there are various positions in logical space available to proponents of PIT. So, it might be tempting to think that such questions are simply unimportant.<sup>13</sup> But what I want to focus on and what will become clear as we continue is that treating conscious states and conscious experiences as essentially the same thing is not theoretically harmless.

Second, there is an important difference between mere consciousness and what philosophers call “phenomenal consciousness”. While the former might be understood as a complex state/property of a subject, it is not immediately obvious that the same is true of the latter. It is widely accepted that the term “consciousness” is ineffable and cannot be explicated in a non-circular way.<sup>14</sup> This is one reason Nagel (1974) offers only an ostensive definition, and describes it in terms of something-it-is-like for a subject to undergo some experience.<sup>15</sup>

What about the term “phenomenal consciousness”? One plausible suggestion is that the term “consciousness” is semantically primitive, whereas “phenomenal consciousness” refers to a phenomenal part of the experience that a subject undergoes.<sup>16</sup> Said differently, phenomenal consciousness is the occurrence of a first-personal experience that has an essentially subjective point of view that subjects enjoy when they undergo conscious experiences. Indeed, Pitt argues that the concept of consciousness and the concept of phenomenality are importantly distinct, since “unconscious phenomenal states and non-phenomenal conscious states are conceivable” (Pitt 2004: 3). If this is correct, then it would be false to

<sup>11</sup> Or if you prefer, one could construe these complex states/properties as tropes.

<sup>12</sup> See e.g., Mendelovici 2018: 84, footnote 1.

<sup>13</sup> See e.g., Mendelovici 2018: 233.

<sup>14</sup> See e.g., Block 2002.

<sup>15</sup> See e.g., Nagel 1974: 436.

<sup>16</sup> See e.g., Pitt 2004: 3, footnote 4.

claim that a conscious state/property just is a phenomenal state/property. Thus, phenomenal consciousness enlarges the semantically primitive, ostensive notion that there is *something-it-is-like* to be conscious, such that if a subject is phenomenally conscious, then the subject enjoys a dynamic, first-personal perspective or outlook on the world. But this leaves open whether phenomenal consciousness refers to a state/property of the subject or a part of the experience the subject undergoes.

The need to distinguish between mere consciousness and phenomenal consciousness is not insignificant for how we are to understand what proponents of PIT mean by inseparatism, since it is the latter not the former that they claim is metaphysically intertwined with intentionality. But this does not mean that proponents of PIT are committed to the view that there are “raw feels” or bare qualia construed in terms of non-intentional conscious states/properties; it only means that inseparatism should be understood as asserting that there is a metaphysically significant relationship between phenomenal consciousness and intentionality, not mere consciousness and intentionality. To get a better grip on why proponents of PIT focus on phenomenal consciousness as opposed to mere consciousness, let us consider a basic motivation for the view.<sup>17</sup>

In response to various problems with reductive, physicalist analysis of the mind, some philosophers have turned away from such worn-out puzzles in the philosophy of mind like questions about physicalism and mind-body metaphysics and focused on the subjective nature of experience itself.<sup>18</sup> Interestingly, some proponents of PIT who have looked to philosophers like Brentano, Husserl, and James for inspiration have failed to heed the theoretical significance that the temporal structure of conscious experience plays in understanding intentionality. This is rather curious, since many phenomenologists take the temporal structure of experience to be a fundamental aspect of intentionality. So, if proponents of PIT wish to remain true to what phenomenologists have traditionally said about experience and intentionality, they should not unreflectively evade the significance that the temporal structure of experience plays in our theorizing about intentionality. With this observation in mind, let us turn our attention to “analytic phenomenology”.

### 3. Analytic Phenomenology

The goal of this section is to introduce and explain what analytic phenomenology is and why it matters for PIT.

<sup>17</sup> Some proponents of PIT are motivated by the apparent failure of several views in the philosophy of mind to account for both phenomenal consciousness and intentionality. Many proponents of PIT take missing qualia arguments like Jackson’s (1982, 1986) modal argument and Chalmers’s (1996) zombie argument to show that functionalism is not a fully general theory of what the mind is. And given that functionalism fails in this respect, some proponents of PIT turn to conscious experience as their starting point rather than a functional analysis of the relevant mental phenomena. And more recently, some philosophers have argued that tracking theories of intentionality, which aim at explaining intentionality in terms of a natural relation that holds between a subject and her environment, are empirically inadequate and should be rejected. See e.g., Mendelovici & Bourget 2014, 2020; and Mendelovici 2018: Chapters 3 & 4.

<sup>18</sup> See e.g., Pitt (forthcoming).

What is analytic phenomenology? I take it to be a philosophical method that treats our first-personal, subjective experience as data or evidence to be integrated into our theory of mind.<sup>19</sup> The idea is that we can take our introspective evidence via subjective experience as our theoretical starting point rather than a phenomenon whose ontological status needs to be explained. So, on this approach, introspective evidence is a basic datum of our total empirical evidence.<sup>20</sup> Thus, we need not give a reductive, non-reductive, or physicalistic explanation of the nature of phenomenal consciousness.<sup>21</sup>

Some have described PIT as a consciousness-first approach in analytic philosophy of mind.<sup>22</sup> But I think it is better described as a phenomenology-first approach, since, as we have already seen, we need to distinguish between mere consciousness and phenomenal consciousness. Moreover, while the view utilizes the tools and methods of analytic philosophy, it can also be understood as a kind of method that is applied to the subject matter of conscious experience itself. And rather than focusing on well-established and routine questions about the metaphysics of consciousness, we do phenomenology from an analytic standpoint, with analytic motivations and values guiding our investigation of experience itself.<sup>23</sup> Let us define “analytic phenomenology” as follows:

**Analytic Phenomenology:** The subject of inquiry is conscious experiences as we actually have them, which encompasses the total experienced scene. And the inquiry uses the standards of analytic philosophy—that is, we do phenomenology from an analytic standpoint and with analytic values guiding our investigation of the whole consciously experienced scene.<sup>24</sup>

Given this way of understanding what analytic phenomenology is, let us consider why it matters.

At the core of why proponents of PIT reject the separatism thesis is the observation that when we consider a subject’s total experienced scene, we can notice that there are intentional properties already built into the experience and phenomenologically present.<sup>25</sup> For example, when discussing an experience of seeing a

<sup>19</sup> See e.g., Goff 2017: 271.

<sup>20</sup> But see e.g., Schwitzgebel 2008 for contemporary reasons to be skeptical of introspection.

<sup>21</sup> Arguably, proponents of PIT will consider questions concerning how to reduce or naturalize phenomenal consciousness as secondary if they are considered at all. See e.g., Kriegel 2013b: 4; Mendelovici & Bourget 2015; and Mendelovici 2018: 116-19.

<sup>22</sup> See e.g., Pautz 2013.

<sup>23</sup> See e.g., Pitt (forthcoming).

<sup>24</sup> This formulation of analytic phenomenology is partly based on Pitt (forthcoming). It should be distinguished from the definition offered by Goff, which says: “Start with common sense, empirical data, and carefully considered intuitions concerning the nature of phenomenal consciousness, and move on by appeal to theoretical virtue” (Goff 2017: 271). The two definitions are related and compatible, since one might think that Goff’s definition is a kind of restricted version of the definition stated above. But they differ with regard to the way they are used in various philosophical investigations.

