Honors Senior Literature and Composition Summer Reading Assignment 2019

Dear student,

According to your schedule for the 2019-2020 school year, you have signed up for Honors Senior English Literature and Composition. Welcome to the class!

To help prepare you for the class, please read the following text over the summer: ***Siddhartha* by Hermann Hesse.** It would be preferable, but not mandatory, if you could find the edition translated by Hilda Rosner, published in 1951 by New Directions Publishing Corporation.

As you read, you should be doing a careful textual analysis, and this requires marking up the text, so please acquire a personal copy of the novel. It is good practice to annotate for key literary elements, especially character, theme, and writing style. Also, it is beneficial to write short summaries in the margin at the end of a chapter; this helps you quickly identify key aspects of that chapter. While your annotations won't be turned in, they can help you with the other assignment:

- Completing a dialectical journal (see attached for information and rubric) – **due Aug. 27, 2019.**

Please note: You also **will be tested** on the novel **during the final week of August**. Other outside reading of your choice and attending a Shakespeare production (such as the UCCS Theatreworks summer performances) are strongly encouraged!

In addition to the novel and journal, you will need to **read the following attached scholarly articles** relating to *Siddhartha*:

"Siddhartha" from *Bloom's Literature* and "Buddhist Perspectives" from the *Encyclopedia of Science, Technology, and Ethics*

Please interact with the articles by annotating key ideas, making connections, and asking questions as you read OR bring notes that show interaction with the text if you do not wish to print the articles. You will use the annotated articles/notes in our first graded Socratic seminar **due August 27, 2019**.

If you have any questions, email me at mary.anderson@asd20.org, although please realize that email is checked only periodically throughout the summer.

Have a wonderful summer! I look forward to seeing you in the fall.

Sincerely,

Mrs. Anderson,
Air Academy High School English teacher

Dialectical Journals

The term "Dialectic" means "the art or practice of arriving at the truth by using conversation involving question and answer." Think of your dialectical journal as a series of conversations with the texts we read during this course. The process is meant to help you develop a better understanding of the texts we read.

Requirements:
- Use The TEMPLATE:
https://docs.google.com/document/d/1EKzNPXHBNffW0Qq6DHy7w9PARlBoUtc69FTEWZOqj-E/copy
- Quantity of entries: 10 (minimum)
- Include entries from beginning, middle, and end of the book
- Write a fully developed paragraph for each entry (10 sentences minimum)
- **Due Aug. 27, 2019.** Students will be **required to submit the journal to turnitin.com;** teacher will provide instructions once students return to school. Assignments that are submitted late will automatically lose 25%, which means the highest possible grade will be a 75%. Please do not wait until the last minute to begin these assignments. You also will have a college essay due and a test over the *Siddhartha* within the first few weeks of school.

Procedure:
- As you read, choose passages that stand out to you and record them in the left-hand column of a T-chart (*ALWAYS include page numbers*).
- In the right column, write your response to the text (ideas/insights, questions, reflections, analysis, and comments on each passage)
- Label your responses. The following is a list of *sample* codes:
    - (CH)Characterization – Analyze details or dialog the author gives you to build his/her characters.
    - (C) Connect – Make a connection to your life, the world, or another text
    - (P) Predict – Anticipate what will occur based on what's in the passage
    - (L) Literary Device – analyze the author's craft using literary terminology
    - (R) Reflect – Think deeply about what the passage means in a broad sense – not just to the characters in the story. What conclusions can you draw about the world, about human nature, or just the way things work?
    - (T) Theme - Determine the author's overall message about some aspect of life through a close reading of a passage.
    - (M)Mood – Determine the mood or tone of a scene and explain how that might be important.

Sample Dialectical Journal entry: *Blues Ain't No Mockinbird* **by Toni Cade Bambara**

Passages from the text	Page #	Commentary
"The puddle had frozen over, and me and Cathy went stompin in it. The twins from next door, Tyrone and Terry, were swingin so high out of sight we forgot we were waitin our turn on the tire. Cathy jumped up and came down hard on her heels and started tapdancin. And the frozen patch splinterin every which way underneath kinda spooky. 'Looks like a plastic spider web,' she said. 'A sort of weird spider, I guess, with many mental problems.'"	1	(CH) In this first paragraph of the story Bambara indirectly characterizes the narrator using rural Southern dialect to let us know our setting is the South and our narrator may be smart, but may not be "educated." We also learn that the characters are children from the activities described. (L) Nice thermal imagery about the puddle freezing over to let us know how cold it is in the scene. (C) The visual imagery of the twins swinging high on the tire swing reminds me of my own childhood when I had to wait in line forever to use the swing. And how exciting it was once it was my turn. (L) There is more great visual imagery about the splintering puddle, and the kinetic imagery of the "tapdancin." I especially liked the simile about the spider web and the humor of spider with mental

		problems. (M) The mood of the story seems to be playful and humorous. (P) I wonder if the entire story will be this way, too? Overall, I am drawn into the story and am already laughing.

