Meditations

The Undergraduate Journal of Philosophy at UCLA

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Letter from the Editor

Dear Reader,

On behalf of the editors of this inaugural issue of Meditations, I invite you to indulge your intellectual appetite on topics verging on the sublime, metaphysical, sensory and visual. We hope you find as much intellectual insight, creativity, and sharpness of mind in these following pages as we have. Each work was chosen by a board of editors who thoughtfully and carefully read several entries written by undergraduates of UCLA from a variety of majors before ranking them on the basis of originality, clarity, organization and philosophical application. We choose to begin with a poem by Sahar Joakim, which so effortlessly brings forth the crux of philosophical endeavors - a need to uncover the wondrous facets of the life of the human mind and being. Following, are the papers by our authors Mitch Enriquez, Michael Lopez, Scott Milton, and Joshua Waugh. These papers delve into selected topics such as temporal relations, sense modalities, phenomenology, and visual semantics. As you follow the authors in their thoughtful steps to their conclusions, we hope you find your own thoughtfulness come alive and engage with the content of the papers.

Every project has its story of evolution, progression and completion. Meditations has been "in the works" and in the minds of many past and present members of our host philosophy club for at least 3 years now. It is with great sincerity that I thank those who have came before us and those who are now with us for their ideas, energy, and passion which have inspired us to bring this project to its final completion this winter.

Happy reading!

Radhalila Reinhofer

Editor in Chief

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Essays

FOR THE LOVE OF SOPHIA

BY SAHAR JOAKIM

Sahar Joakim is known for asking questions and questioning those answers. A philosopher in all respects, she hopes to marry and pass on her puzzles and ponderings to a generation better equipped to answer them. Foreword Movement.

If *this*, then that.
But what is *this*, that can ensure that?
If the one, then the other.
Can lies remain when the *truth* is uncovered?
Some believe in objective truth.
But calling it a *belief* relieves the statement of the burden of proof.
Is the truth uncovered or discovered; is truth *created* and it is our eyes that are covered?
Objective perspective has been debated and all sides have had their truths stated.
Is there *a view from nowhere?* The love of Sofia forces me to care.
Are there existing words that remain to be uttered?
Does the fact that it is a *word*, entail it has been expressed and thus uncovered?
What is in a word, that makes it what it is? Is it not the connotation that is conveyed that wins?
Is it, because we say it is? Or do we say it is, because it is?
Some believe that there is something external.
The mission of *the rational* would be to seek it; eternal.
Others yell existentialist thoughts.
But *advocating nothingness* entails something objective within the thought.
And if there was objectiveness, could a *subject* embrace it?
Maybe the puzzle pieces seem right together, but forcing the pieces can break it.
Can a human being imagine being a bat?
If we are limited to humanness, then even our dynamic senses go flat.
How can you, as ingenious as you are, not be able to fly or pick up a car?
I can do so many things but not everything, is it *me* who chooses my versatility?
Is it me who thinks, or does thinking happen inside of me?
Maybe there is *something* outside of our comprehensibility.
But then do I earn, or am I given ability?
The *things in themselves* can never turn to us and reveal their deal.
When we are limited to our senses, we are not *equipped* to break the seal.
For I live in my head, and you, in yours.
What might be luxuries for one, is for another, chores.
Perceptual disagreement; the things in themselves are forever outside of us.
So is there any motive to be ethical, other than just because?
It seems *the truth* is spread so thin, that no one can lose and no one can win.
We can debate, and hate what it is that the other side states.
But in the end there is one country, even with so many states.
Separated by our individual goals and united by our general vulnerability.
All in all; there is *one human tribe*, even with so many states of being and mind.
Is it right to fight the tribe whose goal it is thrive, in order for one to stay alive?
I am, as you are; one drop of water in this *ocean of life.*
For the love of Sofia, take a dive and strive for an examined life.

THE STRENGTH OF RELATIONS IN McTAGGART'S *THE NATURE OF EXISTENCE*

BY MITCH ENRIQUEZ

Mitch Enriquez is currently a Philosophy Major at UCLA and is on track to graduate in the of Spring 2014. After graduation Mitch plans on applying for graduate programs in philosophy. Mitch's fields of interest in philosophy include philosophy of science, with an emphasis on the criteria for theory choice and the character of scientific theories, as well as the history of medieval philosophy. Mitch's interests outside of academics in include outdoor activities such as camping, fishing, and hiking in addition to enjoying specialty coffees and teas.

J.M.E. McTaggart's argument for the unreality of time has made significant waves in the debate about the nature of time. In the argument, he comes up with a very clear conception of how time would have to be viewed if it were to be considered real. He also offers unique insight about how relations are constituted within time. However, clear as McTaggart was, people still diverge from his initial account of time and ignore the significance of his contributions about the nature of time. I will argue that McTaggart's argument on its own is quite effective in showing the unreality of time, as it was originally displayed, despite others' contrary opinions. First, I will outline Barry Dainton's rendition of McTaggart's argument as he states it in *Time and Space*. Next, I will argue that this rendition does not portray McTaggart's argument faithfully, since this rendition does not show how relational qualities are fixed within the B-series. Finally, I will recast the argument in a way that is more faithful to McTaggart's original intentions and argue that it furthermore successfully refutes the Block theory of time.

McTaggart's argument, as explained by Dainton, first starts by defining what time is, followed by a description of what time would have to consist of if it were to be considered real, namely two different time series. Time, according to Dainton, is "the dimension of change."[1] Dainton is not claiming that there is always something changing in the temporal world, but rather that if something were to change, then we could measure via time.[2] After defining what change is, Dainton then describes the two different series of time. The first series that would be required to show the reality of time is a B-Series. A "B-series" is a static conception of time in which events are arranged in relation to one another by B-properties. B-properties consists of one event being *earlier than, later than, or simultaneous with* another event; one can think of it like the events on a timeline.[3] Each event is connected on the timeline by means of B-properties. However, according to McTaggart, this is insufficient in describing change. The events on the B-series are static. For example, my birth is *earlier than* my death. My birth could never be *later than* my death nor could it be *simultaneous with* my death. Therefore, the relation of my birth being *earlier than* my death is fixed on the B-series.[4]

To remedy this problem a second series is needed, an A-Series. An "A-Series" is a dynamic conception of time that consists of A-properties. A-properties are being *past, present, or future*; they do not function like B-properties since they are more similar to qualities (B-properties, on the other hand, consist of relations). But, since these A-properties are more akin to qualities than relations, a different sort of contradiction arises. For example, picture the 2016 U.S. Presidential election. At first, the 2016 election has the A-property of being *future,* it will eventually change and become *present*, and finally it will become *past*. However, no event is capable of having all three properties. This in

turn results in the A-series being metaphysically incoherent, or incapable of existence, since the 2016 election will have all three properties: the 2016 election cannot have more than one property without having a contradiction, such as being past and future.

Formally McTaggart's argument, as explained by Dainton, can be broken down in five parts: (1) time is a dimension of change; (2) to account for change we need two different series of time; (3) the first, the B-series, cannot account for change because it is a static model; (4) then, if time is real, it requires an A-series in addition to a B-series; (5) however, the A-series is metaphysically incoherent, it cannot exist without giving rise to a contradiction; (6) therefore, time is unreal.[5] At first glance, this argument seems quite strange, considering commonsensical views of time seem to be adequately explained by both series. However, Dainton's explanation of McTaggart's argument immediately fills us with scruples: it fails to give an accurate portrayal of how relations are constituted, specifically in the B-series. If the argument were better explained, then it would not seem as strange as it does initially, and have a much more agreeable conclusion.

I will now show how McTaggart's argument is grounded and then proceed to give my rendition of his original argument, eventually providing a more agreeable conclusion. The nature of McTaggart's argument relies on it following the three classical laws of thought: the Law of Identity (P *is P and not $\sim P$*), the Law of Non-Contradiction ($\sim (P \wedge \sim P)$), and the Law of Excluded Middle ($P \vee \sim P$). Given these laws, McTaggart believes there is no middle ground to account for change, either something changes or it does not. The first premise of McTaggart's argument deals with how we measure time. McTaggart argues that we could do this by observing change. McTaggart says, "If anything changes, then all other things change with it. For its change must change some of their relations to it, and so their relational qualities."[6] In this excerpt, we can see that McTaggart thinks a change would always affect relational qualities of events with other events in time, if a change were to occur. These relations are not limited to just strict temporal relations, but could also consist of distance, size, and other sorts of relations. To put this in perspective, picture the distance relation between Washington D.C. and New York City. The distance between Washington D.C. and New York City has a fixed relation of 229 miles within the B-Series, at 3:25 pm on July 1ˢᵗ 2013. For this distance relation to change (i.e. for there to be a change in the B-series), it either needs to be absolutely destroyed or absolutely become something different than 229 miles at 3:25 pm on July 1ˢᵗ 2013. And furthermore, if a change (in the B-series) were to occur during that moment, the distance relation, and all other types of relations, will be consequently changed with everything else in the universe at that moment in time. However, the B-series cannot change since it is static; it will always be the case that the distance between Washington D.C. and New York City will be 229 mile apart at 3:25 pm on July 1ˢᵗ 2013. Therefore, the B-series is incapable of describing change.

The reason why the B-series cannot account for change can be understood formally as follows: (1) if change occurs, there is a difference in an established relation between events by a process of absolute becoming or absolute destruction at the moment the change occurs, (2) the B-series is not capable of change, since the relations are absolutely fixed when perceived, (3) therefore, a change of relations between two events, by absolute becoming or destruction, in a B-series is a contradiction, and thus incoherent.