<sup>25</sup> For instance, Siewert (1998: 221) argues that a subject’s phenomenally conscious experiences are accessible for accuracy, which implies that some form of intentionality is already built into such phenomenal states. And Searle (1991, 1992) argues that intentionality has a kind of aspectual shape or mode of being represented, and then argues that this feature of intentionality must be grounded in phenomenal consciousness. Similar arguments have been defended by Graham et al. (2017) and Horgan & Graham (2012), which appeal

red pen on a table, Horgan & Tienson (2002: 521) claim that we need to consider such experiences “as we actually have them”. And it is by paying attention to the entire experienced scene that we can detect the intentional parts built into the conscious experience. Indeed, there is far more included in experience as we actually undergo them than alleged non-intentional, phenomenal properties or bare qualia. For instance, amongst the many intentional parts of the experienced scene that we can introspectively notice there are also both spatial and temporal features of the total experienced scene. Here is how Horgan & Tienson describe this point:

You might see, say, a red pen on a nearby table, and a chair with red arms and black behind the table. There is certainly something that the red that you see is like to you. But the red that you see is seen, first, as a property of objects. These objects are seen as located in space relative to your center of visual awareness. And they are *experienced as part of a complete three-dimensional scene*—not just a pen with a table and chair, but a pen, table, and chair in a room with a floor, walls, ceiling, and windows. This spatial character is built into the phenomenology of experience (Horgan & Tienson 2002: 521; emphasis added).<sup>26</sup>

Now, experience as we actually undergo them are much richer in content than separatism would allow. As Mendelovici suggests:

Perception presents us with a multimodal structured represented scene consisting of the representation of visual, auditory, tactile, and other contents, accompanied by a rich and complex assortment of matching phenomenal characters” (Mendelovici 2018: 89).

But experience as we actually have them can be understood and explored as a part of subjective reality or what Paul (2017) calls a subjective ontology.<sup>27</sup> And arguably, it is by taking this first-person, subjective point of view that at least partly enables us to recognize why experience is richer in content than separatism allows. This is because when considering the nature and structure of experience, we have the ability to shift our attention from an impersonal, objective metaphysical point of view toward a first-personal, subjective point of view. Indeed, Paul offers an illuminating illustration of this point:

Some contemporary computer games are “first-person shooter” games where you, the agent, have some sort of task to perform. When you play the game, you play as though you were looking out of the eyes of your character. Your line of sight is the one the character you are playing has. You are presented as seeming to hold a weapon, you “turn your head” to gain a line of sight, etc. In general, you know

to content determinacy to show that built into a subject’s phenomenal conscious experiences are intentional contents.

<sup>26</sup> Someone might object by arguing that we never directly experience space or spatial properties. Rather, what we directly experience are spatial relations. In response, let me simply clarify that proponents of PIT typically use phenomenological examples like this in support of the claim that intentionality is built into our phenomenology. But since my aim here is not to defend PIT but to understand what the view says, for our current purposes, the objection can be ignored.

<sup>27</sup> See e.g., Paul 2017: 262. It is worth pointing out here that Paul claims, and I agree, that a subjective ontology of mental events is consistent with various objective ontological claims about conscious experience.



where you are from the first-personal perspective of your character, the character whose “boots” you are occupying as you play the game. You are given an artificial simulation of the first-personal perspective of your character using a visual line of sight, as a first-personal, subjective way for you to know who you are and where you are in the game. In this way, you are immersed in the game. This game perspective is analogous to the subjective perspective (Paul 2017: 263).<sup>28</sup>

It is this sort of subjective ontology that I claim is crucial for understanding why PIT offers a superior explanation of these parts of our introspective evidence than bare qualia views, which claim that intentionality and phenomenal consciousness are entirely separate.<sup>29</sup>

Of course, one could object by arguing that various forms of representationism can take this analytic phenomenological approach seriously without being committed to a first-personal, subjective approach to mental content.<sup>30</sup> In response to this worry, let me first say that my primary goal in this article is to situate PIT within the methodological framework of analytic phenomenology in order to show why proponents of PIT should take seriously our phenomenology of temporal experience if they are to successfully defend the inseparatism thesis. It may be the case that this thesis could still be defended even if PIT is rejected. So, then, what exactly would be the advantage in taking seriously a first-personal, subjective approach to this issue?

While PIT does not attempt to explain what the nature of phenomenal consciousness is, any plausible account of mental content should not be inconsistent with empirical work being done in the sciences (e.g., neuroscience and cognitive science). Consider the phenomenology of visual perception involved in the holistic aspects of Gestalt Theory (e.g., similarity, continuation, closure, proximity, figure/ground, and symmetry). Arguably, if a model of visual perception completely abandons the first-personal, subjective point of view of experiencing agents in favor of atomistic ingredients like neurochemical ingredients only, then it is not clear how such an approach to visual perception can give an adequate account of the holistic aspects of Gestalt Theory.<sup>31</sup> As Lehar suggests:

Visual experience is more than just an abstract recognition of the features present in the visual field—those features are vividly experienced as solid three-dimensional objects, bounded by colored surfaces, embedded in a spatial void (Lehar 2003: 375-76).

The problem is that when we try to explain the sorts of experiences that creatures like us have purely in atomistic terms using only neurochemical ingredients (what has been called in neuroscience and cognitive science the “Neuron Doctrine”), we arguably fail to sufficiently explain aspects of visual perception that we intuitively think should be explained (e.g., the holistic aspects of Gestalt Theory).<sup>32</sup>

<sup>28</sup> In addition to the example of first-person shooter games, Paul also offers Google Maps as an interesting metaphor to help illustrate this point.

<sup>29</sup> See e.g., Mendelovici 2018: 89.

<sup>30</sup> See e.g., Grush 2006.

<sup>31</sup> See e.g., Lehar 2003.

<sup>32</sup> For background on the history and significance of the Neuro Doctrine, see e.g., Shepherd 2009; Baars & Gage 2010; Swanson 2013; Turner & De Haan 2017; and Helfrich & Knight 2019.

Indeed, Lehar goes on to suggest that “the reason Gestalt aspects have been largely ignored in recent decades is exactly because they are so difficult to express in terms of the Neuron Doctrine paradigm” (Lehar 2003: 376). Of course, I am not rejecting the Neuro Doctrine or claiming that there is no research going on in neuroscience and cognitive science that takes Gestalt principles into consideration.<sup>33</sup> Rather, I am claiming that appealing to neurochemical ingredients alone would be insufficient to capture various features of visual perception, which is at least a *prima facie*, defeasible support for why advocates of PIT should take seriously the first-personal, subjective point of view even if those who reject PIT do not.<sup>34</sup>

An alternative reason that I think should apply to both proponents of PIT and those who do not embrace PIT is the simple fact that we should take seriously our lived conscious experiences as we actually have them, and this intuitively includes paying attention to the temporal unfolding involved in such experiences. For instance, Horgan & Tienson (2002) argue that we can introspectively notice that conscious experience is represented as being “temporally thick”.<sup>35</sup> For example, a case where one undergoes an experience of seeing someone take a bite of an apple, they state:

Experience is not of instances; experience is temporally thick. This is obvious in the case of hearing tunes or sentences, where the temporal pattern is a palpable feature of the experience. The temporal *pattern* is also a palpable feature of the seen moving apple, though less frequently noted as such (Horgan & Tienson 2002: 521; emphasis in the original).

This appeal to motion via the seen moving apple points to the importance of inquiring into conscious experiences as we actually have them, since this is key to understanding why intentionality is built into conscious experience. So, it is not simply the fact that proponents of PIT are motivated by the desire to take seriously one’s conscious experiences that shows why analytic phenomenology matters. Rather, it is the need to take seriously one’s *entire* consciously experienced scene as we actually have them that demonstrates the importance of analytic phenomenology for PIT.

If what I have argued above is correct, then analytic phenomenology is far more radical of a departure from orthodox approaches to consciousness and intentionality than has been recognized in the literature. It tells us to use the tools and values widely recognized by analytic philosophers to investigate conscious experiences from the first-personal, subjective point of view.<sup>36</sup> But this investigation of experience is not simply another attempt at a suitably impersonal, disinterested, objective ontological point of view. Rather, analytic phenomenology calls for a novel approach to the relationship between phenomenality and intentionality, one that claims we cannot theoretically abandon a first-personal, subjective approach to our experiential life without also abandoning crucial features

<sup>33</sup> See e.g., Lamme 1995, 2014; Northoff & Lamme 2020; Roelfsema et al. 2000; Roelfsema et al. 2002; Wagemans et al. 2012; Wagemans 2015.

<sup>34</sup> See also Chudnoff’s (2013) arguments in support of PIT, which also uses the holistic features of Gestalt Theory to support the kind of first-personal, subjective approach I advocate here.

