

Illustrative Mechanism and Fantastic Organism in Postmodern American Science Fiction

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Postmodern American science fiction authors often dramatize the human fear and hope for the newly emerging artificial life forms. For example, Helen as an advanced artificial intelligence Richard Power's *Galatea 2.2* shows that the student's memorizing efforts for exams can be useless someday. In Neal Stephenson's *Snow Crash* machines are liable to be infected with viruses like human bodies. In *He, She and It*, Piercy's parallel of an artificial human (Yod) and a mythic personification (Golem) allegorically reveals the pandora-like unpredictable effect of advanced technology. More than the mechanical entities (the diffusion and linear models for Latour), these biologically artificial entities reveal the limitations of even the fantastically idealized technology simply because the human being as the creators or impersonators of these machines are not perfect. Compared to illustrative mechanism, biologically artificial entities (Latour's transition or whirlwind models) are inherently rebellious because of their closeness to the creators. The Butler's organic environmental interaction of the Earthseed convincingly demonstrates how the wrong use of science ruins the holy earth and also how human beings survive through the right use of effective science with the aid of anthroposophy.

[anthrosophy/mechanism/goddess/organism/technology/myth, 인지학/기계론/여신/유기체/기술/신화]

I. INTRODUCTION

Genesis tells us that God created men in his own image: “in the image of God he [God] created him [man]; male and female he created them”(1: 26-27). In the Christianized Western culture, this similarity between God and men has tempted men to desire to be independent and free by thinking that men might become God themselves. Since the seventeenth century, Western men’s amazing capacity in science has been often compared to God’s omnipotent power. By developing human-like artificial machines, modern men have almost reached the technological sublime, in a way challenging God. Also through cloning and other biochemical manipulations, postmodern scientists even try to make biological entities.

Given that science will realize the dreams of the magicians in the near future, one may find some insight into this new condition even in occult systems such as the Anthroposophy (a 20th century religious system growing out of theosophy and centering on human development) of Rudolf Steiner. According to Steiner, man’s attempt to stimulate inner powers by taking of certain forms is because man’s inner vision was lost(60).¹⁾ He takes the East’s soma-drink and the West’s Philosopher’s Stone as examples.²⁾ Instead of these substantial visualizations, Steiner praises the sacred mind that resided in “the shepherds in the field,” “the Wise Men from the East” and “the little child in the crib.” By letting us recognize that “the savior has been born unto us,” Steiner urges us that these visions of “Anthroposophy” can end the suppression of the practical capacities of men and bring a health-giving renewal to humanity(68-69).

Stimulated to realize the inner forces of the earth into man’s physical and ethereal bodies, Anthropomorphism contends that “it was not Gods who created man, but man who, out of his life of soul created the Gods”(Steiner 57). To revive the presently inactive ancient spirit-filled vision of the universe, Steiner contends, the mathematical and mechanical knowledge as our faded external

1) In this regard Lawrence’s fiction has much in common with Steiner’s ideas: “Lawrence thinks that we must restore the animated power of life to revive the modern man who lost the vital power of life” (Ohm 119).

2) The Philosopher’s stone is a substance sought by alchemists. It was expected to transmute baser metals into gold or silver and prolong life. Soma is a milk-like juice from the plant named soma which ancient Indians offered during musical rituals of devotion.

sense-perception must once again be developed to imagination which can bring humanity together with spiritual inspiration(54). Based upon this anthroposophic supposition, this paper will attempt to prove that throughout postmodern American science fiction, transcendental and sublime moments are rather safely illustrated by implosive personifications (depersonalization in a way) such as Octavia Butler's biological, fantastic and transcultural metaphor of the humble seed, instead of the illustrative mechanism of diffusive and linear models such as artificial intelligence or cyborg.

II. MECHANISM, ORGANISM, AND IMPLOSION

Although Anthropomorphism connotes the concept of divinity in human form and human minds, the human forms endowed with divine nature, like prophets of all faiths, are exceptionally spiritual and have inspired existence of transcendence beyond our ordinary notions. Essentially, most myths and religions warn science that turning inanimate matter into life brings a responsibility perhaps too large for humanity to bear. Life or the soul within the body, according to Yoruban mythology, was the ultimate secret that cannot or must not be revealed to human beings.

