

A CASE FOR META-INTENTIONAL TOP-DOWN CAUSATION

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I certify that I have read A Case for Top-Down Meta-Intentional Causation by Peter James Bartsch, and that in my opinion this work meets the criteria for approving a thesis submitted in partial fulfillment of the requirement for the degree Masters of Arts: Philosophy at San Francisco State University.

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A Case for Top-Down Meta-Intentional Causation

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Abstract:

In this paper I argue that long-term top-down causation of the phenomenal over the physical is possible. I argue that by having an intention to have specific conscious states or specific experiences in the future, one can exercise top-down causation. My theory is compatible with materialism because I accept that consciousness is constitutively dependent on one's brain/body architecture instantiating consciousness. I accept that at all times your conscious state is instantiated, constituted and determined by your occurrent physical state. However, I argue that an intention, desire or goal must be experienced within phenomenal intentionality. I argue that one's brain/body architecture creates one's phenomenally intentional conscious states, but one must also have phenomenal intentional conscious states in order for their brain/body to react to one's internal conscious states. For a theory of top-down causation this means that you must be able to first phenomenally experience your intention in order to cause the physical occurrences to occur (both in the world and inside your brain/body) that are necessary to instantiate an intended conscious state at a future time. This intention will have to be reified often over an extended period of time because the plasticity of the brain requires time for permanent physical changes in the brain to take place. By this account, one's physical brain/body architecture determines one's phenomenal intentional conscious states bottom-up, but phenomenal intentional conscious states play the role of the necessary experiences that create the top-down causation over one's brain/body architecture. I believe that to talk about whether it is the releasing of chemicals in the brain that creates an experience of being happy, or if the experience of being happy creates the releasing of chemicals in the brain is a moot point. They are both necessary occurrences. The physical and the phenomenal determine how the body and mind will interact together with one's environment, thus enabling top-down/bottom-up causal loops.

This paper focuses on developing a pragmatic theory on how to exercise degrees of top-down causal influence of one's phenomenal consciousness over one's physical brain/body architecture, i.e. their biology. My thesis of *meta-intentionality* is the view that you can have an intention to instantiate certain phenomenal intentional states of consciousness, and that this intention can lead to alterations in one's biological determinates of consciousness. To have an intention to carry out an action, or to have an intention to have an experience of a specific phenomenal intentional state, is to require neural correlates to instantiate those actions or experiences. According to my theory, consciousness is constituted by one's occurrent biological state, yet this does not necessitate that consciousness does not have emergent features that are not reducible to physical correlates, or that consciousness cannot have top-down causation over one's biology. I argue that even if phenomenal consciousness is determined by one's biology, one necessarily needs to have the phenomenal intentional experience of having an intention for the biological correlates instantiating these phenomenal intentional states to occur. This implies that if you do not have an experience at a phenomenal intentional level of having an intention regarding future conscious experiences, then you cannot have top-down causation. I call this intention a *meta-intention* since 1) the intention will necessarily need to be experienced phenomenally, 2) must be sustained over an extend period of time since permanent changes in one's brain/body architecture takes time, and 3) because these changes come from a "meta", or top-down, manner.

In this paper I will demonstrate that in the literature of philosophy of mind there are terms and concepts that are suggestive of emergence and dualism between consciousness and the biological correlates that instantiate consciousness. In section 1 I will establish how a theory of meta-intentionality fits within a phenomenal Intentionalist research program. In section 2 and 3 I will utilize research from embodied cognition and neuroscience for insights into the channels top-down causation might take to occur. In section 4 I will draw parallels from research on Zen Buddhism and the brain to a theory of meta-intentionality. Lastly, in section 5, I will show how a theory of meta-intentionality can act as a response to nihilism and the problem of eternal return. I do not intent to offer a knock-down argument against materialism regarding consciousness, but instead aim to offer a theory that focuses on the pragmatic utility of taking the assumption that top-down causal influence is possible.

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1. Supervenience, Emergence and Phenomenal Intentionality

A debate within the philosophy of mind is the extent to which phenomenal states (i.e. sensory modalities such as sight, sound and touch) and intentional states (i.e. cognitive states such as beliefs and thoughts) are separable or inseparable parts of consciousness. This debate is relevant to my thesis of top-down causation because the extent to which phenomenology and intentionality influence each other is relevant to how it is that phenomenology and intentionality play a causal role in influencing one's biological makeup. Tienson and Horgan argue that phenomenality and intentionality are inseparable. According to them all phenomenal states have an aboutness that infuses a phenomenal state with intentionality; they call this *The Intentionality of Phenomenality*. Conversely, they argue that all intentional states have a specific character of what-it-is-like to have that intentional state that infuses any intentional state with phenomenality; they call this *The Phenomenality of Intentionality*.¹ They argue that to alter the intentional state is to alter the phenomenal state and vice-versa. From this relation between phenomenality and intentionality Tienson and Horgan posit their theory of *Phenomenal Intentionality* which states: "There is a kind of intentionality, pervasive in human mental life, that is constitutively determined by phenomenology alone."² Since part of the intentionality of a phenomenal state is about the phenomenal what-it's-like for an individual perceiver, this creates "narrow" content whose truth conditions are dependent only on what goes on inside the head of this one perceiver.³ In other words, there is intentionality that is about the phenomenal intentional state one is having. This implies that there are truth

¹ *The Intentionality of Phenomenology and the Phenomenology of Intentionality*, by Terence Horgan and John Tienson, pg. 520

² *Ibid*, pg. 520

³ *Ibid*, pg. 528

conditions that apply only to the intrinsic and internal occurrences within an individual person's conscious experiences that are determined and satisfied solely by aspects of one's phenomenal intentionality. This is contrasted with externalist theories of intentionality which argue that phenomenal intentionality is determined by "wide" content whose truth conditions refer to actual entities or propositions in the world.⁴ Tienson and Horgan argue that externalist theories of intentionality are wrong since they claim to naturalize intentionality based only on wide content, missing the fact there is narrow content within phenomenal intentionality that is not constituted by external factors.⁵

I agree with Tienson's and Horgan's thesis of phenomenal intentionality and the argument that there are aspects of phenomenal intentionality that create narrow truth conditions solely about the experiencing of these phenomenal intentional states of consciousness. I argue that this lends support to the idea that there is content in the mind that is not dependent on the external world and is therefore constitutionally dualistic from any representations of the world. Wayne Wu classifies pure and impure representationalist accounts as "...accounts that appeal only to representational content and those that appeal also to the psychological mode respectively."⁶ An impure representationalist account appeals to psychological modes as content that does not have to be representative of the external world. I argue that impure representations of internal narrow content creates mental content that is capable of being influenced by internal processes rather than representations of external wide content. This separateness of wide and narrow content is necessary for the possibility of top-

⁴ *The Intentionality of Phenomenology and the Phenomenology of Intentionality*, by Terence Horgan and John Tienson,, pg. 528

⁵ *Ibid*, pg. 528

⁶ *What is Conscious Attention?*, by Wayne Wu, pg. 95

down causation because one must necessarily be able to have content, beliefs and emotions regarding their own phenomenal intentional states in order have any causal influence over those phenomenal intentional states. In other words, one must have narrow content in order to assess the quality of their own phenomenal intentional states if they are going to have any desire or intention for top-down influence over these phenomenal intentional states. Impure representational accounts of mental content lends support to the idea that not all aspects of phenomenal intentionality can be reduced or naturalized to representations of the external world.