<sup>35</sup> See e.g., Horgan & Tienson 2002: 521.

<sup>36</sup> See e.g., Farkas 2008.

of mental content. It is precisely this methodological difference between an objective, atomistic approach and a first-personal, subjective approach to conscious experience that I am going to argue proponents of PIT should take seriously, since the temporal unfolding of an experienced scene is a palpable feature of experience. However, the problem is that it is not immediately clear how we can explain one's entire multimodal experienced scene in terms of a mental ontology involving mental states and properties alone.

#### 4. The Temporal Shape of Experience

In this section, I will articulate and elaborate upon a key feature of experiences as we actually have them in paradigmatic cases—that is, the temporal shape of experience.

Sometimes philosophers talk as though a phenomenal conscious state just is an experiential state of some form.<sup>37</sup> This may not seem problematic, if we assume that reference to states and events are interchangeable. Or, perhaps, these philosophers take it to be merely a verbal matter about whether one prefers state-talk or event-talk, rather than a substantive ontological question.<sup>38</sup> But it is not clear whether this assumption will allow us to adequately capture the temporal structure of a total experienced scene. My claim is that if establishing the truth of inseparatism depends on a focused scrutiny of conscious experience as we actually have them, then it would be a mistake to unreflectively assume that there is no substantive difference between mental states/properties and first-personal, mental events that unfold throughout some duration of time.<sup>39</sup> What is needed, then, is to consider whether there is a principled reason to make a distinction between mental states/properties and mental events/episodes that a subject can undergo.

To get a better sense of the difference I have in mind, I will introduce some jargon that will help facilitate our discussion. Let us define the notion of “temporal shape” as follows:

**Temporal Shape:** X has a temporal shape if and only if the following conditions are satisfied: (i) X appears to be dynamic or changing; and (ii) X fills or occupies some arbitrary duration of time by being composed of temporal parts or stages.<sup>40</sup>

Notice that this is not an *a priori* definition of temporal shape; I am not simply stipulating that all actual and possible experiences are subjectively dynamic, changing,

<sup>37</sup> See, e.g., Block 2002: 228.

<sup>38</sup> See e.g., Chudnoff's (2015: 84) claim that “nothing will hinge on the difference between mental states and mental events, so I will not treat them separately”.

<sup>39</sup> Arguably, the failure to account for the metaphysical distinction between properties/states and events is widespread in contemporary philosophy of mind. But there are some examples where philosopher have recognized the importance of this distinction. See e.g., O'Shaughnessy 2000 and Soteriou 2013. The examples of those who for one reason or another do not recognize the importance of this distinction are too numerous to catalogue here. But some examples are as the following. For cases where one implicitly ignores the distinction, see e.g., Kriegel 2004: 108; for cases where one explicitly ignores the distinction, see e.g., Horgan & Woodward 1985: 198; and Chudnoff 2015: 84. It is also quite common for philosophers to use a disjunctive expression (e.g., “event or state”), and thereby ignore the importance of the distinction. See e.g., Farkas 2008: 90; Bayne & Montague 2011: 11; and Tye 1995: 92.

<sup>40</sup> I am borrowing the term temporal shape from Steward; see e.g., Steward 1997: 72-74.

and have temporal parts. Rather, my claim is that the kinds of experiences that creatures like us (i.e., humans) typically undergo have a temporal structure that is introspectively noticeable, and I am calling this temporal structure its “temporal shape”. Moreover, I take this to be a part of our introspective evidence—that is, in paradigmatic examples, when we pay attention to what is introspectively going on in our conscious mental life, it is possible to notice that a part of our phenomenology is temporal shape, though such introspective reflections may be challenging.<sup>41</sup>

Let me explain: From the first-person point of view, it is possible to notice the temporal unfolding of experience. However, this does not mean that I think every part or every feature of one’s experience is represented as being temporally extended, since it seems plausible to think that there are cases where this is not so. For example, suppose that before you watch someone take a bite of an apple you look at the apple sitting untouched and unmoved on a table for, say, several minutes. Phenomenologically speaking, it may be that the redness of the apple is not obviously represented to you as temporally extended but as an enduring property of the apple itself. In such a case, *what* is experienced (i.e., the redness of the apple) would be a homogeneous state or property that endures, wholly present and unchanged throughout the entire temporal period while it is sitting, untouched and unmoved on the table. Still, there is an important feature that I want to say is there for the noticing—that is, *how* this single, solid and unchanging color is represented.

To my mind, even in a case like this, how one’s experience of an unchanging and static color shows up to them in experience is as unfolding over time, insofar as there is a constant renewal of each moment flowing into the next.<sup>42</sup> However, I am not claiming that in all cases it is introspectively obvious that conscious experience is temporally extended in this way. On the one hand, many philosophers deny that our conscious experiences are temporally extended.<sup>43</sup> On the other hand, there are those who argue that conscious experience is temporally extended, though it may not be phenomenally obvious.<sup>44</sup> It is not a part of my goal in this article to take a position in these matters. Rather, what I want to claim is only that it is a part of our introspective evidence, insofar as it is introspectively there for the noticing (though it may not be immediately obvious) that there is a relentless temporal flowing in a specific direction from past, into the present and the future. And this phenomenological feature that I am claiming is a part of our introspective evidence is nicely captured by James’s famous example of conscious experience as a flowing stream:

Consciousness, then, does not appear to itself chopped up in bits. Such words as “chain” or “train” do not describe it fitly as it presents itself in the first instance. It is nothing jointed: it flows. A “river” or “stream” are the metaphors by which it is most naturally described. In talking of it hereafter, let us call it the stream of thought, or of subjective life (James 1890: 233).

<sup>41</sup> Compare this to Kind’s (2010: 911) claim regarding the weak transparency thesis that it is difficult but not necessarily impossible to directly attend to the intrinsic feature of our experience. My claim here should be read as analogous to Kind’s view of weak transparency.

<sup>42</sup> See e.g., O’Shaughnessy 2000: 42-43.

<sup>43</sup> See e.g., the arguments by Rashbrook-Cooper, Prosser, and Lee, presented in Phillips (2017) edited volume.

<sup>44</sup> See e.g., Dainton 2000, and Hoerl 2017.

But let us suppose for the sake of the argument that appealing to this Jameian intuition regarding *how* our conscious experiences unfold over time is tantamount to asserting without argument that experience is temporally extended. Would this automatically mean that the intuition should be rejected? No. At best, it would only show that not all possible or actual cases of conscious experiences have a temporal shape. But it still might be reasonable to think that many or most of our conscious experiences (as we actually have them) do have a temporal shape. And given that these are the sorts of cases that proponents of PIT have in mind in defending inseparatism, they should take seriously our phenomenology of temporal experience.

Now, in order to better understand the first condition of my definition of temporal shape, which claims that X appears to be dynamic or changing, I need to make clear an important distinction between what we might call “objective-change” and “subjective-change”.<sup>45</sup> Recall that we can shift our attention between an objective and subjective ontological point of view: The former is understood as impersonal and quasi-observational, while the latter is taken to be “seen” or “experienced” from the first-person point of view analogous to a first-person shooter game. So, objective-change should be taken to refer to the objective ontological point of view regarding change; and subjective-change should be taken to refer to the subjective ontological point of view regarding change. With this distinction in mind, then, we can say that X appears dynamic or changing just means that X seems to undergo some kind of subjective-change. But this does not mean that subjective-change is necessarily inconsistent with objective-change. As Paul claims: “Subjective reality is as real as objective reality, and a metaphysical realist...can endorse the existence of both kinds of ontology” (Paul 2017: 262). Thus, strictly speaking, the definition of temporal shape offered above should be understood as involving subjective-change from within this framework of a first-personal, subjective ontology.