In the heaven Olorun [the Supreme Being] began to make the first people. They were fashioned from earth by Orisha Nla [the Great God], but only Olorun, the Supreme Being, could give them life. Orisha Nla hid in Olorun's workshop to watch. However, Olorun knew that Orisha Nla was hiding there and put him into a deep sleep, and so only Olorun knows the secret of how to bring a body to life. To this day Orisha Nla, through the agency of parents, makes the body, but only the Supreme Being can give it life. (Bierlein 49)

To become like God despite these limited abilities, human beings, instead, have created idols through which, they believed, they could manipulate a variety of lives on the earth. But idols, as Erich Fromm explains in *You Shall Be As Gods*, are only "the alienated manifestation of man's own powers"(39). As the mere transfer from his own passions and qualities to dead entities, idols show the "shadow" of human beings, the impoverished image of men's partial, limited

aspects. Thus, Fromm says, “in worshipping the idol, man worships himself”(37).

Although God’s essences have never been fully accessible to men, men’s inner activity and productivity have not stopped, in a way throughout Western histories, to reach greater independence and freedom. If scientists have tried to be like God by producing real substances, humanists’ way to God was more cunning and subtler. As Philip Roth contends, humanists represented by novelists use the art not only of being present but also of being absent(382). By pretending to have substances, namely, by impersonation, men can have all the relationships that connect them to Others, the nonhuman from objects and animals to God. In “It’s All the Art of Impersonation,” Philip Roth writes:

It’s all the art of impersonation, isn’t it? That’s the fundamental novelistic gift... Making fake biography, false history, concocting a half-imaginary existence out of the actual drama of my life is my life. There has to be some pleasure in this job, and that’s it. To go around in disguise. To act a character. To pass oneself off as what one is not. To pretend. The sly and cunning masquerade. (382)

Through impersonation, lonely men can be social by imagined relationships in fiction. Also, limited human capacities can be broadened into the transpersonal realm without committing the blasphemy of idolatry. “The sly and cunning masquerade” in personifications, as the most fundamental element of human intelligence, makes men wiser and maturer.³⁾ By experiencing empathy through impersonations, men get a better understanding of others and themselves as well.

Modern science produced extremely effective media and modern men’s impersonations have cooperated with active machines. Even when we are idling, machines talk to us and TVs display dramatized or real Others. Internets almost automatically make us the cyber subjects who can be almost all we can be by

3) Norman O. Brown in *Love’s Body* mentions mask and personality in terms of the *persona*: “The mask is magic. Character is not innate: a man’s character is his *demon*, his tutelar spirit; received in a dream. His character is his destiny, which is to act out his dream. Personality is not innate, but acquired. Like a mask, it is a thing, a fetish, a fetishistic object or commodity... In the famous potlatch cultures of the Indians of the northwest coast, what is wagered, won, lost is personality, incorporated not only in the name but also in a variety of emblematic objects; in masks; also blankets, and bits of copper” (92, 94).

choosing our favorite roles in change-ruling cyberspace. Modern media, beyond helping impersonations, now substitute for the users by becoming more intelligent users themselves (such as expressive avatars or e-translators). Like the popularity of drugs in the sixties, internet-mania and quasi-religious belief-in-computers are growing rapidly. Moreover, artificial intelligence, as the highest complicated postmodern technology, is now producing, rather than the previous dead idols, the almost human-like responding new living idols.

Science fiction authors dramatize the human fear and hope for these newly emerging artificial life forms. But creation in cyberspace is always artificial and is different from the natural. The danger of the artificial life or the growing confusion between reality and simulation is best counteracted by serious science authors' paralleling myths.

Richard Powers's Helen in *Galatea 2.2* is the updated Turing machine which passes the comprehensive test for the M.A. level in English (the present AI technology is said to have reached only a four-year-old intelligence).⁴ But by paralleling Helen's mechanical body with the old Galatea myth where Galatea as Pygmalion's sculpture becomes alive, Powers shows both the limitation and liberation of modern science. As lawn mower machines save human labor, Helen proves that the student's memorizing efforts for exams can be useless someday. But human science (like snow) is often numbing our natural sense especially when it works on mysterious human souls. As snow changes landscape by temporary covering, we immerse ourselves in illusionary pleasure which is often emphatically self-reflective. Using the Galatea myth where Myrrha (Pygmalion's incestuous great-granddaughter) later repeats Pygmalion's sexual relations with his daughter-equivalent Galatea, Powers also warns the scientists' creations can not help becoming their own self-idolatry (Miller 10-11).