Naturalizing phenomenal intentionality is about finding nomological physical laws and neural correlates for determining the phenomenal intentionality of conscious states. While a naturalized theory of the phenomenal and intentional content of the brain should be sought after, many philosophers do not believe that all aspects of consciousness can be naturalized. According to Uriah Kriegel, a theory that attempts to give a non-naturalized account of intentionality by appealing to phenomenal characteristics falls under the category of a Phenomenal Intentional Research Program (PIRP).⁷ The goal of a PIRP is to give an account of the relations and extent of phenomenal consciousness as a source of intentionality. In contrast, a naturalized externalist research program looks for intentionality in the tracking relations between internal content and representations of stimuli in the external world. For a PIRP, the source of intentionality is the phenomenal character that is associated with the intentional

⁷ *The Phenomenal Intentionality Research Program*, by Uriah Kriegel, pg. 2

content.⁸ The challenge comes in giving a fully descriptive account of emerging properties and the supervenience relation between intentionality and phenomenality.

Supervenience is a relation that emergent properties have with their base property. Supervenience relations can be ambiguous since at the root of supervenience theories, the most basic claim is only that *A* properties co-vary with *B* properties. *A* properties can be said to supervene on *B* properties just in case no two things can differ with respect to *A* properties without differing with respect to *B* properties. However, *B* properties entailing or being ontologically prior to *A* properties is neither necessary nor sufficient for *A* properties to supervene on *B* properties. Just because *A* properties cannot change without a change in *B* properties, does not mean that *B* properties cannot change without a change to *A* properties. Supervenience does not guarantee that *A* properties either reduce to or ontologically depend upon the *B* properties.⁹ This can be seen in the supervenience relation between the mental and the physical since mental properties may supervene on physical properties without physical properties supervening on mental properties. For example, there can be physical differences within a person while the same mental properties supervene on these new physical differences. In other words, if you alter your mental properties your physical properties will alter, but if you alter your physical properties it does not follow necessarily that your emergent mental properties will change.

Emergent properties are wholly new properties from the physical correlates that instantiate their existence by emerging out of the composition of aggregates. Just as two chemicals such as hydrogen and oxygen combine to make the wholly new composition of water,

⁸ *The Phenomenal Intentionality Research Program*, by Uriah Kriegel, pg. 3

⁹ <http://plato.stanford.edu/entries/supervenience/>

analogously, brain/body biological properties combine to make a wholly new composition of consciousness. According to C.D. Broad, the composition of aggregates leads to two types of laws: 1) 'intra-ordinal' laws, and 2) 'trans-ordinal' laws.¹⁰ Intra-ordinal laws describe the order of aggregates instantiating properties within a certain time frame. Trans-ordinal laws describe the governing of higher-level emergent properties from lower-level aggregates. Emergence creates new properties which require new laws and new causal roles. This opens up the question of how emergent properties supervene onto non-emergent properties. A mental property that can be instantiated by multiple correlates is said to be multiply realizable. Multiple realizability implies that emergent properties can supervene onto multiple physical correlates. Due to multiple realizability of mental content, the difficulty of establishing metaphysical or even nomological necessity through supervenience is very hard.

To talk about phenomenal intentionality emerging from non-phenomenal intentionality requires an explication of non-phenomenal content and how phenomenal intentionality supervenes on non-phenomenal content. Non-phenomenal content is content within the brain that contributes to a phenomenal intentional state, yet one is not consciously aware of the contribution of this content. Non-phenomenal content that offers intentionality can be found in one's motor and proprioceptive neurons which give information about one's body in space and time, while one is not consciously aware of their functioning. Kriegel argues regarding scrutable content that only phenomenal intentional states are inherently scrutable in and of themselves.¹¹ In other words, one cannot consciously scrutinize the non-phenomenal content in their brain/mind architecture. This implies that non-phenomenal content derives determinate

¹⁰ <http://plato.stanford.edu/entries/properties-emergent/>

¹¹ *The Phenomenal Intentionality Research Program*, by Uriah Kriegel, pg. 21

content by supervening phenomenal intentional content. If there is a change in one's phenomenal intentional content there is a change in one's nonphenomenal content, but the opposite is not necessarily true. I agree that only phenomenal intentionality is scrutable because only what one is phenomenally aware of is consciously available to a subject to scrutinize. Thus, phenomenal intentionality supervenes upon and emerges out of nonphenomenal content.

Kriegel lays out four options for how phenomenal intentionality might receive its intentionality. 1) All intentionality is phenomenal intentionality, 2) All intentionality derives from phenomenal intentionality, 3) All intentionality derives from potential phenomenal intentionality, and 4) All intentionality derives from intentionality appropriately related to phenomenal intentionality.¹² I agree with premise (1) in the sense that all the intentionality we are phenomenally aware of is experienced as phenomenal intentionality. However, I agree with premise (4) in the sense that what is experienced as phenomenally intentional is derived from some aspects of the brain that are non-phenomenal, yet still contribute a degree of intentionality or meaning to later phenomenal intentional states. I do not think that non-phenomenal intentionality is intentional in the same way that phenomenal intentionality is intentional. Phenomenal intentionality is to have an experience about something and to have scrutable determinate content regarding this intentionality. Non-phenomenal intentionality is non-determinate and non-scrutable, thus intentional in a non-phenomenally accessible way. This might work by non-phenomenally (non-derivate) intentional states, which cannot become phenomenally intentional, still being cognitively integrated into a system of inferentially interrelated intentional states, some of which are phenomenally conscious. This requires a theory of how non-phenomenal content cognitively integrates intentionality into emerging

¹² *The Phenomenal Intentionality Research Program*, by Uriah Kriegel, pg. 19-20

phenomenal intentionality. In section 3 I will utilize a theory of metacognitive assessments to explicate this aspect of the theory.

Part of answering how the non-phenomenal intentional contents of the mind contribute to one's overall phenomenal intentional state, is to also answer what are the sources and the extent of possible phenomenal intentional states. Kriegel establishes that one can limit the extent of phenomenal intentionality to 1) just perceptual experiences, 2) perceptual experiences with somatic and emotional experiences, or 3) all these experiences plus the phenomenology of agency, thought and cognition.¹³ If all three of these options are the totality of what can become phenomenally intentional, then all three must have physical correlates that supply intentionality which can be subsumed into a unified phenomenal intentional state. I argue that phenomenal intentionality must include perceptual, somatic, and emotional aspects, as well as the phenomenology of agency and thought/cognition. Below I will demonstrate that the literature of embodied cognition will support the thesis that phenomenality and intentionality are inseparable, yet is also dynamic enough to account for how intentionality might supervene with phenomenality.

2. An embodied cognitivist approach to phenomenal intentionality

The question of how to naturalize phenomenal intentionality still remains. Even while recognizing that the physical facts within the body won't exhaust the phenomenal facts within consciousness, the need for being able to talk about how the physical facts correlate to the phenomenal facts still remains. I will argue that the research in embodied cognition is able to

¹³ *The Phenomenal Intentionality Research Program*, by Uriah Kriegel, pg. 8

respect the qualitative division between the physical facts and the phenomenal facts, and yet can still provide pragmatic and useful insights on how the brain functions in relation to consciousness.

