

COLORFUL NOTHING

Mind & Matter in the Madhyamaka



Jimmy Pianka

Tufts University 2010

Cognitive & Brain Science / Philosophy

Submitted in partial fulfillment of the requirements for:
Tibetan & Himalayan Studies, SIT Study Abroad, Spring 2009

Academic Director and Project Advisor: Christina Monson

South Asia, Nepal, Kathmandu, Boudhanath

As is one atom,
So in all atoms,
All worlds enter therein -

Buddha Shakyamuni

Table of Contents

Acknowledgments

Preface

I: Emptiness

Introduction	1
The Conventional Level	3
The Ultimate Level: A Physical Approach	4
The Emptiness of Emptiness	8
Arguments for Emptiness in the Madhyamaka	
The Refutation of Causation	10
The Refutation of Motion	13
No Self	15

II: Consciousness

Descartes and His Critics	16
A Buddhist View of the Mind	
Definition and Origins of Consciousness	21
Three Levels of Awareness	25
Karma and Rebirth	27
Dissolving the Explanatory Gap	29

Glossary of Terms

Bibliography

Methods & Limitations

Suggestions for Future Research

Acknowledgments

First and foremost I would like to extend my gratitude to the faculty and students of the Rangjung Yeshe Shedra for their generous support. Their translations, tutelage, and general hospitality were an invaluable aid to this research. Specifically, I would like to thank Khempo Jampa Donden for his enthusiasm. Additionally, I would like to thank Dr. Matthieu Ricard for his time and illuminating explanations. I owe Tinley Lama a great deal of appreciation as well for his translation efforts and willingness to travel at a moment's notice. Finally, I'm grateful to my program director and project adviser Christina Monson for her comments and patience.

Preface

The history of Buddhist philosophy is rich with debate and disagreement, but this paper will focus on the particular school of thought known as the Madhyamaka, or Middle Way view. This perspective, widely regarded as the apex of Buddhist metaphysics, charts a centrist path between the extremes of material realism and nihilism. The work of Nagarjuna, the Madhyamaka's original architect, will be our primary source for understanding the concept of emptiness, though a small amount of Chandrakirti's later commentary will provide additional support. Further research was conducted through interviews at various monasteries in Boudhanath, Nepal.

Finally, this paper orients the Madhyamaka in terms of contemporary thinking in Western physics and cognitive psychology. The answers it provides require a considerable paradigm shift away from the reductionism that characterizes scientific inquiry, though the holistic alternative they present has been gaining support in a number of fields. I believe it is a perspective from which the West has much to learn. Likewise, it will be interesting to see how Buddhist doctrine holds up as the cognitive sciences advance in their understanding of the mind and its relation to the brain. I anticipate a long and fruitful continuation of this dialogue that is now well under way.

I.

Emptiness

Introduction

Our experience of the world is populated with a wide range of phenomena – things like physical objects, forces, emotions, and people – all of which appear to be substantial entities that exist in a very real sense. When you eat your breakfast there is a thing that you consume, there is a thing that consumes it, and then there is a process (another thing) that it undergoes during which it is transformed into more things still. Though the relationships between these things are clear, we maintain rigid distinctions between them and conceive of them as separate and independent phenomena that each deserves its own ontological ground. This form of realism is founded on the notion that all phenomena possess at their core some *essence*, some immutable substance in which the phenomena's intrinsic identity is contained and which serves as the bearer of whatever attributes the phenomena displays.

This assumption, while seemingly commonsense, is understood in Buddhist thought as the greatest and most insidious delusion to plague the human mind. It is a natural misconception – after all, the phenomena we experience affect us in tangible ways: fire burns us when we touch it and a slab of wood taken to the face is going to raise a welt. The fact that these experiences are so compelling, however, is a distraction from the fact that neither the fire nor the wood exist as such. When inspected analytically, all phenomena – everything from galaxies to atoms to people – are ultimately empty of the identities we treat

them as having. They do not exist as independent entities which can be isolated and understood *sui generis*, but rather as momentary forms whose existence is entirely dependent on their relationships to other phenomena and the conceptual labels we impute upon them.

At first glance the idea of emptiness as the ultimate nature of things seems to invite charges of nihilism. It appears as if Buddhists are dismissing the whole of reality as mere illusion, as if it were some phantom masquerading above the great void of nothingness which alone deserves our attention. On face value this is a valid objection: if nothing truly exists, then what is this all around me? There is clearly *something* here, so how is it that this something arises from nothing? If the ultimate nature of things is emptiness, then how are there things in the first place to have this nature? These questions, though sensible, arise from a misunderstanding of what is meant by emptiness. Such a view treats emptiness itself as existing in terms of having an essence, as if there were truly some void out there with the phenomenal world floating above it like mist. Admittedly it is easy to be so misled when terms like “ultimate nature” are employed, but as we shall see, emptiness itself is just as empty as anything else. This is the cornerstone of the Madhyamaka that allows it to maintain a balancing act between the two extremes of material realism, the view that all phenomena exist inherently and independently in and of themselves, and nihilism, the paradoxical view that nothing exists. In the end we are left with a worldview in which emptiness and form, truth and delusion, are as interdependent as the phenomena they describe.

The Conventional Level

According to the Madhyamaka, there are two perspectives by which we can understand phenomena, one of them being their ultimate nature and the other being the conventional paradigm in which we live our daily lives. This is what is known as the Two Truths, for neither takes ontological primacy over of the other – it is simply that we are only aware of the one. In order to get a firm grasp on what is meant by emptiness, we will first examine the conventional level and identify the assumptions we make about the nature of phenomena. Once this is established will we be prepared to dig deeper into their compositions and demonstrate how said assumptions are unfounded and how all phenomena are ultimately empty of inherent existence. Finally, we will turn to the emptiness of emptiness in order to rescue us from nihilism and unite the Two Truths into the coherent centrist philosophy known as the Middle Way.