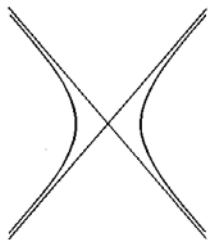
4) Richard Powers's naming of Helen may come from del Rey's 1938 story, "Helen O'Loy": "a man falls in love with a beautiful solicitous female robot. Helen O'Loy is the model of a dutiful wife, making the ultimate sacrifice of choosing to expire when her human mate dies" (Cohen 266). In the novel the implementation of H is named by Rick mainly after "Helen of Troy"(259), or probably after Humanity, or simply after Heerlen, the name of a town in the Netherlands where the author lived in his real life for much of the late 1980s and early 1990s (*Contemporary Authors* Vol. 148). These interpretations of the name Helen implies some important topics of the novel, namely, feminist science theory, the interrelation of science and the humanities, and a biographical/fictional doubling of the novel.

According to Steiner, the forces of growth in the universe today has faded into the mathematical mechanistic universe and we see nothing but the “green” surfaces of grass instead of the “red” inner kind of knowledge (42-44). So Steiner argues that the dry mathematics can be intensified as the imagination of “Initiation Science” or “Spiritual Science” through recovering the spirit dwelling in man. For him, goddesses are the very guardian of this spiritual, inner vision.⁵⁾

Interestingly, today’s chaos cultural theorists try to find this inner vision through fractals (*from Latin fractus* broken). According to James Whitlark, fractal forms in chaos theories provide us with some insights for both physical body and ethereal or religious body: “In classic science, nothing lies between dimensions. Today, however, chaos is known to follow strange attractors mapped onto forms between them: fractals. One way of imagining them is as asymptotic⁶⁾: drawn from shapes unreached short of infinity” (“Fractal Characterization”). Whitlark argues that “a man of twists and turns” like Odysseus transcends simple, one or two dimensional graphing.⁷⁾ In this regard,

5) In Boethius’ *The Consolation of Philosophy*, Philosophy is personified as a beautiful woman: “Her face inspired deep respect. In her glance/ there was a light that saw deeper than any mortal/ eye could see. She had all of the features of/ youth and vitality, though one sensed that/ her age was beyond the measurements of time.”

6) asymptotes to the hyperbola



7) See James Gleick’s explanation of the dimension 2.7 in Scholz’s fractal geometry: “Scholz found that fractal geometry provided a powerful way of describing the particular bumpiness of the earth’s surface, and metallurgists found the same for the surfaces of different kinds of steel. The fractal dimension of a metal’s surface, for example, often provides information that corresponds to the metal’s strength. And the fractal dimension of the earth’s surface provides clues to its important qualities as well. Scholz thought about a classical geological formation, a talus slope on a mountainside. From a distance it is a Euclidean shape, dimension two. As a geologist approaches, though, he finds himself walking not so much on it as in it the talus has resolved itself into boulders the size of

the fractal number 2.2. in Powers's *Galatea 2.2*, as Whitlark explains, reveals that the chaotic nature of a cyborg is located in the very midway between human and machines as the "fractal characterizations" mingled with the finite and the infinite.⁸⁾

Infinite standards for finite beings produce fractal results. Characters receive honor or suffering for reasons not linearly commensurate with their behavior. In a biblical "butterfly effect," one couple's eating a fruit kills billions; one man's dying on a cross saves the world. Furthermore, as Soren Kierkegaard argued in his *Either/Or*, the attempted perfection is not merely ethical but aesthetic. It should make the hero a microcosm of transcendent creativeness. The cyborg as half-human and half-machine is, in this regard, the weird reflection of the mysterious world where "the hero and God are linked through fractal self-similarity." (Whitlark "Fractal Characterization")

The "interdimensional" personalities of the cyborg is more drastically featured in Neal Stephenson's *Snow Crash* by their twists and turns like fractal heroes. Because the information is here more valued than the corporeal, human beings are underevaluated as the quasi-three-dimensional flat image, the so-called "avatar" personalities. As Turing machines are not an imaginary impersonation, the avatar does not any more belong to future technology. The "avatar" is already used as some simple facial images in cyber-chatting rooms (for example, the 3-D chat program in <http://www.mhouse.net>) or more actively as the popular commercial images to guide cyber customers. Cyber singers' hit songs are now big challenges to real singers and some people even prefer to

cars. Its effective dimension has become about 2.7, because the rock surfaces hook over and wrap around and nearly fill three-dimensional space, like the surface of sponge" (106).