Phenomenologically speaking, if we want to know whether some “thing”, X, has a temporal shape, we will need to consider whether X appears to involve subjective-change or some sort of seeming to unfold through time. If it does and it also fills the relevant duration of time by being composed of temporal parts, then it has a temporal shape. If not, then it would lack a temporal shape.<sup>46</sup> Phenomenologically speaking, states/properties endure wholly present and are changeless. But events are dynamic and fill an arbitrary duration of time by being composed of temporal parts or stages.<sup>47</sup> Thus, events have a temporal shape and states/properties do not.

Of course, we can always describe our phenomenology of change in an object in terms of states/properties, if we construe the object as losing and gaining different states/properties. For instance, if you were to paint a red house blue, the

<sup>45</sup> Indeed, this is why Paul’s (2017) appeal to a first-personal, subjective ontology is so crucial.

<sup>46</sup> Someone might object by arguing that this rejects endurantism by fiat. This may be a reasonable objection if what we are talking about is the correct objective metaphysical account of reality but the objection loses its force if we restrict the notion of temporal shape to “mental” events or our first-personal, subjective or phenomenological way things seem or appear. On this way of understanding mental events, this account of temporal shape is arguably consistent with an endurantist view of the objective reality. For a discussion of this point, see e.g., Paul 2017.

<sup>47</sup> For a discussion of this point, see e.g., Crane 2013: 167-68.

object (house) would lose the property of *being colored red* and it would gain a different property of *being colored blue*. But it does not make sense to say that the property *being colored red* itself changes. Rather, one state/property of the object is replaced by a different state/property of the object.<sup>48</sup>

What about the second condition in our definition of temporal shape? What does it mean to say that X fills or occupies some arbitrary duration of time by being composed of temporal parts or stages? Here is what Steward says about this condition:

It is often observed that in merely giving the temporal dimensions of an existent thing—in specifying the beginning and end-points of its existence—one does not thereby determine its temporal character. For vastly more important than these temporal reference points, in determining the ontological category of any item, is the way in which that item fills the relevant period of time—whether it *persists through* the time, or *occurs* during the time, or *obtains throughout* the time, etc. Continuants, for example, persist *through* time and exist, as wholes, at every moment of their existence, whereas events occur *at* times or *during* periods of time, and are unlike continuants in having temporal parts. The differences which are indicated by these contrasting verbs and prepositions I call difference of temporal shape (Steward 1997: 73; emphasis in the original).

The key point is that different things can fill or occupy some durations of time in different ways. To illustrate this point, imagine a case where you fill a transparent glass with water and hold it up to the sunlight, which shines through the glass. The water and the sunlight fill or occupy the glass in different ways. The rays of sunlight you see are photon particles, which are the metaphysical sorts of things that can travel through the glass. But water is not a subatomic particle like the sunlight; it is composed of the chemical elements hydrogen and oxygen, which are not the metaphysical sorts of things that pass through solid objects like the glass. Since photon particles and chemical elements like hydrogen and oxygen are metaphysically different, there is a difference between the way that they fill or occupy the space in the transparent glass. Similarly, we experience different metaphysical things as filling or occupying an arbitrary stretch of time in different ways.

This is not to say that states/properties have a different temporal shape from events/episodes; what I am claiming is that from the first-person perspective, events/episodes have a temporal shape, whereas states/properties lack a temporal shape. If this is correct, then it would be false to claim that an event is either identical to or composed of properties instantiated or exemplified at a time (which is arguably the leading view), since it is hard to see how that which has a temporal shape could be identical to or composed of that which lacks a temporal shape. As Steward claims: “the composition relation can only intelligibly relate items which have the same temporal shape” (Steward 1997: 73). But since states/properties lack a temporal shape, they cannot compose to make events, which have a temporal shape.<sup>49</sup>

<sup>48</sup> For a helpful presentation of some of the complications involved with these issues, see e.g., Hawley 2001.

<sup>49</sup> Even if this is taken to be a verbal dispute, it is not merely a verbal dispute. It is a substantive conceptual issue, since it involves the soundness of the conceptual scheme that we use to understand the relevant phenomena.

So, it would be a mistake to claim that a mental event just is the instantiation of certain phenomenal or experiential properties at a particular time.<sup>50</sup>

However, someone might object by arguing that there are cases of states/properties that satisfy the two conditions of temporal shape described above. For instance, it may be thought that the property of an electric current being such and such hertz (i.e., the frequency of the wave form of the current) is both dynamic and can fill a duration of time. While it is not obvious to me what it means to say that, from a first-person perspective a state/property is essentially dynamic, insofar as it inherently changes in some temporal direction as required by the first condition, let us ignore this point and focus on the second condition.

It is important to notice that this condition does not claim that states/properties cannot fill a temporal duration, it says that the way or manner in which the relevant thing fills the duration of time is what determines whether that thing has a temporal shape. If the thing fills the temporal duration by being composed of temporal parts, this partly indicates that it has a temporal shape. But if the thing fills the relevant duration of time by persisting wholly present at every moment, this suggests that the thing lacks a temporal shape. To see why this point matters, consider a common sixty hertz household current. Notice that the notion of a hertz is a unit of measurement. So, we need to distinguish between the measurement and what is being measured. It is the latter that matters for this example not the unit of measurement itself. Moreover, given that one hertz will measure one cycle of electrical current per second, a common sixty hertz household current would be sixty cycles of electrical current per second. But what the hertz is measuring in this example is something that occurs or happens over a temporal duration, though it would be a rather short-lived temporal duration. So, it does fill the relevant duration of time. The question we need to ask, then, is in what way does sixty cycles of electrical current fill the relevant duration of time?

To my mind, it would be a mistake to say that the electrical current changes. Rather, the electrical current endures wholly present at every moment, irrespective of whether it is composed of temporal parts. So, the example of being a particular hertz would not satisfy both conditions of what it means to have a temporal shape, though it would be natural to think of this as an example of a state/property. Of course, someone may insist that a sixty hertz household current can fill the relevant duration of time by being composed of temporal parts alone. But I would argue that this simply confuses or conflates events with states/properties.

Still, it might be thought that it is easy to conceive of a case where there is *something-it-is-like* to experience some X that is utterly changeless at all times in which it exists. For instance, suppose that your visual field is entirely covered by a single shade of blue with no alteration in hue, saturations, and brightness. In such a case, your entire visual phenomenology would be static and unchanging.

Arguably, however, your phenomenology would still include a kind of temporal direction or flowing from the past, through the present, and into the future.<sup>51</sup> So, even in cases where one imagines some constant, unchanged color, phenomenologically speaking, there is still a dynamic element built into such a case, insofar as your conscious experience unfolds or evolves throughout time. Thus,

<sup>50</sup> This is not an insignificant point given that one might argue that events are really just property exemplifications at times. See e.g., Kim 1976.

<sup>51</sup> See e.g., van Gelder 1998, 1999; O'Shaughnessy 2000; Glicksohn 2001; Nes 2011; and McKenna 2023.

built into your phenomenology of an unchanging field of blue there would still be a kind of temporal structure or temporal ordering. While the shade of blue itself may not change, your phenomenology would still be continuously renewed.<sup>52</sup> If this is plausible, then this experience should count as an example of a mental event/episode that has temporal shape, since it introspectively appears to the subject as being dynamic (it involves subjective-change) and it is composed of temporal parts.