Let us begin with a tree. When we look at a tree we are aware of its many components – its branches, leaves, roots, and so forth – but in general we conceptualize their unity as forming the basis for a greater object still: an identity that begins at the furthest tips of its roots, continues to and includes the outermost atoms of its entire surface, and penetrates completely through to its core. We can stand back, look at the structure as a whole, and say “*that tree exists.*” Now what do we mean we use the verb “to exist”? Jay Garfield in his commentary on Nagarjuna’s *Treatise on the Middle Way* says that for a thing to exist in terms of

our general understanding of the word it would have to “have an essence discoverable upon analysis, for it to be a substance independent of its attributes, [and] for its identity to be self-determined by its essence” (315). To perceive phenomena as existing in this way is to perceive them on the conventional level, the first of the Two Truths. This is how the vast majority of us spend our entire lives experiencing the world: we conceptualize it as being composed of distinct, independent phenomena which can be isolated and understood non-rationally as entities which exist *inherently by their own natures*. We are aware of the various causes that bring these phenomena about and the other phenomena with which they interact, but we perceive sharp discriminatory borders between them and understand them as separate and coherent concepts.

The Ultimate Level: A Physical Approach

There are multiple arguments in the Madhyamaka tradition that are used to demonstrate the emptiness of phenomena, a few of which we will examine in due time, but it is prudent that our first line of attack be conducted in a language with which we are more familiar – namely, the science of physics and its quest to unravel the material world. Since as early as the Greeks, philosophy has been asking the basic question of “What is reality?” in the form of “What kind of stuff is it made out of?” Democritus and Leucippus hypothesized that there was this thing called the atom and that it was the most basic building block, and when our

microscopes first caught sight of those little storms we rejoiced in our discovery of the bricks-and-mortar of the universe. As we probed deeper, however, we found them to be composed of even smaller particles. *Those* particles turned out to yield the same curious results, and now, despite the creation of multiple and increasingly powerful particle accelerators with which scientists have repeatedly collided subatomic particles at ludicrous speeds and searched for new ones in the carnage, no substantial, indivisible object has been located that could feasibly give matter its substance. Despite our effort, we have found only a very colorful nothing.

This being said, our search's failure by no means implies its futility. Perhaps we just have not dug deeply enough. Matthieu Ricard, however, a former physicist and presently a monk and the French interpreter for the Dalai Lama, presents a compelling argument as to why the existence of an indivisible elementary particle is a logical absurdity. Suppose we have such particles – how then do they combine to construct matter? It seems safe to say that they can do so by either coming into direct contact with one another or by maintaining their distance but relating in some other way. If they touch, and say the west side of one particle touches the east side of the other, then we are dealing with objects which are still divisible and thus not elementary. As long as we are conceiving of these particles in three dimensions we will always confront this problem.

If we are to avoid it, these particles would have to only exist in one dimension and thus be mathematical points. This, however, generates some problems: if the particles are points, then when they touch the whole of one would

be in contact with the whole of the other, and thus both points would fuse into one. In such a model the construction of any macroscopic structure is impossible – we would have the whole universe fused into a single point. If the particles did not touch, however, and they were held together by something akin to the strong and weak nuclear forces present in the current model of the atom, then the distance between them becomes nonsensical. The locations of two non-touching one-dimensional points can only be related by positing at least another dimension, and since points are merely theoretical constructs and occupy no space at all, the distance between these two points would stretch into infinity. Thus the relative scales of size we perceive in the world would lose their foundations, and we could in theory have the entire universe situated between two particles. Consequently, the entire concept of an elementary particle is implausible and it is only through emptiness that forms can arise (Ricard 4/16).

So let us return to our tree. We were last talking about its *treeness*: the underlying essence that gives it its identity as that particular tree. Where then can we find this treeness? The intuitive answer is that it arises from its parts, and not just from a few of them but from all of them when they are combined and arranged in a particular way. Notice now that we have already retreated inward to define the tree in terms of its constituent components, which are, of course, just more objects that need explaining. What then makes up *their* essences, and the essences of *their* components? No matter how deeply we penetrate into the tree, everything will stubbornly remain divisible into something smaller. If we look at the wood we find that it breaks down into its cells, the cells break down into

mostly cellulose and other polymers, the cellulose is composed entirely of glucose, and we know the story from here.

After such a descent, how can we say that there is any *thing* there which we can call a tree? We have found nothing of substance to bear this label. Instead we have found an infinitely complex series of relationships and interdependencies: the tree only exists in terms of its parts, those parts only exist in terms of their parts, and so on *ad infinitum*. With no essence we can say that the tree does not exist inherently, and is thus empty. This is not to say that tree does not exist at all, for clearly there is some form to be perceived, but it is to say that the treeness of this form, its supposed identity, is merely an arbitrary and artificial concept which we have foisted upon it. The tree is empty of inherent existence or exists only in terms of other things, which in Madhyamaka terms is to say that it is *dependently arisen*. On a conventional level there is some form called a tree, but any analytic search for the ultimate essence of that form will come back empty-handed.

Of course, this same line of reasoning is not limited to trees but applies to all phenomena – even immaterial things like emotions are empty since they are never found without relations to other things. Anger requires a subject, an object, the particular causes that brought it about, and of course the mind that experiences it; there is no such thing as pure anger blazing somewhere on its own. The relationships that define phenomena are likewise empty because they rely on the objects they relate to exist. If one examines them no concrete thing can ever be isolated and identified – you would simply find particular causal relationships and

orientations which are by definition inextricably connected to their particular causes and effects.

The Emptiness of Emptiness

So far we have ducked beneath the first extreme of material realism, the belief that phenomena exist on their own by means of their essences, but where does this leave us? What sort of monster have we invoked? To say that all phenomena are empty appears to be asserting an intuitively-unacceptable metaphysical nihilism. If nothing exists, then what am I looking at? From what do all these wonderful colors, sounds, and emotions I experience arise? In addition to the protests of perception, emptiness as ultimate nature seems to generate some contradictions. When we employ concepts like dependencies and relationships we necessitate the existence of at least two characters – for after all, how can nonexistent entities be related? How can a relationship exist if the objects it relates do not exist to begin with? It seems that the concepts on which emptiness depends are rooted in exactly that which it denies.

