How Will Tibetan Buddhism Influence the Western Worldview?

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Introduction

In this essay we discuss the process through which cultural beliefs and attitudes are modified when two cultures interact. Specifically, we discuss how Indian and Chinese Buddhism influenced the indigenous Bon beliefs of the 8th century Tibetan people, and the ongoing interaction between 21st century Tibetan Buddhist religious beliefs and 21st century Western beliefs about the world and universe. We will use the concept of worldview in comparing how different cultures perceive or interpret various phenomena and try to determine which knowledge and beliefs might migrate across cultures. Our goals are to develop a better understanding of how beliefs are spread across cultures, determine what issues might hinder the spreading of Buddhist ideas in the West, and identify opportunities to advance the creation of knowledge through a synthesis of ideas from different cultures.

Worldviews

A worldview is a set of beliefs, assumptions, and causal models that describe how social and physical reality work for a specific cultural group (or individual) (Koltko-Rovera, 2004). Worldviews usually include views on human nature, the meaning of life, beliefs in where life came from, and beliefs and on where the universe comes from and is going to. A worldview is an interpretative lens that is used to makes sense of reality and the events of one's life (M. E. Miller & West, 1993). It is a set of beliefs and automatic cognitive processes that attach understandings and values to the events and actions of individuals, and the world at large. It defines how things should behave, and provides reasons for those behaviors on a broad scale (from individuals to the universe). For a given cultural group, the exact same worldview is not held by everyone, but there is enough

similarity in beliefs and views across members of the group to readily identify members as sharing similar beliefs.

The constructs/dimensions included in a worldview analysis vary from one analysis to another, depending upon the specific interests of the researcher and the goals of the study. In this essay, we are interested in the worldviews of 8th century Buddhists and Tibetans at the time when Buddhism was introduced to that country, 21st Tibetans today, and 21st century Americans. We believe the most useful dimensions to bring out the key issue in this analysis will be a subset of the dimensions proposed by Freud (1933).

In Freud's model there are four basic worldviews: science, religion, philosophy, and art. The worldview into which an individual falls is determined by where they stand on seven dimensions: The first dimension considers an individual's or culture's beliefs on what are valid sources of knowledge; the second dimension considers beliefs on the origin of the universe; the third considers the sources of well-being (or health); the fourth considers the efficacy of magic versus physical action; the fifth considers whether there exist unconscious determinants of thought and behavior; the sixth considers the issue of free will versus determinism in the control of behavior; and the seventh considers whether the world is seen in spiritual or material terms (i.e., spiritual versus materialist ontologies).

In comparing the cultures of interest we will consider where they stand on the 1st (epistemology), 2nd (cosmology), 3rd (healing methods and knowledge), 4th (magic as a casual power), and 7th (metaphysics) dimensions. We choose these dimensions both because we deem them highly relevant to the analyses and because we have some way to estimate where the cultures stood on these dimensions. Even so, our analyses will have to be considered tentative due to the lack of rigorous data to firmly establish where the cultures lie on the chosen dimensions. We will be using historical descriptions of the 8th century Tibetan culture (Powers, 2007), historical descriptions of 8th century Buddhists (Yoshinori, 1993), and personal knowledge of modern Tibetan and Western beliefs as data in the analysis. Since our ultimate goal is to understand the spread of ideas, and the resistance they can encounter, we will start with a discussion of 8th century Tibet and the challenges

Indian Buddhist teachers encountered when they attempted to spread Buddhist teachings to Tibet. We will consider the role worldviews played in this process. Once we have established a conceptual model of what needs to happen for ideas to spread successfully, we will them use this framework to consider the challenges modern teachers might encounter in attempting to spread Buddhist ideas to the West.

Buddhism in Eight-Century Tibet

Eighth century Tibet was a feudal society with a strong militaristic bent (Powers, 2007). Tibet was larger at that time due to the military conquests that included what is now Nepal and Western Tibet. The overall worldview was religious (using Freud's term) and the religion was Bon. Bon at that time was not a well-organized religion with hierarchical structure and fixed doctrine, but rather a localized system of animistic practices performed by shamanistic priests called Bon Po. It was only later in reaction to the establishment of Buddhism that the Bon religion took on formal structure and systematized its beliefs, often incorporating ideas from Buddhism.

Bon Po performed rituals, frequently incorporating the sacrificing of animals, to propitiate local spirits and demons and guarantee the welfare of the dead (Powers, 2007). The most elaborate rituals were performed for kings and high-ranking ministers and might include the sacrificing of horses, yaks, or sheep, and offerings of food and drink to spirits. The dead themselves were frequently buried with valuable possessions such as jewels. Burial rituals sometimes included killing ministers, retainers and servants, and burying them with the king.

Spirits and demons were believed to inhabit all of Tibet, and there were a variety of ceremonies to placate them and bring about the protection of crops, livestock, physical health, and material wealth. As Powers (2007) discusses, these rituals were vital to Tibetans who perceived a world inhabited by a multitude of powerful spirits that live in the sky, on the earth (in mountains, trees, rivers, valleys, and lakes) and beneath the ground. There were different classes of spirits for each of these environments. Further, individual geographical regions had their own local

spirits that local individuals strongly believed in. The spirits infused the consciousness of Tibetans and they could see the effects of the spirits in the events in the world.

Further, Tibetans strongly believed in occult and magical practices that could influence other humans. If you had difficulties with family members or neighbors, you would normally resort to magical means to address them. Typically, you would seek the services of a local shaman who would know and perform the proper spell. In addition, these same shamans could exorcise spirits from individuals and perform divination.

On the worldview dimensions put forth by Freud, 8th century Tibetans believed knowledge came from both their senses and from shamans who had knowledge of the spirit world and knew how to understand and influence the various spirits in their world. In terms of cosmology, the Tibetans believed a god created them and their world. Healing was achieved through the casting of magical spells, and magic was the dominant power in their world. Healing frequently included the sacrifice of animals to appease harmful spirits. Finally, their world was inhabited and controlled by spirits of many types. They had no concept of physical laws. This is worldview that Indian missionaries encountered when they traveled to Tibet.

Buddhism initially came to Tibet via arranged marriages (Powers, 2007). Songtsen Gampo (c. 616-650), one of the Yarlung warrior kings that ruled Tibet, sought political alliances through marriage with both the King of Nepal and the Emperor of China. The Chinese princess, Wencheng, is thought to have been a Buddhist who set up a temple featuring a stature of Sakyamuni Buddha as a young prince. According to Chinese records, she attempted to civilize these barbaric Tibetans by having them adopt Chinese imperial cultural practices. Her success was limited, but did result in the establishment of a few Buddhist temples.

The next organized attempt to introduce Buddhism into Tibet occurred during the reign of king Tri Songdetsen (c. 740 – 798). Songdetsen was a devout Buddhist who was personally interested in spreading Buddhism in his country (how he became a Buddhist is unclear). To help accomplish this, he requested a

leading Buddhist scholar, Santaraksita, to travel to Tibet and promulgate the teachings. However Santaraksita was not able to establish the dharma in Tibet due to the resistance of ministers who were adherents of Bon, and due to a series of natural disasters that the Bon adherents attributed to spirits who were angry because Buddhism was being allowed into the country. The ministers forced Santaraksita to leave Tibet, but before he left he recommended that the King invite the tantric practitioner Padmasambhava to come to Tibet. While Santaraksita tried to spread the dharma through appealing to its intellectual advantages (e.g., it described a more complex and sophisticated worldview), history tells us that Padmasambhava spread the dharma by engaging and defeating the demons and spirits of Tibet. This brings us to one of the basic questions of this essay: what exactly did Padmasambhava do, and what was its effect on the Tibetan people?