Choosing Passages from the Text:
Look for quotes that seem significant, powerful, thought provoking or puzzling. For example, you might record:

- Effective &/or creative use of stylistic or literary devices
- Passages that remind you of your own life or something you've seen before
- Structural shifts or turns in the plot
- A passage that makes you realize something you hadn't seen before
- Examples of patterns: recurring images, ideas, colors, symbols or motifs.
- Passages with confusing language or unfamiliar vocabulary
- Events you find surprising or confusing
- Passages that illustrate a particular character or setting
- If you find an extremely long passage that moves you, don't hesitate to use it, just employ ellipses (…) to shorten your writing load. You'll have the page number so that if you decide to share your entry, the class can easily find and read along.

Responding To the Text:
You can *respond* to the text in a variety of ways. The most important thing to remember is that your observations should be *specific and detailed.* You can write as much as you want for each entry.

The Target: Higher Level Responses
- Analyze the text for use of literary devices (tone, structure, style, imagery) and how they contribute to the Theme
- Make connections between different characters or events in the text
- Make connections to a different text (or film, song, etc.)
- Discuss the words, ideas, or actions of the author or character(s)
- Consider an event or description from the perspective of a different character
- Analyze a passage and its relationship to the story as a whole

Dialectical Journal Rubric Name _____

A	• Detailed, meaningful passages and quotations • Thoughtful interpretation and commentary about the text; avoids clichés • Includes comments about rhetorical strategies such as diction, rhetorical questions, syntax, and how these elements contribute to the meaning of the text • Makes insightful personal connections and asks thought-provoking, insightful questions • Coverage of text is complete and thorough • Journal is neat, organized and professional looking; student has followed directions in the organization of journal
B	• Less detailed, but good quotations • Some intelligent commentary; addresses some thematic connections • Identifies and interprets many rhetorical strategies, but does not explain they contribute to the meaning • Some personal connection; asks pertinent questions • Adequately addresses all sections of reading assignment • Journal is neat and readable; student has followed directions in the organization of journal
C	• Several relevant details from the text • Most of the commentary is vague, unsupported, or plot summary/paraphrase • Some listing of rhetorical strategies; virtually no discussion on meaning • Limited personal connection; asks few, or obvious questions • Addresses most of the reading assignment; there are gaps in coverage • Journal is relatively neat; may be difficult to read; did not follow all directions in journal organization
D	• Few relevant details from the text • Most notes are plot summary or paraphrase • Few elements of rhetoric addressed, virtually no discussion of meaning • Limited personal connections; no good questions or too many questions • Limited coverage of the text; sections with few entries or not covered • Did not follow directions in organizing journal; difficult to read or follow; evidence of having been hurriedly done in one sitting.
F	• Incomplete/Does not meet the standards above
0	• Failure to bring in by the due date

Siddhartha

By Stefan Borbély, Bloom's Literature

The German-Swiss writer Hermann Hesse (1877–1962) started the novel *Siddhartha* at the end of 1919, when his psychoanalytical novel *Demian,* (1919) was published, but after a few chapters he suspended his work on the novel for more than 20 months, finishing it only three years later, in summer 1922. In a letter written on August 19, 1922, to the French novelist Romain Rolland, an international champion of the pacifist ideology at the time, Hesse announced the completion of *Siddhartha* and its prospective printing scheduled for late autumn that same year. The work was translated into English in 1951 under the same title. The 20-month suspension of the work is still intriguing, since it represents, perhaps, the main key for understanding the message and the symbolism of the text.

As Hesse himself would claim, *Siddhartha* had been conceived as an "Indian poem," which means that the plot and the symbols of the text do not follow closely the classical myth of the Gautama Buddha complex. The novel is merely a meditation on how to achieve serenity by contemplation, not a textbook on spiritual exercise and practice. Hesse's Buddha goes beyond asceticism and technique to assert that serenity can be obtained by love and simplicity. Apart from the classical prototype, who steps back from the contemplation of Nirvana to preach among the humans the true path of salvation, Hesse's hero opens toward the realities of everyday life by taking up the cosmic rhythms that lie within the humble things of the universe: the trees, the rivers, nature itself.

The novel can be interpreted as a serene hymn to nature, acknowledged as the gentlest counterpart of humans. The novel *Demian,* Hesse's previous literary success, presented the protagonist's self-fulfillment in a typical social environment, although the energetic message of the text, taken from the late 19th-century German philosopher Friedrich Nietzsche's teachings, suggested that the chosen few must "go beyond" morality and restriction, in order to enter the exclusive fraternity of those who are powerful. But after publishing *Demian,* Hesse's interest in people faded and shifted toward nature. *Siddhartha* expresses this shift, although another prose work acknowledges the transition: *Klingsor's Last Summer,* published by Hesse in 1920.