All of these questions, however sensible they may seem, are rooted in the same faulty reasoning that Buddhism is trying to dissolve. The trick is to not treat emptiness as if it were a real void, some ultimate property that defines the *true* essence of phenomena. If we do this we are treating emptiness as if it existed inherently, despite the fact that we cannot explain what this would even mean,

and we have substituted one essence for another. When we searched for the essence of the tree and found nothing, it wasn't that we *found a nothing* as if that nothing were a thing to be found, but rather that we simply did not find the tree; it was a wholly negative statement. The tree's emptiness is merely a concept used to characterize the dependent nature of *that tree* – we imputed it artificially in just the same way we imputed the concept of the tree as a whole in the first place. The tree has no inherent existence or essence, but this lacking is not itself a thing but simply the fact that the tree is only a convention – it is the way that the tree exists.

That said, we can see how the emptiness of the tree is dependent on the tree to exist and is thus empty itself! Furthermore, *that* emptiness is dependent on the previous emptiness and thus empty, and so on *ad infinitum*. We are not talking about the disappearance of the phenomenal world but rather the ultimate manner in which it exists. As Garfield says in that same commentary, “Emptiness is not different from conventional reality – it is the fact that conventional reality is conventional” (316). We cannot talk about its ultimate nature because to use language is to employ concepts and thus reify it, restricting ourselves to the conventional level. Thus a true and lasting understanding of the ultimate nature of phenomena can only be realized experientially through meditation. This is by and large the purpose of Buddhist spiritual practice.

Now we reach the most essential concept of the Middle Way and understand what is meant by the phrase “Form is emptiness, emptiness is form.” All phenomena are empty in that they do not exist inherently but only in relation

to other phenomena, but likewise emptiness can only be understood in relation to the particular phenomena it describes. Thus we have avoided both extremes of essentialism and nihilism and have arrived at a unity of the Two Truths. The real Truth is half truth and half lie – they are like the two sides of a coin or a mobius strip, inseparable and inexplicable without the other. The ultimate reality of things and our misperceptions are themselves interdependent, and thus the nature of the world is both form and emptiness, being and nonbeing, inextricably intertwined.

Arguments for Emptiness in the Madhyamaka

1) The Refutation of Causation

Now that we've been through the concept as a whole the traditional authors of the Madhyamaka may be easier to approach. The first argument for emptiness we will examine is a *reductio* in which Nagarjuna, the Madhyamaka's most central proponent, examines the process underlying causes and their effects and demonstrates that here too no essence can be found. The argument goes as follows: if a phenomenon comes into being, we can say that its causes can have one of four possible relationships with their effect:

- 1) The causes are the same as the phenomenon (meaning they share the same essence)
- 2) The causes are different from the phenomenon
- 3) The causes are both the same and different as the phenomenon, or

- 4) The causes are neither the same nor different than the phenomenon.
(Donden 4/15)

We can immediately throw out the third possibility since it is a contradiction, and we can likewise toss the fourth since it is either a contradiction as well or is to be interpreted that the phenomenon is uncaused and springs into being spontaneously. Additionally, we can eliminate the first possibility since it is circular: if the causes of the phenomenon are identical to the phenomenon itself then the phenomenon would have had to have existed prior to its own origination in order to bring itself about. This leaves us with the model that most people take to be true: effects are brought about through causes which are something other than themselves.

Nagarjuna, however, finds this option equally untenable. In the first chapter of his *Treatise on the Middle Way*, states that the...

Essence of entities
Is not present in the conditions, etc....
If there is no essence,
There can be no otherness-essence (I:3).

The first two lines point to the fact that no essence can be satisfactorily located in causes of phenomena. A burn is not present in fire and a welt is not present in the slab of wood used to draw it out. What is meant by the final two lines is that if phenomena depend on their essences from other objects, and if no such essence is present in those objects, then since there is no other place from which that essence could come it follows that phenomena arise without an essence. Having lost this they thereby lose the basis by which they can be

differentiated, since interdependent phenomena are really just the same thing. Given this lack of difference the notion of obtaining one's essence from another becomes absurd since there are no true others from which this essence can be obtained. Therefore it is impossible for phenomena to come about by virtue of causes different than themselves since this would result in an internal contradiction (Garfield 112).

Having refuted our model of causation Nagarjuna is then forced to explain, at least in some sense, the pattern of cause-and-effect we perceive in the conventional world. In the end he does not do this in a way that we would find fully satisfactory, but since he believes phenomena are ultimately nonexistent to begin with his obligations here are considerably lessened. Rather than point to explicit causes that bring about their effects through some enigmatic occult power, Nagarjuna instead appeals to the various "conditions" that precede an effect to explain its appearance without ascribing them any active involvement in the process. Thus fertile soil, steady sunlight, and a strong water supply are the conditions necessary for the growth of our tree, but none of them are causes in the sense that they exert some power to provoke the tree's growth. Regularities and logical consistency are what count.

When pressed about why regularities exist at all, Madhyamaka philosophers point out that they are only intelligible in reference to larger regularities and that the question is ultimately unanswerable: "The fact of explanatorily useful regularities in nature is what makes explanation and investigation possible in the first place and is not something itself that can be

explained. After all, there is only one universe, and truly singular phenomena, on such a view, are inexplicable in principle” (Garfield 116). Thus our final outlook is a typical Madhyamaka stance: on the conventional level we may acceptably suppose active causal powers in the conditions necessary for an effect, but ultimately no such powers exist – in the end our explanations are grounded on a mythical system built from a consistency we perceive in nature. Any attempt to decode this consistency will, if undergone long enough, climb higher and higher into further consistencies until it reaches the outer limits of the universe, at which point our metaphysics hit a wall and become arbitrary.

2) *The Refutation of Motion*

Next, let us look at an argument that both Nagarjuna and Chandrakirti, a later Madhyamaka philosopher who wrote a commentary to Nagarjuna’s *Treatise* and reinforced many of its ideas, discuss in order to further elucidate the nature of empty form. This argument, based on our conventional understanding of inherently existing phenomena, shows that motion under such a view is impossible. In the second chapter of his *Treatise* Nagarjuna explains that:

What has been moved is not moving
What has not been moved is not moving.
Apart from what has been moved and what has not been moved
Movement cannot be conceived (II:1).