However, you still might not be convinced: If we construe talk of “states” and “properties” in terms of tropes, such that a single state/property could be understood to be a sequence of such tropes, then it could be that a trope-sequence could have a temporal shape. Given that tropes are understood to exist at particular times and places, and insofar as they can be identified with finer or less-fine grain of detail, then this sort of trope-sequence might plausibly itself be construed as a complex trope. If so, then we could potentially construe this sort of state/property to be nothing more than a complex trope-sequence instantiation, involving various tropes at different times and places. Thus, this might be one way of thinking about how a state/property construed as a trope could count as having a temporal shape.<sup>53</sup>

This is an interesting proposal but the devil is in the details. First, it is not clear how we should understand the nature of this trope-sequence.<sup>54</sup> Let us call this trope-sequence “T”. Should we construe T as a special kind of state or property? Or should we take T to be an event or episode? Clearly, if T is an event/episode, I would have no immediate problem with this proposal. But if T is taken to instantiate various states/properties that lack a temporal shape, then it will be unclear how T could have a temporal shape because it is not clear how something that lacks a temporal shape can constitute a complex sequence that has a temporal shape. What would be needed is a plausible account of the composition relation whereby it is clear how something lacking temporal shape can compose something with temporal shape.<sup>55</sup> Second, appealing to a complex sequence of tropes understood as properties would have the disadvantage of inviting various controversies that proponents of PIT would otherwise probably want to avoid. Not only is it unclear whether the philosopher’s notion of a trope is equivalent to that of a mode (i.e., way of existing), it is arguably incoherent to treat tropes as modes. This is because tropes understood as special sorts of properties can conceivably exist without a substance, insofar as they are typically understood as bundled together to compose objects. Modes, however, cannot exist without a substance. For example, a smile is a mode or way a face can exist but a smile cannot exist independent from a face.<sup>56</sup> So, if the proposal under consideration takes tropes to be equivalent to modes, then it becomes vulnerable to the charge of being incoherent.

Instead, we might take T to consist of different tropes that (whatever they are) involve change and have temporal parts. But given that these tropes would already have a temporal shape, then why would we need T? Would these tropes

<sup>52</sup> See e.g., O’Shaughnessy 2000: 42-43.

<sup>53</sup> I want to thank an anonymous reviewer for bringing this objection to my attention.

<sup>54</sup> Perhaps what is being described here could be charitably interpreted along the lines of Kim’s (1976) discussion of property exemplification at times.

<sup>55</sup> See e.g., Steward 1997: 73.

<sup>56</sup> For a discussion of this problem, see e.g., Heil 2012: 106-107.



not suffice to capture the feature of experience that I have argued proponents of PIT should take seriously? T would be redundant, if this were the case, since we could get the job done by using the tropes that constitute T. While it may be true that a complex sequence of different tropes understood as involving subjective-change and temporal parts can be construed as having temporal shape, this is because something with a temporal shape can be composed out of different parts that themselves have a temporal shape. But if the various tropes in question lack a temporal shape because they lack subjective-change and temporal parts, then it is not clear how it can constitute a complex trope-sequence that has temporal shape.

Ultimately, I take the proposal to be harmless, insofar as it would be nothing more than an assertion that tropes can have a temporal shape because they can involve subjective-change and have temporal parts. Perhaps one could claim that T has a temporal shape because it is itself held together with some kind of phenomenal binding or unifying feature, what we might call “phenomenal glue”.<sup>57</sup> But this would still beg the question, insofar as it would sneak the phenomenology needed for temporal shape in the back door without explanation.

Perhaps the objection should be understood only as claiming that it is not obvious that our experience would not introspectively appear to us as being dynamic or involving subjective-change if they were trope sequences.<sup>58</sup> But even granting this much, we can still distinguish between an objective and subjective ontology of experience. If this is right, then even if it turns out to be true from an objective metaphysical perspective that a conscious experience is a trope-sequence, this alone would not rule out my claim that from a subjective ontological perspective, our conscious experiences as we actually have them involves temporal shape, insofar as they seem to be dynamic and have temporal parts. And it is this distinction that I take to be at the heart of questions about whether our experiences introspectively appear to us as being dynamic or involving subjective-change. What proponents of PIT need is a subjective mental ontology that can capture this feature of temporal shape present in our phenomenology. If the arguments offered in support of inseparatism fail to capture the temporal shape present in one’s total experienced scene, then such arguments will be unsupported. Let us turn our attention to some of the arguments that proponents of PIT offer in support of inseparatism in order to test this claim.

## 5. Two Arguments for Inseparatism

In this section, I will consider two arguments in support of the inseparatism thesis, and show why proponents of PIT must account for the temporal shape of experience if these arguments are to count as being successful.<sup>59</sup> The first argument is Loar’s (2003) Isolated Brains argument, which aims to show that there is a kind

<sup>57</sup> See e.g., Dainton 2000.

<sup>58</sup> For a discussion of this suggestion, see e.g., Chuard 2011, 2017, 2020; Prosser 2017; Arstila 2018; Mckenna 2023; and Dainton 2023: Sections 3.1 & 3.2.

<sup>59</sup> I cannot consider all of the arguments proponents of PIT have offered in the literature in support of the inseparatism thesis. But, given the influence of Loar’s (2003) defense of PIT and Pitt’s (2004) Self-Knowledge argument for cognitive phenomenology, I take it that this will suffice to establish my general claim that, proponents of PIT should take seriously the importance of temporal shape in understanding the mental ontology required for the arguments to work.

of intentionality directly built into our perceptual phenomenology. The second is Pitt's (2004) Self-Knowledge argument, which aims to show that there is a *sui generis* kind of phenomenology of intentionality or what has been called "cognitive phenomenology". It is worth mentioning, however, that when considered independently from one another, these arguments only indirectly support inseparatism. But as Horgan and Tienson (2002) claim, taken in conjunction, these arguments provide powerful support for inseparatism.

According to Loar (2003), we should begin by considering a case where we fix the phenomenological aspects of a subject's conscious experience while allowing intentionality to vary wildly.<sup>60</sup> Indeed, Loar encourages us to "exploit all possibilities that are phenomenologically conceivable and *prima facie* coherent" (Loar 2003: 246). Loar offers a hypothetical brain in a vat twin thought experiment to motivate the claim that intentionality is built directly into our perceptual phenomenology. Here is what Loar says:

Apparently I can imagine what it is like to be an isolated brain that is a physical duplicate of my own brain. What I imagine includes not just that brain's nonintentional phenomenal state, its flutters and pains, but also states and events that correspond to my own *outward-directed* thoughts and perceptions. I imagine my isolated twin's states and events as subjectively representing things *in the same manner* as those stream's intentional features—even those of its outward-directed thoughts—are constituted independently of my actual situation in the world. (Note well that I have said 'intentional features' and not 'reference'.) This is not to say that the seeming imagining of the isolated brain's intentional states proves there is such a thing as internal intentionality. But it surely makes one wonder if we can make sense of the idea, make a case for its coherence (Loar 2003: 230-31; emphasis in the original).<sup>61</sup>

Now, the astute reader will likely notice that Loar describes the phenomenology in this imagined case as involving states and events. But immediately prior to this thought experiment, Loar unabashedly endorses the Jamesian description of conscious experience as a *stream of consciousness*; and claims that it is a "...compelling intuition about mental life" and that this intuition "...is central to our founding conception of the mental" (Loar 2003: 230). So, it is entirely reasonable to interpret what Loar calls the "stream's intentional features" as concerned with a first-personal, subjective point of view, which crucially involves a phenomenology of temporality. If this is plausible, then the intentionality that Loar claims is determined by phenomenology crucially includes temporal shape.

Of course, those who take intentionality and phenomenality to be entirely separate will likely reject this sort of thought experiment. But as Loar suggests, phenomenological considerations like these are "there for the noticing; and we have a wrong philosophical view of our intuitive conception of the mind if we persuade ourselves in the abstract that internal intentionality cannot be there" (Loar 2003: 231). So, once it is accepted that there is nothing phenomenologically incoherent with this sort of thought experiment, which proponents of PIT probably would not deny, then the next step in Loar's argument is simply to make it clear why intentionality is determined by phenomenality.

<sup>60</sup> See e.g., Loar 2003: 246.

<sup>61</sup> For a similar approach, see e.g., Horgan and Tienson 2002.

According to Loar's argument, the reason is fundamentally tied to *how* our conscious experiences represent various things not merely what they represent—that is, what is held fixed is *how* the envatted brain's experience shows up to them, phenomenologically speaking.<sup>62</sup> As Loar states:

The point is that when I imagine *how* the brain's visual experiences represent their (merely intentional) objects, I apparently imagine those experiences as in some sense intentional, despite the brain's difference from me in all its references (Loar 2003: 246; emphasis in the original).