Now, to account for change McTaggart (like Dainton) then introduces the A-series. The A-series is a much more likely candidate for change since A-properties can give the experience of change. An event starts out as distant future then it becomes near future, present, near past, and so on. All events need to have one of these properties in

order to exist in time, but if an event has more than one property, a contradiction would arise. As McTaggart explains, each event will have all three properties which render the A-series incoherent.[7] However, a counter argument has been made that an event can have A-properties in succession. For example, an event will be past, is present, and was future.

McTaggart rebuts this argument, though, for he claims that this just introduces another A-series to explain the original A-series.[8] To elaborate upon an earlier example, the 2016 election will become the past, is present, and was in the future. In other words, the 2016 election is past in the future, present in the present, and future in the past. But, by this rendition the 2016 election has two contradictory A-properties at one time. An event cannot be past in the future or future in the past, according to McTaggart. Therefore, an event cannot have A-properties in succession and A-properties are not capable of describing change. Because the B-series is also incapable of describing change, time must be unreal. Again, for time to be real, according to McTaggart, we need to describe change, which he attempts to do with the A-Series and B-Series. However, the B-series is incapable of describing change because it is static, and the A-series is metaphysically incoherent, or incapable of existence. Nevertheless, this does not mean that time itself is unreal; just that, if time is real, it must be described differently than it was in the A-series or B-series. Given the foundation of McTaggart's formal argument, it seems less strange that time should exist in the way we commonly conceive it.

Having restated McTaggart's argument, I will go on to show how it is able to stand up to an argument that stems from the pure B-Theory. The pure B-Theory, also known as the Block view, requires only a B-series to explain time, or describe change. B-theorists posit that all events in time are equally real and are timeless. They accept that the model is static, as in having events fixed timelessly along the B-Series. But, the B-theorists reject the notion that the B-series is incapable of describing or having change. Bertrand Russell, a B-theorist, gives his own interpretation about how change can occur within pure B-Theory in his work *The Principles of Mathematics*. Russell says:

Change is the difference, in respect of truth or falsehood, between a proposition concerning an entity at time T, and a proposition concerning the same entity and the time T^1, provided that these propositions differ only by the fact that T occurs in the one where T^1 occurs in the other.[9]

Change within a B-series, according to Russell, requires two things: a static entity and a three way relation between that static entity, another entity, and to some but not all moments of time. For example, picture a fire poker as a fixed entity and picture the heat, or the absence of heat, as a dynamic entity. At time T the poker is hot and at T^1 the poker is cool. The existence of the heat at time T and the nonexistence of the heat at time T^1 would then constitute a change, since the heat is not present at both times.[10] According to McTaggart, Russell's view of change would occur "if the proposition 'at the time T my poker is hot' is true, and the proposition 'at the time T^1 my poker is hot' is false."[11] This explanation, however, is not sufficient given McTaggart's view of change. If time T and T^1 occur at different points along the B-series, then time T and T^1 have a fixed temporal relation along the B-series. The poker being hot at time T is fixed to be true, and the poker being hot at time T^1 is fixed to be false. Russell's view, then, cannot account for change since the temporal relation between the poker being hot and cold is fixed, at the time it is perceived. (i.e. the poker does not go through a change).

Now that I have shown McTaggart's argument in contrast to Russell's pure B-

Theory, with its original intentions intact, the argument seems much stronger and more agreeable than if we were to use Dainton's rendition, primarily because Dainton does not show how relations in the B-series are fixed. Just using Dainton's rendition, when presented with Russell's view of change, we would be more inclined to accept Russell's conclusion. But as I have argued, McTaggart's whole argument can be used to refute the Block Theory on its own, since the relational qualities are fixed at the moment they are perceived. Furthermore, McTaggart's argument does not need to be built upon to refute the Block Theory. The unreality of time, as posited by McTaggart, was and is still quite a formidable argument when presented in its entirety.

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[1] Barry Dainton, *Time and Space* (Montreal: McGill-Queen's University Press, 2010), 14.

[2] Ibid.

[3] Ibid., 11.

[4] John McTaggart Ellis McTaggart, *The Nature of Existence* (Cambridge: University Press, 1927), 12.

[5] Dainton, *Time and Space,* 13-26.

[6] McTaggart, *The Nature of Existence,* 11.

[7] Ibid., 20.

[8] Ibid., 22.

[9] Bertrand Russell, *The Principles of Mathematics* (New York: W.W. Norton & Company 1996), 469.

[10] McTaggart, *The Nature of Existence,* 14.

[11] Ibid.

NOTES
1. Dainton, Barry. "McTaggart on Time's Unreality," In *Time and Space.* Montreal: McGill-Queen's University Press, 2010.

2. McTaggart, John McTaggart Ellis. "Time" In *The Nature of Existence.* Cambridge: University Press, 1927.

3. Russell, Bertrand. "Motion" In *The Principles of Mathematics.* New York: W.W. Norton & Company, 1996.

INDIVIDUATING SENSORY SYSTEMS
# AND SENSE MODALITIES

BY MICHAEL LOPEZ

Michael Lopez is a recent graduate of UCLA and is currently applying to graduate programs in Philosophy. Michael's primary interests are in philosophy of language focusing on context-sensitivity, the semantic/pragmatic interface, the true nature of meaning, Contextualism, Descriptivism, Indexicals, and Demonstratives. Others areas of research interest are philosophy of mind, including naturalizing mental content (color), mental representations, the role of consciousness in grounding intentionality, and Attention. When Michael is not studying he spends his time writing film reviews, trying new Whiskeys, cooking, working as a personal trainer/nutritionist and playing chess.
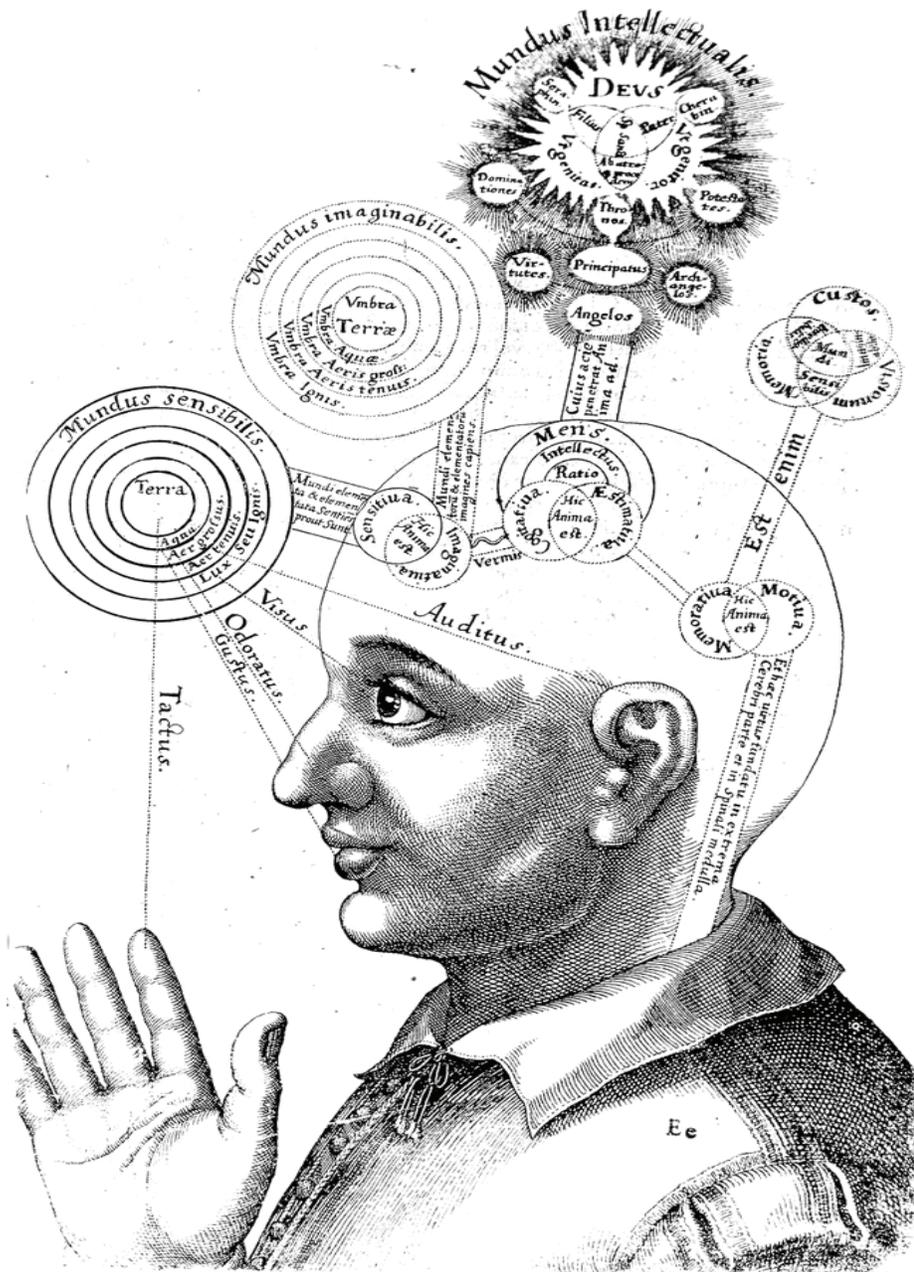
(0)Introduction

Historically it was proposed by Aristotle that there were five distinguished senses associated with the human species.[1] More recently however, some have upheld the idea that there are as many as seventeen different senses.[2] However many senses one takes there to be, how can a subject differentiate and individuate between two senses? In this paper, I examine contemporary philosophical and scientific positions that strive to individuate sense modalities. In the process of this examination, I will initially seek to explain the ideas clearly, followed by a thorough engagement of the content by giving reasons for and against such views. In lieu of brevity restraints I will restrict my analysis to four basic views, *the sense organ theory, the sensation or qualia theory, the property view theory* and *the tactile-visual sensory substitution theory*. I will begin with *the sense organ theory*.