The premise here is that if objects can move then this motion should exist at a certain point in time. One could not say that the motion exists in the past,

since by definition such events are no longer happening – we would consider this to have been a different motion, one that has ceased to exist. Likewise we cannot say that the motion exists in the future since by definition it has not yet come about. There is, however, no third period in which it could take place because the present is an infinitesimal, elusive thing that cannot be located or quantified – it is like a slide on a ruler that occupies no width. As Mark Siderits explains in his commentary of the text, “there is no present going apart from the gone over and not yet gone over, just like the flame of a lamp” (8). This candle-flame analogy is used again and again to exemplify the state of constant change in which form exists: we talk of the flame as if it were a stable and singular object that moves, but in reality the flame is a different object at each moment. Thus there is no motion but a continuity of different but causally-linked entities across time.

Nagarjuna says:

A thing itself does not change.
Something different does not change.
Because a young man doesn't grow old,
and because an old man doesn't grow old either. (I:5)

In other words, since time is infinitely divisible and everything in a state of constant flux then no stable entity can ever be pinned down so that we could say it exists. This is easy to grasp with such ephemeral things as fire but it applies *mutatis mutandis* to all phenomena. We can apply conceptual labels to things like chairs because from our perspective their change is too slow to perceive, but this says more about our relative scale than it does about chairs themselves. As

Matthieu Ricard points out, “The speed doesn’t change the nature of the change. [A chair] is no more permanent than a lightning in the sky – it is a slow-moving lightning” (Ricard 4/16). Thus there are no persisting identities but an infinite continuity of change from which discernable forms are arbitrarily carved.

3) *No Self*

Finally, let us examine the famous Sevenfold Reasoning, an argument Chandrakirti introduced to demonstrate the absence of a true self or ego. This argument is often seen with a chariot as its focus, but due to the profundity of the point and its importance to Buddhism we’re going to take it the whole way. Additionally, although it logically follows that the self would be included in our discussion of the emptiness of all phenomena, I think it deserves a little special treatment seeing as how there are few things which to us seem more real. That said, the argument follows the basic format of trying to isolate and identify the inherently existing person in relation to the body and mind. When all the possibilities have been exhausted and no such thing can be found, it follows that our self-perception as separate and autonomous individuals is an illusion – we are just interdependent as anything else.

Assuming the self exists, Chandrakirti gives seven possibilities for its relationship to its parts. These parts, hereafter unexplained, are typically thought of us as things like the body, the conscious will, memories, sets of character traits, and so on, but they can include anything you yourself would qualify as an essential characteristic of your identity. These seven possibilities are as follows:

- 1) The self is the same as or equal to its parts.
- 2) The self different than its parts.
- 3) The self is dependent on or exists by virtue of its parts.
- 4) The self is based on or contained in its parts.
- 5) The parts are based on or contained in the self.
- 6) The self is the collection of its parts.
- 7) The self is the proper shape or arrangement of its parts.

Many of these will be surprisingly easy to dismiss. Firstly, if the self were the same as its parts then it would have to be either equal to them on an individual basis or equal to them as a whole. If it were equal to them each individually then we would have to say that the self is many, which is clearly not the case.

Furthermore, if the self were equal to the sum of its parts then we would be forced to admit that we were someone new every time we clipped our finger nails, ate a meal, or a had a new thought. This isn't what we have in mind when we think of a self, however – our notion of identity is something that persists through change.

Next, the self cannot be something different from its parts because then we would somehow be able to apprehend it as existing separately from them.

Theoretically we should be able to strip all the parts away and still have the self, which is something we can't do. Furthermore, the self can't depend on or exist by virtue of its parts because to do so would entail difference, *mutatis mutandis* for the self being based on or contained in its parts and the parts being based on or contained in the self. Additionally, the self cannot be the collection of its parts because this would allow us to dismantle it, rearrange the parts in any gruesome order, and still call it the self. This makes no more sense than dismantling a

chariot, tossing its wheels and handlebars into a shiny brass heap, and then readying the horses for a ride.

Finally we are left with the possibility that the self is the proper shape or arrangement of its parts. If the self can be reduced to a shape, then it is a kind of physical thing – a precise arrangement of particles. This, however, leaves out all the mental, non-physical components such thoughts and values. How are things with no shape to be included in this geometry? If you're a materialist and you believe that all of mind can be reduced to neurons and electricity then so far so good, but as we similarly noted in the first possibility this option would freeze a wholly-physical self into some fixed statue incapable of change: the loss or addition of even one particle would constitute a change in identity. As we know, people gain and lose weight, dye their hair, and get tattoos – not to mention the fact that our bodies are constantly refreshing their cells. Even if you consider the shape to be a pattern through which the parts are recycled – like the way a whirlpool exists in a stream despite never containing the same water for longer than an instant – this pattern, being fixed by definition, would not be able to account for the changes humans are known to undergo (Chandrakirti 83-84).

Furthermore, the notion of the self existing as something independent is still untenable. Conventionally that whirlpool may persist, but ultimately it's just a concept available from our perspective, something totally dependent on its components and circumstances for its existence – and beyond that there isn't even a stream. You as a persona exist in a conventional sense like the tree or the chair or the candle, but if you start digging through the layers in search of some gem

that you could tweeze out call yourself you'll find only bridges arching out in all directions, interdependencies that criss-cross to various forces and histories until your ego gets lost in the webbing. After all, as Alan Watts once pointed out, the shape of your body depends just as much on the strength of your bones as it does on the pressure in the air (128).

II.

Consciousness

Descartes and His Critics

The mind-body problem, or the question of exactly how the mind and body interact and exist in relation to one another, was first formulated explicitly by the French philosopher René Descartes. In his book *Meditations on First Philosophy*, Descartes set out to jettison all of his knowledge and assumptions and see what could be known from absolute square-one. Though in doing so he became skeptical about the existence of the external world, he concluded that the existence of his mind was an unquestionable fact. This assertion, famously expressed through the phrase “*I think, therefore I am*”, became the basis for the position that would later be named Cartesian dualism in his honor. This title technically refers to a particular idea about how the mind and brain interact, so for the purpose of this paper we will more generally refer to it as substance dualism.