Padmasambhava did not just directly enter Tibet and go see the king (Tsogyal, 2009). His entry occurred over many months. It consisted of a slowly moving encampment that stopped and stayed at many places that held deep spiritual significance for the followers of Bon. At each place he stayed, Padmasambhava challenged and conquered the spirits and demons that lived there by going to the most sacred place in the area and meditating there for a lengthy period of time. He probably let it be known to the people of the region that he was here to conquer their local deities, and after he completed his meditation, he told them that he had, in fact, conquered them, converted them to Buddhism, and compelled them to protect the Buddhist dharma. For the local people who greatly feared these deities, seeing someone going to their most sacred place and fighting (i.e., meditating on) the demons and spirits there appears to have a major impact. Here was a very powerful shaman—Padmasambhava—who was conquering the spirits that comprised their world, and the local shamans could do nothing to stop it. This approach, along with the explicit visible support of the king, enabled Buddhism to take hold in Tibet.

The followers of Bon did not give up after the initial entry of Buddhism to Tibet. They fought back quite hard, initially opposing Buddhism in any way they could. Eventually, they shifted tactics and tried to co-opt Buddhism by creating a

Bon religion that mirrored the Buddhist teachings. They replaced Sakyamuni Buddha with a figure from their own mythos, Shenrap, and modified just enough of the Buddhist teaching so that they could claim it as their own creation (e.g., instead of Shenrap coming from India, he came from Taksik). This co-opting transformed what had been sets of localized animistic beliefs and rituals, practiced by local shamans, into an organized religion with standardized doctrine, beliefs, and practices, to wit, the Bon religion of today.

It must be noted that Indian Buddhism also underwent significant changes in becoming Tibetan Buddhism. Essentially, Buddhism co-opted Bon. Local deities such as the Three Sisters and Tangla were incorporated into the Buddhist pantheon. Bon rituals such as the fire puja and smoke offerings became Buddhist practices.

What is difficult to determine is to what extent did Bon elements naturally migrate into Tibetan Buddhism compared to Buddhist teachers deliberately adapting Buddhist teachings by incorporating Bon elements to make them more popular and understandable. Regardless of how it occurred, the Tibetan people's belief in the spirit world persisted unabated and continues today. The introduction of Buddhism into Tibet may have changed the way Tibetans think about demons and spirits, but it did not eliminate them from the Tibetan worldview. We will discuss this point in greater detail below.

So what exactly did Padmasambhava do when he conquered the demons of Tibet? There are at least two possible ways to interpret what occurred. The first is that he actually was engaging and defeating real demons, and then binding them by oath to protect the Buddhist teachings. That is what most Tibetans believed then, and probably most still believe today. There is of course the question of whether the various types of spirits that Tibetans believe in actually exist. I know of no way of answering that question.

An alternate position is that he was engaging and defeating beliefs and attitudes of the Tibetan people. Once again, the indigenous beliefs of Tibetans are deeply animistic. Their world consists of three parts, the sky, the earth, and the lower regions, and distinctive spirits inhabited all three places. For them a major casual factor of the universe is magic, and spirits and shamans both practice it.

When Padmasambhava came to Tibet he did not directly challenge these beliefs and attitudes (i.e., he did not try to replace them with other beliefs). Instead, he went and practiced meditation where the spirits were said to be strongest, and by showing that their magic could not harm him, he forced the Tibetans to adjust their beliefs, to accept the fact that there might be more powerful shamans: those who practiced Buddhism. Tibetans, for the most part, maintained their beliefs in magic and their model of the universe. The demons and spirits are still there, and magic is still a causal power, but now (post Padmasambhava) there are more powerful shamans who know more powerful magic.

Over time, the Tibetan worldview became more complex due to the adoption of some Buddhist doctrines. Let's consider the revised, current, worldview on Freud's dimensions. Tibetans still believe knowledge comes from both their senses and from shamans who have knowledge of the spirit world. For instance, Powers (2007) describes highly learned individuals who still to this day use divination to determine when to travel, or to determine on what date a meeting should be held. I personally am aware of two situations where a decision needed to be made and the Tibetans considered using divination to make the decision. Not all Tibetans believe in divination, however. Many want to be shown proof that divination actually works. Further, there are now available authoritative doctrines on how to acquire knowledge using traditional Buddhist teachings on logic. (This is similar to the Socratic method used in the West). Tibetan monks that attend shedra (i.e., religious college) are normally trained in these approaches. However, the scientific approach to gathering knowledge is not widely used or believed in (i.e., it is not taught to the general public as part of a schooling process).

In terms of cosmology, Tibetans have adopted Buddhist views on cosmology that the universe undergoes cyclic expansions and contractions, that there is no creator god, and that all sentient beings (i.e., those entities that are alive and have minds) undergo continuous reincarnation until they become enlightened. Further, the class sentient beings include as sub-classes all categories of beings including gods, demons, spirits, animals, and humans. Tibetans have also adopted the

Buddhist belief that the universe is made of air, earth, fire, water, and space (i.e., in contrast to the understanding of modern chemistry).

Tibetan views on medicine now seem to be a mixture of adopted Buddhist ideas and indigenous beliefs (cf., Clifford 1984 for details). Central to Buddhist beliefs on medicine is the doctrine of channels, winds, and essences. In general, Tibetan Buddhists believe that in addition to our physical body we have a subtle body that mirrors and interconnects with our physical body. Winds moving through the channels of the subtle body control bodily functions. Illness occurs when there are blockages, and the practice of medicine mostly consists of being able to diagnose blockages and recommending cures, to include performing physical actions, taking a special substance, and engaging in psychological practices such as prayer. Healing no longer involves the sacrifice of animals or the casting of magical spells.

Magic is no longer the dominant power in a Tibetan's world, but neither are the laws of natural science. The Tibetan model of causality includes naturalistic methods, such as those included in medicine, and folk models such as the belief that the universe consists of the five elements (both models discussed above).

The belief in spirits has become more complex with some spirits representing internal attitudes a religious practitioner must overcome, while other spirits are believed to be actual non-human sentient beings that live in dimensions that Western science apparently has not yet discovered. Most Tibetans still believe that there are thousands of spirits in the world. To survive, some spirits eat earth, while others eat fire, or smoke. Spirits are now considered a class of sentient beings who became spirits because of their karma, and when their karma is exhausted, they will move on. The rituals performed for the spirits are now thought both to help the spirits, and be a way to collect merit for the performer or sponsor of the ritual. In addition, prayer has become a major source of causal power that can primarily influence future events in the life stream of individuals.