(I) Sense Organ

The most intuitive interpretation to individuating sense modalities is what has been termed the *sense organ view*. The idea is simple. Humans possess distinct *organs* that have evolved to *sense* features or properties of the external world. The human eye has developed to detect brightness of light and distinguish between similar hues. The tongue has adapted to taste sweetness as well as bitterness. The ears are capable of picking up loudness or timbre of sound. Each sense organ can be said to have evolved to best individuate a given sense. Again, this view is very intuitive and it is expected that any person be in agreement with. As is the case with many so called "common-sense" views, the *sense organ view* is riddled with problems.

One problem arises from the question that if each sense organ is designed to individuate certain sense modalities, how is it that all of the sense organs possess such a variety of qualities that are distinct to one another. My tongue is certainly able to detect sweetness, but it can also feel when a fluid is too hot. I can see a sharp object, but push that sharp object into my eye and there is little doubt that I will feel it as well. This seems to be a case in which my visual sense organs, my eyes, are seeing pain. It appears that this is a major detractor from the *sense organ view*.

Another inherent problem with the sense organ view is the concern over why there are not two separate visual experiences, since humans have two eyes. If each sense organ is designed to capture a specific sensory modality, then humans should be experiencing two particular visual experiences since they possess two functioning eyeballs.

Answers to the sense organ view have been presented. With regards to the first problem when one is referring to the sense organ for vision, the eyes, they are referring to an organ that responds to light.[3] More specifically, there is a physical quality that vision detects, namely, differences in electromagnetic stimuli.[4] There exist numerous forms of energy in the physical world, from mechanical and electromagnetic to nuclear, thermal, and chemical energy. Sense organs operate to perceive specific types of energy in the environment. Sensory systems, as a requirement, should possess a connection with the brain or an "end organ" leading from the central nervous system to a sense organ.[5] Another requirement offered by Brain Keeley is that a sense organ must be "wired up" to the CNS so it can be innervated by neurons.[6] Given a physical stimulation occurring in a subject's environment, say electromagnetic, the visual system responds to the stimuli by innervating neuronal pathways that lead to the visual cortex which then arrives at a representation of the received stimuli. Ainsley Iggo has done extensive research into distinct sensory receptors found in the skin, which give the ability to detect pressure and

temperature.[7] These receptors are found on almost every surface of the human body including the eyes. If stabbed in the eye, sensory receptor sites are stimulated and neuronal pathways travel from the brain to the CNS back to the brain that amount to a pain. A subject is not seeing pain since the visual sensory system is set up to detect electromagnetic stimuli. But sensory receptors that detect pain are being innervated. As for the question of having two auditory experiences, or two visual experiences one response is that the visual sensory system works as a *system* to detect electromagnetic stimuli. Given their proximity and neural system relation they work together to both capture and process light waves. They both respond to the same external energy source. [8] An alternative approach to individuating modalities is the *sensation or qualia criterion*.

(II) Sensation

The phenomenology of experience view (also called the characteristic experience view), asserts that a given sense modality possesses a unique experiential quality. The unique quality of an experience can be examined via introspection. A visual experience of standing on a hilltop overlooking rolling green hills has an experiential quality that the subject can inspect. The subject can introspect the sensation of the visual experience, as well as the sensation of the auditory experience. Now if the subject were to group together the experiences and catalogue each of them by the unique quality of a given sensory system, this would allow the subject to individuate modalities via sensory experiences. There are two objections to the view of individuating modalities via the experiential character of sensations.

The first problem is with the view termed as the *transparency of the experience*. [9] When a subject reflects on her visual experience and introspects the phenomenal quality of the experience the transparency of the experience is wrought. What are reflected on are certain properties of the objects of the visual experience and not the properties of the experience itself.[10] One cannot help but reflect on external features of the world when one introspects an experiential quality of visual experience.

The second problem revolves around the issue of nonconscious experiences and animals with differing sensory skills. Is there ultrasound qualia or magnetic qualia that humans have not and cannot experience? Within the last decade, there has been research looking into the possibility of nonconscious sensory modalities. According to Brain Keeley there is strong evidence that humans possess what is called, a *vermeronasal* sense modality.[11] This extra sense modality enables humans to nonconsciously detect pheromones. If this is in fact true, then the qualia view would be unable to differentiate conscious views from nonconscious ones, since accompanying phenomenal experiences do not seem to be present in nonconscious experiences. This leads to another proposed view, *the property view.*

(III) Property View

The property view (also called the proper object of sensation view) is a position which claims that objects are public and mind-independent by nature. Humans perceive the objects themselves as well as properties of the objects. Thus, senses are individuated by abstracting the properties of the object from the object itself. So hearing something is equivalent to sensing pitch or timbre. Likewise seeing something is the same as sensing color or shape. More formally, 'subject S sees object O' is equivalent to 'subject S perceiving object O as some color'. As noted with the *sense organ view*, there is a

problem with properties of objects being perceived with more than one sense. Subject *S* might feel the water as boiling, but it is most likely the case that she can see the water boiling as well. To combat this pitfall the notion of perceiving *directly* and *indirectly* was introduced.

When subject *S* feels the boiling water, she is sensing a feature of object directly. Viewing the water bubbling and steaming amounts to indirectly sensing features or properties of the object. So, 'object *O* looks like feature *F* to subject S' is the same as, 'subject *S* perceives object *O* as having feature *F* and as having some color'. A malleable piece of metal pulled from a heap of coal may appear to be a reddish-orange color, which would amount to an indirect perception of a property of the metal, namely heat. If one were to grab the piece of metal the feeling of the burn on one hand would be a direct experience of a property of the metal. Related to the notion of indirect and direct perception are the controversial tactile-visual sensory substitution experiments that will be looked at next.

(IV) Tactile-Visual Sensory Substitution

Bach-y-Rita carried out experiments with blind subjects (congenitally blind and blind-folded), using Tactile Visual Sensory Substitution devices (TVSS) to exploit the sense of touch so-as-to replace the sense of vision. The device functioned to capture varying levels of light with a camera and transpose via a grid of vibrating pins onto areas of a subject's skin. Blind subjects who became accustomed to using the TVSS device were able to navigate their environment and determine distances from objects with use of the device.[12] The camera in these experiments functioned as a sense organ, namely the eyes, and so some conclude that the blind subjects became capable of sight. In his paper, *Making Sense of the Senses*, Keeley offers an answer to those who follow that train of thought.

Keeley offers four criteria for individuating the senses, one of which is *dedication*. [13] The notion of dedication is taken from *neuroethology* or the study of neural basis of animals. The idea is that through millions of years of evolution sense organs developed to what is biologically important to the organism.[14] An example is the vertebrate eye, which has evolved to *sense photons, mechanical distortions* and a *properly inserted electrode*.[15] Another important notion is the distinction he brings up between "detection" and "reception". The basic idea is that *detection* is applied when a subject can respond to a given stimulation in the external world. *Reception* however is solely for those subjects that are capable of sensory discriminations through a given sense organ.

Now if we return to the issue of a TVSS-equipped subject seeing Keeley reveals the distinction between *detection* and *reception.* He asserts while a TVSS-equipped subject is capable of visual detection, they are not capable of visual *reception.* The reason is that the subjects do not possess the modality of vision which only accompanies functioning vertebrae eyes. The visual sensory system evolved to detect photons which a blind subject cannot do. They lack a sensory modality that a subject with functioning vision possesses.

(V) Conclusion

It has been shown that individuating sense modalities by reduction into distinct sensory systems fails on many levels. As neurobiology, cognitive science, and other related sciences continue to progress in new scientific findings, philosophy of perception must endeavor to research these new findings so-as-to develop new theories of visual

perception. If a unified theory of all sense modalities is desired, much work is still needed to be done. The classical theory of the five senses seems to no longer hold water with the latest scientific theories. Much work is still needed to be done in both scientific and philosophical communities.

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[1] Aristotle, and Hippocrates George. Apostle. *Aristotle's On the Soul (De Anima).* Grinnell, IA: Periatetic, 1981, 424b: 22-23.

[2] Brian L Keeley,. *Making Sense of the Senses: Individuating Modalities in Humans and Other Animals.* The Journal of Philosophy, Vol. 99, No. 1 (Jan., 2002), 5-28.

[3] William Fish. *Philosophy of Perception: A Contemporary Introduction* (New York: Routledge, 2010), 150.

[4] Keeley. "*Making Sense of the Senses",* 11.

[5] Ibid.

[6] Ibid., 13.

[7] Iggo A. *Nonmyelinated visceral, muscular and cutaneous afferent fibres and pain.* In Keele CA, Smith R, Eds. *The assessment of pain in man and animals* (London: Livingstone, 1962), 74-78.

[8] Fish, *Philosophy of Perception,* 151.

[9] Michael Tye. *Consciousness, Color, and Content* (Cambridge, MA: MIT, 2000), 45.

[10] Fish, *Philosophy of Perception,* 152.

[11] Ibid., 152.

[12] Fiona Macpherson. *The Senses: Classical and Contemporary Philosophical Perspectives* (New York: Oxford UP, 2011), 35.

[13] Keeley, "*Making Sense of the Senses",* 17.

[14] Ibid.

[15] Ibid., 18.

NOTES
1. Bach-y-Rita, Paul. *Brain Mechanisms in Sensory Substitution.* New York: Academic, 1972.

2. Fish, William. *Philosophy of Perception: A Contemporary Introduction.* New York:

Routledge, 2010.

3. Hippocrates George, trans. *Aristotle's On the Soul (De Anima).* Grinnell, Iowa: Peripatetic Press, 1981.

4. Iggo A. " 'Nonmyelinated visceral, muscular and cutaneous afferent fibres and pain': The Assessment of Pain in Man and Animals." Proceedings of an international symposium held under the auspices of UFAW, the Universities Federation for Animal Welfare, Middlesex Hospital Medical School, UK, July 26-28, 1961. http://catalog.hathitrust.org/api/volumes/oclc/11503785.html.