In a nut shell, substance dualism is an ontological statement that posits the existence of two distinct substances: the external physical world, which contains our bodies and the various objects of our sense perceptions, and the internal immaterial world of consciousness in which the immortal soul or self, free will, and creative power of human beings reside. This distinction is based on a fundamental difference in the qualities these two worlds seem to possess: physical objects, being *objects* in the way we typically think of the word, have qualities like mass, location, extension, and velocity. Mental phenomena, however, cannot be described in these terms. They have a subjective, colorful aspect that seems to set them in a class all their own. It makes no sense to say where in the world

anger or the taste of salt exist, and they certainly can't be said to occupy any space or be moving at a particular speed. According to Descartes, consciousness exists independently of the body in an entirely immaterial way. Despite this, it exerts causal power over the brain, its seat in the physical world, and the brain is likewise permitted to exert causal power over consciousness by feeding it sense data. In a dualist model the body and mind are ontologically distinct and of fundamentally different natures, but their constant interaction is a necessary feature of their relationship.

In general, this is the model most people adopt whether they're aware of it or not. You can see it in our language when we say things like "my body", as if the physical body were a possession of some true identity that exists higher up. Despite its pervasiveness, however, substance dualism has been out of fashion in the philosophical and scientific communities for quite some time. Damning charges have been laid against it on purely philosophical grounds, but the most devastating blow has been the extraordinary precision with which modern neuroscience has been able to correlate mental states to particular neural configurations and biochemical processes. With so much of our conscious experience accounted for in the physical mechanisms of the brain, many in the field now see no need for this separate and enigmatic mind entity. The mind appears to be what the brain is doing, and nothing more. It is an epiphenomenal consequence of biological activity. This answer to the mind-body problem, known as physicalism or materialism, is not without its own hang-ups, but for the moment let us take a closer look at the charges physicalists have put forth against

substance dualism and examine the various ways in which this kind of monism purports to answer these problems.

The first crack in the dualist's armor is perhaps the most obvious – if the body is material and the mind immaterial, then how can they possibly interact? How is it that something with no physical properties can produce a change in a physical system? What is the nature of the force it exerts, and how is it not by definition physical if it can cross this basic boundary? Additionally, the idea of dualistic interactions seems to violate the law of the conservation of energy, one of physics' most sacred tenets: if consciousness is indeed some entity that exists externally to the physical world, then any force it exerts on that world would constitute an intrusion of unaccounted-for energy. The same objection applies when we consider from whence consciousness arises. If we adopt the view that consciousness is produced by the brain, then we are forced to confront the question of how matter produces an immaterial thing without violating this principle. If some chemical component is consumed in the production of awareness, this departure of the physical into the non-physical would constitute an unacceptable loss of energy. If nothing is consumed and consciousness is simply a thing that emerges by virtue of neural activity, then we are effectively talking about something arising from nothing. It would be a production unlike anything seen in nature (Wallace 182-183).

In addition to this problem of interaction or the “explanatory gap”, a serious threat to substance dualism stems from advances in the cognitive sciences and their ability to account for nearly all mental phenomena on an anatomic level.

Everything that happens in the mind appears to be a direct reflection of what happens in the brain: we have specific lobes for vision, motor control, emotional responses, and even abstract reasoning. Scientists have reliably demonstrated precise correlations between location and function to the degree where a separate, thinking spirit no longer seems necessary – the brain as a mechanism seems explanatorily sufficient for all mental processes and capabilities. The spirit-like mind substance, now superfluous, has been discarded, and the problem of interaction disappears. To the physicalist, consciousness is an emergent property (and impotent bystander) of what has become the main event: a complex organic computer that undertakes the entire effort of the human experience on its own, the whole process operating in deterministic clockwork according to the laws of the physics. Free will is thus an illusion, a necessary consequence of seeing the world from the machine's perspective. However laborious it may feel, the sensation of making a decision is simply the experience of your brain processing information and outputting the consequent signal. Your mind is what your brain is doing.

Things are much simpler from this perspective, but at the end of the day the ontological equivalence of mind and matter is intuitively quite difficult to accept. Reducing the mind to the brain to the point where mental states *literally are* brain states seems to leave out the rich character of our phenomenological experience – after all, there is something that it is *like* to see the color red or smell curry, and these qualitative phenomena (referred to as qualia) appear to be profoundly removed from the interactions of neurons. We may demonstrate a one-to-one correlation between qualia and the brain states that underlie them, but

simply by virtue of their subjective character qualia seem to cry out for ontological independence.

Frank Jackson's thought-experiment known as Mary's Room expresses this sentiment particularly well: imagine a brilliant neuroscientist named Mary who was born in and has never left a black-and-white room in which she uses a black-and-white computer to study all there is to know about the neurophysiology of color perception. Assume that she truly knows all there is to know about what goes on in the brain during the perception of colors. The question is this: if Mary were to leave the room and perceive colors for herself, would she gain *new* knowledge beyond what she already understood from studying the neurophysiology of the experience? Assuming that she would (and there is contention on whether or not this assumption is a fair one), Mary's experience of color as something new would ontologically distinguish qualia from brain states in a decisive way. To say that she would learn something new is to say that her information about the experience was incomplete; but given that she knew *all there is to know* about the brain states of perceptual experience, it follows that there is something more to the mind than what physicalism asserts (Jackson).

Finally, the most profound objection to physicalism is perhaps the fact that it renders consciousness entirely pointless. If the physical brain can function as an information processing device independent of some ghostly awareness, then why does it not do so? If it can perceive and make decisions without involving some other entity then why is there conscious experience at all? Why doesn't it all go on in the dark? It seems far simpler for organisms to have evolved without

consciousness if the physical brain is explanatorily sufficient for life. After all, consciousness is a serious thing for evolution to have produced without need – the magnitude and unlikelihood of such a grand cosmic accident rules it out with considerable certainty. We cannot deny the existence of consciousness because we experience it each moment – indeed, there may be nothing of which we can be more certain – so to relegate it to epiphenomenal status as if we wish it would vanish for the sake of our theories seems a remarkably foolish line of reasoning. Put simply, the sheer profundity of consciousness suggests a bigger role than physicalism allows.