Finally, educated Tibetan Buddhists (as opposed to the average lay person who does not attend schools) now seem to now have a much more complex metaphysical view of the world. In the 8th century they believed that the human race was descended from a god. Now they believe that there is a ground that

underlies all existence, and the sentient beings are connected to the ground, but mentally they have lost that connection and see themselves as separate distinct entities. The Buddhist path is a way to reconnect with that ground. In addition, by looking inward, back toward the ground, advanced meditators (those who have made progress in getting back to the original state) have discovered aspects of the universe such as additional dimensions and types of existence that we cannot confirm or disprove using Western scientific methods. The ultimate goal for a Buddhist is to reconnect with his or her original nature, and in doing so achieve a state of enlightenment. Enlightenment is described as a rediscovery of the primordial state of being.

Why did the Tibetans adopt the Buddhist worldview? Two reasons have already been mentioned: Tibetans were exposed to more powerful "magic" and the king was promulgating Buddhist beliefs.

When one thinks of ideas spreading among cultures, one usually thinks of new technology or methods spreading along trade routes (Diamond, 1999). A better cooking method, a sharper knife, or a better whatever is introduced by traders to a new culture. The new technology provides a slightly better life, so it is adopted.

But why do philosophical ideas, and especially religions spread? Do they provide a better life? Or do human beings have a need for knowledge? If yes, what kinds of knowledge is needed? Must it be practical knowledge such as when to plant crops? Or can it be more existential in nature such as, where do I come from? Buddhism did provide new knowledge to Tibet: New ways to treat illness, new approaches to divination using astrology, and new ways to interpret the surrounding world. It is not clear, however, if that was enough impetus to produce changes to the Tibetan worldview.

Perhaps a better model to explain the adoption of Buddhism by Tibetans would be the spread of Christianity in the Roman Empire. In this case the religion had been around for a few centuries, but was not widely adopted. Like in Tibet, it took the conversion of a Roman king (Constantine) to really make headway. Once the king declares a new state religion, many individuals adopt it just to be in favor

with the king. Like in Tibet, the introduction of Christianity did encounter resistance and it took a period of time for it to widely disseminate in the Roman Empire.

We next consider what factors might influence the spread and adoption of Buddhism in America. We begin by considering where modern day American attitudes fall on the Freudian worldview dimensions.

As to sources of knowledge, the dominant view is that Americans believe in what they see, and what can be verified by science. If a perception cannot be verified by scientific means, then it is not considered truth. Further, the scientific approach has created a large body of knowledge that has been additionally verified by using it to create new technologies that make many novel things possible. It is almost as if Americans really do not believe in scientific advancement unless you can show them a new technology derived from the knowledge. There is also a large minority of Americans who believe in religious truths that are established by faith and not by science. The source of knowledge here is faith in teachings handed down by a church or personally experienced.

As for cosmology, Americans seem to be compartmentalized. They believe one thing when they look at it from a scientific view and another thing when they consider it from a faith based view. For the most part, Americans believe that the universe is vast and undergoes cyclic expansions and contractions; and that there is no scientific need for a creator god. However, many Americans do believe in a god that created the universe.

With respect to healing methods, the vast majority of Americans (although there are some exceptions) believe in scientifically based medical approaches. The scientific approach to medicine has been spectacularly successful in understanding and treating illness, and extending the average human life span. The scientific approach has also created many new technologies to image and treat disease, from X-Ray machines, to chemotherapy, to fMRI scanners, to a vast arsenal of pharmaceutical products and protocols.

Americans, in general, do not believe in magic. That is a set of beliefs they have set aside. In addition, they do not perceive their universe as inhabited by a

vast array of spirits, some of which can influence our world. As to where we came from, here again Americans are compartmentalized in their beliefs, believing both in evolution and (for many) a god that created the universe. Americans of both persuasions are unsure if there are other living beings like us in the universe; the majority probably lean against that view.

Will Buddhism Spread?

Will Tibetan Buddhism continue to spread to the West and become a major religious factor, or will it be more of a niche player, appealing primarily to Asians who have moved to America and the small minority of non-Asian Americans who are drawn to it, primarily due to its focus on contemplative practices? To begin this discussion, it is clear that that there is no king who could decree that Buddhism is now the official religion of the United States (nor is one expected anytime soon). If Tibetan Buddhism is to succeed as a religion in America it will have to be on the value of its ideas. Let us compare and contrast select Buddhist and American worldview elements and see if we can determine which beliefs might be adopted by Americans, and which beliefs that may just fade away over time.

With respect to the acquisition of knowledge, the dominant approach in America, once again, is the scientific method. Knowledge is gathered (primarily) through experiments that follow defined protocols. The results from these experiments must be verifiable by others. Experimental results are used to create theories. All theories should have aspects that are falsifiable (i.e., aspects that if shown to be false will disprove the theory). In contrast, the set of beliefs for acquiring knowledge associated with Tibetan Buddhism still entails methods such as divination, astrology, and consulting with, and making offerings to, spirits. I do not think these approaches are likely to be widely adopted in the West in the foreseeable future. Further, a major tenet of Buddhism requires that if a Buddhist belief is proven wrong, it should be abandoned. I suspect that the use of divination, astrology, and spirit consulting are likely to be proven false and consequently abandoned over time.

With respect to cosmology, American and Tibetan Buddhist beliefs are broadly similar, with some significant differences. Both sets of beliefs acknowledge the large-scale structure of the universe, both temporally and physically, and both view the universe as probably cyclical in nature. Where the two worldviews differ is the role of sentience in creating the universe. The scientifically acquired American view is that the arising of life and consciousness is due to the chance combination of physical elements and random events. The meditation derived Tibetan Buddhist view is that life exists throughout the universe and that it is the karmic propensities of the collective sentient beings that caused the universe to unfold as it does. I see no way of harmonizing these perspectives in the short-term. To do so would require a better understanding of how consciousness arises, and how common it is in the universe (i.e., are we the only conscious beings, or are they to be found everywhere).

With respect to medicine, the American view is based on observational science; the Tibetan view is based on beliefs in the doctrine of channels, winds, and essences that constitute a subtle body. Current American medical practice and technology have failed to establish the existence of a subtle body. In comparison, American styled medicine (as discussed above) has made phenomenal strides in understanding and curing illness. Unless it can be established that there is a subtle body, it is likely that the American model will dominate, and probably be adopted by Tibetan Buddhists, both here and in Tibet.

With respect to magic as a causal power or force in the universe, it has no role in the American worldview. In contrast, the belief in "magical" influences still seems to play a significant role in the Tibet worldview. As discussed above, not everyone believes in it, and it is likely that these beliefs will fade in popularity over time due to the lack of proof that magical means actually work.

With respect to metaphysics, there are substantial differences in the two worldviews, with the biggest differences being the structural elements of the universe and nature of sentient being. The Tibetan Buddhist worldview proposes that the universe consists of four atomic elements—earth, water, fire, air—and four derived substances—form, smell, taste, and tactility (Dalai Lama, 2006). The

American view is that the universe consists of matter that is composed of quarks and all the aggregate matter types that can be created from them. This American model is derived from scientific research and is very well supported. It is likely to become the dominant model in the future.

With respect to sentient beings, the Tibetan Buddhist view is that sentient beings pervades the universe and exists in many forms. Once again, Tibetan Buddhists believe that spirits, gods, and other sentient beings in countless varieties permeate our world and the universe. Further, these sentient beings may have preceded the universe and will continue to exist until they become enlightened. These beings wander from one state of existence to another based upon their karma. In contrast, the principal American belief is that the arising of sentient beings was a chance event: certain factors came together and life was created. When life ends, the sentient being ceases to exist. The American model is underdeveloped, for example in describing what types of creatures possess consciousness, and what that experience is like for them, but the general belief is that the scientific approach will eventually answer these questions and whatever other ones arise.