In this paper I will accept non-classical, connectionist models of the mind as more favorable than classical computational models for accounting for phenomenal intentionality. “In a connectionist system, information is actively represented as a pattern of activation.”¹⁴ A benefit to a system that represents with patterns of activity is that it is more economic than computing each individual symbolic representation. One way to mathematically represent patterns of activation is through a dynamic systems theory. Dynamic systems theory is a mathematical system regarding the temporal evolution of all possible physical trajectories within the high-dimensional state space of a connectionist model.¹⁵ A brain is able to deal with such varying patterns of activation by utilizing morphological content that is constituted implicitly by one’s brain/body architecture. According to D. Henderson and T. Horgan, “Morphological content—the information implicit ‘in the weights’—is embodied in the *topographical contours* of the network’s high-dimensional activation landscape.”¹⁶ A topographical contour is synonymous with the structure, landscape or architecture of the brain. This means that morphological content is content that is implicit in the topography of the brain and gets integrated in cognitive processes without relying on strict representations. They argue that this implicit structure effects the realization of intentional states and how morphological content is processed without being explicitly represented. How an implicit structure nomologically coincides with the supervenience of *A* properties (biological correlates) with *B*

¹⁴ *Epistemic Virtues and Cognitive Dispositions* by David Henderson and Terry Horgan

¹⁵ *Ibid*

¹⁶ *Ibid*

properties (phenomenal intentional states of consciousness) is unknown. Nevertheless, morphological content as an implicit structure affecting the way the information is computed is supportive of non-phenomenal content supervening intentionality onto later emergent states of phenomenally intentionality. Classical inferential processes deal with rigid representations but connectionists processes can deal with non-rigid representations which are constituted by subsuming multimodal representational content. Patterns of activation of non-rigid representations in a connectionist model are also more apt to account for impure representationalism and narrow content in the mind. If morphological content is able to contribute to phenomenal intentionality by the topography of the brain/mind, then a top-down causal theory would be interested in how phenomenal intentional experiences affect the topography of one's brain/mind.

A theory of how the brain's topography is shaped and influenced can be found in the work of Lawrence Barsalou. Barsalou argues that cognition is based on the same neural systems that are used in perception.¹⁷ He then argues that perceptual symbols are dynamic, rather than rigid, by defining a perceptual symbol as associative patterns of neurons whose activation at later times may vary. "The subsequent storage of additional perceptual symbols in the same association area may alter connections in the original pattern, may distort activation of the original pattern, as connections from contextual features bias activation toward some features in the pattern more than others."¹⁸ If subsequent storage of perceptual symbols may alter previously established connections, then one's capacity for phenomenal intentionality will be determined by a history of phenomenal intentional states. The above mentioned concepts of

¹⁷ *Perceptual Symbol Systems* by Lawrence Barsalou, pg. 577

¹⁸ *Ibid*, pg. 584

morphological content within a topographical landscape are a perfect example of nonphenomenal intentional content that contributes a bias to one's occurrent phenomenal intentional state. I argue that what creates trajectories within the activation patterns of one's topographical contours are the neural pathways that instantiate a meta-intentional goal of a specific phenomenal intentional state of consciousness. Barsalou argues that what influences the storage process is not just perceptual symbols activated at latter times, but multimodal information that includes sensorial, proprioceptive and introspective information.¹⁹ A brain having an established topography that contains morphological content implicit in the structure of the topography would allow for a brain to more easily recognize multimodal patterns of internal activation. This would afford an organism the capacity to react to external information and predict the environment more aptly than having to deal with an environment without preestablished neural pathways. The ease of neural computations due to morphological content demonstrates one possible avenue for influencing supervenience relations of *A* properties to *B* properties. As morphological content changes the likelihood of emerging phenomenal intentional experiences changing is very high.

The inseparability thesis between phenomenality and intentionality supports the idea that perceptual symbols are modal. According to Barsalou, perceptual symbols are modal because they are represented by the same sensory modal neural systems that produce perceptual states. This is contrasted with amodal symbols which are amodal, i.e. non-modal, because they do not correspond with the perceptual systems, bodily actions or sensorimotor systems that produce the perceptual states.²⁰ The argument for amodal content is that they can

¹⁹ *Perceptual Symbol Systems* by Lawrence Barsalou, pg. 582

²⁰ *Ibid*, pg. 578

account for higher forms of representation. “As amodal symbols become transduced from perceptual states, they enter into larger representational structures...”²¹ Barsalou argues that the problem with amodal symbols is that there is no satisfactory account of how modal content in sensorimotor systems transduce or map with amodal symbols. Despite not having a naturalized account of the existence of amodal and modal symbols and their relation with instantiating phenomenal intentionality, I argue that it is plausible to accept the existence of both modal and amodal content in the mind. Modal content can account for perceptual experiences in phenomenal intentionality while amodal content can account for the phenomenology of agency, thought and cognition. Modal and amodal content can account for the whole extent of phenomenal intentionality.

Allowing for modal and amodal content within the brain would benefit from a theory of how to manipulate these contents in order to achieve meta-intentional top-down causal influence. I argue that Barsalou’s idea of a simulator within the mind is open-ended enough to account for modal and amodal. According to Barsalou, “...a simulator contains two levels of structure: (1) an underlying frame that integrates perceptual symbols across category instances, and (2) the potentially infinite set of simulations can be constructed from the frame.”²² I argue that Barsalou’s concept of a frame being integrated through simulators is a very familiar concept to morphological content instantiated in the topographical contours of one’s brain/body architecture. Simulators combine established frames and multimodal perceptual systems recursively to implement productivity.²³ Productivity is the ability for a brain to produce new frames off of old frames and to be more dynamic within a world in which content is always

²¹ *Perceptual Symbol Systems* by Lawrence Barsalou, pg. 578

²² *Ibid*, pg. 586

²³ *Ibid*, pg. 582

changing. Productivity of combinatorially and recursively simulating multimodal frames is a necessary component for any top-down causation. Without being able to make new combinations of frames and to make them recur, there would be no mechanism for supervenience or top-down causation. The supervenience of meta-intentional top-down causal influence requires productivity within the mind as well as reification of specific aspects of phenomenal intentionality. I argue that productivity is a virtue for cognitive systems. A cognitive system that maximizes productivity of simulating frames will be able to solve problems quicker and would be more likely to survive and prosper. Putting one's productivity to a specific task is a virtue in a meta-intentional system. If you want to be a mechanic your productivity will supervene on simulating how parts of a novel engine function based on previous experiences. If you belong to a religion the productivity of your spiritual life will be supervened upon by the textual, conceptual, cultural and historical paradigms you are framing your experiences with.

Memory is a perfect everyday example of a mental attribute with phenomenal intentional characteristics that everyone is familiar with. I argue that memory can function similar to Barsalou's idea of a simulator. It seems probable that when having a memory, one is running a simulation of frames and morphological content, phenomenal and intentional content, nonphenomenal and nonintentional content, as well as modal and amodal content. I argue that memories could be composed of modal and amodal symbols, giving you the amodal conceptual remembrance of what happened and modal visceral remembrance of how the experience made you feel. Arthur Glenberg argues that memory is involved in the "meshing" together of projectable properties with nonprojectable properties. Projectable properties are properties in the mind that refer to external properties within an environment, while

nonprojectable properties refer to nonphysical properties in the environment. “Thus spatial layout is a projectable property, whereas ownership is a nonprojectable property that must come from experience.”²⁴ If this is true it means that any meta-intentional goal would require the supervenience of projectable properties onto nonprojectable properties. Glenberg argues for the possibility that the structure of representations are lawfully related to the objects that they represent, so that representations mesh together based on whether or not they literally fit together. How nonprojectable and projectable properties fit together is a relation of supervenience. Though there is no metaphysical necessity for how these properties are to fit into one another, it is still evident that influencing the relation of nonprojectable and projectable properties would create some changes in the supervening properties within one’s phenomenal intentional states. The idea of memory meshing projectable and nonprojectable properties is analogous with Barsalou’s idea of a simulator utilizing perceptual and sensorimotor systems for cognition, both require combining two kinds of mental content into a unified phenomenal intentional state. Utilizing the above concepts, one could argue that the topography of a brain can instantiate morphological content and frames that enable a brain to simulate an expectation for the meshed projectable and nonprojectable properties, modal and amodal content, as well as narrow and wide truth conditions, in the environment and the mind.