Hesse's acute desocialization is also shown by his decision to settle in Montagnola, a relatively small town in the Swiss Alps, not far from Lugano, to live the life of a hermit. In the letter to Rolland, Hesse also confessed that in spite of being less than an hour away, he had not visited Lugano for more than a year. The protagonist of *Klingsor's Last Summer,* a painter (like Hesse himself), lives alone in a distant medieval landscape, dotted by mysterious ruins and primeval woods. Like many of Hesse's heroes, Klingsor is a charming wanderer, self-sufficient in his isolation, where he occasionally indulges in Oriental poetry, good wine, and the random visits of a few friends. One of the teachers from *The Glass Bead Game* is also a Chinese hermit, living outside civilization in a tiny bamboo forest that he planted. Hesse's passion for gardens, flowers, and trees is well known, as is his conviction that nature is enough for a complete life. *Siddhartha*'s contemplation expresses a pacifist ideology that can also be perceived as a revolt against the new political order brought about by the end of World War I.

Similarly, *Siddhartha* marks a revolt against traditional European values, which brings Hesse close to his literary and philosophical masters, Arthur Schopenhauer and Nietzsche. The preference given to Oriental religion and its symbols shows his reluctance to take up Christianity as a privileged technique of salvation. Moreover, if we remember Hesse's Pietist family milieu, full of close relatives who went to India to preach, the option for Buddhism represented to Hesse an equivalent to generational insurgence. Accordingly, the young Brahmin Siddhartha, the wise protagonist of the novel, rises against his father and his teachings, and becomes a humble boatman on the banks of a huge river, which is the central symbol of the protagonist's personal adventure.

The revolt against the father figure (which can also be Gautama Buddha and his classical teaching) represents a main starting topic of *Siddhartha.* Hesse's Indian "poem" is based on the paradoxical spiritual evolution of a young Buddhist Brahmin. Siddhartha is, to a certain extent, an anti-Buddha, because Hesse's protagonist reverses the classical story of the historical Gautama Buddha, who lived in the sixth century B.C. According to the standard Indian legend, the founding

master of Buddhism was given the name Siddhartha at birth (Gautama was his family name), and became Buddha Shakyamuni ("the sage of the Shakya clan") through a spiritual rebirth after several years of asceticism and contemplation. He reached perfection through severe fasting and contemplation and attained complete spiritual insight, which yielded the sense of the pure concentration of the self and the possibility of transcendence toward the heavenly beauty of Nirvana.

Another legend maintains that while engaged in extreme fasting and surrounded by his disciples, Buddha discovered the uselessness of extreme mortification and decided to "come back" into the world of humans to preach the doctrine of salvation. Although five of his disciples abandoned him because of their disappointment with their master's having ceased his contemplation, Buddha set out as a missionary on his way to challenge the archaic Hindu wisdom. He initiated a growing community of monks and followers, who gathered around him and his favorite new disciple, Ananda.

The classical Indian legend distinguishes between two successive phases in Buddha's career, since an initial process of extreme asceticism, spiritual concentration, and solitude is followed by a decisive option taken toward human altruism, teaching, and generosity. In the first stage, Buddha reaches personal perfection, which allows him to control and surpass the endless chain of reincarnations. This implies going beyond our world and acting outside the ever-rotating wheel of time. In the second stage he decides to become a teacher and a preacher, a radical repositioning of his own self inside time and human suffering. By doing this Buddha acknowledges the existence of history and helps people find their way out of the traps and vicissitudes of everyday existence.

Hesse's unorthodox plot starts with the revolt of the young Siddhartha against his condition as a Brahmin. He feels that the doctrine of sacrifice, which he learns as a very promising future Brahmin, cannot help self-exploration, since it leaves aside the very sense of asceticism, which is inner peace and self-understanding. To explore his soul Siddhartha leaves his father's house and joins the tribe of the wandering ascetics called *samanas,* who live in the forest and engage in relentless techniques of reclusion and concentration. Followed by his friend Govinda, and meeting eventually the great Gautama Buddha, who teaches in a nearby region, Siddhartha achieves a highly spiritual detachment but also experiences the paradoxical revelation that, by yielding to extreme asceticism and mortification, he risks ending up in self-alienation, given the gap that may widen between him and the surrounding world.