I see no way to resolve these difference at the moment. Modern neuroscience is making significant progress in determining how consciousness relates to brain structures, but there is still a lot of research that is needed. Either set of beliefs, at this point, could be true. Further, while the principal American belief is the evolutionary "chance mutation" model, a substantial number of Americans maintain beliefs in some form of continued existence after death. A "here after" ruled by God, for example. Discovering the truth associated with the arising of sentient beings will likely take a long time.

In general, when I compare Tibetan Buddhist and American worldview models, there appears to be very little in the Tibetan beliefs that I think will be adopted by Americans. For the most part, the Tibetan worldview seems simplistic and not grounded in the real world. Instead it seems more psychic in nature. I do not think that most individuals will adopt the view that the universe consists of

space, earth, water, fire and air, for example; or that "subtle body" medicine will replace science-based medicine anytime soon.

I will return to this discussion below when I discuss what would change this forecast, but for the moment I would like to shift gears and discuss some aspects of Tibetan Buddhism have already spread to the West and been incorporated into the American worldview.

Adopting Select Ideas

Mindfulness is the practice of paying attention to one's body, speech or mind. An early text describing the importance and practice of mindfulness is the Satipatthana sutra (Trungpa, 1976). In general, most of us go through life day dreaming a lot of the time and only minimally paying attention to the world around us. Who hasn't driven somewhere and surprised themselves when they arrive by not being able to recall the drive? It turns out that this inattention can have deleterious effects on mental and physical health.

Buddhist mindfulness techniques have been incorporated into cognitive-based therapy (CBT) to help reduce reoccurrence of depression, and to reduce overall stress which, in turn, leads to a reduced risk of heart disease (Kabat-Zinn & Davidson, 2010). Depression is a disease that has a high frequency of reoccurrence. Incorporating mindfulness of mind meditation techniques, where you pay close attention to your mind, into a treatment protocol has been shown to significantly help patients identify and stop the thought patterns that play a role in triggering depression. Patients who practice CBT become aware of the risk of another episode earlier by monitoring their thought patterns. This change in thought patterns frequently occurs before the emotional component of depression has kicked in, often enabling the patient to stop an episode before it starts.

Scientific studies have also identified a link between high stressed individuals and heart disease (Kabat-Zinn & Davidson, 2010). Studies have shown that if you can reduce overall stress in an individual, you can lower his or her risk of heart disease. CBT clinicians have shown that by teaching patients mindfulness of the body and relaxation methods, high stressed individuals can self monitor their

stress levels and reduce them when they are getting "stressed out". Preliminary studies suggest that the use of these methods can reduce the long-term risk of heart disease.

In addition, the Buddhist meditation practice of "sending and receiving" (tonglen) has been incorporated into Western psychotherapy treatments. In tonglen, a patient imagines an interpersonal situation that is difficult for them to deal with. This situation is frequently some type of conflict with another person. The person imagines drawing the energy of the conflict into their heart and incinerating it by reciting a mantra (typically Ah). They then breath out love and compassion, infusing the imagined situation with a different atmosphere. This practice of imagining enables them to reengage in the conflict situation, but now they perceive the situation in a new way, one that is typically more workable.

In the above examples, patients are taught Buddhist meditation techniques, but generally nothing about the Buddhist religion's worldview. From one perspective, this is a partial return to the roots of Buddhism. The Buddha focused on practice, not on philosophical theory. He frequently admonished his followers to not worry about the intellectual issues, but to spend time practicing instead. In fact, the Buddha had a list of topics he would not discuss that dealt with the question of where did the universe and Being come from, and where will they eventually go in the end (Dalai Lama, 2006).

From this perspective, "Buddhism" has already entered the America culture and spread quite widely. Other meditation techniques, particularly calm abiding (Shamatha) meditation, are also being broadly taught in American. Mindfulness and calm abiding meditation techniques, for example, are being taught to many of the Fortune 500 companies as a way to reduce stress and increase job focus (Time Magazine, 2014). Here again though, while the methods are being taught, the Tibetan Buddhist, or even just the Buddhist, worldview is not. Part of the reason is that these methods are not unique to Buddhism. They are found in several religions, including the Christian religion that is native to many Americans. Further, many Americans are suspicious of organized religion and its creeds. They prefer a more abstracted view that has methods that can provide them with their own personal

experience of "God" or spirituality (Pew Studies on Religion, 2015). In addition, Americans like to pick and choose among the doctrines offered by religions and frequently build their own unique set of beliefs. For many Americans, their interest in Buddhism reflects there belief that the Buddhist philosophy might be true and it might lead to real spiritual experiences.

The Challenge to Buddhism

What are the most significant challenges in validating at least some aspects of the Tibetan Buddhist worldview, thus ensuring the continuation of that Buddhist tradition in America? The biggest challenge, of course, would be establishing scientifically that Nirvana or a state beyond suffering exists and that a path of meditation and renunciation leads to it. That is a very ambitious goal, and perhaps too difficult to accomplish in the short term. It would require at a minimum having multiple individuals travel the path and achieve enlightenment, which is quite a challenge.

Three other challenges are determining if reincarnation is true, establishing if there is a subtle body, and determining if the Buddhist model of mind/consciousness can shed light on some of the biggest mysteries in psychology and philosophy such as what is a mind and how does consciousness arise? Making progress on any of these challenges would demonstrate the value of Buddhism by showing it does embody truths that are not currently part of the American worldview, and can therefore open major new avenues of research. We consider issues associated with these challenges next.

The concept of reincarnation is one of the central pillars underlying the Buddhist worldview. Buddhists believe that there are several realms of Being, and that sentient beings travel among them, driven by karma, until they achieve enlightenment. Further, Buddhists believe that all sentient beings have existed since the start of the universe, and have been continuously traveling among various embodiments since then. Buddhists believe that all sentient beings undergo suffering and that the only way to escape this suffering is to become enlightened (i.e., to achieve Nirvana). This belief provides a lot of the motivation to engage in

meditation and virtuous behavior, so one can cease the endless wandering among the realms. If there is no reincarnation, however, then much of the motivation to behave virtuously might go away. Conversely, if one could demonstrate firm evidence of reincarnation, then that might motivate others to behave more ethically and pursue spiritual goals.

Unfortunately, I am not aware of any sound evidence that supports the belief in reincarnation. There are many reports of children remembering past lives, but none of these have been validated to a scientific standard. Further, there needs to be a plausible model of how reincarnation works. The Tibetan Buddhist bardo teachings discuss what happens during the process of death, but aspects of this model seem to be based on a model of the physical universe that includes types of substances and perceptual processes that contemporary science is not aware of. Additional detail is needed to develop the reincarnation model to the point where it could be testable.

For instance, the bardo teachings put forth the belief that a sentient being is composed of a body made of matter (the stuff we are familiar with), a subtle body consisting of winds, channels, and essences which are composed of refined matter (stuff we are not aware of), that the subtle body is connected to the physical body in seventy thousand places, and that a separate essence (a subtle consciousness that we are not aware of) that travels between embodiments (Ponlop, 2006). This subtle body is the same one mentioned above that is supposed to be heavily involved in physical health. Is it possible to establish if there is a subtle body?