5. Keeley, Brian L. "Making Sense of the Senses: Individuating Modalities in Humans and Other Animals." *The Journal of Philosophy* 99.1 (Jan., 2002): 5-28.

6. Macpherson, Fiona. 2011. *The Senses: Classic and Contemporary Philosophical Perspectives.* New York: Oxford University Press.

7. Tye, Michael. *Consciousness, Color, and Content.* Cambridge, MA: MIT Press, 2002.

Fig. 1. Robert Fludd, Microcosm *Diagram of the Mind,* 1617. Etching, Utriusque cosmi maioris scilicet et minoris metaphysica, physica atqve technica historia: in duo volumina secundum cosmi differentiam diuisa, historia, tomus II, tractatus I, sectio I, liber X, De triplici animae in corpore visione. Reproduced from Wikipedia http://www.wikipedia.com (accessed October 5, 2013).

HEIDEGGER AND PHENOMENOLOGY
BY SCOTT A. MILTON

Scott Milton holds degrees in Mathematics and Comparative Literature. He is currently studying Computer Science at Oregon State University.

Martin Heidegger's *Being and Time,* originally published in 1927, is a work of ontology that covers a broad array of topics such as the nature of existence, temporality, and mortality; humanity's relation to the world; engagement in tasks and commitment to life; and the importance of maintaining individuality in a milieu of social conformity. In setting out to explain these issues, Heidegger grapples with many of the most persistent problems in philosophy, and in the process, he challenges many of the most basic assumptions of the Western philosophical tradition. In this essay, I will begin by explaining Heidegger's basic approach to phenomenology, as outlined in section seven of his book. Then, I will outline and briefly discuss some of the problems evident in his approach. In general, I will argue that his approach to philosophy is a step in the right direction, but its problems reveal a need for certain modifications. Finally, I will propose a solution to these problems.

In section seven, Heidegger lays out his general philosophical approach, which he calls phenomenology. He makes it clear right away that what he is doing is ontology and that his approach takes *being* as its subject. Nonetheless, Heidegger is quick to repudiate any reliance on the practices and principles associated with the existing discipline of ontology, and he foregoes the formulation of a fixed and pre-formulated methodology in favor of a flexible and open approach to ontology employing the procedures called for by the particular demands of each specific investigation. According to Heidegger: "[t]he term 'phenomenology' expresses a maxim that can be formulated: 'To the things themselves!'" He takes this maxim from his mentor, Edmund Husserl, although for Husserl, phenomenology was a fixed method--a specific series of steps or *reductions* intended to establish a foundation for all knowledge. Since Heidegger has just repudiated any reliance on the existing discipline of ontology as well as any adherence to a fixed methodology altogether, he makes it clear that his approach to phenomenology will be fundamentally different.[1]

He proceeds to explicate the meaning of phenomenology, noting that the word consists of two parts, *phenomenon* and *logos*, both of which have ancient Greek origins. The first, he explains, comes from the verb "'to show itself'[,]" and he thus defines a phenomenon as something that "shows itself in itself".[2] Heidegger points out that a phenomenon can also sometimes show itself in a misleading way, creating a false semblance of something it is not. He differentiates this semblance from appearance, however, and explains that the latter does not show itself at all, but rather announces itself through something else entirely—such as is the case when a symptom indicates the presence of a disease even though it is not itself the disease it indicates.[3] Thus appearance never directly shows the thing indicated; that stays hidden and only announces its presence through the appearance. Heidegger makes every effort to be clear about what he means because, as he points out, the term *appearance* has a number of meanings in philosophy and its ambiguous use tends to create confusion. He notes, for example, that Kant uses the term to mean both a cognitive experience (a *perception* of a something as having a more or less static appearance) and the *process* of revelation (the gradual disclosure of the thing's appearance). In any case, Heidegger wants to make it

clear that what he is talking about is not an appearance at all. His concept of a phenomenon is precisely "the self-showing [of something] in itself" and not merely an appearance caused by something that itself stays hidden.[4]

Moving on to the second component of the word phenomenology, *logos,* Heidegger draws on his scholarship of Plato and Aristotle, who, as he points out, use the term *logos* in numerous ways. He argues that the varied and even ambiguous use of the term demonstrates that it lacks a unified and stable meaning. Drawing on ancient Greek sources for justification, Heidegger defines *logos* as discourse that *shows* something— language that "makes manifest what it is talking about and makes it accessible to another".[5] Furthermore, he emphasizes the visual aspect of this manifestation. It lets somebody *see* what it discloses—it is "vocalization in which something is always sighted".[6] However, Heidegger makes it clear that this seeing has nothing to do with a mental image, representation, or conception of the thing seen. What he means is that *logos* directly shows the thing it discloses; that is to say, it shows the actual thing itself and not just an appearance of it. Again this goes back to the earlier discussion of appearances. Heidegger does not mean for logos to show something that itself stays hidden while only revealing its presence through an appearance, whether mental or otherwise. *Logos* lets the thing itself be seen, and more precisely, lets it be seen in a particular way—it always shows a thing together with something else—it lets "something be seen as something [else]".[7]

As such, *logos* can be true or false, he adds, but this must not be taken in the conventional sense of "truth construed in the sense of 'correspondence' or 'accordance'". [8] Instead, Heidegger claims, *logos* is true if it effectively shows and reveals things— laying them bare and bringing them out of concealment. On the other hand, *logos* is false when it obfuscates and covers over something, preventing it from being seen, or when it is deceptive or misleading, presenting something "as something it is not".[9]

Having defined each of the two word parts separately (*phenomenon* and *logos*), Heidegger now proceeds to combine them in his preliminary definition of *phenomenology.* Since these two individual parts are very similar in meaning, the resulting portmanteau word incorporates their combined meanings without the slightest discord; and thus, phenomenology means "to let what shows itself be seen from itself, just as it shows itself from itself".[10] Phenomenology must let the things that show themselves be seen directly in the way that they show themselves. The things must speak for themselves. Heidegger explains that this definition is simply a rewording of the aforementioned maxim "To the things themselves!".[11] Following then from his earlier discussion of appearance and of the nature of *logos*, phenomenology as a practice must always demonstrate its objects directly; that is to say that the things it discusses must be readily apparent. He declares that phenomenology is descriptive in nature and "has the sense of a prohibition, insisting that we avoid all nondemonstrative determinations".[12] Thus, even if phenomenology lacks a formal methodology, that does not mean that it is entirely without rules.

Although things can show themselves, Heidegger claims that "initially and for the most part" they are concealed, and for this reason, the practice of phenomenology is needed as a means to help them reveal themselves.[13] Moreover, what is typically concealed is *being* itself (that is to say, *being* taken in the sense of the general property of *existence*, in contrast to the individual *beings* that possess this property. Throughout the remainder of this essay, I will capitalize the word *Being* to help distinguish it from references to individual *beings*). Hence, phenomenology takes Being as its thematic

object or, in other words, it takes ontology as its principal focus. The demonstrative nature of phenomenology lends itself to the study of ontology and, in fact, Heidegger claims that "[o]ntology is possible only as phenomenology".[14] This seems to follow from his claim that Being is usually concealed and requires phenomenology to help reveal it.[15] He names three basic types of concealment for phenomena. First of all, a phenomenon might not have been discovered yet and thus remains concealed in the sense that it is still unknown. Second, something that was once known might have been forgotten or its proper understanding might have been lost over time, either in part or in total. Such a phenomenon is thus "covered up again".[16] Finally, the third category of concealment is, as previously mentioned, Being itself.

Since Being is never encountered on its own, but rather only as something that individual beings possess (or as something that makes their existence possible), the study of Being in general must necessarily be conducted through the study of individual beings. In particular, the being that Heidegger chooses as his focus for *Being and Time* is one he calls *Dasein.* Although he does not explicitly define Dasein in section seven, it seems evident from his discussion that a Dasein must be similar to (but not necessarily synonymous with) a human being, or at least similar to the ones he expects will be reading his book. The reason is clear; Heidegger presents his philosophical practice in such a way that he expects readers to verify his claims for themselves in their own immediate environments. In order to do so, they must have access to all the things he mentions, since he claims that all phenomenological descriptions must be immediately and directly demonstrable. Therefore, Heidegger chooses to focus on a particular being that he is sure all readers will have access to; namely, their own being, (which for most readers is presumably human, so we might say that a Dasein roughly approximates a human being, although an extraterrestrial being that shared certain human characteristics might equally qualify).

Then, Heidegger's investigation will be a study of the being and structures of Dasein, through which he intends to investigate Being itself. Although it is logically evident that he proposes to study the general structures pertaining to every Dasein and to investigate the *general* nature of Being, he also emphasizes the importance of the *individual* nature of this investigation (and in fact, individuality becomes an important part of the discussion in later sections of his book). Since Heidegger's claims (and those of phenomenology more generally) are to be confirmed by his individual readers, the investigation he proposes will be highly interpretive in nature. As he puts it, "the methodological meaning of phenomenological description is *interpretation*".[17] Heidegger takes for this interpretive approach the name of *hermeneutics*, a term which he primarily defines as "an analysis of the existentiality of existence".[18] And while he does not unpack the meaning of this definition in the present section, its meaning likely relates to his later discussions of temporality, to the gradual process by which things reveal themselves, and perhaps to the temporal nature of Dasein's (authentic) existence. Heidegger claims Being is "the fundamental theme of philosophy[,]" which is perhaps not a baseless claim, since all things have Being as their basis.[19] Furthermore, he holds that "[p]hilosophy *is* universal phenomenological ontology" since it is not only contingent on Being for its investigations, but also because the study of this Being is necessarily grounded in the "hermeneutic of Dasein[,]" the being for whom and by whom such investigations are conducted.[20] Thus Heidegger not only makes the Being of Dasein the object of his investigation, but also seems to claim it as the foundation for all philosophical inquiry.

philosophy of Edmund Husserl, as well as many of his predecessors going back at least to Descartes. Surely, nobody has been able to describe that process because nobody can observe *how* it happens, or at least nobody has recognized the mechanism that enables a mind-body linkage. If something does stand behind the things we see, empirical evidence suggests that nobody has direct access to it since it operates in an ethereal and non-material realm, even if it does supposedly mediate with the (material) things that we perceive. It is exceedingly unlikely that anyone could ever observe such a phenomenon; thus, if something like that exists at all, it is almost certainly unknowable. Something like that simply defies conventional understanding. Consequently, it is left completely to the imagination and to speculation. But again, nobody has been able to envision a viable *mechanism* that would enable these causal interactions between fundamentally different immaterial and material realms.