To compensate for his estrangement, Siddhartha leaves the *samanas* and takes a step toward the sensual beauties of everyday life. By doing this he rediscovers many details of life he has ignored so far: the vivid colors of nature, people's faces and their smell, the unpredictable metamorphoses of material beings, and, of course, love. Lured by a beautiful woman, he feels sensual rejuvenation in spite of his years of mortification. Reaching a town, he meets an attractive courtesan, Kamala, who initiates him into sexuality. To please her with precious gifts, he becomes a successful merchant under the guidance of an older tradesman, Kamaswami, but he practices his trade with detachment and joy, more as an art than as a way of living. In spite of his material success as a merchant, he decides to leave Kamala and Kamaswami, seeking to join his old friend Vasudeva on the banks of a river and become a humble ferryman.

The characters and situations of the novel are structured according to well-defined old Buddhist realities and symbols. Kamala, the courtesan, symbolizes the earthly world as illusion and Samsara, the endless flow of births and reincarnations. According to the Hindu teaching, due to the cumulative effect of one's actions in former lives (called *karma*), the soul is condemned to be reborn again and again, remaining captive in an endless chain of reincarnations. The Buddhist teaching also says that through penance, asceticism, and contemplation, a perfect soul can escape the cycle of reincarnations, reaching the pure realm of Nirvana. By leaving the *samanas,* Siddhartha voluntarily decides to continue his life within Samsara: His and Kamala's captivity in the world of illusions is represented by a bird in a cage, released by the courtesan when Siddhartha abandons his career as a merchant and goes down to the great river.

On the other hand, Govinda, Siddhartha's disciple, stays close to Nirvana, refusing to join his master when the latter decides to leave the ascetic life of the *samanas.* Siddhartha reveals to him that his decision to take up the earthly world is based on an unorthodox interpretation of the classical Buddhist doctrine, that is, on a solitary revolt against the very meaning of the master's teaching. He explains to Govinda that to achieve perfection, Buddha separates Nirvana and Samsara, although the universe as we see it does not show any sign of separation. On the contrary, it is a vivid integrity, an organic whole in which Nirvana and Samsara do not oppose each other but coexist in mutual completion. If a

philosopher desires to become a sage, he must get to know both sides of the universe, not only Nirvana, since self-understanding also entails the harmonious integration of both halves of one's soul, not the privileging of one half against the other.

The river is the main symbol of completeness in the novel. Siddhartha and Vasudeva venerate it as a cosmic teacher, who binds the two sides of the universe together and links earth to eternity. The great river marks the center of the imaginary geography in Hesse's novel. Siddhartha crosses it several times. At first, when he is still a wandering ascetic (*samana*), he learns from the river that everything passes away in an endless flow that links life to death in the cosmic cycle of reincarnations. Later on, when he returns to the river as a ferryman, he experiences the revelation that the river has simultaneously contained, since time immemorial, all the nurturing energies and "images" of the world.

Further Information

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BUDDHIST PERSPECTIVES
By Peter D. Hershock, *Encyclopedia of Science, Technology, and Ethics*

Buddhism arose around 500 B.C.E. as a practical response to the trouble and suffering that characterize the human condition. Uniquely among traditions concerned with those issues, Buddhism has never offered a final description of ultimate reality; it also has not proposed a universal fixed solution to the persistent and concrete problems of solely human trouble and suffering. Instead, Buddhism has developed a general yet systematic strategy for generating truly sustainable resolutions of the trouble and suffering that afflict all sentient beings in their specific contexts.

Significant common ground with the traditions of science and technology, particularly as they have developed in the West, is suggested by Buddhism's commitments to developing insight into patterns of causal relationship; challenging both common sense and other, more sophisticated forms of presupposition and authority; construing knowledge as a cumulative and consensual process; and devising concrete interventions to redirect patterns of human activity. However, Buddhismtraditionally also has avoided any form of reductionism (materialist or otherwise), countering claims of both privileged subjectivity and absolute objectivity, inverting the presumed priority of facts over values, identifying

the limits of (especially instrumental) rationality, and cultivating limitless capacities for emotionally inflected relational transformation. These commonalities and differences suggest that Buddhism is well positioned to complement but also critically evaluate science and technology as epistemic (knowledge-centered) and practical enterprises.

Historical Background

Originally promulgated in what is now northern India by Siddhartha Gautama (likely 563–483 B.C.E.), who became known as the Buddha, or "Enlightened One," the teachings of Buddhism quickly spread across the subcontinent and, over the next half millennium, throughout central, eastern, and southeastern Asia. Its emphasis on the need for context-specific responses and resolutions tailored to each new linguistic and cultural environment resulted in a distinctive pattern of accommodation and advocacy through which Buddhism steadily diversified, resulting over time in a complex "ecology of enlightenment."