Scientists talk about closed and open systems. A closed system is one where all observed data are accounted for by existing theories and models. An open system is one that does not adequately explain all the data with existing models. The process of life and the existence of consciousness are both open systems, in that neither one has been adequately explained to the levels expected of a scientific theory.

Life is a form of "negative entropy". The second law of thermodynamics says that all things continuously devolve to simpler states (entrophy). In contrast, the process of life creates sophisticated assemblies that maintain their structure for a

period of time, and which are capable of extracting and storing energy from the environment to support this process. The process is fairly amazing in that living things both construct themselves, and continually recycle all material (i.e., the physical matter of the organism is being continuously replaced while living). Little is known about why this process occurs, or how it starts and ends. The science of genetics does know a lot about how life will unfold once it starts. But there is still a lot to discover about life and death.

It is possible that life could involve another type of energy (e.g., dark energy or dark matter) merging with normal matter and triggering the negative entropy (i.e., the process of life). It is also possible that such a process could potentially create something like a subtle body that mirrored the physical body. However, at this time, there is no scientific evidence to support either of these ideas; they are pure speculation and I know of no way to test them.

The Challenge of Consciousness

Skrbina (2007) examines the lack of progress in understanding the phenomena of mind. He notes that Western scientists and philosophers have been unable to reach a consensus on what mind is and determine how it is related to the body, or to matter in general, even though they have been studying it for two thousand years. He notes that most modern scientists have two unvalidated assumptions concerning mind research. The first is that minds are reserved for humans and some "higher animals" (i.e., more evolved). The second is that mind is somehow dependent upon the physical substrate of the brain. He notes further that many thinkers have challenged the idea that there is anything unique about human and animal brains and that no scientific research program has put forward a comprehensive model of how minds emerge from the brain. He calls for a research program to develop a general understanding of the phenomenon of mind. I think Buddhist philosophy has the potential to greatly contribute to such a program.

It is interesting to note that many Western scientists when referring to the phenomena of subjective awareness normally use the term *consciousness* instead of *mind*. While neither term is fully defined from a scientific perspective, scientists

seem more comfortable "researching consciousness" than "studying the mind". In discussing Western approaches to understanding how subjective awareness comes about we will use the term consciousness. In discussing the Buddhist approach we will use both terms, mind and consciousness, and make a distinction between the two terms.

The phenomenon of consciousness is not well understood by science. One popular view is that consciousness arises almost magically (scientists call it an emergent property) from systems (living and electronic) as they become more computationally complex. Such theories postulate that as complexity increases, consciousness increases, and that you can measure the degree of consciousness by measuring the number of bits per second that can be processed by the system. More bits per second equal more consciousness (Tononi, 2008; Koch and Tononi, 2008). The problem with such approaches is that they do not address the issue of the subjective experience of consciousness, the so-called first person view. Why is it that some things (i.e., sentient beings) experience perception, cognition, and emotion, while other things do not? To expand upon this, is a thermostat conscious? Is a more complex thermostat more conscious? If you are measuring how many bits of information per second a system can process, then clearly the more complex thermostat is "more conscious". But I think most people have difficulty with the idea of a thermostat being conscious. As noted by H. H. Dalai Lama (2006), the real question that needs to be explored is, what is it that changes in non-sentient matter that enables the emergence and evolution of sentient beings (i.e., what is the difference between regular matter and sentient matter)?

Due to the problems with the "complexity model", some researchers have turned their attention to other models of consciousness. One such model is that consciousness is synonymous with life. Several individuals have noted that only living biological based things seem to have the potential to be conscious, so consciousness must be co-existent with life (Searle, 1997). Therefore, if one wants to understand consciousness, one must study and understand the process of life. This is a relatively new approach and not much progress has been made to date, although it does show much promise.

A variation on this theme focuses on how consciousness developed, or was invented, as a result of evolutionary pressure. In this view consciousness was not part of the original universe. It was first created as a result of chance mutation of genes that produced an artifact—consciousness—that enhanced the fitness of the organism. Consciousness developed and continues to develop as response adaptations to changing environments because it provides increased fitness. From this perspective, more complex organisms should be more conscious, because those species have undergone more adaptation. In addition, there should be an original ancestor who first developed consciousness. However, I am not aware of any attempt to identify this original source.

Both the consciousness as a by product of life and consciousness as a product of evolution lines of research are attempting to address the issue of what changes in non-sentient matter that enables the emergence and evolution of sentient beings. Both approaches are making progress, but there has been no breakthrough to date. One challenge for these approaches is the fact that traditional Darwinian (evolutionary) theory does not address the qualitative distinctions between flora and fauna. Both are alive, both are relatively complex, are both conscious? This issue highlights the fact that determining at all whether something is consciousness is beyond the capability of science: there are no agreed upon set of markers. In addition, H. H. Dalai Lama has stated that: "A model of increasing complexity based on evolution through natural selection is simply a descriptive hypothesis, a kind of euphemism for mystery" (Dalai Lama, 2006). It does not really explain the key issue of what is required for sentience to emerge and how sentient beings of various complexities come about.

A fourth approach is to return to an older model called Panpsychism. While there exist several varieties of Panpsychism (Skrbina, 2007), they all argue that mind exists in some fashion in all living beings and non-living things. As you can see, this is in sharp contrast to the model that only living things possess consciousness. The main challenge for the Panpsychism approach is to explain why do we each seem to be a unified whole? That is, if all the atoms in our body have minds, why do we not have as many perspectives or feelings equal to the number of

atoms that we are comprised of? Panpsychism is the approach closest to the Buddhist position, although there are some substantial differences that will be discussed below.

Uniqueness of Buddhist Thought

As we begin to explore how Buddhism might contribute to a new model of consciousness, there are a couple of important distinctions that need to be made. From a Buddhist perspective, most beings live in a deluded state of being in what is called Samsara (i.e., the world we live in), but they aspire to become enlightened and live in the state of Nirvana. Samsara and Nirvana are not separate physical locations in the universe; rather, they are distinct states of mind, or being. The enlightened state of mind (sems-nyid) is described as pure awareness, an open dimension. In it there is no sense of an I and it functions similar to a camera lens in that the mind can focus on different "world settings" similar to the way a camera can focus at different depths of field. In contrast, unenlightened beings possess consciousness; they participate in a specific "world" and have a strong sense of I (sems). I use this distinction to help clarify the differences between awareness, mind, and consciousness. First, I define consciousness as a property of minds and awareness as a property of matter (i.e., all of what we perceive as matter is also awareness). Second, mind and consciousness are distinct but related things from a Buddhist perspective. A mind is a process; consciousness is a state the process can assume. Awareness, as used here (i.e., as a property of matter), is more of a building block and mind is something that can be built with it.

From a phenomenological perspective, awareness is that which is luminous and knowing (Dalai Lama, 2006). The presence of awareness, however, does not necessarily mean that a mind is present. For example, I think most Buddhists do not think a table has a mind, despite the belief that the table is awareness. A mind is a process; it is more than just awareness. Minds form out of the field of primordial awareness via the process of dependent origination (Taye, 1995; Kalu, 1997; Goodman, 1974).