Hence, it seems altogether reasonable for Heidegger to adopt an alternate approach to understanding and explaining Being. For practical matters, his approach seems quite reasonable in that it sidesteps these potentially insoluble problems and assumes the existence of things in Dasein's world while focusing attention on practical considerations such as life and engagement in tasks.

Perhaps the most compelling solution to the problems with the appearance model lies in a sort of middle road between his views and some of the traditional conceptions of appearances. The appearance model seems largely correct to me, except I think that minds are part of the physical realm, and are thus in the world, not separate from it or different in substance. I contend that where Descartes, Husserl and many other philosophers have seemingly gone wrong is to imagine that we are merely our solipsistic minds somehow existing independently of the body and of the world. Heidegger is right to reinsert human beings in the world.

I propose that our minds are *body processes*; that is to say, we have cognitive equipment, our brain, and when this equipment operates, it generates psychological processes such as perception, consciousness, and emotion, which we call collectively the mind. A brain cannot exist and operate separately from the context of the body any more than a computer processor can operate outside the context of the computer, and without a functioning brain there can be no mind. Human consciousness requires a medium to operate, and that medium is the brain. To make a simple analogy, we might say that the brain pumps thought just as the heart pumps blood. Like the heart, the brain serves a particular function in the body. Each of the two organs generates its own respective body processes. And we might make a slightly more complex analogy: the lungs take in oxygen and release carbon dioxide from the environment through the mouth, and similarly, the brain relays input and output to and from the environment through the body. The mental processes involved in such input and output are the brain in action, aka the mind.

To be clear, I am proposing that the mind is material; that is to say that it exists only in the material world and not as some spiritual or ethereal substance attached to and governing the body. The ability to perceive the world (and to think, to experience an emotion, to remember something, etc.) is merely an electrochemical sequence of events that takes place in our physical organism. Although conventional thought holds that the mind and the body are different, I follow Heidegger in rejecting this duality. I propose that the mind is only different from the body in that the former is an internal process going on inside of the latter. In other words, the mind is the functioning of the brain. It is only different from the body in the same way that the functioning of the heart (it's beating

and pumping blood, etc.) is different from the body or in the same way that the function of the lungs (breathing, gas exchange, etc.) is different from the body. These are body processes and what we call "the mind" is too. Dasein would not exist without the body or without the world. Therefore, we should not think of ourselves in terms of a dualistic mind and body, but rather as a unitary being. I propose that Being is purely physical (a monistic rather than a dualistic cosmology).

In the model I am advancing, we are immersed in a purely physical world of objective nature. The things we interact with are in fact the *real things*, but the impressions we have of them are always mediated by the shortcomings of our sensory organs and our perceptual registers. Hence, the things we perceive are in a sense never really the actual things themselves, but are only our cognitive experiences of those real things with which we are interacting. Thus, even though the things do show themselves to us, we always necessarily experience an interpretation of them, which can only be an imperfect image of the actual things. Nonetheless, our physical bodies do touch the real things when we grab them with our hands, for example. We do create, alter, and destroy the real things, or decide to leave them unaltered if we choose.

In most cases, the appearances probably closely approximate the real things that surround us. I suppose that we see the world through a sort of lens (in a metaphorical sense) that is akin to an almost completely transparent glass, giving us an image of our surroundings that is largely without distortion. The reason for this is clear; we need to have fairly accurate perceptions of our surroundings to survive. Nonetheless, certain mental illnesses, defects in our sensory organs, or drug-induced states can significantly distort otherwise accurate impressions of our surroundings. In such cases, the lens might be thought of as more or less opaque, convex, or marred by imperfections.

So even if the things do show themselves to us, we can only experience them in our own way, principally based on the particular type of sensory organs and perceptual registers we have, and thus the appearances, or interpretations, that we have of the things we interact with are not entirely accurate and are always incomplete. If the things showed themselves to us, but we were wearing a blindfold, we would not be able to see them. Or if we were instead wearing green glasses, the things would appear green to us. In a similar fashion, even without such glasses human perception is colored by our particular sensory equipment and the type of perceptual registers we have.

These appearances, our interpretations of our surroundings, although distorted to a certain degree, still correspond to the things that are showing themselves to us and are the result of a physical causal sequence of events. Thus, if the things in the world reveal their presence to us but are mediated by our sensory organs and consequently become mere appearances, this fact does not in any way diminish causality in such a way as to present problems for this hybrid, *realist appearance model* (or at least not to the same extent as in the case of the transcendent mind approaches of most philosophers). We might represent such a causal sequence in the following manner: a real thing in the environment emits or reflects photons, which arrive in the eyes. The photons are detected by the eyes, sensory information is relayed to the brain, and finally, a perceptual experience (an appearance) of the thing is formed in the consciousness. So there we have a plausible mechanism (a purely physical transfer of energy) for linking the things in the world to the perceptions of them in our minds.

For the record, I am not dismissing Heidegger's solution to the problems with the traditional appearance model. I agree with much of what he says; namely, his rejection of dualism and the fundamental differences it places between subject and object.

Nonetheless, as I have just explained, we cannot perfectly know the world and so there is a degree of discrepancy between our perceptions and the actual things around us. If Heidegger claims that nothing stands behind the things, I challenge that by highlighting the differences between the things and our perceptions of them.

Imagine for a moment seeing the world in black and white, as it might appear on an old television set. If we saw that way, we would not be detecting everything there is to see. Our perceptual experience would be missing a lot of information (the subtleties of color) and would in a sense be inaccurate. Now consider the fact that even though we do see in color, we still do not perceive all the information in our environment. How much different our experience would be if we were able to see infrared or ultraviolet light, or if we had three-hundred-and-sixty-degree vision. And extending the discussion to other senses, imagine if we had the olfactory capabilities of a canine, the sonar of a bat, or a snake's tongue. How different the world would appear to us! How different our interpretations would be!

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[1] Martin Heidegger, *Being and Time, trans. Joan Stambaugh* (Albany: State University of New York Press, 2010), 28.

[2] Ibid. (original emphasis).

[3] Ibid., 29.

[4] Ibid., 31.

[5] Ibid., 32.

[6] Ibid., 33.

[7] Ibid. (original emphasis).

[8] Ibid.

[9] Ibid.

[10] Ibid., 34.

[11] Ibid.

[12] Ibid., 35.

[13] Ibid., 35-36.

[14] Ibid., 36.

[15] Ibid.

[16] Ibid.

NOTES

1. Heidegger, Martin. *Being and Time.* Translated by Joan Stambaugh. Albany: State University of New York Press, 2010.
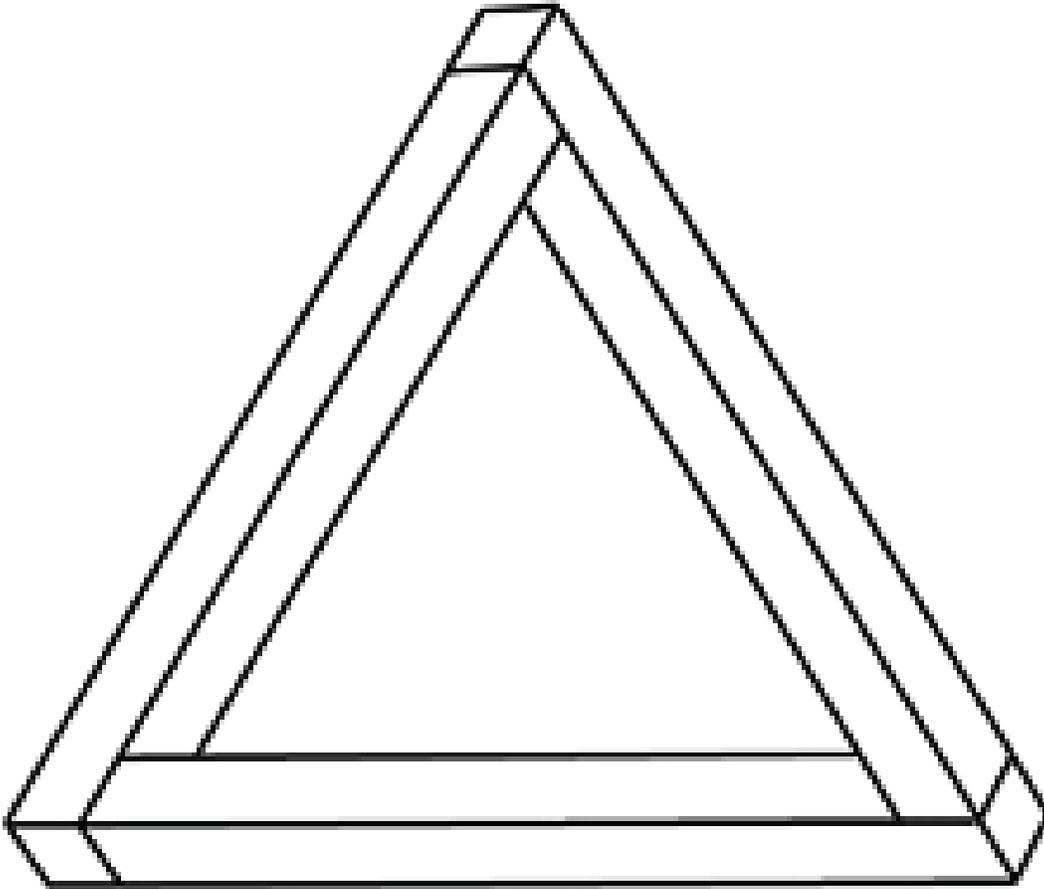
AGAINST A HUMPTY DUMPTY THEORY OF PICTURES