Traditionally, Buddhist teachings and practices have been classified into three broad evolutionary streams: the *Hinayana* ("Small Vehicle") stream, which is prevalent today in southeastern Asia and more commonly is called the *Theravada*, or "way of the elders"; the *Mahayana* ("Great Vehicle") stream, which is most prevalent in eastern Asia; and the *Vajrayana* ("Diamond Vehicle") stream, which is associated primarily with Tibet and the societies and cultures of north-central Asia. None of these streams has a universally central text such as the Confucian Analects, the Christian Bible, or the Muslim Qur'an. There also are no globally fixed Buddhist institutions or centralized authorities. Although the analogy is not precise—especially because Buddhism is not a theistic tradition and does not advocate a pattern of belief in a supreme deity or deities—one can compare the breadth of Buddhist teachings and practices with that of the "Abrahamic" religions of Judaism, Christianity, and Islam.

A coherent axis of critical insights and practical strategies has remained constant in the course of the historical development of Buddhism. This axis is expressed most succinctly in the so-called *Four Noble Truths*, the fourth of which has come to be known as the *Eightfold Path*: All *this* is suffering, troubled or troubling (Sanskrit: *duhkha*); suffering or trouble arises with particular patterns of conditions; suffering or trouble ceases with the dissolution or absence of those patterns; and those patterns of conditions can be dissolved through the cultivation of complete and appropriate understanding, intentions, speech, action, livelihood, effort, mindfulness, and attentive virtuosity. The insights and practices summarized in the Four Noble Truths traditionally have been referred to as the *Middle Way*, a brief examination of which can introduce Buddhism's distinctive stance with respect to science and technology.

THE MIDDLE WAY: THE ONTOLOGICAL PRIORITY OF AMBIGUITY. Buddhism originated at roughly the time when early Greek thinkers were developing the precursors to natural science and philosophy. As in Greece, the intellectual terrain in India in the first millennium B.C.E. was extremely fertile. If anything, the range of Indian beliefs and debate regarding the nature of ultimate reality, its relationship to the world of experience, and the meaning and purpose of the good life exceeded that which developed on the Peloponnesian peninsula and in Asia Minor.

Recognizing the interdependent origins of all things, the Buddha saw that each individual view in the spectrum of beliefs failed to resolve the trouble and suffering afflicting all sentient beings. Moreover, he realized that the entire spectrum—encompassing a range of metaphysical and ethical positions running from hard materialist reductionism and hedonism at one end to theistic monism and asceticism at the other—was similarly inadequate. The very conviction that some independent ground (matter or spirit, for example) or grounds (as in the case of metaphysical dualism) underlies all things was a primary cause of trouble and suffering. Equally conducive to suffering was the belief that individual things exist independently of one another. In actuality, the Buddha realized, nothing literally exists or "stands apart" from all other things. What is most basic is relationality.

Rather than being a compromise position or a synthesis of a variety of contrasting views, the Middle Way consisted of the process of critically countering all epistemic and practical stances and the "horizons" associated with them. It represents a return to that which is prior to the exclusion of the "middle" between "this" and "that," between what "is" and what "is-not." This process is modeled most concisely perhaps in the teaching of the three marks, an injunction to

see all things as troubled or troubling, as impermanent, and as having no self or fixed essence and identity.

THE TEACHING OF THE THREE MARKS. The distinction between is and as—that is, between existential claims and strategic claims—is particularly important in the imperative to see all things as characterized by *duhkha*, or suffering and trouble. Whereas claiming that all things are troubled or suffering can be shown to be empirically false, seeing all things as troubled or suffering causes one to perceive how even the moments of greatest happiness come at a cost to someone or something. Far from being an exercise in pessimism, seeing all things as troubled or troubling helps a person understand his or her situation from another person's perspective. In effect, this entails opening up connections that allow people to realize an ethically shared presence. It means becoming aware that in some way all people make a difference to one another and have a [responsibility](#) for asking, "What kind of difference?"

Seeing all things as impermanent (Sanskrit: *anitya*) makes it impossible for people to assume or even hope that they can hold on to anything forever. This undercuts the kinds of expectation that lead to disappointment and suffering. It also makes it impossible to sustain the belief that people can do nothing to change their current circumstances. Seeing all things as ceaseless processes means seeing that no situation is truly intractable. Because every situation continuously evidences both energy and movement, debate cannot center on whether change is possible but only on what direction it should take and with what intensity.

Finally, seeing all things, including humans, as lacking any essential nature or identity renders impossible any claims that specific people are inherently good or bad. This dissolves the primary, prejudicial grounds for racial, ethnic, religious, and political conflict; it also undercuts any pretense that people simply are who they are. Seeing all things as *anātman* (Sanskrit)—literally, as having "no-self"—forfeits the basic conditions of maintaining chronic conflicts and opposition.