A Buddhist View of the Mind

1) Definition and Origins of Consciousness

At least on the conventional level the Madhyamaka adopts a stance Western philosophy would quickly identify as a form of dualism. At the Mind & Life Institute, an organization of Western and Buddhist scholars and scientists that have been exploring the relationship between Buddhism and cognitive science, the Dalai Lama has accepted the possible one-to-one correlation between neural and mental activity. Nevertheless, Buddhism maintains the distinction between the brain and the mind it supports. Consciousness from their perspective is literally nothing more than awareness – the simple act of knowing. As Alan Wallace, a philosopher of science and member of the Mind & Life Institute, has

written, “The mental gymnastics come in only when we try to define this firsthand event in terms of non-cognitive physical processes, configurations of matter, abstract behavioral dispositions, emergent properties of the brain, and so on” (178). The urge to further define consciousness stems from our tendency to reify, but in doing so we distort a simple phenomena with an inappropriate set of concepts. Consciousness is entirely first-person and experiential – it cannot be found out there in the world like some sort of light, and to conduct such a search is to erroneously conceive of it in terms of physical objects. It is not something to be apprehended in the way one apprehends a tree or an emotion, but is simply the apprehension itself.

Of course, this does not answer the questions of how this apprehension is possible or how it is brought about. The key is to look at what these questions are actually asking in our Western context: the first is more properly expressed as “How is it that inanimate matter can know itself?” and bears the physicalist assumption that matter is a primary phenomenon and consciousness is secondary or epiphenomenal. The second question should be read as “What is the nature of the process by which consciousness emerges from matter?” This question, in speaking of an origin, is again founded on the idea that matter is primary. Furthermore, both questions betray the additional and more subtle assumption that matter, along with all other phenomena, exists inherently in and of itself in an objective external world. The emptiness of consciousness will have dramatic implications for understanding the mind-body problem, but for now let us answer

these two questions from the Buddhist perspective and explore their definition of mind as it exists on the conventional level.

Firstly, Buddhism would dismiss the question of how matter can know itself on the grounds that it is not matter that is doing the knowing. Consciousness, at least conventionally, is to be understood as a separate and distinct phenomenon that joins matter at conception, exists in parallel to it throughout the life of the organism, and departs at death to be reborn in a new form. Consciousness is thus a primary phenomenon in the sense that its experiential perspective provides us with the basis for all cognition and endures beneath the passing of each particular thought: if we conceive of thoughts as individual clouds, then consciousness would be the sky in which they arise, exist, and dissolve. It is described as a basic “luminosity”, or that which illuminates the inanimate world, and should not be confused with a feature the inanimate world itself (Tenzin 4/26).

Where then does consciousness come from? Western psychology hypothesizes that it emerges from nervous systems when they reach a certain level of complexity, but the details of this emergence remain a complete mystery. Science has no concrete definition of what consciousness even is, and accordingly has no method for detecting its presence in the external world. Buddhism avoids this problem entirely and rejects the notion that matter gives rise to consciousness on the grounds that they are fundamentally disparate phenomena. From the Buddhist view there is such a profound difference between the two that admitting that one could give rise to the other would necessitate the admission that anything

could arise from anything else; they have no substantive link. Additionally, Buddhism rejects the notion that consciousness could arise spontaneously and without cause on the principle that such an occurrence is impossible for any phenomenon.

If consciousness does not arise from matter and does not arise *ex nihilo*, then it follows that all streams of consciousness exist without beginning. Any given moment of consciousness, Buddhism argues, could only have been brought about by the moment of consciousness that immediately preceded it. Thus by necessity Buddhist cosmology posits a universe with no beginning, each continuum of consciousness having experienced an infinite number of lives in an infinite number of forms. The Western mind recoils at this infinite regression, but in truth we are a bit unjustified in this reaction – Christianity inexplicably exempts God from the causal chain of being, and cosmologists can only speculate about what preceded the Big Bang. With no solid alternative of our own, it seems a beginningless universe is just as good an answer to the first-cause problem as any other.

This model begs the common questions of where these mind-streams existed before the universe became hospitable to life, but Buddhism responds that there is no principle that restricts rebirth to the same species, world, or even universe. The Buddhist cosmos are infinite in every respect: they exist without beginning, have no spatial boundaries, are populated by an infinite number of sentient beings on an infinite number of worlds, and will continue without end. To propose otherwise would be to contradict the doctrine of emptiness, since

anything that begins or ends must exist inherently, and reality as a set with a finite number of members would as a whole constitute an inherently existing phenomenon.

2) *Three Levels of Awareness*

Madhyamaka philosophers regard consciousness as being composed of three distinct levels: the gross, subtle, and very subtle. Though similar divisions exist in Western psychology such as Freud's subconscious and Jung's collective unconscious, the notion of a tiered consciousness may seem alien to Western thinkers. Buddhism however claims that these divisions are empirically visible through advanced meditation (though such an "experiment" is only accessible to those willing to make the effort). These three levels of mind as a whole do not combine to form some greater thing called the mind or the soul, but are in fact separate processes. At a meeting of the Mind & Life Institute, the Dalai Lama described consciousness not as a singular entity but as a "multifaceted matrix of events" (Gyatso 40). Nevertheless, they are all three accessible by any given being. Additionally, each level differs in its dependence on the brain: the gross level is entirely determined by neural processes, the subtle level is based on the brain but achieves some freedom, and the very subtle level, the most fundamental of the three, is completely independent from physical form.

First let us examine the crudest of the three: the gross level of awareness. This level is quite simply the contents of perception. It is our bare sense data as they exist below conceptual identification or abstract thinking of any kind. It is

thus entirely dependent on the brain and determined by the biochemical activity of our sensory pathways. Second in the hierarchy is the subtle level of awareness which consists of the mental activity with which we are most frequently engaged. This is all forms of conceptual thinking such as language, object recognition, philosophy, decision making, daydreaming, etc. This subtle level is tied to the brain in that its concepts are based on sense data, but Buddhism regards the concepts themselves and the flow of conceptual thinking as being immaterial phenomena that function outside the realm of neural processes.¹

The third and final level of awareness, the very subtle, is the deepest and most basic member of what we would call consciousness. Known as *rigpa* or “pure awareness” in the tantras, it is the fundamental light of mind that perceives reality directly without conceptual obscurities. In his classic *The Tibetan Book of Living and Dying*, Sogyal Rinpoche describes *rigpa* as “simply your flawless, present awareness, cognizant and empty, naked and awake” (50).

