

## “Predication and the Frege-Geach Problem”

Indrek Reiland

### Introduction

What is it for us to represent the world *as* being a certain way in the sense of being in a state with accuracy- or truth-conditions? Let us first narrow down the question. Both perceptual states and cognitive states like judgments and beliefs are frequently taken to represent. However, the way they do it differs. Perceptual states seem to have *iconic* content, content that is not conceptually articulated (Burge 2010). We can compare the format of such representation to that of a picture. In contrast, cognitive states have *propositional* content, content that is conceptually articulated. We can compare the format of such representation to that of a sentence.<sup>1</sup> While there’s a lot to be said about perceptual representation, I want to focus here on cognitive representation.<sup>2</sup>

On the traditional *Platonist* or *Fregean* picture of cognitive representation, we represent by standing in certain relations to intrinsically representational propositions qua abstract objects. For example, for us to represent an apple as being red is for us to stand in some relation to the proposition that this apple is red which represents it as being red. On this picture it is propositions that represent fundamentally and we who represent derivatively.

---

<sup>1</sup> One of the main differences between iconic and propositional content is that the former is not canonically decomposable in a conceptually articulated fashion whereas the latter is. Consider a picture of a book on a table. Its content can be said to represent the book on top of a table or a table below the book. Both ways of decomposing it are fine, but either is arbitrary with respect to the other since the content itself isn’t conceptually articulated. Contrast this with the sentence ‘this book is on top of the table’. Its content can be said to represent a particular book on top of the table. And this way of decomposing it is not arbitrary since it conforms to the content’s conceptual articulation. For further discussion of some of the differences see Burge 2010: Ch. 11.

<sup>2</sup> Of course, some late perceptual states or perception/cognition interface states are plausibly cognitive states with propositional content (see Burge 2010: Ch. 11, Reiland 2015).

The Platonist picture has recently come under attack. First, it leaves it completely unexplained how we could come to stand in the relevant relations to propositions qua abstract objects. Second, it leaves unexplained what propositions qua abstract objects are such that they could intrinsically represent. In other words, it can't solve the problem of the unity of the proposition or the problem of explaining how propositions have truth-conditions (Davidson 2005, Jubien 2001, King 2007, 2009, Soames 2010, 2014, 2015, Hanks 2015).

On the critics' alternative *Naturalist* picture of cognitive representation it is we who represent *fundamentally* and propositions that represent derivatively. This requires an answer to the question what it is for us to represent.

Suppose we can independently explain *reference*. For example, it's a relatively common view in contemporary cognitive science and philosophy of perception that perception involves causally driven, non-conceptual, context-bound reference to objects (Burge 2010, Clark 2004, Fodor & Pylyshyn 2015, Pylyshyn 2007, 2009). It's also common to think that perceptual reference somehow grounds conceptual, context-bound/demonstrative reference to objects (Campbell 2002, Smithies 2011). We can represent such reference by using 'REF' to mark the event or act of reference and *this* to mark the fact that it's conceptual and demonstrative:

REF (*this*)

This is to be read as: an event or token act of reference via the demonstrative concept *this*, leaving it open how we should think of demonstrative concepts.

Moving on, many people think that perceptual reference and demonstrative reference ground *naming* which enables conceptual, context-free/non-demonstrative reference to objects. We can represent such reference by using *Arvo* to mark the fact that it's conceptual and via the name 'Arvo':

REF (*Arvo*)

This is to be read as: an event or token act of reference via the name concept *Arvo*, again leaving it open how we should think of name concepts.

It's useful to have a way to represent reference in general while abstracting away from the particular *way* of referring (e. g. perceptual, via a demonstrative concept, via a name concept etc.). We can do this as follows:

REF (*O*)

This is to be read as: an event or token act of reference to the object *O*.

One way to approach our question is to ask: what do we need to do beyond referring to an object to come to cognitively represent it as being a certain way? The age-old answer is that we need to *predicate*, attribute, or ascribe a property to it. Peter Hanks and Scott Soames have both appealed to this answer in developing their theories of cognitive representation and propositions. Their view has a common structure. On the first step they claim that to predicate the property of being *F* of *O* amounts to representing *O* as being *F*. They also equate this with performing the most basic or primitive propositional act. On the second step they then claim that the basic propositional act-types<sup>3</sup> can be identified with propositions.<sup>3</sup>

A central difference between Hanks's and Soames's views lies in how they think about predication and the most basic or primitive propositional act. Hanks thinks that predication is *forceful* in that when you predicate being *F* of *O* you take a stand on whether *O* is *F*, namely that it is. To predicate being *F* of *O* is to represent *O* as being *F* and to perform the basic propositional act of *judging\** that *O* is *F*.<sup>4</sup> We can represent this as follows, where IND(*F*) represents the act of indicating the property of being *F* and '⊢' represents forceful predication:

---

<sup>3</sup> There are alternative things one could say on the second step. For example, both Brit Brogaard and Friederike Moltmann claim that performing the basic propositional act results in a *product* and that it's the product-type that can be identified with the proposition (Brogaard 2013, Moltmann 2013).

<sup>4</sup> I use 'judge\*' because Hanks's thinks that the basic propositional act is defined in terms of taking a stand on whether the object has the property. In contrast, the ordinary notion of judging has intuitively more packed in it than just taking such a stand. For example, it is common to think that to judge that *p* is the case one has to have considered the question whether *p* is the case and taken a reflective stand in the light of one's evidence. Here's another way to put it. When one guesses that *p*, one judges\* that *p*, but doesn't judge that *p*. Here's a

⊢ <REF(*O*), IND(*F*)>

This is to be read as: the sequence of acts consisting of referring to *O*, indicating the property of being *F* and forcefully predicating being *F* of *O*, where this final act constitutes the act of judging\* that *O* is *F*.

In contrast, Soames thinks that predication is *neutral* in that when you predicate being *F* of *O* you don't take a stand on whether *O* is *F*. To predicate being *F* of *O* is to represent *O* as being *F* and to perform the basic propositional act of *entertaining* the proposition that *O* is *F*. We can represent this as follows, where '-' represents neutral predication:

- <REF(*O*), IND(*F*)>

This is to be read as: the sequence of acts consisting of referring to *O*, indicating the property of being *F* and neutrally predicating being *F* of *O*, where this final act constitutes the act of entertaining the proposition that *O* is *F*.

Both have powerful reasons for their views and both face problems. Hanks's reason for thinking that predication is forceful is that it must be, if it is to explain representation. However, his own way of implementing the idea gives rise to the Frege-Geach problem. Soames's reason for thinking that predication is neutral is that it must be, if we're to avoid the Frege-Geach problem. However, it looks like nothing neutral can explain representation.