It also entails abandoning any justification for separating spirit and nature, the human and the animal, the individual and its environment, and consciousness and matter. The teaching of no-self thus came to be associated with the practice of seeing all things as empty (Sanskrit: *śūnya*), that is, as a function of horizonless relational patterning. For this reason, in later Buddhist usage emptiness (Sanskrit: *śūnyatā*)—the absence of any abiding essential nature—often has been equated with fullness. Instead of signifying its privation, the emptiness of a thing consists in its unique way of bringing into focus and contributing to all other things. An observable example of this is the way species contribute both directly and indirectly to one another's welfare in a sustainable ecosystem, with each species uniquely processing, circulating, and augmenting the resources of the system as a whole. As put by the second-century C.E. Indian Buddhist philosopher Nāgārjuna (ca. 150–250 C.E.), understanding emptiness means appreciating the mutual relevance of all things.

Doing this, however, also entails realizing that what people refer to as separate, individual "things"—whether plants, animals, human beings, or histories—are nothing more than people's own editions of the total pattern of relationships that they focus and to which they contribute. For example, what people take a dog *to be* reflects their own values—the horizons of what they believe (or will allow) to be relevant—and this varies with whether a person is a laboratory worker, an only child living on a farm, or an elderly person confined to a small apartment. Because the particulars of people's experiences are conditioned by their values and intentions, people's day-to-day experiences cannot provide complete or objective pictures of their situation. In actuality, what people customarily assume to be independently existing objects are compounded or put together (Sanskrit: sa|sk|ta) out of habitual patterns of relationship.

Although many of these habits—and thus the nature of people's experience—reflect relatively individual values, intentions, likes, and dislikes, they also are conditioned by the values, goals, and desires embodied inPage 259 | *Top of Article*families, communities, social and political institutions, and cultures. In Buddhist terms, the human world arises as an expression of people's [karma](#) and any practice directed at resolving the suffering or trouble that occurs in it must be karmically apt.

THE TEACHING OF KARMA. According to the Buddhist (as opposed to Hindu) teaching of karma, people should not see the topography of their life experiences as a simple and objective outcome of the intersection of their actions and the operation of universal moral law and/or divine will. It also should not be seen as a simple function of "natural law"

and/or "chance." Instead, individual and communal experiences should be seen as reflecting ongoing and always *situated* patterns of consonance and dissonance among people's values and intentions. In light of the emptiness and impermanence of all things, karma can be understood as a function of sustained acts of disambiguation, a pattern of values-intentions-actions that constitutively orders the world and the individual's experienced place in it. Thus, not only do people have and share responsibility for the direction in which things are headed, the *meaning* of the human situation as a whole is continuously open to revision. The Buddhist cosmos may be described as irreducibly dramatic, a place in which all things are at once factually and meaningfully interdependent.

The Buddha most commonly discussed karma in terms of basic relational orientation: an orientation toward chronic and intense trouble and suffering (Sanskrit: *samsara*) and another toward liberation from those states (Sanskrit: *nirvana*). Orienting the individual and communal situation away from *samsara* and toward *nirvana* cannot be done through independent exertions of will aimed at bringing about the world people want. Understood karmically, controlling one's people's circumstances so that one experiences what one wants causes one to live increasingly in want, in circumstances increasingly in need of further control. Skillfully and sustainably directing one's situation away from trouble and suffering depends on seeing all things as thoroughly interdependent in a world in which differences truly make a difference and freedom is not a state of limitless choices or autonomy but a horizonless capacity for relating freely. Buddhist freedom does not pivot on matters of fact but on meaning; it is a matter not of controlling consequences—the victory of "free will" over "chance" and "determinism"—but of demonstrating appreciative and contributory virtuosity.

PRAJN˜Ā, SAMĀDHI, AND ŚĪLA: WISDOM, ATTENTIVE MASTERY, AND MORAL CLARITY. All Buddhist practice thus can be seen as directed toward healing the "wound of existence." Traditionally, this was understood as requiring three dimensions of sustained capacity building: *prajn˜ā, samādhi*, and *śīla*, that is, insight into the irreducible relationality of all things; attentive mastery, a function of meditative training that implies both perceptual poise and responsive flexibility; and moral clarity arising from attunement to the currents of value and meaning constitutive of any karmically inflected situation and a capacity for discerning how to orient them away from *samsara*and toward *nirvana.*

Thus, Buddhist practice is always both a *critique of self* and a *critique of culture.* Neither of these as aspects entails a general rejection of personal or social norms and institutions. However, both necessitate continuous and context-sensitive evaluation of those norms and institutions and the material processes through which they are realized. The relative balance of these dimensions of Buddhist practice of course have varied historically. In light of the nature of contemporary societies, they entail a readiness to engage science and technology critically.