In contrast to conceptual thinking, which is described as a monkey frantically leaping from branch to branch or “a candle flame in an open doorway, vulnerable to all the winds of circumstance”, *rigpa* is the unwavering clarity at the base of mind that sees straight into the empty nature of phenomena and transcends the

¹ It should be noted that the Dalai Lama is open to a possible revision of this stance if Western science can adequately demonstrate a one-to-one correlation between conceptual thoughts and corresponding brain patterns. At a Mind & Life conference he stated that “If there is strong evidence that suggests the absence of a thing – even certain things that are asserted in Buddhist canon, the original words of the Buddha himself – even then, these words are to be interpreted on the basis of valid evidence, and not to be accepted at their face value. In other words, we do not adhere to the literal meaning of the Buddha’s words when they are refuted by valid evidence” (Gyatso 48).¹

subject/object duality of self and environment (Rinpoche 47). It is the basic Buddha-nature of all consciousness; though obscured by delusion like a sun behind clouds, it exists fundamentally in all sentient beings. It is likewise the mode of awareness that characterizes enlightenment.

Rather than consciousness arising from the gross biological level as science hypothesizes, Buddhism asserts that it is this fundamental and completely immaterial awareness that ultimately gives the gross and subtle levels their foundation. These grosser levels depend on the additional physical system of brain, body, and environment to become manifest, but without this basic spark no awareness would be possible. At conception *rigpa* enters the fertilized egg, and from this point forward the gross and subtle levels of awareness begin to develop. It is at this point that a new being can be said to exist – before the arrival of *rigpa*, the cells still belong to the parents.

3) *Karma and Rebirth*

During death it is said that the gross and subtle levels of awareness condense into the very subtle level to the point where only *rigpa* remains. As the grosser levels dissolve into their foundation and become dormant, carrying with them all memories and conceptual thought, the dying person has an opportunity to engage their exposed *rigpa* and achieve enlightenment. A person's ability to do this, however, depends on the awareness of *rigpa* they cultivated during their life through spiritual practice: a skilled meditator could embrace this luminance and pass into nirvana, however the majority of beings withdraw in fear when

confronted with its immensity and remain in samsara. When the now-condensed mind-stream finally disengages from its physical vessel, this incarnation is conclusively considered dead. The mind-stream will then pass through the intermediate realm known as the *bardo* before being reborn in its next body.

Beings are famously reborn as various creatures in accordance with the karma they accumulated during their last life. Karma, which translates from Sanskrit to nothing more than “action”, is a simple system of cause and effect: every action spreads out from its agent like ripples in a pond, producing an equal and opposite reaction from all phenomena it touches. (As an infinite number of beings live out their lives in this fabric, reality is pierced through with an infinitely complex web of causes and their effects, building and firing off each other as they intersect.) Buddhism describes six realms of existence in which a being can be born according to their karma: the god realm, the demigod realm, the human realm, the animal realm, the realm of the hungry ghosts, and the hell realms. At first glance karma may appear to be an absolute moral system by which beings are judged and rearranged accordingly, but without a theistic overlord to establish the moral code such a process would be arbitrary; after all, virtue and malice are only intelligible relative to particular perspectives.

A better understanding of karma is to equate it with the general mental disposition that beings develop over their lifetimes. This disposition, having retreated into the very subtle level of consciousness, would continue into the being’s next life and define the perspective with which it viewed the world. Do we not project our gloom onto the world when we feel down and delight in the

world when things are going our way? It is said that someone whose life was characterized by a great deal of anger would be reborn in a hell realm, but this is not to say that he or she would be appear in a literal place of fire and torture devices: the hell this person would experience would be a negative state of mind brought on by the weight of his or her habitual tendencies. The various realms are not literal then but rather figurative descriptions of a state of being, much like the Orthodox Christian notion of hell as a state of distance from God. Thus we have no need for supernatural planes of existence – reality is infinite as it is, and the various realms are flexible categories based on subjective modes of being.

Dissolving the Explanatory Gap

Though Descartes' division was intuitive – both mind and matter are apparent and meaningfully distinct – it rests on the faulty premise that each entity exists inherently in an independent and self-determining way. Likewise, though physicalism simplifies the discussion and absolves the problem of interaction, it too falls prey to this assumption by treating matter as if it constituted an objective, intrinsically-real external world – not to mention discounting the reality of inner experience. However, when we cease reifying consciousness and its objects and view them in light of their mutual emptiness, we retain not only the conventional distinction we observe but render the problem of interaction nonsensical. On the

ultimate level, there are no separate entities to interact but rather an interdependent and inseparable whole whose internal relationships give it form.

One could easily think of consciousness as having inherent existence, especially when we talk about this “basic luminosity” of *rigpa*, but to do so would require that we somehow extract awareness from the phenomena of which it is aware. Obviously no such act is possible: awareness cannot exist without being aware of something, and this awareness is only intelligible with its object included in its description. Additionally, concepts and conceptual thinking could never come about without sensory input from an external world. Therefore we can say that consciousness exists conventionally, but ultimately is empty of any inherent essence by which it could be isolated and identified.

Furthermore, we can see that the external world arises in dependence upon the consciousness that perceives it. Not only do physical phenomena depend on each other for their structural characteristics, but they likewise depend on conceptual designation for their identities as such. This is not to imply complete external idealism or idealism, the view that the external world is entirely invented by the mind, but instead is to point out that a discriminatory perspective is required to extract shapes from the infinite continuum of change that is reality. This is likewise not a form of skepticism that would posit an objective external world that exists beyond our limited conceptual perspective, because anything in a constant state of change can never be said to exist in a certain way. If we recall the example of the chair we see that no form can be carved out on any objective basis – the chair as an object is only visible from our relative size, and its identity

as a “chair” is nothing more than a conceptual label that stems from our subjective intents and purposes. A Martian or a gaseous sun-being would likely not identify the chair as a “chair”, and perhaps would even reinterpret it according to their own concepts and perceptual abilities as something entirely different. They would not have mistaken the chair for something erroneous, for the chair does not exist in an objective sense – the physical world relies entirely on its sentient inhabitants to give it meaning.