Glenberg argues that memory records how conceptualizations, composed of projectable and nonprojectable properties, mesh into one another. Whenever there is a change in how projectable and nonprojectable properties mesh, then there is a change in the conceptualization of a memory. Memory is updated when conceptualizations change. “The degree to which updating takes place is exactly correlated with the degree to which the conceptualization

²⁴ *What Memory is For* by Arthur Glenberg, pg. 4

changes.”²⁵ Glenberg argues that what is updated is how one pattern of activation flows into another pattern of activation. He refers to this flow as “trajectory,” which he uses to imply that the flow is not random, but is biased by previous conceptualizations.²⁶ I argue that the idea of trajectory heavily supports a possible way in which top-down causation can be attained. By having a meta-intention to view projectable properties (e.g. people, animals, plants, objects, etc.) meshed with nonprojectable projectable properties (e.g. care, compassion, love, etc.), one could possibly create a trajectory of meshing properties towards instantiating specific aspects of one’s phenomenal intentional landscape. By intentionally meshing nonprojectable properties such as love and kindness with projectable properties such as people or specific objects, one can create a neurological history of phenomenal intentional states that creates a neural proliferation of these meshed properties. As these properties get meshed together over and over again they establish more permanent correlates. This would lead to a point in which a meta-intentional nonprojectable property such as love would automatically, i.e. without intending, mesh with projectable properties in the environment, thus instantiating the phenomenal intentional state of love. Glenberg attributes essential attributes of human cognition to how patterns of activation mesh together projectable and nonprojectable properties. “It is the mutual modification of meshed patterns of action that produces emergent and creative features of thought.”²⁷ Emergent and creative thoughts are essential aspects of phenomenal intentionality within a human being. They are also essential aspects of a theory of meta-intentionality since productivity in generating new concepts and new intentionality is necessary for achieving the normative goal of continual conceptual and intentional growth. A theory of meta-intentionality

²⁵ *What Memory is For* by Arthur Glenberg, pg. 7

²⁶ *Ibid*, pg. 7

²⁷ *Ibid*, pg. 1

argues that by modifying how properties mesh together you can influence which aspects of one's phenomenal intentionality supervene on one's lower neurological correlates.

I argue that Glenberg would have to be sympathetic to my theory of meta-intentionality and top-down causation. "A significant human skill is learning to suppress the overriding contribution of the environment to conceptualization, thereby allowing memory to guide conceptualization."²⁸ Memory guiding conceptualization *ipso facto* allows mental content to have top-down influence over mental content within one's phenomenal intentional landscape. Memory uses the trajectory of previous patterns of activation to suppress current environmental properties to better guide current patterns of action. Glenberg argues that suppressing input from the environment leads to "prediction, recollective memory and language comprehension."²⁹ To argue that these higher-level aspects of phenomenal intentionality are possible due to the suppression of the external environment is to give in to an impure representationalist account of content within the mind. Suppressing patterns of activation to achieve prediction, memory and language comprehension seems to me to imply that there are higher-level brain functions that lead to emergent features within one's mental content which can exercise some degree of top-down influence over one's final phenomenal intentionality. I have a better memory for certain things and this is because these things have meta-intentional significance for me. In other words (using the above terminology): I more easily simulate the frames and mesh the nonprojectable properties that have the most value and significance to me. The strengthened memory I achieve due to embedded meta-intentional significance leads to the stronger supervenience of specific aspects of phenomenal intentionality. The

²⁸ *What Memory is For* by Arthur Glenberg, pg. 1

²⁹ *Ibid*, pg. 1

phenomenal intentionality of my experiences is partially determined by how attuned I am, and the value I attribute, to specific projectable and nonprojectable properties.

3. Possible Neural Correlates for Metacognitive Assessments and Meta-Intentional Causation

The question of the naturalized mechanism for meshing of projectable and nonprojectable properties in the head remains unaccounted for. However, I argue for the pragmatic utility of accepting Glenberg's concept of directed memory as useful for talking about how to exercise long-term top-down meta-intentional causation. Above I argued that within the paradigm of meta-intentionality, there is plenty of room for Glenberg's account of memory within embodied cognition. Similarly, just as the naturalized correlates for modal and amodal content remains unaccounted for, I argued that it can still be useful to adopt Barsalou's view of a simulator as a way to integrate multimodal perceptual and cognitive components into new conceptualizations. Just because offering a fully naturalized account of morphological content implicit in brain topography may currently be out of reach, the concepts of directed memory and morphological content are nevertheless productive within a meta-intentionally causal top-down paradigm. Santiago Munoz has a theory of directed memory, mental action and metacognition that is also useful for a theory of top-down meta-intentional causation and lends support to the idea that phenomenal intentionality is an essential and necessary component in creating top-down meta-intentionally causal and bottom-up biological causal loops.

I argued that top-down meta-intentional causation occurs over a period of time when someone has a trajectory of phenomenally conscious intentions to instantiate specific actions and mental states at future times, and that these intentions put into process the biological experiences that are necessary for the instantiating these physical bottom-up changes.

However, not all top-down causation, influence or guidance is classified in this manner. According to Munoz, the executive functions of intentions are: 1) to initiate the action, 2) to sustain the action, 3) to guide the action, 4) to monitor the action.³⁰ Munoz defines motor control as an action by: α) trying to do it, β) in a controlled way, γ) to attain a goal, δ) because of some reason. Doing a task for δ), a specific reason, is the driving motivator supervening on how you 4) monitor an action. This monitoring then supervenes onto the task at hand to make sure it is completed in a certain manner. Barsalou's concept of meshing projectable and nonprojectable properties is relevant here. I argue that 1) initiating, 2) sustaining, 3) guiding and 4) monitoring an action requires mostly the manipulation of projectable properties; you carry out an action based on how you interact with the projectable properties in the world. Conversely, α) trying to do something in β) a controlled way γ) to attain a goal δ) because of some reason relies on nonprojectable properties such as intentions and normative assessments implicit in one's brain/body architecture to supervene on attaining a goal. Drawing the connection of projectable and nonprojectable properties to Munoz's criteria of 1-4 and α - δ shows the supervenience on one's relationship between the projectable external world and one's nonprojectable internal world.

Munoz distinguishes between mental action and bodily action. Bodily action utilizes motor control to create "mind-to-world causation."³¹ Mind-to-world causation would require a supervenience of mental intentions on the external world. An example of mind-to-world causation is when someone manipulates the external world to gain knowledge, i.e. using a dictionary or looking under a rock to discover what is there. Mental action utilizes metacognitive

³⁰ *Mental Action, Metacognition and Epistemic Feelings: The Case of Directed Memory*, by Santiago Arango Munoz

³¹ *Ibid*

control to create “mind-to-mind causation.”³² An example of mind-to-mind causation is maintaining or diverting attention on an object, or creating a mental goal or a calculation in the head. Munoz argues that practical reasoning is the explicit process of weighing the pros and cons of taking certain actions that create mind-to-world causation. Munoz defines metacognition as resulting from the implicit processes within the brain/mind that create an, “...internal monitor which detects the presence of memory traces of elements in the store and then elicits a feeling of knowing.” Metacognition gives a subject a positive or negative epistemic judgment as a *feeling of knowing* that is based on the internal assessment of established memory traces regarding the economic efficacy of carrying out a mental action. Positive assessments of feeling of knowing encourage a subject to carry on with a mental action without looking for assistance from external sources. Negative assessments of feeling of knowing make a subject resort to external assistance to complete a mental action.³³ By creating a metacognitive assessment, the brain/mind is able to assess whether or not to rely on external or internal means while carrying out 1-4 with the supervenience of α - δ .