Conceptually, mind appears to be a process that reacts to things. A mind is attracted to some things and moves toward them, it rejects other things and moves away from them, and finally some things are neutral, and it ignores them. This "moving back and forth" towards objects or forms is a volitional process that triggers the thoughts that are constantly flowing through our minds. Further, this process seems to imply that to have a mind, you must have some sense of an I (e.g., "I like this, I do not like that"). Once again, a table (or any other form) is made out of matter and as such, it is awareness, but that does not mean it has a mind, nor does it possess consciousness. It probably lacks the necessary neural hardware to "create" a mind. In contrast, sentient beings have minds (i.e., the process of mind) and might be conscious (i.e., be in a specific state or configuration).

The distinction between open awareness (sems-nyid) and mind (sems) is what distinguishes Buddhist thought from Western models of Panpsychism. The Panpsychism position is that mind exists in some form in all things (Skrbina, 2007). Buddhist thought postulates that the universe is a field of awareness (i.e., Buddha nature) and that minds develop as a "going astray" in the way information is processed. This process begins when individuals perceive themselves as separate from the universe, and begin to process and respond to information based on this sense of a separate I. Again, the Buddhist perspective appears to be that sentient beings possess minds (sems) but other material objects do not. Material objects exist as matter/energy/awareness, but they lack the process that creates a distinct mind.

In support this discussion about awareness, the Dzog Chen teachings of Longchenpa state that when you achieve a state of realization you realize that all matter is primordial awareness (Rabjam, 1998). Primordial awareness represents the original state of openness before the energy becomes part of a deluded state of mind. In addition, H. H. Dalai Lama (2006) has noted that the Guhyasamaja tantra states that matter in its subtlest form is prana, a vital energy inseparable from consciousness, suggesting again that all matter/energy is awareness. Once again, the process of going astray from the primordial ground is described in the teachings of dependent origination (Taye, 1995; Kalu, 1997; Goodman, 1974)

Further, from a Buddhist perspective, minds do not have to be embodied in what we call matter to exist. Buddhism postulates that there are three distinct realms: the desire realm, the form realm and the formless realm (Dalai Lama, 2006). The desire realm is the one that animals and human beings inhabit. Beings within the desire realm experience sensual desires and pain. In contrast, the form realm is composed of more subtle matter and is primarily experienced as bliss; pain is not known there. Further, beings in the form realm have bodies composed of light. Finally, the formless realm is an extremely subtle state of existence. Beings in the formless realm are said to be free from material embodiment; they exist on an immaterial plane of existence. They experience no physical sensations and abide in a state of perfect equanimity.

Additionally, Buddhism postulates that to completely appreciate a phenomenon like mind or consciousness, you must understand it from three distinct perspectives (Dalai Lama, 2006). The first perspective is matter, or physical properties. The Buddhist definition of matter is very similar to what Western science considers matter. Matter has physical properties such as extension in space and spatiotemporal locality (i.e., it exists somewhere). It includes physical particles like electrons and quarks, as well as all the electrical magnetic fields and forces of nature such as gravity.

The second perspective is mind, by which they mean subjective (first person) experiences. This includes emotions, sensations, and our rich imagination. It is the world where meanings exist. Sentient beings have their own subjective experiences and worlds of meaning based on the way they are embodied. While Buddhists believe that mind is dependent upon the physical base (brain and central nervous system in our case), they also believe that mental events cannot be reduced to the world of matter. The subjective mental realm enjoys a separate status of its own.

The third perspective is abstract composites by which Buddhist's mean knowledge created by humans. This realm consists of set of concepts that have been created by minds and put into concrete form by publishing them or creating a work of art, for example. These concepts influence the way we perceive the universe and

think. This realm consists of all the artifacts created by humans and is considered to be neither physical nor mental.

Towards a New Model of Mind

We are now going to attempt to lay the foundation for a new model of mind. We will consider the concept of mind from the three perspectives suggested by Buddhism. We start by looking at mind from a physical or matter perspective and consider the idea that sentient beings may exist in subtle matter and other realms. We know that dogs and bats perceive the world differently due to different sensory systems that dominate their perception (dogs – smells; bats – echo location). Similarly, we can assume that beings constructed from different physical particles would exist in a reality somewhat different from ours.

Modern physics postulates that there is a field that extends throughout the universe (Economist, 2015). This field contains what is called vacuum energy and particles continuously arise from it. Initially the particles are balanced between particles and anti-particles, (made up of anti-matter) but for some reason more anti-particles fall back into the ground leaving many more regular matter particles and creating the universe we know.

There are two classes of particles, those that contain mass (fermions) and those that carry forces (bosons). The two basic varieties of mass particles are leptons and quarks, of which there are six types each (total twelve). In addition there are four force particles (photons, gluons, gravitons, and intermediate vector bosons). Only a subset (4 of 12) of the mass particles comprise the universe we see. It is made up of up and down quarks, and electrons and electron neutrinos(both leptons). Combining these particles in various combinations creates other particles. For example, a proton consists of two up and one down quarks. A neutron consists of two down quarks and one up quark. Mass carrying neutrons and protons combined with force carrying electrons give rise to the further aggregated forms of matter that are the elements comprising the periodic table. These elements, when combined or aggregated further, provide the substances of our world.

The standard model of physics explains three of the four forces that operate in the universe (i.e., strong, weak, and electromagnetic; gravity is not yet well modeled). In addition, the standard model cannot currently explain dark matter or dark energy. Dark matter seems to be a form of matter (i.e., made up of other mass carrying particles) that we cannot see and only know its presence through its gravitational effect, and dark energy is something which is not made up of particles and appears to be a force driving the universe apart. If we accept for discussion purposes that all energy is ultimately awareness—as proposed by Buddhist philosophers—then there seems to be plenty of room for various types of sentient beings throughout the universe.

Science has different sets of theories to account for the behavior of the universe at different levels of complexity: Quantum mechanics accounts for behavior at the particle level (quarks and leptons); physics accounts for the behavior of elements; chemistry accounts for the behavior of combination of elements (molecules); and, biochemistry accounts for the physical properties of living things. Not all of theses theories are complete, in particular behavior at the field/particle level is not completely understood, and in a couple of cases theories used at different levels are not mathematically (and perhaps conceptually) compatible with each other. Applying any or all of these theories to a sentient being would consist of a physical level description of a sentient being.

In actuality, the problem of physically characterizing a sentient being is somewhat more complex in that we do not know what types of matter sentient beings in other realms consist of, and there might not be any existing theories that could be used to characterize them (e.g., we would have difficulty characterizing the physicality of an entity comprised of dark matter). Nevertheless, you would analyze them in terms of fields, particles, forces and their interactions, and the more complex types of matter that could be created out of the subset of matter that existed in that realm.