In terms of the mind-body problem, however, we are not talking about meaning – we are talking about existence in a strict ontological sense. How is it that two incompatible substances can interact? This question remains on the conventional level since mind and matter are conventionally substantial and distinct, but having just demonstrated their ultimate emptiness and mutual dependence we see that the question is irrelevant. Mind and matter are not incompatible because they are not separate! If in trying to identify one we are forced to include the other, we must therefore admit that they are essentially the same thing. Thus the dichotomy between internal and external, self and other, becomes nonsensical, and any self-identity we entertain must be extended to include the whole of reality. By only existing in relation to other phenomena we have no intrinsic basis by which we can be differentiated from anything else, and if followed through this expansion spreads endlessly in all directions. By ultimately not existing, we literally become one with infinity.

Glossary of Terms

Material realism: The belief that phenomena exist inherently in and of themselves in an objective external world.

Nihilism: The belief that nothing exists.

Substance dualism: The belief that consciousness and matter exist as separate but interactive entities.

Physicalism: The belief that nothing exists apart from the physical universe. In philosophy of mind, this implies that consciousness is entirely reducible to the brain and has no immaterial existence.

Idealism: The opposite belief which states that mind is primary and that the physical world only exists as a projection of consciousness.

Monism: The belief that all phenomena are reducible to a single substance. Both physicalism and idealism are monist positions.

sui generis: By virtue of an essence.

ad infinitum: And so on, into infinity.

mutatis mutandis: Given their differences, the status of one phenomenon applies equally to the another.

ex nihilo: Having arisen from nothing or by a Creator.

Bibliography

- Chandrakirti. The Word of Chandra: The Necklace of Spotless Crystal. Trans. Padmakara Translation Group. Ed. Jamgon Mipham Rimpoche. Comp. Rafael Ortet.
- Conlon, Ryan. "Interview with Jimmy Pianka." Personal interview. 13 Apr. 2009.
- Conlon, Ryan. "Interview with Jimmy Pianka." Personal interview. 20 Apr. 2009.
- Dalton, Catherine. "Interview with Jimmy Pianka." Personal interview. 16 Apr. 2009.
- deCharms, R. Christopher. Two Views of Mind Abhidharma and Brain Science. Ithaca, N. Y: Snow Lion Publications, 1998.
- Donden, Jampa. "Interview with Jimmy Pianka." Personal interview. 15 Apr. 2009.
- Donden, Jampa. "Interview with Jimmy Pianka." Personal interview. 30 Apr. 2009.
- Donden, Jampa. "Nagarjuna's Treatise on the Middle Way." Rangjung Yeshe Institute, Boudhanath. 15-16 Apr. 2009.
- Hayward, Jeremy W. Gentle Bridges. Boston: Shambhala, 1992.
- Hopkins, Jeffrey. Meditation on emptiness. Boston: Wisdom Publications, 1996.
- Jackson, Frank. "Knowledge: The Qualia Argument." Stanford Encyclopedia of Philosophy. Ed. Martine Nida-Rümelin. 3 Sept. 2002. Stanford University. 1 May 2009 <<http://plato.stanford.edu/entries/qualia-knowledge/>>.
- Nagarjuna. The Fundamental Wisdom of the Middle Way. Trans. Jay Garfield. New York: Oxford UP, 1995.
- Nagarjuna. Mulamadhyamakakarikas: Chapters I-XXI. Trans. Mark Siderits.
- Price, Sean. "Interview with Jimmy Pianka." Personal interview. 12 Apr. 2009.
- Ricard, Matthieu. "Interviews with Jimmy Pianka." Personal Interview. 16 Apr. 2009.
- Ricard, Matthieu. "Interviews with Jimmy Pianka." Telephone Interview. 29 Apr. 2009.

Ricard, Matthieu, and Trinh Xuan Thuan. The Quantum and the Lotus: A Journey to the Frontiers Where Science and Buddhism Meet. New York: Three Rivers P, 2004.

Rigsel, Khen Rinpoche Lama Lhundrup. "Interview with Jimmy Pianka." Personal interview. 27 Apr. 2009.

Rinpoche, Sogyal. Tibetan Book of Living and Dying. [San Francisco, Calif.]: HarperSanFrancisco, 2002.

Tenzin, Khunzang. "Interview with Jimmy Pianka." Personal interview. 26 Apr. 2009.

Gyatso, Tenzin. Consciousness at the Crossroads: Conversations with the Dalai Lama on Brain Science and Buddhism. Ed. Zara Houshmand, Robert B. Livingston, and B. Alan Wallace. Ithaca, N. Y: Snow Lion Publications, 1999.

Wallace, B. Alan. Choosing Reality a Buddhist View of Physics and the Mind. Ithaca, N.Y: Snow Lion Publications, 1996.

Watts, Alan W. Nature, Man and Woman. New York: Vintage, 1991.

Methods

This research was conducted using a combination of textual support and interviews with Buddhist practitioners and students. The texts provided the preliminary exposure to the concepts and arguments of the Madhyamaka, but the series of interviews I conducted along the way deepened my understanding of the numerous subtleties and sticking points.

Limitations

Though the various translations and commentaries that have been written on Nagarjuna's and Chandrakirti's work provided thorough explanations of their arguments, the fact that I was limited to these English translations kept me one step removed from the original text. I doubt much was lost in the translation, but the nuances inherent in Sanskrit and Tibetan could have provided valuable insights. Additionally, the one month time period limited the depth of my studies. A month was sufficient for a paper of this size, but anything more ambitious would require more time.

Suggestions for Future Research

This research could be furthered in a great number of directions. For one, the specifically Buddhist theories of mind could be more deeply explored. In particular, the continuation of consciousness between rebirths and the formation of concepts deserve a closer look. A comparison of the Madhyamaka and other schools of thought such as the Yogachara would likewise be worthwhile. Nagarjuna's refutation of motion invites a closer look at the nature of time, and the possibility of a consciousness entering a machine would have implications for the field of Artificial Intelligence. Additionally, it would be interesting to juxtapose the methodologies of science and contemplative practice in terms of their epistemological merit.

Finally, the steady growth of cognitive psychology will inevitably produce a host of insights which will either corroborate or contradict Buddhist doctrine. Future researchers will thus be in a position to harmonize the two views or conclusively demonstrate their incompatibility. Needless to say, either position would be significant for thinkers in both worlds.

The author can be contacted at jamespianka@gmail.com.