The difficulty in establishing a naturalized account of how metacognitive assessments are carried out is analogous to the difficulty of establishing a naturalized account of phenomenal and intentional content versus nonphenomenal and nonintentional, as well as modal versus amodal content. How we know our own minds is debated, but one possible naturalized correlate for grounding meaning and intentionality is through motor pathways. Neural feedback loops allow a person to assess established motor pathways to create a nonconceptual prediction of knowledge and of bodily movements. Munoz argues that this nonconceptual neural

³² *Mental Action, Metacognition and Epistemic Feelings: The Case of Directed Memory*, by Santiago Arango Munoz

³³ *Ibid*

prediction is based off an emulator model and a forward model. A forward model is the simulation of your bodily movements on the basis of your past experiences.³⁴ An emulator model has motor pathways produce efferent copies of neural predictions for the forward model and compares these copies with afferent signals returning to a central nervous system. If the efferent and afferent copies match, the action is considered complete and does not need correcting.³⁵ According to Munoz, motor pathways are an important part of mental action, but do not constitute the whole picture for mental action. Motor images are either too short in time to be consciously picked up, or they are too fine grained and too narrow.³⁶ Despite the short life of motor pathways, they still play an essential role in metacognitive assessments. Since we do not always think with words, but with images, diagrams and schemas, motor imagery is a plausible candidate for a naturalized correlate for these non-linguistic forms of thought.³⁷ In conclusion, motor signals within an emulator model produce feelings of knowing as reliable signals that do not need to be made linguistically or conceptually accessible, thus requiring a fraction of the time to process. It seems to me that this conclusion is supportive of a non-naturalized account of metacognitive assessments as a function within a theory of top-down meta-intentional causation.

A possible naturalized source for metacognitive assessments can be grounded in the amygdala. Modern day neuroscientific research shows that "...the amygdala responds to visual, auditory, somatic sensory, visceral sensory, gustatory, and olfactory stimuli."³⁸ The amygdala

³⁴ *Mental Action, Metacognition and Epistemic Feelings: The Case of Directed Memory*, by Santiago Arango Munoz pg. 2 notes

³⁵ *Ibid*, pg. 9 notes

³⁶ *Ibid*, pg. 9 notes

³⁷ *Ibid*, pg. 8 notes

³⁸ *Neuroscience*, 5th Edition, pg. 654

also, "...mediates neural processes that invest sensory experience with emotional significance."³⁹ I argue that neural processes investing sensory experiences with emotional significance is exactly what would be needed in a theory of metacognitive assessments. Neural processes investing significance to certain stimuli and embedded in topographical contours would alter supervenience relations of top-down causal influence. Only by experiencing something with phenomenal intentional significance can one then start to create the physical changes that are the bottom-up instantiation/constitution that fulfills one's top-down meta-intentions. According to V.S. Ramachandran, once the sensory pathways have been processed they are sent to the amygdala which "...tells the hypothalamus to activate the autonomic nervous system in proportion to the arousal worthiness of the triggering sight..."⁴⁰ The amygdala causes autonomic emotional responses as a way for an agent to elicit a feeling of knowing. This feeling of knowing supervenes on the biological activation of the amygdala. Ramachandran argues that it is through this autonomic nervous system response that "...the amygdala is able to create a 'salience landscape' of your world, with hills and valleys corresponding to high and low salience."⁴¹ Similarly to morphological content and topographical landscapes, having a specific autonomic nervous system response to specific stimuli is an example of embedded meta-intentional significance to those stimuli. Changing the embedded normative, meta-intentional and emotional significance of something would change the degree of autonomic nervous system response, thus altering the supervenience relation between one's biological correlates and their covarying phenomenal intentional conscious states. By meta-intentional significance, I mean that it is possible to intentionally embed a stimuli or context within one's salience landscape

³⁹ Neuroscience, 5th Edition, pg. 655

⁴⁰ Tell-Tale Brain, by V.S. Ramachandran

⁴¹ Ibid

with significance, thus over time creating a physical change to the topography of the amygdala, the hypothalamus, and other neural correlates causing one's autonomic responses. Having bottom-up instantiated/constituted conscious states experienced with phenomenal intentionality allows for a supervenience relation to have recursive top-down causation over these physical correlates. This is because the end result of a phenomenal intentional state can function as a metacognitive assessment of one's phenomenal intentional states.

The ability for a brain to run a metacognitive assessment would require naturalized sources beyond just the amygdala and the association cortexes. For easing the cognitive demand of metacognitive assessments, information could be 'chunked' together into more manageable units of processing. The American psychologist George Miller found that "...more items can be remembered when they are coded, or 'chunked'...chunking enormously increases effective memory and perception."⁴² An example of chunking is the ability to remember more numbers or letters if they are organized in a sequence such as a phone number or a word. A possible naturalized account of information being chunked together may be found in the feedback loops between the sensorimotor cortex and the striatum. Scientists at M.I.T. gave tests to mice learning how to run a maze as a way to test for habit formation. "When the rats were first learning the maze, neurons in the motor-control part of the striatum were active the whole time the rats were running. But as their behavior became more habitual, neuronal activity began to pile up at the beginning and end of the runs and quieted down during most of the time in between."⁴³ The conclusions that were drawn from this research argue that striatum cells chunk neural activity together in a way that can be monitored without overt cognitive awareness. The

⁴² The Mind, edited by Richard Gregory, pg. 148

⁴³ Scientific American, June 2014, Volume 310, Number 6, pg. 41

neural feedback loops between the prefrontal cortex and the striatum communicate with the midbrain which releases dopamine which, "...aids learning and assigns value to goals."⁴⁴ The release of dopamine in these circuits could help contribute to a salience landscape and a feeling of knowing. As a behavior becomes more habitual and the striatum chunks brain activity together, the infralimbic cortex helps the striatum further imprint a habit as a more permanent brain activity.⁴⁵ A habit becomes harder to break as it becomes established in the topography of multiple brain circuits that include your association cortexes, striatum, infralimbic cortex, midbrain and sensorimotor cortex. Thus, any meta-intentional top-down causation would need to create changes in the topography of these circuits.

Munoz is arguing that, "Only a being which is able to evaluate its cognitive adequacy can perform an action which aims to change or modify the content of its mind at will."⁴⁶ I argue that to speak of changing or modifying content of one's mind requires the implicit assumption of top-down causation. Modern day research supports the thesis that by deliberately conditioning our brain, we might be able to control our habits. "[E]ven though habits seem nearly automatic, they are actually under continual control by at least one part of the neocortex, and this region has to be online for the habit to be enacted."⁴⁷ I argue that intentionally and saliently focusing on an aspect of one's phenomenal intentionality will cause a region within one's neural pathways to be online to instantiate the cognitive processes necessary to execute a habit. Research shows that the activation of the dorsal and lateral aspects of the frontal cortex has

⁴⁴ Scientific American, June 2014, Volume 310, Number 6, pg. 42

⁴⁵ Ibid, pg. 42

⁴⁶ *Mental Action, Metacognition and Epistemic Feelings: The Case of Directed Memory*, by Santiago Arango Munoz

⁴⁷ Scientific American, June 2014, Volume 310, Number 6 pg. 43

been associated with a subject suppressing behavioral responses.⁴⁸ It is not clear whether the activation of the dorsal and lateral frontal cortex is bottom-up causing a phenomenal intentional state by suppressing aspects of mental content, or whether a phenomenal intentional state is top-down causing the activation of the dorsal and lateral frontal cortex. In other words, this naturalized information regarding the neural correlates of habit formation and mental suppression does not offer any insight to whether or not consciousness has non-naturalizable emergent properties (i.e. narrow content), or if consciousness is fully materialistically reducible. The biological brain functions I have been citing, and the philosophical arguments and concepts I have been explicating all lend to a framework that is compatible with the concept of top-down meta-intentional causation, thus offering possible avenues to talk about and explore the pragmatic utility of accepting a meta-intentional top-down causal paradigm.