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Introduction

In Lewis Carroll's *Through the Looking Glass* Alice queries Humpty Dumpty about what he means by the word 'glory.' Humpty Dumpty responds by saying that he means 'glory' as a "knock down argument." Alice retorts that the meaning of 'glory' does not reflect what Humpty Dumpty says. To this, Humpty Dumpty states: "When I use a word...it means just what I choose it to mean—neither more nor less."[1] In modern philosophical parlance, to accuse someone of having a "Humpty Dumpty theory of meaning (or names, etc.)" is to suggest that they are advocating that anyone can use words, names, or the like however they choose. This is not a paper about words, but one

about pictures. I want to put forward my own accusation against those who might suggest that pictures of so-called impossible objects (such as the Penrose Triangle[2] shown on the title page) can depict, or represent those impossible objects. This, I will contend, is using the notion of depiction in a way similar to how Humpty Dumpty used 'glory.'

Roy Sorensen and Ben Blumson both discuss impossible pictures in "The Art of the Impossible"[3] and "Pictures, Perspective, and Possibility"[4] respectively. Sorensen's paper focuses on what he believes impossible pictures are not, and states that he would offer $100 to the first person who can show him a picture of a logical impossibility.[5] Though he offers the challenge, he fully expects that he will pay the $100 eventually, further stating that philosophers should be open to the idea of a depiction of a logical impossibility. Blumson offers no such challenges but he does make the bold claim that impossible pictures can exist, stating that a straight line can represent a "square-circle" from the side.[6][7] Both authors connect the depiction of impossible (conceptual or logical) with the idea of having impossible beliefs.[8] The argument is akin to asking, "If we can have beliefs that either have conflicting premises or try to deny logical truths,[9] then why can't we have representations of impossible objects as depicted by pictures?"

I believe that both of these authors are wrong in making claims stating that a picture can "depict" an *a priori* impossibility and that this is connected with our ability to represent these objects by looking at these depictions. In fact, I believe that those who do make such claims are taking liberties with what depiction means and what it is capable of as a form of communication. I am not, however, interested in exploring the arguments they present in any detail. Rather, I want to make the claim that their arguments are made, and perhaps accepted, because theorists allow artists[10] and interpreters to affect what we mean by depiction or pictorial representation too much. This paper is an examination of the possible theoretical conditions that would limit the control that certain philosophers say artists and interpreters have over a particular depiction.

The aim of this paper is twofold. First, I want to examine so-called impossible object pictures and explain why those kinds of pictures do not actually depict impossible objects. The main argument I will be presenting is about illuminating certain plausible constraints that we can set on artist intentions and viewer interpretations. My second goal is to explain away the intuition that some people have that looking at impossible pictures gives them a conceptual or visual representation of an impossible object and thus there is a certain sense in which such pictures depict or convey an impossible object. Here, I will try to draw a distinction between the information actually conveyed by the structure of the picture and how the viewer interprets that information.

This paper will be divided into three sections. In the Terminology section, I will give the reader a guide to the terms I will be using, and how I will be using them. In Part I, I will take a look at an example of an impossible picture given by Blumson, a picture of a straight line that is entitled "side view of a square-circle." The conundrum here is whether the title or the *context* can determine entirely what a picture depicts. My argument is that it cannot and I will explore two limitations that will show this. In Part II, we will take a look at the infamous Penrose triangle and I will argue that the visual representation produced by this image is more akin to an illusion than anything else. Hopefully, by the end of the paper it will be clear to the reader that a Humpty Dumpty approach to depiction is not feasible, and that there are actual limitations on what a picture can depict.

Terminology

Part of the problem I have with both Sorensen's and Blumson's claims is that they are using important terminology in loose ways. I do not think that this issue is contained to these arguments either. An important project in the area of pictorial semantics should be precision and clarity with the terminology being used, as one author may use terms in radically different ways than the next. I am not attempting to try and unify this terminology, nor am I suggesting that I have solved the issue of terminology within the field. My only goal is to provide a clear guide to my usage of terminology, as using these words precariously can often lead to disaster.

To begin, we should take a look at what an impossible picture is taken to be. An impossible picture supposedly depicts an object that cannot exist as a three dimensional object.[11] An example of this is the Penrose triangle shown on the cover page. Such a triangle simply cannot exist in physical space, as the sides of the solid triangle cannot possibly fit together in any coherent way. Pictures that attempt to depict objects like the Penrose triangle are what I am interested in, though to be clear, I am more interested in the claims surrounding the picture than the picture itself.

I also want to explicate how I will be using the word 'depict.' In this paper I will be using the word "depict" to be defined as *fleshed-out content*. Roughly,[12] fleshed-out content concerns all of the context sensitive aspects of a picture. For example, reference in context sensitive, as it cannot be determined by structure alone. More specifically, however, I will be using it to talk about a picture's referential and attributive aspects. Two usages are "this picture *depicts* Adam" and "this picture *depicts* Adam as sad." These two examples illustrate the different usages of depict, either in the referential sense which picks out an object, or in the attributive sense which picks out a property of an object. When I talk about depiction, I will be using it to refer to attribution, reference,[13] or both (in an inclusive sense) and I will be clear when I am using one usage rather than another.

In contrast, I will use the term 'structure' to refer to *bare bones content*. Bare bones content refers, again roughly, to the non-contextual aspects of a picture. An example of this would be the system of projection used or the lines drawn on the page and the edges they produce. In essence, I will use the term to talk about the information contained within the picture, outside of all contextual information. The contrast between contextual (fleshed out content) and non-contextual (bare bones) information will play an important role. To be clear, when I talk about "outside context" I will be referring to three things, reference, attribution, and the viewers visual representation or interpretation of a given picture. Bare bones content will refer to, roughly, the structure or how the picture is composed (the confluence of lines to form a shape, the colors used, etc.).

Finally, I want to say a bit about representation. I will be using it in two different senses, and I will be clear about how I am using it. The first sense is a picture as a representation, or a picture that has representational content.[14] This is to say that the picture indicates, attributes, and refers to either an object or a class of objects. This is pictorial representation. The second sense will be when I am talking about a viewer's visual representation of a given depiction. The former sense is about a picture *as a* representation, where the latter sense concerns the psychological representation a given person has of a given depiction. I will argue that it is not only important to distinguish between the two, but further that the use of representation in relation to pictures is often imprecise and it is time to demand a more fundamental notion of representation in the pictorial sense.

Part I

In this section I will examine the claim that a straight line can depict (in both senses) the side view of a square-circle.

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This kind of "impossible" picture may seem odd since it is not like the Penrose triangle, or any other typical example of an impossible picture. Nonetheless, in his article, Blumson argues that this can be a representation of a square circle.[15] The basic idea is that if a square-circle existed, and one turned it onto its side, then it would produce an image exactly like the one above. While Blumson concedes that this is not an *explicit* representation, he does state that it is a form of a representation of an impossibility in the implicit sense.[16] Here, Blumson is referring to the way outside contexts can influence what we take a particular picture to be. A picture implicitly represents something because it is given a certain meaning. My goal in this section is not only to elucidate further why such a picture cannot explicitly represent an impossibility, [17] but to also deny that it can do so implicitly.

There are two things I need to deny to show that a straight line (or any similar impossible pictures of this kind) can depict a square circle (explicitly or implicitly): (1) That this image depicts in the attributive sense, and (2) That this image depicts in the referential sense. I will accomplish this by exploring two possible conditions on how outside context can influence what a picture depicts. These conditions, I believe, are real and that they line up with some of our most basic intuitions concerning pictures. The first condition states that attribution can only occur if the relationship between the attributed property and the object is not arbitrary. Similarly, I will argue that based off of the first condition we can easily see why reference is not established, and that the relationship between the referent and the picture cannot be arbitrary either. Finally, I will examine some examples of pictures that do depict, but might be thought to have arbitrary relationships to their objects. I hope to explain how that is not the case, and to further explicate the role of pictorial representation.

Before I begin, however, I want to say something about why I am taking a look at this case. One can argue that it is trivially the case that the straight line does not depict (in either sense) a square-circle, and question why I am bothering to look at this case at all. My answer is that I do believe that this is, in some sense, a trivial case.[18] It is clear to me that it does not attribute or refer. But, this project is about exploring boundaries or conditions. As I will argue, examining this case in close detail reveals the limits on outside contexts influencing the representational content of a picture. Even if some of the intuitions seem obvious it is important to state why as they may be built upon and provide foundations for more complicated theories.

Artists attribute properties of objects in pictures. These properties can include that of being red, being cold, being disgusted, etc. How this is done can be, and is in this paper, disputed. Essentially, there is some connection between what the artist intends and what is actually on the picture. If he makes a particular object red, then he is attributing the property red to that object. One claim an artist can make is that by drawing the straight line he is attributing a certain property of a square-circle in his picture. More specifically, if a square-circle existed and was turned such that we were viewing it on its side, it would have a similar property to the picture shown at the beginning of this section. Because of this claim, my first condition then must limit the relationship between what an artist can actually attribute in a picture and the supposed object (even though there is none in this case).

property of an object to a picture without meeting some threshold, however small it may be. The thrust of this condition is that in order for a picture to be depicting an object in the attributive sense, it must meet some standard. This standard could be that of resemblance or likeness. But, whatever this standard may turn out to be, it cannot *solely* be based off of artist intentions. Further, I do not believe that this threshold needs to be particularly high. My only point is that *some standard* is needed to correctly use the word 'depict' in this sense.