My aim in this paper is to present a third view, one which respects the powerful reasons while avoiding the problems. On this view predication is forceful and can thus explain representation, but the idea is implemented in a way that avoids the Frege-Geach problem. The key is to make sense of the notion of *grasping* a proposition as an objectual act where the object is the proposition. Once, I've presented it, I'll also show that both Hanks and Soames

---

yet another way. When you judge\* you exhibit being a *representational* agent, but not necessarily yet an *epistemic* one. However, when you judge you do exhibit being an *epistemic* agent. I discuss this further in Reiland 2019.

are already pushed towards this view by some of the things they have said and argue that this poses a serious challenge to their current views.

I will proceed as follows. I will start by taking a closer look at Hanks's approach by explaining in more depth his reason for thinking that predication is forceful and showing how his way of implementing the idea gives rise to the Frege-Geach problem (Section 1). I'll then explain his solution to the Frege-Geach problem and argue that it's problematic (Section 2). Next, I'll take a closer look at Soames's approach (Section 3). Finally, I'll present the third view (Sections 4-6).

## 1. Hanks's Approach: Predication as Forceful & the Frege-Geach Problem

Hanks thinks that predication is *forceful* in that when you predicate being  $F$  of  $O$  you take a stand on whether  $O$  is  $F$ , namely that it is. To predicate being  $F$  of  $O$  is to represent  $O$  as being  $F$  and to perform the basic propositional act of *judging\** that  $O$  is  $F$ . As I said above, we can represent this as follows, where  $\text{IND}(F)$  represents the act of indicating the property of being  $F$  and ' $\vdash$ ' represents forceful predication:

$$\vdash \langle \text{REF}(O), \text{IND}(F) \rangle$$

This is to be read as: the sequence of acts consisting of referring to  $O$ , indicating the property of being  $F$  and forcefully predicating being  $F$  of  $O$ , where this final act constitutes the act of *judging\** that  $O$  is  $F$ .

Hanks's reason for thinking that predication is forceful is that it has to be if it is to explain representation. It's perhaps easiest to understand his argument for this if we first consider an analogous argument in the case of sorting which Hanks takes to be similar to predication (Hanks 2015: 22).

Performing an act of sorting a marble into a pile is intuitively something that has correctness-conditions. If I use the property of being red as my principle of sorting marbles into two piles and put  $x$  into a pile of reds, then I do something incorrect if  $x$  is not red. But

now assume that sorting is neutral and doesn't amount to taking a stand on whether  $x$  actually belongs into a pile of reds. Then, clearly, my action wouldn't be incorrect if  $x$  is not red. It follows that if an act of sorting has correctness-conditions it has to be forceful in the sense of involving taking a stand.

Now, on Hanks's and Soames's view performing an act of predication is supposed to result in representing-as and thus similarly be something that has certain kind of correctness-conditions, namely truth-conditions. If I predicate  $F$  of  $O$  then I represent  $O$  as being  $F$  and do something incorrect, something that's done falsely, if  $O$  is not  $F$ . But now assume that predication is neutral and doesn't amount to taking a stand on whether  $O$  actually is  $F$ . Then my action wouldn't be incorrect, wouldn't be done falsely, if  $O$  is not  $F$ . It follows that if an act of predication is to have truth-conditions it must be forceful in the sense of involving taking a stand.

I find this argument convincing and won't discuss it further here, but proceed on the assumption that it works.<sup>5</sup> My interest lies in what follows from taking predication to be forceful.

One of the consequences of taking predication to be forceful is the rejection of the classical Fregean *Content-Force* distinction. According to the distinction force doesn't play a role in constituting propositional content and can always be separated from it (Hanks 2015: 9-10). However, if predication is forceful and plays a role in constituting representation, then it follows that force can't be separated from content.

However, Hanks thinks that if one takes predication to be forceful it's also natural to further reject an important Fregean corollary of the *Content-Force* distinction. According to the corollary, since force can always be separated from propositional content, it is possible to grasp a proposition without judging\* it to be the case (or without performing any stronger act like judging it to be the case). Why does Hanks think that it's natural to reject it? It's not entirely clear, but perhaps he reasons as follows. On the Hanks-Soames approach, it is the act of predication that somehow grounds our ability to have access to propositions and explains their

---

<sup>5</sup> For discussion and elaboration see Hanks 2015: 36-39. The argument is also endorsed by Francois Recanati in Recanati 2017.

existence and representationality. Thus, if predication is forceful then it is judging\* a proposition to be the case that somehow grounds our ability to have access to the proposition qua judgment\*-type and explains its existence and representationality. However, then it starts looking like you must always judge\* a proposition to have access to it. And if that's true then it follows that you can't grasp a proposition without judging\* it.

Rejecting the *Content-Force* distinction by itself doesn't lead to the Frege-Geach problem. It is rejecting the Fregean corollary that does. Consider what it is to perform judgments\* of complex propositions like those involving propositional conjunction, negation, and disjunction. For present purposes, we can think of such judgments\* on the model of propositional logic. If we reject the Fregean corollary like Hanks does, we must say that to perform such judgments\* you must first judge\* the constituent propositions. For example, take the act of judging\* that *O* is *F* **and** *O* is *G*. On Hanks's view, to perform this judgment\* you must first perform the constituent judgments\* only after which can you predicate being jointly true or standing in the conjunction relation *Conj* of them:

$$\vdash \langle \vdash \langle \text{REF}(O), \text{IND}(F) \rangle, \vdash \langle \text{REF}(O), \text{IND}(G) \rangle, \text{IND}(\text{Conj}) \rangle^6$$

But now take the acts of judging\* that **it is not the case** that *O* is *F* or judging\* that *O* is *F* **or** *O* is *G*. On Hanks's view to perform these judgments\* you must again first perform the constituent judgments\* only after which you can predicate untruth and being disjointly true or standing in the disjunction relation *Disj* of them:

$$\begin{aligned} &\vdash \langle \vdash \langle \text{REF}(O), \text{IND}(F) \rangle, \text{IND}(\text{Not-True}) \rangle \\ &\vdash \langle \vdash \langle \text{REF}(O), \text{IND}(F) \rangle, \vdash \langle \text{REF}(O), \text{IND}(G) \rangle, \text{IND}(\text{Disj}) \rangle \end{aligned}$$

But it's simply false that judging\* that **it is not the case** that *O* is *F* and judging\* that *O* is *F* **or** *O* is *G* require judging\* that *O* is *F*. That is exactly what they don't require!