4. Zen as an example of Meta-Intentional Causation

Buddhism as a whole is a psychological system. It offers a psychological account of what creates suffering as a conscious state and possible ways to alleviate this suffering. Buddhism studies the many intricacies of the internal and external relations which constitute a phenomenal intentional states. In *Zen and the Brain*, Dr. James Austin sets forth to show what is happening to the brain/body when someone is meditating, as well as the measurable effects of meditation on people's brain/body architecture and phenomenal conscious states over a period of time. Austin's thesis is that meditation and daily life practices can shape basic neurophysiological functions "To yield striking ongoing constellations of perception, insight,

⁴⁸ Neuroscience 5th Edition, pg. 601

attitudes and behavior.”⁴⁹ Austin’s language and thesis is very similar to Henderson and Horgan who argue that, “A virtue epistemologist seeks to understand which constellation of stable dispositions among those that humans can with training come to possess, would have the optimum or at least satisfactory tendency to produce and maintain systems of true belief.”⁵⁰ Having stable constellations of perception, insight, attitudes and behavior as dispositions which produce true beliefs or virtuous actions is a perfect example of a meta-intentional goal.

Austin takes an empirical and naturalized approach for accounting for how one can create constellations of stable dispositions for specific phenomenal intentional states. He asks if the changes high up in the cortex are responsible for the behavioral and cognitive changes from practicing meditation and Zen Buddhism. He finds that the answer is no, but rather, “...deep structures will first need to change: such as the hypothalamus, the lateral septal region, the central gray substance, and the amygdala.”⁵¹ Austin argues that the brain must be modified in at least three ways to create any lasting change in one’s possible phenomenal intentionality. The brain must change: “(1) the way it perceives stimuli, (2) the way it responds to stimuli at basic visceromotor levels, and (3) the way its many layered systems *reinforce* the interactions between the first two.”⁵² Having an intention to alter the brain in these three ways is a perfect example of meta-intentional causation. As I outlined earlier borrowing Munoz’s criteria of 1-4 and α - δ , a theory of meta-intentionality is concerned with how to 1) initiate, 2) sustain, 3) guide and 4) monitor an action by α) trying to act in β) a controlled way to γ) attain a goal because of δ) some reason. Consciously trying to carry out this process, I argue, would lead to deep

⁴⁹ *Zen and the Brain*, James Austin

⁵⁰ *Cognitive Virtues and Cognitive Dispositions* by David Henderson and Terry Horgan

⁵¹ *Zen and the Brain*, James Austin

⁵² *Ibid*

structural changes in the hypothalamus, septal region, amygdala and other relevant brain areas; thus leading to reinforced interactions between deep structural changes and how one perceives stimuli with phenomenal intentionality. Austin argues that attention is sustained through a consistent and dynamic flow of neural impulses. I agree with Austin's thesis that meditation is a useful approach to achieving the sustained attention that is needed for deeper biological structural changes that alter the bottom-up processes that instantiated consciousness. Austin argues that, "*Awareness itself* then starts to become the content within awareness."⁵³ I argue that this sentence assumes that changing awareness changes one's biological structure, thus supportive of the idea of top-down causation by phenomenal intentionality playing a necessary role in creating physical changes in one's brain. My theory of meta-intentionality expands on Austin's thesis by arguing that it is not just meditation and Zen Buddhism that can have an effect on one's brain architecture and phenomenal intentional states, but that any intention that is supervenient or reified enough is a meta-intention in that it too can have a top-down and bottom-up change on one's brain architecture and phenomenal intentional landscape.

For Austin, "Zen training means *brain* training."⁵⁴ For me, a meta-intention means brain training; you are training your brain to respond to the significance of specific aspects of phenomenal intentionality. It does not take meditation alone to create brain training. However, neuroscientific research regarding meditation and brain training is relevant to other non-meditative methods of top-down causation. Austin divides mediation in *concentrative* and *receptive* meditation. Concentrative meditation is focused attention while receptive meditation is sustained but unfocused meditation that is open to but not associated with any specific

⁵³ *Zen and the Brain*, James Austin

⁵⁴ *Ibid*

stimuli. Understanding the neural correlates of meditation, concentration and awareness might give insight into how the brain is altered by phenomenal intentional experiences. Ramachandran cites the anterior cingulate cortex (ACC) as motivating desire to take action and the dorsolateral prefrontal area (DLP) as responsible for sustaining attention or focus on something. “The DLP is required for holding things in your current, ongoing landscape, so you can use your ACC to direct attention to different aspects of the information and act according to your desires.”⁵⁵ Ramachandran argues that these neural pathways are also responsible for working memory and logical reasoning. I argue that his research on the DLP and ACC neural pathways offers a partial but naturalized account of meditation. What this means is that a sustained and reified meta-intention to behave or perceive stimuli in a certain manner would also elicit activation in the DLP and ACC. It is the activation of the DLP and ACC, in conjunction with many other neural circuits that leads to the strengthening of certain neural pathways. Here the neural correlates that sustain meditation are also apropos to sustaining meta-intentions, thus apropos to creating changes one’s brain/body architecture.

An account of phenomenal intentional states having influence over one’s brain/body architecture can be partially characterized by the Hebb’s postulate. The Hebb’s postulate hypothesizes that the activity between presynaptic and postsynaptic neurons strengthens the connection between the two. “Hebb’s postulate implies that synaptic terminals strengthened by correlated activity during development will be retained or sprout new branches, whereas those terminals that are persistently weakened by uncorrelated activity will eventually lose their hold on the postsynaptic cell.”⁵⁶ This implies that neural pathways and the phenomenal intentional

⁵⁵ Tell-Tale Brain, Ramachandran, pg. 265

⁵⁶ Neuroscience 5th Edition, pg. 538

states that are instantiated by such pathways are in a constant ebb and flow of neuronal strengthening or weakening depending on how much they are activated. Certain activities and experiences will proliferate certain neural pathways. However, neuroscientific research shows that the neural pathways that are developed early in the critical period of development will always remain stronger than neural circuits that are developed later in life. This means that certain aspects of phenomenal intentionality will be harder to change or to exercise any top-down influence or causation on. A naturalized account of neural plasticity recognizes that “The eventual decline of the capacity to remodel cortical (and subcortical) connections most likely explains changes in the capacity of the brain to acquire new information and direct new behaviors over a lifetime...”⁵⁷ In other words, the plasticity of the brain declines over time. The insight to take away from this evidence for a theory of meta-intentionality is that the possibility to exercise significant meta-intentional causation is early in life. Later in life one might be better at guiding their phenomenal intentional states of consciousness, but it will still be harder to create big shifts in one’s biological structure instantiating one’s phenomenal intentional states.