What I mean by a "threshold" is left intentionally vague. My argument will mainly focus on the idea that such a standard exists, not necessarily what the standard is exactly. Nevertheless, it would be helpful to explicate my idea further. The conditions are meant to show that in order for a picture to depict a particular object enough information concerning that object must given. Also, each condition deals with two important aspects about depiction, attribution and reference. Thus, the conditions require that enough information be presented in the picture for reference to an object or an attributed property to be depicted. The threshold or standard determines when enough information has been given (or the right kind of information at least).[19]

What does this accomplish? It allows us to deny that any properties given in the picture of a straight line can be attributed to a square circle. In other words, because some threshold was not met, and not enough information was given to identify features of a particular object, there are no attributed properties given in relation to the object of a square circle. While an artist can attribute certain properties of a picture to a particular object, enough of those properties must be given to distinguish that picture, otherwise a theorist can arbitrarily claim that an artist can attribute based off of outside context alone. It is arbitrary because it shortcuts explanation[20] or the communicative aspect of a depiction by allowing an artist's intentions to wholly determine what is conveyed or depicted in a picture.

A final thing I want to note here is that in a trivial sense, attribution is also determined by the structure of the picture. What should be a clear limit on attribution is what information is really conveyed by the structure of the picture. Imagine if someone gave you a piece of paper with a black dot on it and proceeded to tell you how this was a representation of you from 10,000 miles away. Now imagine that same artist started to attribute properties to you in the picture stating that, "In this picture you are wearing a red shirt and a black tie." It would be odd to agree that the depiction of that black dot could actually have attributed properties to an object other than a black dot. This is just to give an example of what kind of standard must be met, and it is clear to me that somehow the attributive properties need to be founded on some minimum limit of information that is actually conveyed by the picture.

The second condition focuses on reference. Like attribution, it is my contention that reference also cannot be established arbitrarily in relation to depiction. Essentially, the condition states that reference is not established if too few attributed properties are given in a given depiction. It is my aim to argue that without proper attribution, reference is meaningless if it depends entirely on outside context (for pictures). Thus, even if such an object existed, reference would still not be established because it did not meet a previous threshold for attribution.

There may be two plausible concerns here. The first is that this seems to make reference subservient to attribution, and the second is that this view would make some pictures have no referent even though it is common to associate those pictures with a particular referent.

In order to make my point more clear, it is essential to think of the two conditions I set as intelligibility conditions. If we think about what a picture is trying to accomplish, or what we as the viewer can get out of a picture, it makes more sense to say that attribution and reference cannot be completely determined by outside contexts. The case I want to make is that in order for reference to be established for the viewer, there needs to be a minimum standard of information met in the picture itself. In a certain sense, we need to be able to "see," or a little less vaguely, understand,[21] what is going on in the picture. The viewer himself needs to understand that there is at least some plausible relation between the object and its referent. A given set of attributed properties helps the viewer understand that relation, in other words it is a crucial component of the information provided by a given depiction.[22] I do not think it should be much of a concern that reference in relation to pictorial representation be partly built upon attribution. However, it I am not claiming that reference is built solely on attribution. Rather, outside context does play a large role establishing a reference. My only argument is that outside context cannot be everything.

Now, in order to alleviate the second concern, let us take a look at three examples where the conditions I set are met.
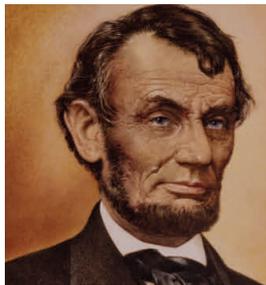

This is a picture of Honest Abe.[23] It should be clear that my conditions are easily met. Not only is it clear and apparent what properties are being represented, it should also be clear that the properties given construct an accurate portrayal of Honest Abe. Even if one did not know who this was, it should be clear that it is a person, with a beard, who has a well-worn face, is stately, etc. Basically, the picture depicts a man with a specific series of properties that convey to the viewer that it is a person with those properties. Finally, the relationship between the properties depicted and the referent is not arbitrary. There are clearly enough properties depicted that are commonly associated with Honest Abe to make it the case.

This picture is a cartoon of Honest Abe.[24] I still believe that this representation of Honest Abe can establish a reference to him. It is clear that while this may not be an entirely accurate representation, and though the properties are cartoonish, it still is

Honest Abe. The picture captures some of the fundamental properties commonly associated with Honest Abe. Even if one did not know who Honest Abe is, they would still be able to realize that there is a connection between this picture and a person. As such, even though it may be cartoonish, it still does not bear an arbitrary relation to its referent and its properties.
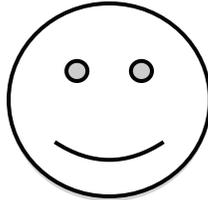
I take it that this picture[25] with the caption reading "Honest Abe" is the hard case for my conditions. But, I think that there is an answer I can give here. I never denied that context could not play a role in determining reference; in fact I believe that it is fundamental. The conditions I set would merely limit that context, not erase it. It may be the case that the conditions I set do not need to be very strict. The picture above may still depict enough information to fulfill my conditions and establish reference as long as a sufficient context is provided. Further, the context given may not be as arbitrary as it may look. The image is commonly associated with that of a face of a person. Assuming the context is trying to set up a relation between a depiction of a face and a person, one may not regard it as arbitrary. A better approach would be to look at contexts that I believe *would fail* to represent the subject matter. For example, if the artist claimed that this is a depiction of "my dog" or "justice," then that would be arbitrary in relation to the given picture. Whereas the claim that it is Honest Abe would make more sense, at the very least we can see how the depiction bears a kind of relation to its object (both have faces, eyes, etc.).

To conclude, this section was an examination on the necessary conditions of depiction, both in the attributive sense and the referential sense. I took a look at the straight-line picture and determined that it failed to depict a square circle because it did not meet two conditions. First, the picture itself had an arbitrary relation to it object in terms of attribution. The properties actually depicted in the picture were insufficient to establish attribution, and more fundamentally, likeness. Because of the failure to meet the first condition, it also failed the second. Pictorial representation also cannot be arbitrary, or entirely context dependent. A sufficient enough attribution must occur for reference to be successful. Failing to meet either condition, the straight line does not depict a square circle. Further, we have made progress in establishing more concise notions of representation, attribution and reference. As such, we can now begin to see why it is important to develop these terms further and how they cannot be applied to impossible pictures the same way Blumson or Sorensen have been doing.

Part II: The Penrose Triangle
The Penrose triangle is a picture of triangle that would be impossible to construct in three-dimensional space. Here is similar variation of the Penrose

triangle (as seen on the title page):

As you can see, this is a rather confounding picture[26] and much more detailed than the "straight-line" case. We get the immediate sense that there is something wrong with it, that it could not be so. This section will be an examination of this picture in relation to not only the previous conditions I set, but also the interpretation we as a viewer give this picture. As in the last section, I believe that there are two fundamental issues I need to contend with. The first is whether or not the artist has given enough detail to satisfy the conditions for attribution and reference. The second is to explain the intuition that by looking at this picture we get a visual representation of an impossible object. Once again, I propose to resolve these issues by proposing limits, this time on artist intention's and viewer interpretation.

The first question is how this picture would satisfy my previous conditions. For one, the picture is detailed enough to perhaps spark the intuition that if such an impossible object existed, then it would look a lot like this from so and so angle. The argument being made would have to contend that properties depicted would be enough to satisfy whatever minimum standard I postulated. Thus, even if reference fails, there is no information to suggest that this is not what an actual Penrose triangle would look like if it existed. It is a depiction (if only in the attributive sense) of a Penrose triangle. Once again, the danger here is not so much that the artist successfully referenced an impossible object, but that through his intentions he was able to create a depiction of one.

My argument against this view is that artists' intentions will always be limited by what information the structure of the picture can possibly allow. For one thing, the artists cannot actually create objects that defy geometry, but more importantly, they cannot create nonsensical interpretations of lines or edges.[27] To see what I mean, we need to examine "line labeling." Line labeling allows vision scientists and the like to take an image (usually a simple polygon meant to be seen as three-dimensional) and show all of the possible interpretations a particular line or edge can have. This is done by using the symbols "+" or "−" that represent convex or concave lines respectively.[28]

To give a clear example, imagine a man drawing the most top left corner of his room. He might produce an image like this:

The three lines or edges are meant to be interpreted in the way shown. The top corner of the artist's room is most easily represented by three edges coming together at a vertex. Each edge is supposed to be interpreted as "concave" since that reflects what the top corner actually looks like. If you are still having difficulty, imagine that the creases of the wall are the lines. The creases of the wall are concave in reality. Thus, we give each line here a "-" symbol to denote that they are to be interpreted in one way.

Two things might be further observed here. The first is that this is an ambiguous picture in that at first glance it might look like the edge of a box, or as having a convex shape. So without the help of line labeling more information might be needed to know what object it resembles. The second is that there are only so many ways this picture can be interpreted. For example, try to imagine that the red lines form the left side of a box (in this scenario you are looking right at one of the edges of the box). Now imagine that the black line with the same interpretation you would give it if the above picture was that of a corner of a room. A quick realization is that such an interpretation is impossible to make. There is an obvious clash between two lines having a concave interpretation and a convex one.