---

<sup>6</sup> The conjunction relation is the relation two propositions stand in iff both are true. Similarly, the disjunction relation is the relation two propositions stand in iff one or the other is true. (Hanks 2015: 105)

Of course, Hanks is well aware that rejecting the Fregean corollary leads to the Frege-Geach problem. However, he's not disturbed by this because he thinks he can solve it with the help of his notion of *cancellation*. In the next section I'll discuss the solution and argue that it's problematic.

## 2. Hanks's Solution: Cancellation

Hanks's solution to the Frege-Geach problem relies on the idea that certain acts bring about what he calls *cancellation*. Take again the act of judging\* that  $O$  is  $F$  **and**  $O$  is  $G$ . On Hanks's view, predicating *Conj* doesn't bring about cancellation so to perform the above judgment\* it is indeed to do what we said above:

$$\vdash \langle \vdash \langle \text{REF}(O), \text{IND}(F) \rangle, \vdash \langle \text{REF}(O), \text{IND}(G) \rangle, \text{IND}(\text{Conj}) \rangle$$

However, now take the acts of judging\* that **it is not the case** that  $O$  is  $F$  or judging\* that  $O$  is  $F$  **or**  $O$  is  $G$ . On Hanks's view predicating untruth and *Disj* do bring about cancellation so to perform these judgments\* is to do the following instead (where  $\sim$  = cancellation of predication):

$$\begin{aligned} &\vdash \langle \sim \vdash \langle \text{REF}(O), \text{IND}(F) \rangle, \text{IND}(\text{Not-True}) \rangle \\ &\vdash \langle \sim \vdash \langle \text{REF}(O), \text{IND}(F) \rangle, \vdash \langle \text{REF}(O), \text{IND}(G) \rangle, \text{IND}(\text{Disj}) \rangle \end{aligned}$$

And this is supposed to solve the Frege-Geach problem because it's supposed to be unproblematic to think that judging\* that **it is not the case** that  $O$  is  $F$  and judging\* that  $O$  is  $F$  **or**  $O$  is  $G$  involve cancelled judging\* that  $O$  is  $F$ .<sup>7</sup>

Whether this amounts to a solution depends on how we are to think about cancellation. Indrek Reiland has argued that there are two ways to think of it: either cancellation annihilates

---

<sup>7</sup> In fact, Hanks now takes a more complicated view about what it is to perform judgments\* of complex propositions (Hanks 2015: 99-100). I'll come back to this in the final section.



predication, or it annihilates a part of predication and leaves another part intact. This leaves Hanks with a dilemma. If cancellation annihilates predication, then it also annihilates representation and the proposition. This obviously won't do. But if cancellation annihilates the forceful part of predication, but leaves intact the part that generates representation and the proposition then force wasn't needed after all. This won't do either. (Reiland 2013)<sup>8</sup>

Hanks's response is to claim that there's another way to think about cancellation. As he puts it in slogan form: "Cancelled predication is more than predication, not less" (Hanks 2015: 99). The idea is that cancellation doesn't annihilate anything. It leaves the predication entirely intact and rather *adds* something. Thus, even a canceled predication results in a judgment\*. However, it results in a judgment\* that has something added to it.

How to think of cancellation as not annihilating predication, but adding something? Hanks appeals to an analogy with Frege's argument that sentential mood doesn't encode force and Dummett's response to it (Hanks 2015: 92-94). Frege's argument goes roughly as follows. Suppose declarative mood encodes assertoric force. To adopt a concrete hypothesis about how, suppose that this is because there's a rule of use governing sentences in the declarative mood to the effect that a speaker *s* may use 'p' iff *s* believes that p. Then, any use by a speaker of a declarative sentence 'p' with its meaning should result in the expression of the belief that p and asserting that p. But now consider an actor on the stage who uses 'p' with its meaning without believing that p. Frege thought, and many people have agreed, that the actor doesn't do anything semantically impermissible, doesn't express the belief that p nor assert that p. He concluded that the declarative mood doesn't encode assertoric force.

Dummett disagreed with Frege's conclusion and responded as follows:

The reason [the actor] is not making assertions is not that he is doing *less* than that – merely expressing thoughts, say – but that he is doing *more* than that – he is acting the making of assertions. What constitutes his doing this is his uttering the assertoric sentence – with an assertion sign if we have one – in a context which determines the

---

<sup>8</sup> See also the arguments in Hom & Schwartz 2013.

significance of everything he does in that context – on the stage in a theatre at an announced time. (Dummett 1981: 311)

In effect, Dummett says that the actor indeed does do something semantically impermissible, does express the belief that  $p$ , and does assert that  $p$ . The intuition to the contrary is to be explained away by noting that the actor does these things while acting. Given that we know that he's acting, we simply don't care about the semantic impermissibility and his insincerity.

Hanks is best read as proposing that we think of cancellation analogously. The idea is that predicating untruth and *Disj* bring about cancellations of predications in the sense that even though the component judgments\* are performed, we simply don't care about the fact that they are.

The above seems to be the best Hanks can do given that he can't accept cancellation as annihilating predication or a part of it. But there are several serious worries about this solution. Let's approach them by contrasting it with Dummett's response to Frege.

Here's the first worry. Dummett's response features a clear explanation of *why* we supposedly don't care about the semantic impermissibility, insincerity etc. This is because the actor is on a stage and not speaking in his own voice. However, in the case of predicating untruth and predicating *Disj* we have no explanation of why it should be that we don't care about the fact that the component judgments\* are performed. And without such an explanation we just seem to have a specification of what is structurally needed to solve the problem without an idea of how we could have it.

Let me elaborate. One thing Hanks could say is that it's simply built into the acts of predicating untruth and *Disj* or the relevant properties that they have this effect. However, this amounts to admitting that there really is no explanation of why it should be that we don't care about the component judgments\*. And that's suspect. Another thing Hanks could say is that it's built into the meaning of 'it is not the case' and 'or' that they have the relevant effect. In other words, it's the meaning of these words that explains the properties of untruth and *Disj* and not the other way around. This is a possible route, but it requires giving an account of the meaning of 'it is not the case' and 'or' that explains why they have the effect. And before we

have such an account we still just have the specification of what's structurally needed to solve the problem without an idea of how we could have it.

Here's another worry which probably won't move Hanks, but which I suspect many of his opponents will find conclusive. Dummett's response to Frege is highly contentious. Yet it doesn't strain credulity to think that the intuition that the actor doesn't do anything wrong can be explained away by claiming that while he indeed does do something semantically impermissible, we simply don't care about this because we know he's acting. But in the case of predicating untruth things are different. Here the intuition is that the judgment\* that **it is not the case** that  $O$  is  $F$  doesn't involve the judgment\* that  $O$  is  $F$  because that would be inconsistent. It seems incredible that this is to be explained away by claiming that it does indeed involve that judgment\* and it is inconsistent, but we simply don't care about this.