So, according to this argument, what determines one's perceptual intentionality (whether they are an envatted brain or not) is this phenomenological *how*—that is, “a matter of how one's perceptions and thoughts represent things if they succeed, rather than of what is thereby represented” (Loar 2003: 240).<sup>63</sup> And if intentionality is built directly into how one perceives the world, then we can ask the following question: Is the temporal shape of one's conscious experience relevant in determining how one perceives the world? I think the correct answer is yes.

Consider, again, the sort of case that Horgan and Tienson (2002) offer involving someone who takes a bite of a red apple. Recall that they claim there is more built into this sort of experience than mere qualia of, say, the redness of the apple, which can be abstracted away from the experience. Indeed, we need to consider the total experienced and multi-modal scene, not just various parts of it. And, according to Horgan and Tienson, this allows us to see that experience is what they call “temporally thick”—that is, not composed of mere instances.<sup>64</sup>

Suppose, then, that you and your envatted brain-twin are both undergoing an experience of someone taking a bite of an apple—such that this experience unfolds over some duration of time. And suppose that we hold fix the phenomenology involved in such an experience. Given that your experience is veridical but the envatted brain's experience is nonveridical, then what determines the intentional content in this case would be *how* the phenomenological features show up to you and the envatted brain. So, it would be a mistake to exclude or ignore the temporal shape of this conscious experience, since the crucial point involved in such an experience is not merely what is represented but *how* it is represented—that is, how the total experienced scene is represented as unfolding over some duration of time. Therefore, a fundamental part of Loar's (2003) brain in a vat argument for inseparatism is temporal shape. If this is right, then proponents of PIT should take seriously the temporal structure of our conscious experiences.

What about Pitt's (2004) self-knowledge argument for the phenomenology of intentionality? According to Pitt, our Immediate self-knowledge cannot be properly explained without appealing to cognitive phenomenology. This argument is significant because it also aims to show that content is constitutively determined by the phenomenology alone. If this argument works, it would indirectly support the inseparatism thesis. And when we combine Pitt's argument for the

<sup>62</sup> See e.g., Loar's (2003: 240-42) discussion of this pivotal point.

<sup>63</sup> See also Loar's (2003: 244) discussion of how a Picasso painting represents an object as distorted rather than representing a distorted object.

<sup>64</sup> See e.g., Horgan and Tienson 2002: 521.

phenomenology of intentionality with Loar's argument for intentionality of phenomenology, this will suffice to show directly that intentionality and phenomenality are inseparable. Here is Pitt's (2004) argument:

(K1) It is possible Immediately to identify one's occurrent conscious thoughts...one can know by acquaintance which thought a particular occurrent conscious thought is; but

(K2) It would not be possible Immediately to identify one's conscious thoughts unless each type of conscious thought had a proprietary, distinctive, individuating phenomenology; so

(P) Each type of conscious thought—each state of consciously thinking that  $p$ , for all thinkable contents  $p$ —has a proprietary, distinctive, individuating phenomenology (Pitt 2004: 8).

Notice that this is an abductive argument, whereby we introspectively observe key features of our total experienced scene. Namely, we can introspectively distinguish an occurrent thought that  $p$  from an occurrent thought that  $q$ . According to Pitt, the fact that we can notice these features in our introspective reflection can only be explained by the fact that cognitive phenomenology exists, is irreducible to sensory phenomenology, and the intentional content is in fact constitutively determined by the relevant phenomenology.

Some philosophers have responded to this argument by claiming that one can have immediate self-knowledge without appealing to their phenomenology. Here is how Levine (2011) describes this objection:

What makes this Immediate knowledge, in Pitt's sense, is the fact that this sentence tokening is not the result of an inferential process, but rather an immediate causal result of the first-order thought state itself (together with some functionally characterizable internal monitoring process). It's because of the reliability of the relevant process yielding the higher-order sentence expressing the fact that one is thinking a certain content that it counts as knowledge. If this explanation is adequate, then we don't need to appeal to the thought's phenomenal character to explain how we know—Immediately—that we're thinking it (Levine 2011: 107).

Pitt would likely respond by claiming that Levine presupposes the sort of cognitive phenomenology that the argument is meant to establish.<sup>65</sup> But this assumes that one's immediate self-knowledge must be a mental state, tokened in the thinker's cognitive architecture in some way, such that it either instantiates a phenomenal property associated with the thinker's thought that  $p$ , or not. Let me explain.

Either Levine's alternative explanation presupposes that the phenomenology involved in our immediate self-knowledge is an occurrent, unfolding event/episode that one undergoes or not. If it is an occurrent, unfolding event/episode rather than a state/property, then Pitt and the proponent of cognitive phenomenology could plausibly avoid Levine's objection. If it is not taken to be some form of occurrent, unfolding event/episode, then it is not clear how one could avoid Levine's alternative explanation of our immediate self-knowledge. This is because the self-knowledge argument is an abductive argument. If the best explanation of our immediate self-knowledge allows that the phenomenology involved be construed

<sup>65</sup> See e.g., Pitt 2011: 146.

in terms of states/properties that lack a temporal shape rather than requiring that it be construed in terms of events/episodes that have a temporal shape, then we will have a different explanation. This is why the notion of analytic phenomenology plays such a crucial role for the proponent of PIT and the inseparatism thesis—that is, at least with regard to this argument, which explanation is the best hinges on making clear the mental ontology required.

So, the reason why Levine's alternative explanation of our immediate self-knowledge would fail to demonstrate that we can have immediate self-knowledge without phenomenology is because the type of self-knowledge that Pitt arguably has in mind is best construed in terms of occurrent mental events/episodes that a subject undergoes rather than mental states/properties. Levine wrongly assumes that the phenomenology involved in the first premise can be unproblematically construed in terms of mental states/properties. But, as I have argued above, conscious experiences as we actually have them should not be construed as a mental state/property because states/properties lack a temporal shape. Thus, if the immediate self-knowledge that Pitt claims cannot be explained without appealing to phenomenology is to be construed as an occurrent event/episode that has temporal shape, and the phenomenology that Levine's alternative explanation involves lacks temporal shape, then we can reasonably conclude that Levine's objection fails.

Importantly, however, this way of responding to Levine's objection is not available to the proponent of PIT who assumes that the mental ontology required for one's total consciously experienced scene just is a mental state that instantiates phenomenal mental properties. If this counts as a plausible response to Levine's (2011) objection to Pitt's (2004) argument for the phenomenology of intentionality (i.e., cognitive phenomenology), then it should count as an excellent reason for why proponents of PIT should take seriously the temporal shape of conscious experiences as we actually have them. It follows that analytic phenomenology matters a great deal for proponents of PIT. So, without making a distinction between events/episodes that have a temporal shape and states/properties that lack a temporal shape, at best, Pitt's (2004) self-knowledge argument for cognitive phenomenology generates a kind of stalemate.

Of course, there are ways of understanding the inseparatism thesis that might deny that a mental ontology of occurrent mental events/episodes is required. For instance, one could hold that a subject's experience can represent an object as changing, but deny that the experience itself is dynamic and changing—that is, they might nonetheless deny that the experience has temporal shape. I take this to be an unwelcome result for the proponent of PIT, one that should be avoided. Even if the distinction is accepted, this alone might not be sufficient to break the stalemate. In response to this worry, let me first make it clear that I think anyone concerned with the relationship between intentionality and phenomenal consciousness should take seriously the temporal structure of conscious experiences as we actually have them, and therefore, analytic phenomenology. While my main concern here is not to defend PIT against competing views that deny our conscious experiences have temporal shape, this is an important issue that should not be ignored.

To my mind, a stronger case can be made for why proponents of PIT should take seriously the temporal structure of our conscious experiences than for competing views. But this is arguably the result of various auxiliary motivations or assumptions taken by defenders of the inseparatism thesis. For instance, some

versions of representationalism, which might deny that conscious experiences have a temporal shape, likely also hold various background assumptions that claim intentional content is relational, external, and naturalizable; and some proponents of PIT are motivated by the idea that intentional content is non-relational, internal, and resists naturalization.<sup>66</sup> So, an important part of breaking this stalemate would involve arguing for these background assumptions. But this has not been my goal here. For the purpose of this article, I have been concerned primarily with why proponents of PIT should take seriously our phenomenology of temporal experience. I want to understand what PIT says and how to approach the view, given that our goal is to test the theory using the assumptions and methods endorsed by proponents of the view.