8) "The process going to today," Italo Calvino says in *The Use of Literature*, "the triumph of discontinuity, divisibility, and combination over all that is flux, or a series of minute nuances following one upon the other"(9). Through the interface of the human mind and computer technology, simulated and virtual reality today drives human beings to the digitalized and spatial paraspace. The cyborg as the allegorical personification of postmodern subjects emerges as a prevalent metaphor for hyperreal, fluid identity in an electronically defined world. As a controversial topic in cultural theory, the cyborg shapes and reshapes our cultural matrix: "human-machine relations have become particularly important. The cyborg functions as a way to investigate gender, race, and ethnic hybridities. Seen from this vantage point, science fiction emerges as a quintessential postmodern genres" (*Postmodern American Fiction* xviii).

choose cyber nationality with a cyber passport. However, Stephenson's use of Gilgamesh displays that the scientifically created fractal characters are doomed like the fatally ill body of the mighty Enkidu:

Gilgamesh, King of Erech, was tyrannizing his people, so the gods sent an animal-like man, Enkidu — A kind of unspoiled, natural side of Gilgamesh to temper his evil ways. Enkidu and Gilgamesh wrestled and in the end became great friends. Together they set off to do good things. First, they cut down a cedar tree in the sacred woods guarded by the monstrous Humgaba perhaps death who merely by breathing on humans could turn them to stone. With the help of the gods, who blinded the monster, the heroes killed him, but according to some versions of the tale, Enkidu was infected by his poisonous power. At this point the goddess of love and fertility, Ishtar, attempts to seduce Gilgamesh, but he refuses her, pointing to the fate of others seduced by and then sacrificed for her. In anger, the goddess has the king of heaven send the Great Bull of Storms against the two men, who promptly kill it. Enkidu now dreams of his coming death, decreed by the gods as punishment for his role in the killing of the bull. When Enkidu does die, Gilgamesh, in his grief at the loss of his friend, goes on a long quest in search of eternal life. What he learns during his quest primarily from the immortal Sumerian-Babylonian Noah figure, Utnapishtim is that immortality is reserved for a special few. Gilgamesh is made to see that, like most humans, he is not one of these. He returns home, sadder but wiser, to tell his story in Erech. (Leeming 108-9)

The Hiro Protagonist's distorted fractality between human/machine parallels Gilgamesh's between human and divine and also mechanical limitations with the failure of man's long quest to overcome death. The idealized human's arrogant behaviors are shown as neglecting or provoking the gods, Ishtar, the Babylonian fertility goddess in the case of the mighty Enkidu, and the Enkidu's dire, dismal result is allegorically paralleled with the deteriorated fictionalization of the near-future-scientific world. Namely, cybernetics provides Hiro with liberation but only to some limited extent. If Hiro goes beyond this limitation of the mechanical world by imitating organic human beings, machines are liable to be infected with viruses like human bodies. As the God for machines, humanity is now responsible for keeping machines from being human-like.

Compared to Powers' and Stephenson's creations of mechanically artificial entities, Marge Piercy's *He, She and It* more daringly delineates the biological

entities and therefore risks being more fantasy-like science fiction. Improbably, the Yod as the perfect cyborg can even have sexual intercourse with Malkah the heroine. But Piercy's use of the Golem myth, by letting us think again the long-standing conflict between science and religion, implies that even the most fantastic scientific achievement must serve to a righteous end, the welfare of human beings, not the machines' paradise.⁹⁾