### 3. Soames's Approach: Predication as Neutral

Soames thinks that predication is *neutral* in that when you predicate being  $F$  of  $O$  you don't take a stand on whether  $O$  is  $F$ . To predicate being  $F$  of  $O$  is to represent  $O$  as being  $F$  and to perform the basic propositional act of *entertaining* the proposition that  $O$  is  $F$ . We can represent this as follows, where '- ' represents neutral predication:

- <REF( $O$ ), IND( $F$ )>

This is to be read as: the sequence of acts consisting of referring to  $O$ , indicating the property of being  $F$  and neutrally predicating being  $F$  of  $O$  = the act of entertaining the proposition that  $O$  is  $F$ .

His reason for thinking that predication is neutral is that it must be if it can avoid giving rise to the Frege-Geach problem rather than having to solve it. To see this, notice that if one takes predication to be neutral one can hold on to the Fregean corollary of the *Content-Force* distinction according to which it is possible to grasp a proposition without judging\* it to be the case (or performing any stronger act). If predication is neutral, then it is entertaining a

proposition that somehow grounds our ability to have access to the proposition qua entertaining-type and explains its existence and representationality. However, then you can obviously grasp (here, = entertain) a proposition without judging\* it to be the case.

Holding on to the corollary enables Soames to avoid the Frege-Geach problem. Take the acts of judging\* that **it is not the case** that  $O$  is  $F$  or judging\* that  $O$  is  $F$  **or**  $O$  is  $G$ . On Soames's view, to perform these judgments\* you only have to perform the constituent entertainings after which you can predicate untruth or *Disj* of them:

$$\begin{aligned} \vdash & \text{- <- <REF}(O), \text{IND}(F)\text{>, IND}(Not\text{-}True)\text{>} \\ \vdash & \text{- <- <REF}(O), \text{IND}(F)\text{>,- <REF}(O), \text{IND}(G)\text{>, IND}(Disj)\text{>} \end{aligned}$$

And it's not obviously problematic to think that judging\* that **it is not the case** that  $O$  is  $F$  or judging\* that  $O$  is  $F$  **or**  $O$  is  $G$  requires entertaining the proposition that  $O$  is  $F$ .

Of course, as Hanks has argued, nothing neutral can explain representation. Soames of course does not agree, but, as I said above, I find Hanks's argument convincing and won't discuss it further here, but proceed on the assumption that it works.<sup>9</sup>

Let's take stock. Hanks has argued that predication must be forceful if it is to explain representation. However, his rejection of the Fregean corollary of the *Content-Force* distinction gives rise to the Frege-Geach problem and his solution to it is problematic. In contrast, Soames has shown that holding on to the corollary is important because it enables us to avoid the Frege-Geach problem rather than having to solve it. It would be nice to have a view which could do both. In what follows I'm going to present such a view. On this view predication is forceful and can thus explain representation, but the idea is implemented in a way that avoids the Frege-Geach problem. The key is to make sense of the notion of *grasping* a proposition as an objectual act where the object is the proposition.

---

<sup>9</sup> For Soames's take on the argument see his 2015: 219-223.

#### 4. The Third View: Predication as Forceful without the Frege-Geach Problem

We saw above that Hanks thinks that if one takes predication to be forceful it is natural to reject the Fregean corollary of the *Content-Force* distinction according to which it is possible to grasp a proposition without judging\* it to be the case. I suggested that he might be reasoning as follows. On the Hanks-Soames approach it is the act of predication that somehow grounds our ability to have access to propositions and explains their existence and representationality. Thus, if predication is forceful then it is judging\* a proposition to be the case that somehow grounds our ability to have access to the proposition qua judgment\*-type and explains its existence and representationality. However, then it starts looking like you must always judge\* a proposition to have access to it. And if that's true then it follows that you can't grasp a proposition without judging\* it.

This reasoning is faulty. It doesn't follow from the fact that the act of judging\* a proposition to be the case *grounds* our ability to have access to the proposition qua the judgment\*-type that you must always judge\* a proposition to have access to it. It is entirely compatible with it being possible to grasp the proposition without antecedently judging\* it.

Here's how to think about it. We start out by assuming that cognizers have the capacity to perform *atomic* judgments\* like the following:

$$\begin{array}{l} \vdash \langle \text{REF}(O), \text{IND}(F) \rangle \\ \vdash \langle \text{REF}(O), \text{IND}(G) \rangle \end{array}$$

Like Hanks, we identify the judgment\*-types with propositions.<sup>10</sup> Next, we claim that the capacity to perform atomic judgments\* either comes together with the capacity to grasp the judgment\*-types/propositions without antecedently performing them or at some later point

---

<sup>10</sup> Two points. First, on this view the fact that somebody has the capacity to perform an atomic judgment\* is sufficient for the judgment\*-type to exist. Second, identifying proposition with judgment\*-types is not mandatory. Like Brogaard and Moltmann we could also identify propositions with judgments\*' *product-types* if this is for some reason preferable. Some things in our story in Section 5 would have to be changed accordingly.

in the phylogenetic development cognizers develop this capacity.<sup>11</sup> Finally, we claim that together with or after developing the capacity for grasping, cognizers acquire the capacity to start predicating untruth, *Conj*, and *Disj* of judgment\*-types/propositions.

The key to being able to claim that we can grasp the judgment\*-types/propositions without antecedently performing them is thinking of grasping as an objectual act. Judgment and belief are propositional acts or attitudes and not objectual ones: they have *content*, not objects. In contrast, reference is the paradigmatically objectual act: it has an *object*, not a content. On the Fregean picture of grasping, it's thought of unlike judgment and more like reference in being an objectual act. When you grasp a Fregean proposition you go to the Platonic heaven and simply grab a mental hold of an object. It's just that the object is a Fregean proposition.

The distinction between propositional attitudes vs. objectual acts where the object is a proposition better is not restricted to judgment/belief vs. grasping. Consider Alex Grzankowski's recent discussion of the difference between fearing that p vs. fearing the proposition that p:

...in fearing that p, the proposition that p is the *content* of the attitude, but in fearing the proposition that p, the proposition that p is the *object* of the attitude. ... When an attitude has propositional content, the attitude is sensitive to the truth of the proposition. To put things in general terms, for any attitude V, V is a propositional attitude just in case for a subject S and proposition p such that S stands in V to p, if p were true, then things would be as S V's them to be. For instance, when one believes that p, if p were true, things would be as one believes them to be. If one fears that p, if p were true, things would be as one fears them to be. With this observation on the table, we can draw a clear contrast with the non-propositional attitudes for they do not appear to have conditions of accuracy, satisfaction, and so on. ... Propositional attitudes have propositions as contents, which is to say that they are sensitive to the

---

<sup>11</sup> This depends on whether one thinks there are creatures that can perform only atomic judgments without being able to perform complex judgments or not.

truth of the proposition in the way outlined above. Non-propositional attitudes directed at propositions merely have propositions as objects and so are not sensitive to the truth of the propositions they are about. (Grzankowski 2016: 5).