The point of this exercise in relation to my argument is that the artist can intend to make a picture nonsensical, but that information is not correspondingly carried to the picture itself. The structure of the picture either conveys an easily conceivable two-dimensional object, or a series of possible three-dimensional objects. Any information conveyed by the structure needs to be possible, so to speak. Thus, while an artist may intend a certain line to be interpreted in a way that is impossible, the structure of the picture will limit it. The Penrose triangle does not depict (in either sense) an impossible object because the structure of the picture limits what lines can be interpreted one way or another.

One may object, however, and argue that when we look at the Penrose triangle we see not only the interpretation that the artist intends but also we experience a visual representation of an impossible object. My response to this is to suggest that our interpretation of the information given is best explained as a kind of error. To see what I mean, let us look at an example of a common illusion:
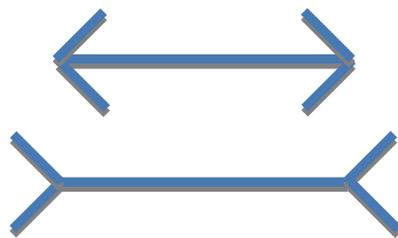
This is a visual illusion known as the Müller-Lyer illusion.[31] Looking at this image you may experience a visual representation that attributes the bottom line being longer than the line on the top. However, such a representation would not be accurate as the top line and the bottom line are actually the same length. Fundamentally, there is a difference between what information is actually given by the image and the corresponding visual representation we have. Our visual representation in this case is flawed, or not veridical, but that does not mean the picture is somehow also flawed. As mentioned in my introduction, we need to differentiate between visual and pictorial representations. What is actually, or possibly could be, represented by a picture does not mean that it has to correspond with our visual representation. When we talk about what is "true of"[32] a picture, it cannot be based off our interpretation alone.

Thus we might now be able to start to see that the Penrose triangle is a kind of illusion. The Müller-Lyer illusion tricks us because our visual system is not necessarily based off of veridicality, but rather biological fitness. Either out of ease or necessity, our visual system adapted to see certain edges specific ways given the relevant visual cues. These cues can be shadows, depth, or more relevantly, the combination of certain edges. The visual system is programmed in such a way to respond to these cues and make us see, or interpret, the world in a specific way. The Müller-Lyer illusion plays off of that, and so does the Penrose triangle. The edges are placed and oriented in such away as to "trick" our visual system into interpreting it as an impossible three-dimensional figure. We cannot help but have the representation that we do, but like the Müller-Lyer case, our interpretation is an error. The information that can be gotten from the Penrose triangle does not match our visual representation. We are under an illusion.

One might at this point object and state that even if the artist's intention plays no role, and the picture does not give the relevant information, it still may be the case that what we have in mind is an impossible object despite the fact that it appears more like an illusion than anything else. If this were the path the arguer wants to take, then it would have to be a rather strange one. If you recall, my ultimate goal is to show that pictures cannot depict impossible objects. Thus, my objective is to cut the tie between the picture and the interpreter by arguing that the picture is not responsible for the visual representation we have of it. If one wants to argue that by some accident, we stumble upon a resemblance of an impossible object in our minds, then so be it.

Conclusion

I believe that if we allow people to say that certain images depict impossible objects, then we are allowing those people to use 'depict' 'representation' and 'pictorial' ways that promote misunderstanding or confusion. If the study of pictorial representation is going to be a kind of science, then it deserves more rigid terminology with clearer meanings. The word 'depict' has many intuitive uses, and it is worth studying these uses. But we cannot let intuition guide us alone, as that may lead us to use the 'depict' in contexts that are unsuitable, as with an impossible picture. It is important to limit our study to those uses that advance explanation and not to those that advance the idea that a picture can depict anything.

Contexts, intentions, and interpretations are all important parts of viewing and understanding pictures. However, we must not forget about the medium itself. Pictures can have their own language, and in the same way we do not use words in any arbitrary way we please, we should not assume that pictures can depict anything without following the proper rules and meeting certain conditions. Outside context cannot be the only thing doing the work in this form of communication. The structure and representational content of the picture has to also play an important role. In this paper, I have argued for such conditions and have tried to limit the influence of artist intentions and viewer interpretation. Through this lens, we can start to see what pictures ought to be used for, what they can accomplish, and how they play a role in understanding. I believe that I have not even scraped the surface of those three issues, but hopefully I have brought some illumination to the subject matter.

[1] Through the Looking Glass by Lewis Carroll. (Note that the quote was obtained at: http://www.gutenberg.org/files/12/12-h/12-h.htm#link2HCH0006).

[2] Image obtained here: http://psylux.psych.tu-dresden.de/i1/kaw/diverses%20material/ www.illusionworks.com/html/impossible_triangle.html.

[3] Sorensen, Roy (2002). "The art of the impossibility." In Tamar Szab'o Gendler & John Hawthorne (eds.), Conceivability and Possibility. Oxford University Press.

[4] Blumson, Ben (2010). Pictures, perspective and possibility. Philosophical Studies, 149 (2).

[5] Sorensen distinguishes between depictions of conceptual impossibilities and logical impossibilities. This divide is not made entirely clear, however he does state that depictions of objects that defy geometric truths have already been rendered, like the Penrose triangle. However, he is more interested in Logical impossibilities. What he would need is a picture that is similar to the logical form P&~P. Pgs. 337, 338, 340.

[6] Blumson does state that the "straight line" case is one where the impossible object is not an "explicit" depiction of an impossible object, but it is a depiction nonetheless. (Note: no page numbers are given on the article, but it is in section VII, a page after it begins).

[7] Gary Malinas also states in his article "A Semantics for Pictures" that one of the puzzles for the semantics of pictures is that some pictures appear to depict impossible objects.

[8] Sorensen, 341-342.

[9] This would be like denying that 3 + 3 = 6.

[10] When I say 'artist' I only mean someone that can create a pictorial representation (a painting, doodle, picture, etc.). In other words, I am using the word in an inclusive sense where almost anyone could be considered an artist.

[11] The Penrose triangle can, of course, exist as a wire frame object or some other form that represents it as a 2 dimensional object. What I am saying here, more specifically, is that it cannot be a filled in, continuous, or solid, object with multiple sides.

[12] I say roughly because I do not think that context sensitive aspects of a picture are entirely independent of the non-contextual aspects. I will elaborate on this later in my paper.

[13] For both attribution and reference, I will be using these terms in a similar way Tyler Burge might use them in *Origins*. That is to say that I will assume that both reference and attribution are aspects of representation and have a functional and relational role. For example, if I say the name "Adam" I am using a referential function in order to establish a relation to a subject matter. This function, however, can fail to connect to a subject

matter. This function, however, can fail to connect to a subject matter. Attribution follows the same template, but with properties. Pg. 30 -37.

[14] In this paper I will assume that pictures have content.

[15] The line was made using a drawing tool in Word.

[16] Ibid, 146, 147.

[17] This gives my task a more general focus than just arguing against Blumson. One of the odd things about Blumson's article is that he takes certain things to be obvious that should not be. For example, the fact that a straight line could depict, even if only implicitly, a square circle. I find the willingness to accept that any depiction can explicitly or implicitly represent an impossibility odd. My aim is to try and explore possible real world constraints on depiction so that the stated conclusion would be considered absurd.

[18] In case it is not clear, most people do not believe that a picture of an "impossible object" can refer because no such relationship between the representation and the object is achieved by the referential function. This is primarily because such an object does not exist.

[19] There are certain notions that may approximate what I am talking about, such as *accuracy* or resemblance. However, I want to remain neutral in respect to these, or any other concepts as linking them may require more philosophical work and come with implications that I am not ready to commit to.

[20] The notion of having representation be an explanatory kind comes from Burge, 38.

[21] I do not want to equate my view with Schier's notion of recognition, which requires the viewer to be able to recognize the referent. My condition only states that the viewer must be able to understand that there is a non-trivial relation between the attributed properties and the intended referent. *Deeper Into Pictures* Flint Schier, 91, 92.

[22] Further, this gets at the notion of the coordination problem. The question here is: "how do I communicate my intentions, and the context I provide, to the viewer?" My claim is that this can only be accomplished in a non-arbitrary way. For example, an artist may want to refer to Obama and attribute some set of properties to him. The best way to accomplish this task is to try and produce an image that resembles his subject, not through some obtuse, obscure, or absurd means. Schier, 98-99.

[23] http://www.tennessee.gov/tsla/exhibits/lincoln/

[24] http://www.clker.com/clipart-abraham-lincoln-4.html

[25] Created using Word.

[26] http://en.wikipedia.org/wiki/Penrose_triangle

[27] Since, for now, we are dealing with simple polygonal images, I will define an edge

as a line meant to be interpreted as part of a three-dimensional space.

[28] *Seeing and Visualizing,* Zenon W. Pylyshyn, 99-101.

[29] Created using Word.

[30] Thus, replace the right most "-" with a "+".

[31] This version of the Müller-Lyer Illusion was created using Word.

[32] Malinas,275, 276.

[33] Burge, 301-308.

[34] Pylyshyn, 64.

NOTES
1. Blumson, Ben. Pictures, perspective and possibility. *Philosophical Studies* 149.2 (2010): 135-151.

2. Burge, Tyler. *Origins of Objectivity.* Oxford: Oxford University Press, 2010.

3. Malinas, Gary. "A Semantics for Pictures." *Canadian Journal of Philosophy* 21.3 (1991): 275-298.

4. Schier, Flint. "Deeper Into Pictures: An Essay on Pictorial Representation." Great Britain: Cambridge University Press, 1986.

5. Sorensen, Roy. "The art of the impossibility" In *Tamar Szabó Gendler & John Hawthorne (eds.), Conceivability and Possibility.* New York, NY: Oxford University Press), 2004.

6. Pylyshyn, Zenon W. *Seeing and Visualizing: It's Not What You Think..* Cambridge, Mass.: MIT Press, 2003.