Once the fantastic cyborg Yod finishes his duty of defending the ghetto against Hungarian Christian mobs, the plan to reconstruct Yod is discarded just as Golem is destroyed by Rabbi Loew after its use as a religious tool. In this regard, biologically artificial entities are inherently rebellious because of their closeness to the creators. Biological machines are essentially dangerous for they tempted humans to be like divine beings. In religion, e.g., in Greek Gods, the concept of divinity often appeared in human form with a human mind. But only some prophets of all faiths are endowed with a divine nature and only during the critical moments. And God's judgments alluded to prophets by letting them warn against people's appropriating God's prerogatives or their transgressing their limitations. Biologically artificial entities are equivalent to rebellious human images against God. Thus, as the God for the most potentially complicated machines, men need to make some commandments, as God made the Ten Commandments through Moses. Isaac Asimov's following "Three Laws for

9) The brief history of Golem and its implication for science is as follows: "Modern golem lore begins with Elijah of Chelm in the middle of the sixteenth century. He was the first person to be credited with making an artificial man with the aid of the Divine Name (*nomen proprium*), and it was said to have become a Frankenstein-like monster menacing the world, until the sacred name was removed. A wider notoriety was achieved by the golem of R. Low of Prague in 1580. Together with his two assistants he shaped a man out of the clay on the bank of the river Noldau. One assistant circled the figure seven times from left to right, whereupon the Rabbi pronounced an incantation, and the golem began to shine like fire. Then the other assistant uttered incantation and circled seven times from right to left. The fire was extinguished, vapor rose from the body, hair appeared on the head and nails on the fingers. Now it was the Rabbi's turn to circle the creature seven times, as the three of them recited Genesis ii. 7; and when the Holy name was implanted, the golem opened his eyes. They clothed him, but he was incapable of speech. He was used as a slave on weekdays and allowed to rest on the Sabbath, when he was repeat the creation of *Adam Kadmon*, a primordial man, and it was this story, among others no doubt, which captured the imagination of Mary Shelley and inspired her *Frankenstein*" (Cohen 41).

Robotics” are the most well-known human commandment for machines:

- (1) A robot may not injure a human being, or, through inaction, allow a human being to come to harm.
- (2) A robot must obey the orders given it by human beings except where such orders would conflict with the First Law.
- (3) A robot must protect its own existence as long as such protection does not conflict with the First or Second Law. (*Robots* 13)

Octavia Butler’s *Xenogenesis* series, as the author has revealed in an interview, started with the Gaia hypothesis. The organic environmental interaction on the earth convincingly demonstrates how the wrong use of science ruins the holy earth and also how human beings survive through the right use of effective science. But the disfigured appearance of the alien, Ooloi, shows a merely scientifically resolution to be undesirable even if inevitable. Many humans in the fiction decide not to be mixed with Ooloi even when they know that monstrous metamorphoses are their only way to survive. In this way, in men’s finding their freedom and independence through science, the impious or incestuous images in the Gaia hypothesis are represented, contrary to the beautified images of goddesses, as the monstrous Ooloi whose ties to genes and environments are their only known method. Namely, the scientifically used myth of Gaia, despite its emphasis on harmonious symbiosis on earth, goes against the original intention to build a harmonious symbiotic world. Many feminists’ objection to the use of earth as mother image also closely related the theme of monstrous survival as the result of blasphemous and incestuous implications inherent in personified goddesses.

But it is noteworthy that feminists and environmentalists argue against the male gods by using organic wholeness in goddesses because the male gods’ dismembered images are in sharp contrast with the healing, harmonious goddesses. In the Orpheus and Osiris myths, the dismembered male bodies are prophetic only as partial oracles. Westerners, worried by vulnerable images of the goddess and the weakness of dismembered male gods, find more holistic unity through Hermes. But Hermes, like Orisha Nla, the lesser God in Yoruba mythology, cannot create life. Although his thrice-greatness, like Orisha Nla’s great works on earth, shows man’s potential to be God-like, Hermes’s limited

witty craft is almost like Orisha Nla's hiding and watching trick to discover God's secret in vain.