The idea is that judging and fearing that  $p$  are propositional acts or attitudes in that they have the proposition that  $p$  as their contents and as such they are sensitive to its truth. The judgment that  $p$  is correct or true iff  $p$ . The fear that  $p$  is realized iff  $p$  comes to be true. In contrast, grasping and fearing the proposition that  $p$  are objectual acts or attitudes in that they have the proposition as their objects and as such they are completely insensitive to its truth.<sup>12</sup>

On the Fregean picture, grasping is thought of as an objectual act. I propose that we retain this idea. Thus, when you grasp a proposition qua judgment\*-type you similarly grab a mental hold of an object. It's just that the object is not a Fregean proposition, but a judgment\*-type. We can represent this as follows:

$$\text{GR} (\vdash \langle \text{REF}(O), \text{IND}(F) \rangle)$$

This is to be read as: the act of grasping the judgment\*-type/proposition that  $O$  is  $F$ .

I'll say more about what it is to grasp shortly. But before, notice that since this view holds on to the corollary it can easily avoid the Frege-Geach problem. Take again the acts of judging\* that **it is not the case** that  $O$  is  $F$  or judging\* that  $O$  is  $F$  or  $O$  is  $G$ . On the third view, to perform these judgments\* you must grasp the constituent propositions after which you can predicate untruth or *Disj* of them:

$$\begin{aligned} &\vdash \langle \text{GR} (\vdash \langle \text{REF}(O), \text{IND}(F) \rangle), \text{IND}(\text{Not-True}) \rangle \\ &\vdash \langle \text{GR} (\vdash \langle \text{REF}(O), \text{IND}(F) \rangle), \text{GR} (\vdash \langle \text{REF}(O), \text{IND}(G) \rangle), \text{IND}(\text{Disj}) \rangle \end{aligned}$$

---

<sup>12</sup> See also the insightful discussion in Forbes 2018.

But it's not at all problematic to think that judging\* that **it is not the case** that O is F or judging\* that O is F **or** O is G requires grasping the proposition that O is F.<sup>13</sup>

## 5. The Third View: Grasping

What is it to grasp? Let's start with a comparison case. Suppose that to make dough you must pour water into a bowl, add flour, and mix them.

I said above that we should think of grasping like reference in being an objectual act. However, it's obvious that grasping is not just reference. When you refer to or think of the act of making dough or a judgment\*-type/proposition "obliquely" you don't grasp it. For example, suppose you can use 'Doughing' to refer to the act of making dough. Clearly, when you refer to the act via 'Doughing' you don't grasp it. After all, you could pick up the name 'Doughing' from someone without knowing what it would be to make dough. Then you could refer to making dough via 'Doughing' without being aware what you would do in performing the act, what its results are etc. But grasping must involve being aware of these things.

Similarly, perhaps you can use 'Logicism' to refer to the judgment\*-type/proposition that mathematics is reducible to logic.<sup>14</sup> Clearly, when you refer to it via 'Logicism' you don't grasp it. After all, you could pick up the name from someone else without knowing what it would be to perform the judgment\*. Then you could refer to judgment\*-type/proposition via 'Logicism' without being aware how you would represent the world as being in performing

---

<sup>13</sup> To avoid confusion, let me stress that I'm not advocating retaining the Platonist or Fregean picture of cognitive representation. Like on Hanks's view, on the third view we say that to perform atomic judgments\* is to just perform an act of predication. We thus abandon the Fregean picture of atomic judgment on which you must first grasp a proposition. What I advocate retaining are the Fregean ideas that:

- a) we can grasp propositions without antecedently judging\* them;
- b) grasping is an objectual act; and
- c) to perform judgments\* of complex propositions you must first grasp the constituent propositions.

<sup>14</sup> I'm not sure that we can do this. Names like 'Logicism' seem to refer to *views*, things that could be stated by using different, though logically equivalent propositions. Nathan Salmon has called what logically equivalent propositions have in common *logical content* and argued that it amounts to an intermediate value between propositions and intensions (Salmon 1992). Names like 'Logicism' might thus refer to logical contents, and not propositions.



the act, what its truth-conditions are etc. However, grasping a proposition must involve being aware of these things.<sup>15</sup>

Let's say that to grasp a structured act you must think of it in a special, "revelatory" way: one which involves being aware of what you would do in performing the act. What is it to do this?

Here's a commonly suggested first-pass idea: to grasp a structured act is to sequentially think of its constituent acts. For example, to grasp making dough is to sequentially think of pouring water, adding flour, and mixing. Similarly, to GR ( $\vdash \langle \text{REF}(\textit{Arvo}), \text{IND}(\textit{composer}) \rangle$ ) is to sequentially think of  $\text{REF}(\textit{Arvo})$ ,  $\text{IND}(\textit{composer})$ , and ' $\vdash$ '.

There are two obvious problems with this idea. First, much like when you think of a proposition "obliquely" you don't grasp it, when you think of even one of the constituent acts "obliquely", you don't grasp the structured act. For example, suppose you can use 'Peter's favorite act' to think of pouring water into a bowl. Clearly, when, in sequentially thinking of the constituent acts, you think of pouring water into a bowl via 'Peter's favorite act', you don't grasp the act of making dough. After all, you can do that without being aware what the *contribution* of pouring water is to what you would do in making dough. But this would mean you wouldn't also be aware of what you would be doing in making dough.

Similarly, suppose you can use 'Scott's favorite act' to think of  $\text{REF}(\textit{Arvo})$ . Clearly, when, in sequentially thinking of the constituent acts, you think of  $\text{REF}(\textit{Arvo})$  via 'Scott's favorite act', you don't grasp the judgment\*-type/proposition that Arvo is a composer. After all, you can do that without being aware what the *contribution* of  $\text{REF}(\textit{Arvo})$  is to how you would represent the world as being in performing the judgment\*. But this would mean you wouldn't also be aware of how you would represent the world as being in performing the judgment\*.

The second obvious problem is that when you sequentially think of the constituent acts, you get access to a mere list of acts, something without structure or unity. When you sequentially think of the act of pouring water, the act of adding flour, and the act of mixing you're still thinking of a mere list of acts and not grasping the act of making dough. Similarly,

---

<sup>15</sup> See also the discussion in Hanks 2015: 14-15

when you sequentially think of  $\text{REF}(\textit{Arvo})$ ,  $\text{IND}(\textit{composer})$ , and ‘ $\vdash$ ’ you’re still thinking of a mere list of acts and not grasping the judgment\*-type/proposition that Arvo is a composer.