To help illustrate these points, let us notionally consider how to apply these theories to sentient beings in the three realms proposed by Buddhism. Formless realm beings are in a perfect state of equanimity and exist on an immaterial plane of

existence. They could potentially exist as part of the field that extends throughout the universe, or exist as 1st order particles that do not mix with any other types of matter. One would probably need a theory like quantum mechanics to characterize them physically. In contrast, form realm beings experience bliss and are composed of light. This sounds like they could consist of one or more types of force carrying particles. They would not consist of (what we know as) elements. To characterize such entities one might need two theories, one to characterize quantum effects and another for physical effects. Finally, desire realm beings experience sensual pleasure and pain; their bodies are made of normal matter (from our perspective). They are creatures like us and one would need all of the theories described above (quantum mechanics, physics, chemistry, etc.) to characterize them.

As beings move away from being solely composed of elementary particles and instead become made out of aggregated matter, they seem to possess more complex sensory capabilities. Why is this so? If your body was made of basic or simple matter and its sensory apparatus processed neutrinos, for example, then you would not see nor interact with much of the universe we know. You might still interact with the whole universe spatially (e.g., we can see energy that has traveled 14 billion light years to get here), but much of the "substance" of the universe would not be perceivable because neutrinos only rarely interact with aggregated matter. Sentient beings solely consisting of fundamental matter (i.e., that is less aggregated than the matter that comprises our universe) would likewise experience a smaller range of experiential states because they are fewer ways for that matter to interact with the universe. Finally, if a sentient being was part of the ground, it might not possess any sensory apparatus and consequently just stay in one state since there is no way to receive energy that could flip it to another state.

Conversely, if your body was made of aggregated matter like our own and its sensory apparatus processed electromagnetic energy, there would be "more" of the universe to perceive, and more ways to perceive it. Each piece of aggregated matter (molecules, amino acids, proteins, etc.) can interact with other types of matter through the reception and transmission of electromagnetic energy and particles. So from a sensory perspective, it makes sense that sentient beings consisting of more

aggregated matter would be able to experience a wider range of sensory experiences because they have more ways to interact with the universe.

The realm of mind is the world of subjective experience. For the formless realm being it is the experience of equanimity. For the form realm being it is the experience of bliss. For the desire realm entity it is the experience of sensual desires and pain. Here again, as you move away from the underlying field, the world you can experience becomes increasingly more complex. Desire realm beings seem to have a larger range of experiences available to them, than beings in other realms. This seems to suggest that their consciousness is more complex.

Buddhists believe that the world of subjective experiences rests on the world of physical states, but cannot be reduced to it. What you can experience is determined to a large extent by the way you are embodied. But no matter how you are embodied, your experience is still subjective. If you try to explain it solely as a physical state, you lose this subjective experience.

The realm of mind is the world of emotions, sensations, and imaginations. A separate descriptive framework, or language, that addresses the meaning of things and events is required to understand this world (i.e., other than physics, chemistry, etc.). It is the world of philosophy, ethology, and psychology. From a scientific perspective it is a fragmented world, where frameworks and methods to study the meaning of things are still being invented.

It is important to reiterate that what you experience is strongly influenced by the way you are embodied. Bats, elephants, dogs, and whales (etc.) all see different frequencies of "light" and hear different frequencies of sound than humans do. They perceive and respond to different aspects of the universe. In addition, most sentient beings only perceive an extremely small fraction of the energy available in the universe. Sentient beings use this small slice of the universe to create a "world" with their minds. This world is to some extent unique. Even when two sentient beings hear exactly the same sounds, the meanings for each (both denotation and connotations) are different, to some extent. Further, the range of states of consciousness that, say, an amoeba can experience, versus a gorilla, is quite

different. The complexity of a gorilla's nervous system enables it to assume more states.

Skrbina (2007) suggests that more complex entities probably have more complex cognitive functions available to them. Simple entities might only have the experience of a mental state and awareness of what it is like to be that entity. More complex entities might be able sense or perceive objects that trigger simple emotions, such as attraction and repulsion. Even more complex entities might have, in addition, a sense of I and an ability to remember important episodes in their lives. Finally, human level of complexity might have a whole range of cognitive abilities to include planning, the ability to mentally run and evaluate alternative plans of action, and the ability to communicate with others using language.

The realm of the mind seems to be strongly influenced by the final realm, the realm of abstract composites. This last realm, once again, consists of concepts and other products that have been "published"; that have been put into some type of physical form that enables other humans to see, interact, and learn from them. This realm is considered to be neither physical nor mental. It consists of knowledge that can be perceived and transmitted to other individuals.

In summary, it is possible that the Buddhist belief that sentient beings extend throughout the universe is true, and it is possible that sentient beings exist in different realms or dimensions that consist of other types of matter. To identify and study them would definitely require new conceptualizations about the concept of mind and Being. If Buddhist beliefs were true, then they would provide a new way to think about these subjects.

Conclusion

Let's start this section by summarizing some of the major worldview differences between Buddhist and the Western thought. The first worldview dimension considers an individual's or culture's beliefs on what are valid sources of knowledge. Tibetan Buddhists still believe that knowledge comes from unstructured (or untested) perception and Shamans. The dominant view in the West is that science, with its structured methodology, is the primary source of

knowledge, and that is unlikely to change as the result of Buddhism coming to the West. The second dimension considers beliefs on the origin of the universe. Here again the scientific model of cosmology is likely to remain the dominant view in American thought. The third dimension considers sources of well-being (treating the patient's subtle body versus treating the physical body) and Western models of health are unlikely to be abandoned any time soon. They are just too successful. The fourth worldview dimension considers the efficacy of magic versus physical action. Americans (for the most part) have abandoned the idea that spirits are external powers that exert control over the world. Many Tibetans are also abandoning the view of magic as a causal power.

Finally, there are substantial differences between the West and East on the nature of consciousness. Many Westerners see consciousness as something that was not there at the start of the universe; they believe it is something that either emerged as systems became more complex, or something that resulted from evolutionary pressure. However this Western approach to date has failed: (1) to address the differences between sentient matter and non-sentient matter; and (2) to address differences between plants and animals. Buddhists see sentient beings as pervading the universe. Consciousness may have helped create the universe and it is found in a variety of life forms throughout the universe.

It is in this last worldview dimension where I see Buddhism as having an opportunity to make a major impact on Western thought. Buddhist philosophers have spent two thousand years investigating the basis of consciousness (and minds) in the universe. Their ideas are complex, novel, and worthy of a detailed study by Western philosophers and scientists. This is not to say, however, that such a research program would be easy.

For example, there are difficult challenges in mapping a word meaning in one language onto a word that has similar meaning in another. At a high level the two words might have comparable meanings, but without knowing the associations (or connotations) that link a word to other concepts, one can be easily be lead astray. H. H. Dalai Lama (2006) notes that in the Western European languages there are several "mental" terms to include consciousness, mind, mental phenomena and

awareness. In Buddhist philosophy (in Sanskrit) there are the terms buddhi, shepa, and vidya all that can be translated as intelligence, in the broadest sense. These terms need to be further differentiated. Additional Buddhist terms include citta, or mind; vijnana, or consciousness; and manas, or mental states. Citta (mind) which includes emotional states, is a broader term than its Western counterpart. Vijnana (normally translated as consciousness,) also means much more that the English term. For instance, it includes the unconscious states found in psychological and psychoanalytic theories, such as unconscious desires. H.H. Dalai Lama states that the Buddhist concept of consciousness consists of a wide variety of mental states that vary in intensity, with some being highly charged. There is also an aspect of the consciousness/mental states that is volitional, that leads to action. It is also important to note that different Buddhist schools of thought use some of these same terms differently from each other. Significant research is needed to clearly understand the full meaning of all of the terms (Western and Buddhist) and to relate them to one another.