Austin cites research that is in agreement with Hebb’s postulate that we strengthen synaptic connections by using them more. “In fact, repetition does enable the limbic system to respond more efficiently. It is almost like priming a pump. Once the hippocampus has been primed by stimuli that come down the prefrontal pathway, its own subsequent responses are greatly enhanced.”⁵⁸ The hippocampus priming the receptors of neural pathways in the limbic system is called long-term potentiation because it is making the neural pathways more potential for a period of time. I argue that the idea of long-term potentiation is an idea that allows for an

⁵⁷ Neuroscience 5th Edition, pg. 538

⁵⁸ Zen and the Brain, Austin pg. 181

intention to have top-down priming effects on one's biology. Priming effects the limbic system and the limbic system is attributed to contributing to our emotional landscape and most basic drives in life. Austin lists seven limbic drivers as, "mating, memory, mood, motivation; fear, fighting, food."⁵⁹ These seven basic drives are very influential somatic and visceral aspects of one's phenomenal intentionality. Controlling the drivers connected to the limbic system would heavily affect one's phenomenal intentional states. Thus the limbic system is connected to the most basic drivers for any possible top-down meta-intentional causation. Having an intention to remember specific things would prime a pump in the limbic system to help fulfill this intention. It would be of meta-intentional significance to control or limit the causal strength of the limbic system within one's phenomenal intentional states. Austin points out that "Self-control is not as difficult when there is less self to control."⁶⁰ Through meditation it is possible to calm, prime or turn off certain neural pathways, thus creating less neural trajectory towards certain aspects of phenomenal intentionality, resulting in less neural trajectory to control. Both concentrative and receptive meditation will reduce the activation of the neural correlates for emotional evaluation. Less neural trajectory means that the previously mentioned pathways of the limbic system, the striatum, the amygdala, the ACC and the release of dopamine (which are all essential aspects of the phenomenal intentionality of human interaction), would have an altered degree of supervenience relations. Meditation also would quite the activation of mirror neurons since someone meditating isn't interacting with other people. According to the Hebb's postulate, lessening the activation of all these neuronal pathways would lessen the strength of

⁵⁹ Zen and the Brain, Austin, pg. 170

⁶⁰ Ibid, pg. 75

the presynaptic and postsynaptic connections of these pathways. This shows that meditation is one viable option for exercising top-down causation over one's biology.

According to the Hebb's postulate, the history of neural processes, especially at critical points of development, will lead to strengthened synaptic connections. Strengthened synaptic connections lead to engrams. In the neuroscientific community, "There is general agreement that the so-called engram—the physical embodiment of any memory in neuronal machinery—depends on changes in the efficacy of synaptic connections and/or the actual growth and reordering of such connections."⁶¹ An engram is a naturalized and embodied account of content within the brain constituted partially in synaptic connections. Thus, an engram is similar to morphological content creating a salience landscape. I argue that the idea of an engram is useful for Glenberg's idea of meshed content. Meshing involves combining projectable and nonprojectable properties, an engram describes properties as meshed at the pre and postsynaptic levels, thus offering a naturalized embodied account of meshing. Accessing one's topography of embodied engrams is an answer to how the brain ruins metacognitive assessments. Austin argues that if an event goes on for a long enough time it will leave memory traces scattered throughout the brain, thus creating well established engrams. He argues that, "...these older engrams will have become so dispersed, stabilized, and consolidated that they will be relatively invulnerable to any recent damage localized to any one spot."⁶² This would mean that dispersed and stabilized engrams are of phenomenal intentional significance because they would be more operant than non-stable non-dispersed engrams.

⁶¹ Neuroscience 5th Edition, pg. 698

⁶² Zen and the Brain, Austin pg. 186

5. A theory of meta-intentionality as a response to nihilism

The motivation for my thesis of meta-intentionality is as a response to nihilism. John Marmysz defines *nihilistic incongruity* as involving three features: “1) Humans are alienated from such perfections as absolute Being, Truth, Goodness, Justice, Beauty, etc.; 2) This circumstance of alienation is other than it ought to be: 3) There is nothing that humans can do to change this circumstance.”⁶³ I argue that identification with absolute Beauty, Truth, Being, etc., would have to be achieved with a specific type of phenomenal intentionality, one that instantiates the experience of congruence with these absolutes. I disagree with premise (3), arguing that instead of being powerless, a theory of meta-intentional causation is an account of how humans can change their supervenience relations to absolute ideals within perception and experience. Through a reified intention to evaluate the world in a certain manner, biological substrates such as the amygdala can be altered to instantiate meta-intentional phenomenal intentional experiences. “The nihilist recognizes that the absolutely large ideas of Being, Truth, Goodness, etc., are mind dependent, and despite all of their sublime majesty, nothing can be done to bring them into objective presence.”⁶⁴ I argue this incongruity can be eliminated at time, there are times when one achieves the phenomenal intentional state they intended to achieve. By instantiating an experience that is of significance to oneself, you are bringing into objective existence an ideal, a meta-intention. Phenomenal Intentional states of consciousness might not have a permanent absolute metaphysical or ontological existence, but they can still be experienced as objective experiences to an individual. If your meta-intention is to experience life with specific aspects of phenomenal intentionality, and you achieve these meta-intentional

⁶³ *Laughing at Nothing*, Marmysz, pg. 3

⁶⁴ *Ibid*, pg. 104

states, then you are closing the incongruity between your actions and mental experiences instantiating your absolute ideals, norms and meta-intentions.

Some phenomenal intentional states are virtuous in the sense that they sustain a congruous relation with Truth, Beauty, Goodness and other ideals. Ernest Sosa argues that beliefs, "...count as performances, long sustained ones, with no more conscious or intentional aim than that of a heartbeat."⁶⁵ To talk of beliefs as long established unconscious performances is to require established neural pathways, ergo constellations of networks, to more readily instantiate certain aspects of phenomenal intentionality. Sosa outlines the quality of a belief for its "...accuracy, i.e., its truth; its adroitness, i.e., its manifesting epistemic virtue or competence; and its aptness, i.e., its being true *because* competent."⁶⁶ A belief is an aspect of one's phenomenal intentional landscape. A theory of meta-intentionality is one that focuses on establishing the supervenience of adroit beliefs manifesting epistemic virtues, ergo manifesting virtuous states of phenomenal intentionality. An adroit state of phenomenal intentionality would be one that responds to stimuli with a specific meta-intentionally guided phenomenal intentional character, rather than a non-controlled non-meta-intentionally guided action. In other words, if your meta-intention is to experience the world with the phenomenal intentional character of love attached to experiences, then one has an adroit brain/body architecture if one can instantiate this meta-intentional goal. A naturalized account for the supervenience of an adroit meta-intentional virtue can be grounded in the amygdala and other biological circuits involved in creating a salience landscape and affording metacognitive assessments.

⁶⁵ *A Virtue Epistemology*, Ernest, Sosa, pg. 23

⁶⁶ *Ibid*, pg. 23

Sosa argues that an epistemic virtue enters constitutively, and not just instrumentally, in achieving an accurate, adroit and apt belief. "A virtuous performance, whether a correct belief due to intellectual virtue or a right action due to practical virtue, will involve both the agent's constitution and his situation."⁶⁷ Since one's physical constitution partially determines one's virtuous performance, the value of neurological correlates instantiating virtuous performances is constitutional and not just instrumental. There must be constitutional value instantiated in one's brain architecture that supervenes instrumental value in producing phenomenal intentional states that help to satisfy meta-intentions. I argue that the idea of the interaction between a person's constitution and their situation determining their degree of virtuous performances is coherent with the idea of biological structures as instantiating meta-intentional virtues. Meta-intentional virtues are instantiated in neurological correlates that help to create desired states of phenomenal intentionality. This leads to the meta-intentional view that altering one's physical constitution will lead to altering one's virtuous qualities. Marmysz writes, "Those goals, if they are valued in and of themselves apart from their own usefulness toward other ends, are considered to have terminal value."⁶⁸ I argue that whatever has terminal value offers a refuge from nihilism and the rejection of any value or significance in things. If something has terminal value, then it has value in-and-of-itself, rather than depending on a higher absolute or metaphysical realm. For consciousness, the neural correlates that have constitutional value are the neural correlates that instantiate a meta-intentional phenomenal intentional state with terminal value. The ability to achieve the phenomenal intentional states of consciousness that are valued in-and-of-themselves is the ability to achieve a meta-intention since meta-intentions

⁶⁷ *A Virtue Epistemology*, Ernest, Sosa, pg. 81

⁶⁸ *Laughing at Nothing*, John Marmysz, pg. 115

are value driven as things that are significant in-and-of-themselves. I argue that the best response I can give to nihilism is to achieve the conscious states that I value in-and-of-themselves. Thus, any neural correlates that have constitutional and instrumental value in instantiating phenomenal intentional states with terminal value are neural correlates that have meta-intentional significance. This allows for a response to nihilism that is grounded in a naturalized account of top-down meta-intentional causation.