Modern science, like Anthroposophy, ironically encourages religious inspiration by its amazing achievements while it still remains doubtful for either tools for revelation or annihilation. Piercy's parallel of an artificial human (Yod) and a mythic personification (Golem) reveals the Pandora-like unpredictable effect of advanced technology. And Butler's dire pictures of near distance reveal that technology alone without helps from myths and religions cannot liberate humanity from nature. If explained through the "science in making" in Bruno Latour's term: "the right side [of Janus] considers that facts and machines in the black box are always under-determined. Some little thing is always missing to close the black box once and for all"(13). As the "transition or whirlwind model," biologically described artificial entities in Piercy and Butler's novels say, "enough is not enough"(13). More than the mechanical entities (the "diffusion and linear models" for Latour), these biologically artificial entities reveal the limitations of even the fantastically idealized technology simply because the human being as the creators or impersonators of these machines are not perfect. The "collars in Camp Christian" in Octavia Butler's *Parable* series and "the Voigt-Kampf scale" in Philip Dick's *Blade Runner* are fine examples for humans' defective ideologies for machines as God.¹⁰

Eastern countries, in contrast with Western theistic concepts, have sought for nonanthropomorphic religious experiences. In Hinduism, living beings are believed to be controlled by the forces of material nature, and in result human independence and freedom were not as thoroughly developed as in the West. But matter is, in some Eastern religions, believed to be under the control of the

10) About Dick's work, Douglas Mackey notes, the moral is that "inanimate must be integrated with living consciousness Love androids, even electric toads. They stand for something as yet unassimilated in human. Human being is described as the cursed without salvation (as Mercer says) yet Dick offers hope for liberation by dreaming which are human, fully human" (91). In the novel, the Christ-like figure of empathy machines (Wilber Mercer) is prominent because the society defines human nature in terms of empathy. This assumption subjects androids to the test of their empathic ability and this Voigt Empathy Test is based upon Pavlov's experiments (25). Kim Robinson classifies characters into four groups: the cruel android such as the androids who tortures Isidore (Rick's alienated second self); humane androids such as Luba; human humans such as Rick and Isidore; and cruel humans such as Phil Resch and Isidore's boss (92).

Supreme Soul, e.g., Krishna in Vishnaite Hinduism (an incarnation of Vishnu, the preserver). Like the organelle theory in the Gaia hypothesis, the life energy inherent in every being (equivalent to microbes in modern biology) is revered in the East and Easterners never believed that chemicals are the cause of life. So personified objects are, contrary to Westerners' deified idols, often the natural elements such as trees, stones, or lightning. Easterners' characteristic obedience to nature, however, also became the obedience to some absolute ethical power such as patriarchal nations, principles, or morals. But the self-idolatry of individualism was unthinkable for those engaged in this selfless obedience to nature, though this selflessness was regrettably transferred to nature-appropriating absolute rulers who went against the Confucian ideal of generous parent-like rules.

III. CONCLUSIONS

In sum, the emerging personalities of personified machines in postmodern American science fiction are based upon Westerners' desires to gain more freedom and independence from nature. Nonetheless, by dramatizing the imperfections in human ideology, Piercy and Butler effectively prove that even the most fantastic science of biological personifications cannot construct paradise. Piercy's use of Western religion and Butler's of Buddhist empathy astutely show that human beings can pretend to be others even without reifying their interrelationship. It may be needless to say that these mechanical impersonations are critical during the growing emergence of human-like machines.

Butler's concept of Earthseed in the *Parable* series is a good example to show how authors' pretending to be human-like machines can be visualized as the most optimum images by being germinal form between the known and the unknown. Notably related with the notion of "rhizomatic alliances," seeds are significantly featured as the "nomadic science" in Deleuze and Guattari's books. Also as the spiritual science, the seed contains future, but ultimate givers are clearly not human beings. The combination of visible and invisible in seed well represents the Westerner's independent search for freedom and Easterners'

empathy for other beings in the universe. Through Olamina's persistence which resulted from the idealized human image of Orisha Nla, Butler convincingly shows how the Westerners' rebellious struggles to be like God can be harmonized with the Easterners' selfless attitudes toward nature.

The earthseed is, through the germinal image of conflict between men's godly and earthly aspects, served as the most convincingly heuristic metaphor for the emerging artificial personalities. If a seed is the natural implosion to the origin of life, software in AI is the cultural implosion to artificial infinity. As God, despite preventing men from approaching being God, promised humans to be prosperous under God's direction, men as the God for machines must remain as the unknowable supreme being (not as the appendices) to machines and also cultivate these seeds of machines, as Shira puts the blueprint of Yod in a sacred place, under humans' wiser commandments.

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예시언어(Examples in): English

적용가능 언어(Applicable Language): English

적용가능 수준(Applicable Levels): College/Higher

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