Buddhism in Relation to Science and Technology

There have been robust traditions of science and technology in many Buddhist cultural spheres, particularly in India and China. In general, those traditions were not subject to direct critical attention and did not play significant roles in shaping the patterns of accommodation and advocacy that characterized Buddhism's adaptation to its changing cultural, social, and historical circumstances. Although there are passages in early canonical teachings that indirectly address the place of technology in governance and the furthering of social good (e.g., the *Cakkavatti Sihanda Sutta*), Buddhist critiques of scientific knowledge and considerations of the ethics of technology are only implied in broader critiques of religious, philosophical, and commonsense views. This was true throughout the first two millennia of Buddhist history even when Buddhist universities were the largest and most comprehensive in the world (roughly 600–900 C.E.), with faculties of as many as 2,000 teaching international student bodies in excess of 10,000.

A major shift occurred with the rapid expansion of European colonialism from the sixteenth through the late nineteenth centuries. Resting on interwoven scientific and technological advances, the colonial era brought Buddhism to the attention of the West and also brought modern Western traditions of science and technology to the attention of the Buddhist world.

Two primary currents of interaction emerged at the beginning of the twentieth century and have remained strong since that time. The first involves Buddhist accommodations of scientific and technical knowledge, initially in the colonial states of southern and southeastern Asia. Reflecting on the course of events on the Indian subcontinent, Buddhist leaders concluded that to the extent to which Buddhism was positioned as a religion based on revelatory insights and

"unscientific" practices, it would undergo rapid and probably fatal erosion. Those leaders thus began to find textual evidence that would support the claim that Buddhism was in fact a rational and empirically grounded tradition that in many ways prefigured the role of science in the modern West. This "Protestant Buddhism" positioned itself as scientifically rational, logical, and devoid of the sorts of superstitions, myths, and mysticism that were a severe liability in Western eyes. The legacy of those "reform" movements can be seen today in the "globalization" of Tibetan Buddhism.

The second current of interaction developed largely as a result of the rise of science as the West's intellectual sovereign, the associated corrosive effects on European and American religious faith, and the breakdown of classical Newtonian physics. Asian traditions, Buddhism in particular, appeared as complementary systems that could provide scientific reality with a cogent ethical dimension, with scientists and philosophers such as Albert Einstein (1879–1955), Alfred North Whitehead (1861–1947), Betrand Russell (1872–1970), and Robert Oppenheimer (1904–1967) hailing Buddhism as the religion of the future and the appropriate partner of science.

In the final third of the twentieth century, as Western knowledge about Buddhism increased, there came to light—especially in cosmology, physics, biology, ecology, and the computational sciences and neuroscience—patterns of uncanny resonance with Buddhist teachings that caused many people to conclude that they demonstrated the prescient, "postmodern" nature of Buddhism and its "anticipation" of, as well as potential for contributing to, contemporary science. More cautious commentators have seen the encounter between Buddhism and contemporary science—particularly in psychology, medicine, the biology of communication and perception, and behavioral science—as extremely fertile and mutually beneficial, with each tradition being assisted in its pursuit of truth.

Some Buddhists question the logic and wisdom of the marriage of Buddhist and scientific approaches to truth. It has been pointed out, for example, that legitimizing Buddhist teachings on the basis of their anticipation of current scientific truths is counterproductive. In light of the fact that the history of scientific change can be described as a "punctuated" evolution of essentially broad and incompatible research paradigms, many contemporary scientific truths will have no place in the science of the next decade, much less in that of the next century. Identifying Buddhism with current scientific paradigms runs the risk of discrediting Buddhism as they are replaced.

Moreover, it has been argued that although science often has been characterized as explicitly eschewing questions of meaning and claims neutrality with respect to the uses of scientific knowledge, Buddhism is centrally concerned with fostering directed revisions of the interdependence of all beings and stresses the union of knowledge and compassionate engagement.

Prospects for Critical Interaction

This suggests an opportunity for a "third stream" that would restore and enhance Buddhism's traditional role of examining patterns of belief and conduct and disclosing how they are limited and/or counterproductive in terms of understanding and resolving trouble and suffering.

Until recently most Buddhist work along these lines focused on the roles of science and technology in industrial and postindustrial patterns of economic development that have induced a drift toward materialism, consumerism, and fractious individualism. It has been noted that science and technology have played into global historical processes through which diverse patterns of sustainable interdependence have been replaced with patterns of simple coexistence. This systematic translation of diversity into mere variety has been criticized as resulting in a decrease of responsive and contributory capacity that is particularly apparent at the community level, with entire villages having been rendered unsustainable through incorporation into the global market economy. Here primary ethical attention has been given to the uses of science and technology to further elite, corporate, and national interests over and often against those of particular populations and the natural environment.