## 6. Conclusion

To conclude: I argued that proponents of PIT need to take seriously the temporal structure of one's total, multimodal, consciously experienced scene when arguing for the inseparatism thesis. But even if one is still skeptical, this article can be treated as a call for proponents of PIT to begin rethinking phenomenal intentionality in order to make sense of the temporal structure of conscious experience.

## References

- Arstila, V. 2018, "Temporal Experiences without the Specious Present", *Australasian Journal of Philosophy*, 96, 2, 287-302, DOI: 10.1080/00048402.2017.1337211
- Baars, B.J. & Gage, N.M. 2010, "Mind and Brain", in Baars, B.J. & Gage, N.M. (eds.), *Cognition, Brain, and Consciousness: Introduction to Cognitive Neuroscience*, 2-31, DOI: 10.1016/b978-0-12-375070-9.00001-2
- Bayne, T. & Montague, M. 2011, "Cognitive Phenomenology: An Introduction", in Bayne, T. & Montague, M. (eds.), *Cognitive Phenomenology*, Oxford: Oxford University Press, 1-34.
- Block, N. 2002, "Some Concepts of Consciousness", in Chalmers, D. (ed.), *Philosophy of Mind: Classical and Contemporary Readings*, Oxford: Oxford University Press, 206-19.
- Bourget, D. 2010, "Consciousness is Underived Intentionality", *Noûs*, 44, 1, 32-58, DOI: 10.1111/j.1468-0068.2009.00730.x
- Bourget, D. 2015, "The Role of Consciousness in Grasping and Understanding", *Philosophy and Phenomenological Research*, 95, 2, 285-318, DOI: 10.1111/phpr.12208
- Bourget, D. 2020, "Relational vs Adverbial Conceptions of Phenomenal Intentionality", in Sullivan, A. (ed.), *Sensations, Thoughts, Language: Essays in Honor of Brian Loar*, New York: Routledge, 137-66.
- Bourget, D. & Mendelovici, A. 2019, "Phenomenal Intentionality", in Zalta, E.N. (ed.), *Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/phenomenal-intentionality/#AsseForAccu>
- Chalmers, D. 1996, *The Conscious Mind: In Search of a Fundamental Theory*, Oxford: Oxford University Press.

<sup>66</sup> For a general discussion of the theoretical importance of these background assumptions, see Mendelovici 2018: 111-13. See also Loar's (2003: 245) discussion of why representationalism rely on externalist assumptions rather than intuitions about phenomenology.

- Chuard, P. 2011, "Temporal Experiences and Their Parts", *Philosopher's Imprint*, <http://hdl.handle.net/2027/spo.3521354.0011.011>
- Chuard, P. 2017, "The Snapshot Conception of Temporal Experiences", in Phillips, I. (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*, New York: Routledge, 121-32.
- Chuard, P. 2020, "Temporal Consciousness", in Kriegel, U. (ed.), *The Oxford Handbook of the Philosophy of Consciousness*, Oxford: Oxford University Press, 187-207, DOI: 10.1093/oxfordhb/9780198749677.013.9
- Chudnoff, E. 2013, "Intellectual Gestalts", in Kriegel, U. (ed.), *Phenomenal Intentionality*, Oxford: Oxford University Press, 174-93.
- Chudnoff, E. 2015, "Phenomenal Contrast Arguments for Cognitive Phenomenology", *Philosophy and Phenomenological Research*, 91, 1, 82-104, DOI: 10.1111/phpr.12177
- Crane, T. 2013, "Unconscious Belief and Conscious Thought", in Kriegel, U. (ed.), *Phenomenal Intentionality*, Oxford: Oxford University Press, 156-74.
- Dainton, B. 2000, *Stream of Consciousness*, New York: Routledge.
- Dainton, B. 2023, "Temporal Consciousness", in Zalta, E.N. (ed.), *Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/consciousness-temporal/>
- Dretske, F. 1993, "The Nature of Thought", *Philosophical Studies*, 70, 2, 185-99, DOI: 10.1007/bf00989589
- Dretske, F. 1995, *Naturalizing the Mind*, Cambridge, MA: MIT Press.
- Farkas, K. 2008, *The Subject's Point of View*, Oxford: Oxford University Press.
- Glicksohn, J. 2001, "Temporal Cognition and the Phenomenology of Time: A Multiplicative Function for Apparent Duration", *Consciousness and Cognition*, 10, 1, 1-25, DOI: 10.1006/ccog.2000.0468
- Goff, P. 2017, *Consciousness and Fundamental Reality*, Oxford: Oxford University Press.
- Graham, G., Horgan, T., & Tienson, J. 2017, "Consciousness and Intentionality", in Schneider, S. and Velmans, M. (eds.), *The Blackwell Companion to Consciousness*, 519-35, DOI: 10.1002/9781119132363.ch37
- Grush, R. 2006, "How to, and How Not to, Bridge Computational Cognitive Neuroscience and Husserlian Phenomenology of Time Consciousness", *Synthese*, 153, 3, 417-50, DOI: 10.1007/s11229-006-9100-6
- Harman, G. 1987, "(Nonsolipsistic) Conceptual Role Semantics", *Notre Dame Journal of Formal Logic*, 23, 2, 242-56, DOI: 10.1305/ndjfl/1093883628
- Hawley, K. 2001, *How Things Persist*, Oxford: Oxford University Press.
- Heil, J. 2012, *The Universe as We Find It*, Oxford: Oxford University Press.
- Helfrich, R.F. & Knight, R.T. 2019, "Cognitive Neurophysiology of the Prefrontal Cortex: The Frontal Lobes", in *Handbook of Clinical Neurology*, 35-59, DOI: 10.1016/b978-0-12-804281-6.00003-3
- Hoerl, C. 2017, "Temporal Experience and the Philosophy of Perception", in Phillips, I. (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*, New York: Routledge, 171-83.
- Horgan, T. & Graham, G. 2012, "Phenomenal Intentionality and Content Determinacy", in Schantz, R. (ed.), *Prospects of Meaning*, Vol. 3, Boston: De Gruyter, 321-44, <https://www.degruyter.com/document/doi/10.1515/9783110216882.321/html>