Let’s take each problem in turn. To solve the first problem, we’ll say that one needs to think of the constituent acts in some special, “revelatory” way, one which involves knowing what its contribution is to what you would do in performing the structured act. What is it to do this?

Consider the question what’s required of a cognizer for her to be able to grasp a proposition on Fregean and Neo-Fregean views. On such views it’s a precondition for being able to grasp a proposition on an occasion that one possesses the constituent concepts (for example, see Peacocke 1992). Thus, for a cognizer to be able to grasp the proposition that ARVO IS A COMPOSER on an occasion she has to possess the concepts ARVO and COMPOSER.

On our view, we should similarly say that it’s a precondition for being able to grasp a particular judgment\*-type/proposition that one has the *capacity* to perform the constituent acts. Thus, to be able to GR ( $\vdash$   $\langle \text{REF}(\textit{Arvo}), \text{IND}(\textit{composer}) \rangle$ ) you must have the capacity to  $\text{REF}(\textit{Arvo})$ , the capacity to  $\text{IND}(\textit{composer})$ , and the capacity to predicate the latter of the former. Notice that this amounts to the claim that it’s a precondition for being able to grasp a particular judgment\*-type/proposition that you have the capacity to perform the judgment\*.

Given this precondition, I propose that to think of a constituent act in a “revelatory” way is to think of it in a way that is afforded by one’s capacity to perform the act. Such ways are nowadays called practical modes of presentation (PMP). Thus, to think of a constituent act in a “revelatory” way is to think of it under a PMP.<sup>16</sup> This solves the problem because if you think of the constituent acts under PMPs you are thinking of them in a way which involves knowing what its contribution is to what you would do in performing the structured act.

---

<sup>16</sup> I want to leave it open, here, how exactly to think of PMPs. However, there are two views of the relation of knowledge how and PMPs: one could take knowledge how to ground ability to think under PMPs or take ability to think under PMPs to ground know how. I take the first view to be the natural one. Jason Stanley and Tim Williamson famously and controversially defend the second view (Stanley & Williamson 2001, for criticism see Glick 2015). For one recent view of PMPs see Pavese 2015.

Let's proceed to the second problem concerning structure and unity. To solve this, we'll say that to grasp one can't just think of the combinatorial act, but rather must understand its role in generating structure. Thus, to grasp the act-type of making dough is to think of pouring water into a bowl and adding flour under PMPs while not just thinking of mixing, but understanding that in the act one mixes the two previous constituents together. Similarly, to GR ( $\vdash \langle \text{REF}(Arvo), \text{IND}(composer) \rangle$ ) is to think of REF(*Arvo*), IND(*composer*) under PMPs while not just thinking of ' $\vdash$ ', but understanding that in the act one predicates the property of the object.

Here, then, is the view we've arrived at: to grasp a complex act-type is to think of their constituents under PMP-s while understanding the role of the combinatorial act in generating structure.

Let's now go back to our claim that to grasp a structured act-type you must think of it in a special, "revelatory" way, one which involves being aware of what you would do in performing the act. Given the view we've arrived at, we can also say that to do this is to think of it in a way afforded by one's capacity to perform it, to think of it under a PMP. Thus, to grasp the act-type of making dough is to think of it in a way afforded by one's capacity to perform it. And to do that is to think of its constituent acts under PMPs while understanding that in the act one mixes the constituents together. Similarly, to GR ( $\vdash \langle \text{REF}(Arvo), \text{IND}(composer) \rangle$ ) is to think of it in a way afforded by one's capacity to perform the judgment\*. And to do that is to think of its constituent acts under PMPs while understanding that in the act one predicates the property of the object.

## 6. The Third View: A Challenge to Hanks and Soames

Let me summarize the third view. Like Hanks, we say that to predicate being *F* of *O* is to represent *O* as being *F* and to perform the basic propositional act of *judging\** that *O* is *F*:

$$\vdash \langle \text{REF}(O), \text{IND}(F) \rangle$$

Like Hanks we then identify the judgment\*-types with propositions. However, unlike Hanks, we say that it is possible to grasp a judgment\*-type/proposition without performing it:

$$\text{GR} (\vdash \langle \text{REF}(O), \text{IND}(F) \rangle)$$

Furthermore, unlike Hanks we say that to perform judgments\* of complex propositions you must grasp the constituent propositions after which you can predicate untruth etc. of them:

$$\begin{aligned} &\vdash \langle \text{GR} (\vdash \langle \text{REF}(O), \text{IND}(F) \rangle), \text{IND}(\text{Not-True}) \rangle \\ &\vdash \langle \text{GR} (\vdash \langle \text{REF}(O), \text{IND}(F) \rangle), \text{GR} (\vdash \langle \text{REF}(O), \text{IND}(G) \rangle), \text{IND}(\text{Disj}) \rangle \end{aligned}$$

This view respects the powerful reasons for each of Hanks' and Soames's view while avoiding their problems. However, it also seems to me that both are already pushed towards this view by some of the things they have said, and that this poses a serious challenge to their current views.

Hanks used to present his view of judgments\* of complex propositions like I did above (Hanks 2011). To recap, take the act of judging\* that **it is the case** that *O* is *F*:

$$\vdash \langle \vdash \langle \text{REF}(O), \text{IND}(F) \rangle, \text{IND}(\text{True}) \rangle$$

Here one first one performs the constituent judgment(s)\* and then one simply predicates truth, untruth, *Conj*, and *Disj* etc. You could see why this is problematic. Usually it's thought that we predicate these properties of propositions. On Hanks's view propositions are identified with judgment\*-types. Thus it shouldn't be enough that we just perform the constituent judgments\* and then predicate these properties, we should also somehow shift to the judgment\*-types/propositions as targets for the predications. Hanks has therefore recently presented his view by claiming that predication of these properties involves such target-shifting (Hanks 2015: 99-100). He represents this by using '↑' for target-shifted predication:

$\uparrow < \uparrow < \text{REF}(O), \text{IND}(F) >, \text{IND}(\textit{True}) >$

‘ $\uparrow$ ’ is to be read as target-shifted predication of the indicated property of the judgment\*-type/proposition.