A nihilist might be opposed to my response to nihilism by saying that it doesn't matter if one achieves the phenomenal intentional states that one desires because no phenomenal intentional state of consciousness can be a response to the metaphysical incongruity between humans and absolute ideals such as Truth, Beauty, Justice, etc. Though I cannot argue against this, I respond by offering a pragmatic response that focuses on creating congruity and supervenience between states of phenomenal intentionality and meta-intentional goals. I share the same thesis as Marmysz: "Nihilistic incongruity possesses instrumental value insofar as it may act to awaken nihilists to their highest aspirations."⁶⁹ Marmysz is arguing that it is the desire for one's highest aspirations that causes one to keep striving for ever higher ideals. From this perspective, nihilistic incongruity is a motivator. From the perspective of a theory of meta-intentionality, nihilistic incongruity creates a desire to try to shrink the gap and lessen the incongruity between phenomenal intentional states and meta-intentional goals. Marmysz argues that abstract concepts developed from rational faculties, and from, "...the development of abstract concepts, a whole new realm of incongruous possibility is created."⁷⁰ The more abstract concepts one can have, the greater one's spectrum of meta-intentional goals and

⁶⁹ *Laughing at Nothing*, John Marmysz, pg. 110

⁷⁰ *Ibid*, pg. 128

phenomenal intentional states of consciousness. Part of the development of rational faculties is the ability to make aspects of phenomenal intentionality congruent with one another. An example of meshing non-abstract concepts together is the meshing of a projectable property, such as the size and color of a stop sign, with a nonprojectable property, such as the traffic law for stopping your car at a stop sign. For more abstract concepts, the degree of meshing projectable and nonprojectable properties together is much wider. An example of meshing abstract concepts together might be the nonprojectable property of duty and loyalty with the projectable property of a person. Being able to mesh together so many abstract concepts creates a wider range of possible nihilistic incongruity in one's phenomenal intentional states of consciousness.

6. Conclusion

In this paper I have argued that there are aspects of phenomenal intentionality that are top-down supervening and causally influential over the neurological correlates that bottom-up instantiate phenomenal intentionality. I argued that having an intention that remains operant over multiple experiences of phenomenal intentionality creates a meta-intention. I defined a meta-intention as the neurological shaping of the brain/body to instantiate specifically desired phenomenal intentional states. In section 1, I argued for the inseparability of phenomenality and intentionality. I argued that the sources of phenomenal intentionality come from somatic, visceral, perceptual, emotional and cognitive sources. I argued that non-phenomenally scrutable and determinate content within the brain is instantiated in one's topographical landscape and morphological content. I argued for wide and narrow content within the mind

and the fact that there are some truth conditions that are dependent on phenomenal intentional states only, and not the external world. I argued that impure representationalism and narrow content shows that aspects of phenomenal intentionality are not dependent on external stimuli. I argued that this adds a further challenge for naturalizing phenomenal intentionality.

In section 2 and 3, I argued that despite the difficulties of naturalizing a PIRP, a theory of meta-intentionality can be grounded in naturalized accounts of embodied cognition. I cited neural pathways that are correlated with aspects of phenomenal intentionality and argued that these correlates are subject to alteration. I connected the idea of meta-intentional causation with Barsalou's idea of perceptual symbols constituting dynamic, non-rigid, multimodal frames which simulators can run recursively and combinatorially to create productivity in generating new perceptual symbols and frames. I connected Glenberg's theory of meshed content to a theory of meta-intentionality. I also connected the idea of meta-intentional causation as utilizing Munoz's thesis of metacognitive assessments producing a feeling of knowing.

In section 4, I argued that meditation is a viable option for studying how one can create substantial changes to neural correlates such as the amygdala, limbic system, hypothalamus and other neural correlates responsible for instantiating phenomenal intentionality. I argued that the tenets of Zen Buddhism offers a tenable methodology for creating biological changes in one's brain architecture. I argued that while one's conscious states may be materialistically determined, following a meta-intention, such as creating adroit phenomenal intentional states of consciousness, causes long term changes to one's brain/body architecture, and it is the long

term bottom-up changes which instantiate one's phenomenal intentional states. It is the phenomenal intentional experience of a meta-intention that must necessarily be experienced as top-down for any bottom-up changes in one's brain/body architecture to occur. In section 5, after having established the coherency of a theory of meta-intentionality, I argue that the purpose for taking a pragmatic view of meta-intentional causation is as a response to nihilism. I argued that phenomenal intentional experiences are the only vehicles for experiencing any kind of incongruity or congruity with meta-intentional ideals and norms. I concluded that taking the view that top-down causation is possible, as a pragmatic response to nihilism, is coherent with literature on the brain and how it produces consciousness.

Bibliography:

1. *The Intentionality of Phenomenology and the Phenomenology of Intentionality*, Terence Horgan and John Tienson. *Philosophy of Mind, Classical and Contemporary Readings*, edited by David J. Chalmers, Oxford University Press, 2002.
2. *What is Conscious Attention?*, Wayne Wu. *Philosophy and Phenomenological Research*, Vol. LXXXII No. 1, January 2011, 2010 Philosophy and Phenomenological Research, LLC
3. *The Phenomenal Intentionality Research Program*, Uriah Kriegel. *Phenomenal Intentionality*, edited by Uriah Kriegel, Oxford University Press, 2013.
4. "Epistemic Virtues and Cognitive Dispositions," David Henderson and Terry Horgan, in K. Steuber, G. Damschen, and R. Schnepf (eds.), *Debating Dispositions: Issues in Metaphysics, Epistemology and Philosophy of Mind*, Berlin: DeGruyter (2009).
5. *Perceptual Symbol Systems*, Lawrence Barsalou. *BEHAVIORAL AND BRAIN SCIENCES* (1999) 22.
6. *What Memory is For*, Arthur Glenberg.
7. *Mental Action, Metacognition and Epistemic Feelings: The Case of Directed Memory*, Santiago Arango Munoz
8. *The Tell-Tale Brain*, V.S. Ramachandran. W.W. Norton & Company, 2011
9. *The Oxford Companion to The Mind*, edited by Richard L. Gregory, Oxford University Press, 1987
10. *Scientific American*, June 2014, Volume 310, Number 6
11. *Neuroscience 5th Edition*, edited by D. Purves, G. J. Augustine, D. Fitzpatrick, W. C. Hall, A La-Mantia, L. E. White, Sinauer Associates, Inc., 2012.
12. *Zen and the Brain*, James. H Austin, MIT Press, 1998.
13. *Laughing at Nothing: Humor as a Response to Nihilism*, John Marmysz, SUNY Press, 2003.