- Horgan, T. & Tienson, J. 2002, "The Intentionality of Phenomenology and the Phenomenology of Intentionality", in Chalmers, D. (ed.), *Philosophy of Mind: Classical and Contemporary Readings*, Oxford: Oxford University Press, 520-33.
- Horgan, T. & Woodward, J. 1985, "Folk Psychology is Here to Stay", *The Philosophical Review*, 94, 2, 197-226, DOI: 10.2307/2185428
- Jackson, F. 1982, "Epiphenomenal Qualia", *The Philosophical Quarterly*, 32, 127, 127-36, DOI: 10.2307/2960077
- Jackson, F. 1986, "What Mary Didn't Know", *The Journal of Philosophy*, 83, 5, 291-95, DOI: 10.2307/2026143
- James, W. 1890, *The Principles of Psychology*, New York: Henry Holt and Company.
- Kim, J. 1976, "Events as Property Exemplifications", in Brand, M. & Walton, D. (eds.), *Action Theory*, Synthese Library, 159-78.
- Kind, A. 2010, "Transparency and Representationalist Theories of Consciousness", *Philosophy Compass*, 5, 10, 902-13, DOI: 10.1111/j.1747-9991.2010.00328.x
- Kriegel, U. 2004, "Moore's Paradox and the Structure of Conscious Belief", *Erkenntnis*, 61, 1, 99-121, DOI: 10.1023/b:erke.0000037548.06150.b6
- Kriegel, U. 2013a, "Phenomenal Intentionality Past and Present: Introductory", *Phenomenology and the Cognitive Sciences*, 12, 3, 437-44, DOI: 10.1007/s11097-013-9308-0
- Kriegel, U. 2013b, "The Phenomenal Intentionality Research Program", in Kriegel, U. (ed.), *Phenomenal Intentionality*, Oxford: Oxford University Press, 1-26.
- Lamme, V.A. 1995, "The Neurophysiology of Figure-Ground Segregation in Primary Visual Cortex", *The Journal of Neuroscience*, 15, 2, 1605-15, DOI: 10.1523/jneurosci.15-02-01605.1995
- Lamme, V.A. 2014, "The Crack of Dawn", in Metzinger, T. & Wendt, J.M. (eds.), *Open MIND*, DOI: 10.7551/mitpress/10603.003.0067
- Lee, G. 2017, "Making Sense of Subjective Time", in Phillips, I. (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*, New York: Routledge, 157-68.
- Lehar, S. 2003, "Gestalt Isomorphism and the Primacy of Subjective Conscious Experience: A Gestalt Bubble Model", *Behavioral and Brain Sciences*, 26, 4, 375-408, DOI: 10.1017/s0140525x03000098
- Levine, J. 2011, "On the Phenomenology of Thought", in Bayne, T. & Montague, M. (eds.), *Cognitive Phenomenology*, Oxford: Oxford University Press, 103-20.
- Loar, B. 2003, "Phenomenal Intentionality as the Basis of Mental Content", in Hahn, M. & Ramberg, B. (eds.), *Reflections and Replies: Essays on the Philosophy of Tyler Burge*, Cambridge, MA: MIT Press, 229-58.
- McKenna, C. 2023, "Agency and the Successive Structure of Time-Consciousness", *Erkenntnis*, 88, 2013-34, DOI: 10.1007/s10670-021-00440-7
- Mendelovici, A. 2018, *The Phenomenal Basis of Intentionality*, Oxford: Oxford University Press.
- Mendelovici, A. & Bourget, D. 2014, "Naturalizing Intentionality: Tracking Theories Versus Phenomenal Intentionality Theories", *Philosophy Compass*, 9, 5, 325-37, DOI: 10.1111/phc3.12123
- Mendelovici, A. & Bourget, D. 2020, "Consciousness and Intentionality", in Kriegel, U. (ed.), *The Oxford Handbook of the Philosophy of Consciousness*, Oxford: Oxford University Press, 560-85.



- Millikan, R. 1984, *Language, Thought, and Other Biological Categories*, Cambridge, MA: MIT Press.
- Nagel, T. 1974, "What Is It Like to Be a Bat?", *The Philosophical Review*, 83, 4, 435-50, DOI: 10.2307/2183914
- Nes, A. 2011, "Thematic Unity in the Phenomenology of Thinking", *The Philosophical Quarterly*, 62, 246, 84-105, DOI: 10.1111/j.1467-9213.2011.711.x
- Northoff, G. & Lamme, V.A. 2020, "Neural Signs and Mechanisms of Consciousness: Is There a Potential Convergence of Theories of Consciousness in Sight?", *Neuroscience & Biobehavioral Reviews*, 118, 568-87, DOI: 10.1016/j.neubiorev.2020.07.019
- O'Shaughnessy, B. 2000, *Consciousness and the World*, Oxford: Clarendon.
- Paul, L. 2017, "The Subjectively Enduring Self", in Phillips, I. (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*, New York: Routledge, 262-72.
- Pautz, A. 2008, "The Interdependence of Phenomenology and Intentionality", *Monist*, 91, 2, 250-72; DOI: 10.5840/monist20089124
- Pautz, A. 2010, "A Simple View of Consciousness", in Koons, F. & Bealer, G. (eds.), *The Waning of Materialism*, Oxford University Press, 25-66.
- Pautz, A. 2013, "Does Phenomenology Ground Mental Content?", in Kriegel, U. (ed.), *Phenomenal Intentionality*, Oxford: Oxford University Press, 194-234.
- Phillips, I. 2017 (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*, New York: Routledge.
- Pitt, D. 2004, "The Phenomenology of Cognition or *What Is It Like to Think That P?*", *Philosophy and Phenomenological Research*, 69, 1, 1-3, DOI: 10.1111/j.1933-1592.2004.tb00382.x
- Pitt, D. 2011, "Introspection, Phenomenality, and the Availability of Intentional Content", in Bayne, T. & Montague, M. (eds.), *Cognitive Phenomenology*, Oxford: Oxford University Press, 141-73.
- Pitt, D. *forthcoming*, "The Quality of Thought".
- Prosser, S. 2017, "Rethinking the Specious Present", in Phillips, I. (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*, New York: Routledge, 146-56.
- Rashbrook-Cooper, O. 2017, "Atomism, Extensionalism and Temporal Presence", in Phillips, I. (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*, New York: Routledge, 133-45.
- Roelfsema, P.R., Lamme, V.A., & Spekreijse, H. 2000, "The Implementation of Visual Routines", *Vision Research*, 40, 10-12, 1385-1411, DOI: 10.1016/S0042-6989(00)00004-3
- Roelfsema, P.R., Lamme, V.A., Spekreijse, H., & Bosch, H. 2002, "Figure-Ground Segregation in a Recurrent Network Architecture", *Journal of Cognitive Neuroscience*, 14, 4, 525-37, DOI: 10.1162/08989290260045756
- Schwitzgebel, E. 2008, "The Unreliability of Naive Introspection", *Philosophical Review*, 117, 2, 245-73, DOI: 10.1215/00318108-2007-037
- Searle, J. 1991, "Consciousness, Unconsciousness and Intentionality", *Philosophical Issues*, 1, 45-66, DOI: 10.2307/1522923
- Searle, J. 1992, *The Rediscovery of the Mind*, Cambridge, MA: MIT Press.
- Shepherd, G.M. 2009, "Neuron Doctrine: Historical Background", *Encyclopedia of Neuroscience*, 691-95, DOI: 10.1016/B978-008045046-9.00988-8

- Siewert, C. 1998, *The Significance of Consciousness*, Princeton: Princeton University Press.
- Soteriou, M. 2013, *The Mind's Construction*, Oxford: Oxford University Press.
- Steward, H. 1997, *The Ontology of Mind: Events, Processes, and States*, Oxford: Oxford University Press.
- Swanson, L.W. 2013, "Basic Plan of the Nervous System", *Fundamental Neuroscience*, 15-38, DOI: 10.1016/b978-0-12-385870-2.00002-0
- Turner, R. & De Haan, D. 2017, "Bridging the Gap Between System and Cell: The Role of Ultra-high Field MRI in Human Neuroscience", *Progress in Brain Research*, 179-220, DOI: 10.1016/bs.pbr.2017.05.005
- Tye, M. 1995, *Ten Problems of Consciousness: A Representational Theory of the Phenomenal Mind*, Cambridge, MA: MIT Press.
- Tye, M. 2015, "Phenomenal Externalism, Lolita and the Planet Xenon", in Sabates, M., Sosa, D. & Horgan, T. (eds.), *Collection on the Philosophy of Jaegwon Kim*, MIT Press, 190-208.
- van Gelder, T. 1998, "The Dynamical Hypothesis in Cognitive Science", *Behavioral and Brain Sciences*, 21, 5, 615-28, DOI: 10.1017/s0140525x98001733
- van Gelder, T. 1999, "Wooden Iron? Husserlian Phenomenology Meets Cognitive Science", in Petitot, J., Varela, F., Pachoud, B., & Roy, J. (eds.), *Naturalizing Phenomenology*, Redwood City: Stanford University Press, 245-65.
- Wagemans, J. 2015, *The Oxford Handbook of Perceptual Organization*, Oxford: Oxford University Press.
- Wagemans, J., Elder, J.H., Kubovy, M., Palmer, S.E., Peterson, M.A., Singh, M., & von der Heydt, R. 2012, "A Century of Gestalt Psychology in Visual Perception: I, Perceptual Grouping and Figure-Ground Organization", *Psychological Bulletin*, 138, 6, 1172-1217, DOI: 10.1037/a0029333