While claiming that predication of truth etc. involves a shift to the judgment\*-types/propositions as targets for the predications, Hanks nevertheless writes as if performing the constituent judgment\* is enough for this:

When Obama says ‘It is true that Clinton is eloquent’ he predicates the property of being true of the proposition that Clinton is eloquent. The target of this act of predication is the type [ $< \uparrow < \text{REF}(\textit{Clinton}), \text{IND}(\textit{eloquent}) >$ ]. In order to predicate truth of this type he has to somehow single it out, but he doesn’t do that by referring to it. Rather, he singles it out by tokening it. He performs a token of [ $< \uparrow < \text{REF}(\textit{Clinton}), \text{IND}(\textit{eloquent}) >$ ] and thereby makes this type available as a target of predication. (Hanks 2015: 100)

However, it is completely implausible that judging\* that p suffices for “singling out” the judgment\*-type/proposition that p as a target. In judging\* that p one just tokens the type, one doesn’t conceive of the type *as* a type. But to “single out” the type as a target one needs to do something like that. Here’s another way to drive the point home. It’s plausible that there are some creatures that have the capacity to perform a judgment\* without having the capacity to shift to the judgment\*-type/proposition as a target. Even though the capacity to shift to the judgment\*-type/proposition as a target presupposes the capacity to perform the judgment\* it plausibly involves more. But then performing a judgment\* couldn’t suffice for “singling out” the type as a target.

If this is true, then to “single out” the judgment\*-type/proposition one must do something like what I’ve called grasping. Thus, even though Hanks himself hasn’t yet realized this, he is already pushed towards including grasping in his story of what it is to perform judgments\* of complex propositions. But this poses a serious challenge to his current view.

Once he includes grasping in his story, he needs a reason to think that the constituent judgment\* is performed at all! After all, grasping gets you the proposition as a target for predication. In other words, once you have grasping, why think that the constituent judgment\* is performed at all and allow the Frege-Geach problem to arise in the first place? Why not just adopt the third view?

Soames presents his view of entertaining complex propositions like I did above. To recap, take the act of entertaining the proposition that **it is the case** that *O* is *F*:

- <- <REF(*O*), IND(*F*)>, IND(*True*)>

Here one first one entertains the constituent proposition and then one simply predicates truth, untruth, *Conj*, and *Disj* etc. Let me quote him, to make this clear (my emphasis):

Let *p* be a proposition that represents things as *being so-and-so* (and nothing more) and *q* be a proposition that represents things as *being such-and-such* (and nothing more). Next consider a certain disjunctive operation the application of which to *p* and *q* represents things as *being so-and-so or things as being such-and-such* (and nothing more). **To entertain this proposition is to entertain *p*, to entertain *q*, and to operate on them in this way...** (Soames 2014: 99)

Again, you could see why this is problematic. Usually it's thought that we predicate the above properties of (or perform a disjunctive operation etc.) on propositions. On Soames's view propositions are identified with entertaining-types. Thus, it shouldn't be enough that we just entertain the constituent propositions and then predicate these properties or perform the operations, we should also somehow shift to the entertaining-types/propositions as targets for the predications.

Unlike Hanks, Soames isn't explicit about the need for target-shifting when he presents his view. However, he does acknowledge the need for shifting in the surrounding discussion and even thinks that entertaining the constituent proposition is not sufficient for it. For

example, in *What is Meaning?* he first flirts with a deflationist view on which propositions are theoretical constructs that help us track the predications of agents and thus have truth-conditions only by convention (Soames 2010: 94-95). He rejects this view because he thinks that in entertaining complex propositions we need to have constituent propositions “in mind” as targets of predication. He further thinks that it follows that the constituent propositions must be genuine entities with intrinsic truth-conditions (Soames 2010: 97-98). However, he also thinks that to have the constituent propositions “in mind” as targets of predication one must have capacities beyond being able to entertain them (my emphasis):

“Since the proposition that snow is white is the minimal event type in which an agent predicates whiteness of snow, and since every propositional attitude one bears to the proposition involves one’s performing this predication, **agents capable of being acquainted with their own cognitive processes – in the sense of being able to make them objects of their thought** – will typically be capable of being similarly acquainted with the proposition that snow is white, by virtue of being acquainted with the cognitive event that is the instance of it that they have brought about. (Footnote 5: As with many abstract objects, acquaintance with the instances of the event types that are propositions, **plus the ability to notice the relevant similarities** among those instances, **play crucial roles** in our acquaintance with the types.) (Soames 2010: 105).

Here, he seems to acknowledge that to have the constituent propositions “in mind” as targets of predication is to somehow make them objects of your thought.

More recently, Soames is even more explicit about this (my emphasis):

To entertain the proposition *that it is not true that o is red* is (i), to predicate redness of o, and thereby to entertain the proposition that o is red (ii), to negate the property *being true*, and (iii) to predicate the resulting property *not being true* of that proposition. This can be done by thinking “That’s not true,” **referring to the result of the initial**

**predication – provided that one can so refer. Many, but not all, agents capable of entertaining the original proposition can do this. There is nothing inherent in the ability to entertain p that guarantees that one can think thoughts *about* p.** The minimal form of acquaintance with propositions is the ability to cognitively or perceptually represent the world by predicating properties of objects, thereby generating tokens of event-types corresponding to those predications. **To gain a more robust form of acquaintance one must be able to make propositions targets of predication. This requires the ability to focus on the concrete events in one’s cognitive life, and reliably group together those bearing relevant similarity relations into units or types.** Since the proposition *that o is red* is an event type in which one predicates redness of o, one, who can focus on particular events in one’s cognitive life, and reliably group together those in which one predicates this property of this object, is in a position to make the proposition that is the event type of which they are instances, **an object of thought.** (Soames 2014: 98).

Here he says explicitly that to have the constituent proposition “in mind” as a target of predication it is not sufficient to entertain it, but you must somehow make it an object of your thought, to conceive of it *as* a type.

Soames is therefore in a slightly different predicament than Hanks. Hanks now represents his view as involving target-shifting, but seems to think that performing the constituent judgment\* is sufficient for this. Soames, doesn’t represent his view as involving target-shifting, but acknowledges the need for shifting in the surrounding discussion and even thinks that entertaining the constituent proposition is not sufficient for it. Nevertheless, the challenge for his view is similar.

To have the constituent entertaining-type/proposition in mind, Soames thinks, one must make it an object of your thought. To do that one must do something like what I’ve called grasping. Thus, even though he hasn’t yet realized this, he is also already pushed towards including grasping in his story. But, again, this poses a serious challenge to his current view. Once he includes grasping in his story, he needs a reason to reject the natural view of



predication as forceful! After all, grasping gets you the proposition as a target for predication in a neutral way and allows you to avoid the Frege-Geach problem. In other words, once he involves grasping, why think that predication is neutral? Why not just adopt the third view?