CHALLENGING THE VALUE-NEUTRAL STATUS OF SCIENCE AND TECHNOLOGY. Some Buddhist critics have begun to question whether the moral valence of science and technology can be restricted to the way in which they are used. When considered in the context of interdependence and karma, it is apparent that*Page 261* | *Top of Article*Western-

style development both drives and is driven by scientific and technological activity and that this symbiotic relationship is not accidental. In actuality it reveals deeply and continuously shared values. Because [Buddhist ethics](#) is concerned foremost with how both intentions and values shape human circumstances and experience, this recognition entails admitting that science and technology have a moral influence apart from any particular uses to which they are put.

At least since the time of Galileo (1564–1642), Western (and now global) science and technology have coevolved, embodying a constellation of values that include precision, predictability, objectivity, universality, power, and independence, all of which can be said to depend on the values of control and autonomy. These core values have proved to be highly compatible with short-term positive consequences in responding to trouble or suffering. Promoting these values means promoting the freedom to experience what people want in circumstances they prefer. From within a linear causal framework there is little reason to expect that the same situation will not hold in the long term.

However, in terms of the recursive processes of karmically ordered causation and change, control and autonomy—when expressed with sufficient commitment and/or on a sufficient scale—generate ironic effects and intensifying cycles of perceived trouble or suffering. For instance, a sustained commitment to control leads to increasing capacities for control but also creates circumstances that are both open to *and* in need of control. Because control always is exerted over and against another person or situation and cannot truly be shared, its widening instantiation engenders increasingly steep slopes of advantage/disadvantage, with a prime example being the income and wealth disparities endemic to technology-permeated global markets.

DISPLACING THE INDIVIDUAL AS THE UNIT OF ANALYSIS IN EVALUATING SCIENCE AND TECHNOLOGY. Although autonomy or the freedom to choose or control the nature of one's experienced circumstances may appear to be a simple ethical good, this is true only insofar as *individual* needs, desires, and values are taken as an evaluative basis or unit of analysis. In the absence of universal agreement about the desired nature of shared circumstances and the meaning of the good or the effective isolation of disagreeing parties, multiple exercises of autonomy within a population necessarily result in conflict.

The dominant Western ethical responses to this dilemma—utilitarianism and communitarianism—have not challenged the assumption that individually existing beings are the basic unit of both ethical analysis and communities. Those schools of thought thus have remained compatible with unabated commitments by both individuals and communities to technological development biased by an orientation toward control and autonomy. By contrast, the ethics associated with the Buddhist teachings of emptiness, interdependence, and karma require that qualities of relationship be taken as the basic unit of consideration. Generally stated, granted that the individual, independently existing, and rightfully autonomous self is a pernicious fiction, using the individual as the unit of analysis in evaluating science and technology can only lead to ironic consequences.

From this perspective it has been argued that control- and autonomy-biased technological development leads to mediating institutions, such as global commodity markets and mass media, that allow meaningful differences to be nullified while distracting attention from immediate personal, communal, and environmental relationships. This brings about a systematic erosion of diversity and situational capacities for mutual contributions to shared welfare. Thus, whereas control- and autonomy-biased technologies are conducive to ever-widening *freedom of choice*, they are correlated with an increasingly compromised capacity for *relating freely* and thus with ever more intense and chronic patterns of ignorance, trouble, and suffering.

In more general terms Buddhist ethics cautions against blurring the distinction between tools and technologies. Tools should be evaluated in terms of their task-specific utility for individual users (persons, corporations, or nation-states) and should permit the exercise of "exit rights," that is, choosing *not* to use them. Technologies, however, never are used in a literal sense. Instead, they consist of broad patterns of conduct that embody systems of strategic values and encompass activities that range from resource mining and tool manufacturing to marketing and the innovation of new cultural practices. Although one may choose not to use the tools associated with a particular technology, the world in which one lives continues to be shaped by that technology. With respect to technologies, there are no real exit rights.

From a Buddhist perspective technologies and the sciences with which they symbiotically develop systematize the way people conceive and promote their ends, conditioning the meaning of things, and thus can be evaluated only in terms of the ways in which their core values affect the quality of people's conduct and relationships.*Page 262* | *Top of Article*In Buddhist terms this entails critically assessing how and to what extent these values are consonant with the core Buddhist practices of cultivating wisdom, attentive virtuosity, and moral clarity for the purpose of realizing liberating patterns of interdependence.

It generally is agreed among Buddhists that scientific advances in people's understanding of factual processes—for example, the dynamics of climate change—should inform efforts to resolve current and future trouble and suffering sustainably. It also is agreed that scientific and technological research should be undertaken in ways that contribute not only to human welfare but to the welfare of all sentient beings. In combination, these commitments make imperative a deepening of the historically arranged "marriage" of Buddhism, science, and technology and promise an increasingly skillful furthering of the Middle Way.

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