A second challenge is that Buddhism is usually taught as a historical subject, and taught by schools. First you learn Vaibhāṣika philosophy, then Sautrāntika philosophy, then Yogacara (or Cittamatra) philosophy and then Madhyamaka philosophy. Further, the philosophical schools are believed to be progressive improvements in understanding, with Madhyamaka being the highest teaching. This approach hampers modern theorists from developing syntheses that draw from multiple schools or from understanding the evolution of thought over time. In addition, among the earliest Buddhist teachings are a set of doctrines called the Abidharma, which include a description of Buddhist teachings on psychology and cognition. Some Buddhist schools do not view these teachings as canonical, and consequently ignore them, even though the earliest schools held them in high regard. These beliefs further hamper the development of an integrated approach to understanding consciousness that draws from different schools and time periods.

To demonstrate the potential of an integrated approach, I have sketched out (above) a framework of a model of mind/consciousness that draws from multiple sources. I have no doubt that I inadvertently left out knowledge from other schools

that may have greatly contributed to the discussion, and further I probably misrepresented some of the Buddhist ideas I discussed due to a lack of a complete understanding of the concepts. I do think, however, that I have demonstrated how a study of Buddhist philosophy could potentially enhance Western thought about consciousness and mind.

There is much that is left open in this account, starting with "What is knowing"? From a Western perspective, knowing is something that requires a state change (from not knowing something, to knowing it) in a sentient being. The key point is that something physical must change.

The Western model of knowing is based on an electronic system metaphor of information processing (also sometimes known as "no action at a distance"). In this model information is processed in a mind and as a result an intention is formed to do something, for example, say something. This "mental" intention has to then be transformed into a behavioral action, speaking words. Both the intention and action are believed to be physical events; they are brain states. The action of speaking the words creates sound waves that travel across the physical gap between the speaker and hearer. The hearer transduces the sound into a brain state, and the message is (hopefully) understood. The transmission of the sound produces the action of hearing. There is no hearing without the receiving and processing of a sound wave. There is no "action (or knowing) at a distance", since sound must cross the physical gap to be heard; and, there is no understanding unless there is some type of state-change in the receiving sentient being.

The information (sound wave in above example) does not necessarily have to come from another sentient being. It may be energy from the environment that is transduced by a sensor. Further, the "knowing" can be very basic or complex depending upon the nervous system of the receiving sentient being. For a simple organism, light transduced as "warmth" may produce a behavior of moving towards (or away from) the source of warmth. In a more complex organism, the reception of a sensory signal might trigger a cascade of associations (i.e., state changes within the sentient being) that lead to the formation of a complex representation of the environment (perhaps both social and physical). This is turn might cause some

behavior whose goal is to acquire additional information, and eventually lead to a response to the original signal. Further, many mammals have complex sensory systems, that while they are only capable of perceiving a very limited slice of the electromagnetic spectrum, are very good at creating a navigable representation of the "world".

It is not clear what knowing means from a Buddhist perspective, nor the ways that knowing can come about. The H.H. Dalai Lama has said the monks learn at a young age that the mental is that which is luminous and knowing (2006). Other Buddhist teachings say that consciousness reaches out to its object, but what this means is not clear. It may mean that Buddhist understanding is similar to that in the West in that a representation of the object must form in the mind for understanding to occur, or perhaps it means something else. The Buddhist texts I have seen do not discuss information coming from outside and being transduced. In addition, it is not clear how a formless realm being would "process information". If they only exist of pure energy, how does one produce a change in a sensor made of matter? Research is needed to better understand the Buddhist conception of knowing and how it is similar and different from the Western model.

Another major difference between Buddhist and Western thought concerns the nature of consciousness and awareness (i.e., that which enables a sentient being to take a first person perspective and experience things). Western scientists, once again, believe that consciousness was not there at the start of the universe. It either emerged as organisms (or systems) became more complex, or it developed as a result of evolutionary pressure on living things. In contrast, Buddhists believe that the primordial state is awareness, that all energy is somehow related to awareness. Further, Buddhists believe that awareness can be in two distinct states: that of an enlightened being or a deluded being. The enlightened state of being is an open dimension, a state of unity beyond concept, thought, and differentiation. In contrast, a deluded being has a strong sense of I, which causes the sentient being to see the world from an egocentric perspective. From such a perspective, there are forms that activate concepts, which in turn trigger thoughts. The deluded being is conscious of a very specific world bounded by his or her concepts.

The process which describes the transformation of an enlightened being into a sentient being is known as the Twelve Links of Dependent Origination. It describes the stages of transformation through which the primordial awareness becomes a specific being with a specific mind, with specific beliefs and attitudes. Further, the Twelve Links of Dependent Origination is one of the more difficult constructs to translate into English. There are several words/constructs that really do not have any Western intellectual conceptual counterparts. This is partly driven by Westerners seeing mind developing relatively late in time and Buddhist seeing it there from the beginning, and also due to the Buddhist belief that matter is actually awareness versus the Western belief that it is inert. In addition, different schools within Buddhism describe the process somewhat differently. Therefore, when you read different translations, you have difficulty comparing the translations to one another (e.g., compare Kalu, 1997, Goodman, 1974, Taye, 1995). Developing a new conceptual translation that accounted for the different metaphysical world views between Buddhist philosophers and Western scientists could potentially lead to major advances in our understanding of how mind and consciousness developed in the universe, and facilitate the spread of Buddhist ideas in the West.

Once again, it is this transformational process that distinguishes Buddhist thought from Western concepts such as Idealism which postulates that everything is mind, and Panpsychism which postulates that everything has a mind (or mind like qualities) (Sprigge, 1998). In contrast, Buddhism holds that primordial awareness is the ultimate reality, and that awareness can "go astray" and become the minds of individuals who think they are separate from the rest of the universe. Further, Buddhism does not propose that all elements of nature (atom, molecules, etc.) are things with minds. Instead, matter is perceived as awareness, without an actor (or anyone) being aware.

This is just a high level sketch of select Western and Buddhist positions, but it is here that I believe that some of the most meaningful discussion could be held between Western and Buddhist philosophers. In actuality, there are at least several different Western theories of Idealism and Panpsychism and this sketch does not do justice to the richness of ideas. More detailed analysis is needed.

In conclusion, it is debatable to what extent Tibetan Buddhism will influence Western ideas and beliefs like those found in America. For the most part, Tibetan Buddhist beliefs and practices seem primitive compared to similar Western ideas. There has been some adoption of meditation practices (mindfulness practices in particular) particularly into therapies that help prevent depression and heart disease. However, these practices do not really draw upon the major philosophy tenets of Tibetan Buddhism.

If Buddhism is to produce a major lasting impact on the Western worldview, it is more likely to come from demonstrating that one or more of the major pillars of Tibetan Buddhist thought (i.e., reincarnation, existence of subtle body, or model of consciousness) is true. Of the three potential candidates, it seems that the Buddhist model of consciousness can have the largest impact in the short-term. There already is a huge interest in understanding consciousness in the West, and Tibetan Buddhism has some significant ideas and perspectives to add to the discussion.

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