### **Conclusion: An Analogy**

Let me conclude with an analogy. We've arrived at three very different views of predication and what plays the role of grasping in judgments\* of complex propositions. On Soames's view predication is neutral and grasping (=entertaining) is the basic thing made sense of independently, whereas judgment\* can be thought of entertaining plus added force (Soames 2010: 82). On Hanks's view predication is forceful and judgment\* is the basic thing made sense of independently whereas grasping is thought of as judgment\* with the force somehow cancelled. And on the third view predication is forceful and judgment\* is the basic thing to be made sense of independently whereas grasping is thought of as thinking of a judgment\*-type\*/proposition. Here, grasping itself is not a truth-evaluable attitude, whereas the object grasped, the judgment\*-type/proposition, has truth-conditions.

Compare these three views with three views of perception and imagination. On one view, imagination is the basic thing made sense of independently whereas perception is imagination with the added feel of actual presence of the imagined thing (Matthen 2010). This is structurally analogous to Soames's view. On another possible view, perception is the basic thing made sense of independently whereas imagination is perception with the feel of actual presence of the imagined thing somehow cancelled. This is structurally analogous to Hanks's view. On a third view, perception is the basic thing made sense of independently whereas imagination is conjuring up an image constructed of perceptual materials. Here, imagining itself is not an accuracy-evaluable attitude, whereas the thing conjured, the image, has accuracy-conditions. This is structurally analogous to my view. I'll leave it to the reader to decide which view is natural in either case.

## Acknowledgments

I want to thank Stephen Barker, Ray Buchanan, Jonathan Cohen, Daniel Cohnitz, Alex Davies, Chris Hom, Manuel Garcia-Carpintero, Kathrin Glüer-Pagin, Geoff Georgi, Alex Grzankowski, Peter Hanks, Bjørn Jespersen, Jaan Kangilaski, Lorraine Keller, Jinho Kang, Jeff King, Uriah Kriegel, Max Kölbel, Riin Kõiv, Taavi Laanpere, Indrek Lõbus, Marc Moffett, Jeremy Schwartz, Gary Ostertag, Peter Pagin, Bryan Pickel, Francois Recanati, Peter Ridley, Michael Schmitz, Mark Schroeder, Scott Soames, Uku Tooming, and audiences at the *Society for Analytic Philosophy* in Tartu, the 9th *Barcelona Workshop on Issues in the Theory of Reference* at LOGOS, Institut Jean Nicod, King's College London, and the *Force, Content, and the Unity of Proposition* workshop at University of Vienna/WU Vienna for helpful comments and/or discussion.

## References

- Brogaard, B.** 2013. "An Empirically-Informed Cognitive Theory of Propositions". *Canadian Journal of Philosophy*, 43, pp. 534-557
- Burge, T.** 2010. *Origins of Objectivity*. Oxford: Oxford University Press
- Campbell, J.** 2002. *Reference and Consciousness*. Oxford: Oxford University Press
- Clark, A.** 2004. "Feature-Placing and Proto-Objects". *Philosophical Psychology*, 17, pp. 443-469
- Davidson, D.** 2005. *Truth and Predication*. Cambridge: Harvard University Press
- Dummett, M.** 1981. *Frege: Philosophy of Language*. Cambridge: Harvard University Press
- Fodor, J. & Pylyshyn, Z.** 2015. *Minds without Meanings: An Essay on the Content of Concepts*. Cambridge: MIT Press
- Forbes, G.** 2018. "Content and Theme in Attitude Ascriptions". *Non-Propositional Intentionality*. Ed. A. Grzankowski, M. Montague. Oxford: Oxford University Press, pp. 114-133
- Glick, E.** 2015. "Practical Modes of Presentation". *Nous*, 49, 538-559

- Grzankowski, A.** 2016. "Attitudes Towards Objects". *Nous*, 50, pp. 314-328
- Hanks, P.** 2011. "Structured Propositions as Types". *Mind*, 120, pp. 11-52
- Hanks, P.** 2015. *Propositional Content*. Oxford: Oxford University Press
- Hom, C. & Schwartz, J.** 2013. "Unity and the Frege-Geach Problem". *Philosophical Studies*, 163, pp. 15-24
- Jubien, M.** 2001. "Propositions and the Objects of Thought". *Philosophical Studies*, 104, pp. 47-62
- King, J.** 2007. *The Nature and Structure of Content*. Oxford: Oxford University Press
- King, J.** 2009. "Questions of Unity". *Proceedings of the Aristotelian Society*, 109, pp. 257-277
- Matthen, M.** 2010. "Two Visual Systems and the Feeling of Presence". *Perception, Action, and Consciousness: Sensorimotor Dynamics and Two Visual Systems*. Ed. N. Gangopadhyay, M. Madary, & F. Spicer. Oxford: Oxford University Press, pp. 105-124
- Moltmann, F.** 2013. "Propositions, Attitudinal Objects, and the Distinction between Actions and Products". *Canadian Journal of Philosophy*, 43, pp. 679-701
- Peacocke, C.** 1992. *A Study of Concepts*. Cambridge: MIT Press
- Pavese, C.** 2015. "Practical Senses". *Philosophers Imprint*, 15, pp. 1-25
- Pylyshyn, Z.** 2007. *Things and Places: How the Mind Connects With the World*. Cambridge: MIT Press
- Pylyshyn, Z.** 2009. "Perception, Representation, and the World: the FINST That Binds". *Computaton, Cognition, and Pylyshyn*. Ed. D. Dedrick, L. Trick. Cambridge: MIT Press, pp. 3-48
- Reiland, I.** 2013. "Propositional Attitudes and Mental Acts". *Thought*, 1, pp. 239-245
- Reiland, I.** 2015. "Experience, Seemings, and Evidence". *Pacific Philosophical Quarterly*, 96, pp. 510-534
- Reiland, I.** 2019. "Predication and Two Concepts of Judgment". *The Act and Object of Judgment*. Ed. B. Ball, C. Schuringa. Cambridge: Cambridge University Press, pp. 217-234
- Recanati, F.** 2017. "Force Cancellation". Forthcoming in *Synthese*

**Smithies, D.** 2011. "What is the Role of Consciousness in Demonstrative Thought?" *Journal of Philosophy*, 108, pp. 5-34

**Stanley, J. & Williamson, T.** 2001. "Knowing How". *Journal of Philosophy*, 98, pp. 411-444

**Salmon, N.** 1992. "On Content". *Mind*, 101, pp. 733-751

**Soames, S.** 2010. *What is Meaning?* Princeton: Princeton University Press.

**Soames, S.** 2014. "Cognitive Propositions". *New Thinking About Propositions*. By J. King, S. Soames, J. Speaks. Oxford: Oxford University Press, pp. 91-126

**Soames, S.** 2015. *Rethinking Language, Meaning, and Mind*. Princeton: Princeton University Press