



Review: The Powers of the Universe by Brian Swimme

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Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

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Scholarly Book Review

ABSTRACT

This essay presents a review on Brian Swimme's 3-DVD set of lecture series in the interdisciplinary field of philosophy, cosmology and consciousness. In the eleven 45-minute episodes of a systematic 9-hour immersive program, a set of 12 intercorrelated cosmological powers is proposed on the basis of modern scientific theory. A positive and life-affirming vision of human potential is attained together with a new level of ecological responsibility and relatedness. The interwoven cosmological paradigm compromises with two ancient eastern wisdoms.

Keywords: Power; cosmology; paradigm.

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1. INFORMATION OF PUBLICATION

Title: The Powers of the Universe
Author: Brian T. Swimme
3-DVD set of lesson series
Directed by Dan Anderson
Studio: Center for the Story of the Universe, Mill Valley, CA
Release Date: 23 September 2004
Run Time: 9 Hours; Eleven 45-minute episodes
ASIN: 096503657X; \$35.00
Amazon: <https://www.amazon.com/Powers-Universe-Brian-Swimme/dp/096503657X>

The 3-DVD set of lecture series provides a fascinating and challenging journey into the cosmological powers that Professor Swimme has explored and identified to be always active coursing through a cyclic evolution of the universe everywhere since the beginning of time, including all kinds of lives. The subtitles of the program include: 1. Seamlessness; 2. Centration; 3. Allurement; 4. Emergence; 5. Homeostasis; 6. Cataclysm; 7. Synergy; 8. Transmutation; 9. Transformation; 10. Interrelatedness; and, 11. Radiance.

The eleven 45-minute episodes offers a systematic integration of a total of 9-hour immersive program to demonstrate the 12 intercorrelated cosmological powers (there is an additional implicit one, Collapse, in 6. Cataclysm) that have shaped not only the universe but also our human beings. The program contains the cosmological dynamics that the universe follows in its origin and cyclic evolution. It offers amazing insights on who we are and how we think, on the illuminating understanding of our vital role to recognize the whole Cosmic Drama, and on the contemporary access to an interwoven but a holographical Nature which unfolds continuously the cosmological powers not only through the macrocosmic splendors in planets, stars, or, galaxies, but also through the microcosmic marvels that are within us, both individually and collectively [1].

Each episode is presented scene by scene slowly, poignantly, humorously in an extemporaneous style with a combination of brevity, clarity, and rhythm. The complete series shows how the universe Story lives in us through primal cosmological energies and interprets the role of the sentient humans within the Earth community as an emergent being within the universe. Particularly, all the lectures are dependent of the most advanced development in biology, geology, thermodynamics, paleontology,

astronomy, and cosmology, to enable the audience the best comprehension of both the miracles of science and the philosophical and psychological frontiers in the evolution of the universe and humans, as well as the most accurate onto-cosmological consciousness of the true nature of the cosmos itself [2].

In taking the audience on an accessible journey “from the vast reaches of the ancient cosmos down into the most infinitesimal elementary particles,” all the episodes reveal an irrefutable fact that the powers of the universe own a couple of conspicuous features:

- (1) They are ubiquitous in Nature to permeate even into the human heart; and,
- (2) They are interconnected with each other, with each one able to be built upon another.

Thus, each power “can be worked with as a spiritual training that leads one to a richer connection with ... fellow creatures;” and, beyond that, the diversity of the power styles allows the audience to experience “a spiritual path or progression leading to a fundamental appreciation for the beauty” of the universe [3] on the basis of the understanding of how the microcosm mirrors the macrocosm, e.g., from DNA to star systems, or, from lungs to galaxies [4].

2. A SET OF 12 COSMOLOGICAL POWERS

The episodes expose a set of 12 powers in total. They ground scientific theory in a human context to demonstrate a worldview that is filled with reverence and wonder of the behaviors and dynamics of the universe, as well as to recognize and attain a positive, life-affirming vision of human potential, together with a new level of ecological responsibility, wisdom, and relatedness. The definition and theme of these powers are listed as follows [5]:

Power-1 Seamlessness: This is the power of all the other powers, and the generative mainstay of reality. It is the all-nourishing abyss of pure nothingness which is ultimateless or boundless before the revitalization and rebirth of a universe with an explosion of basic particles in space, followed by the formation of primary elements to produce all things. It is the quantum vacuum which has the potential energy to support nonlocal connections or quantum entanglement.

Power-2 Centration: This is the self-centering power for the entities of reality to maintain or nurture the development of ever-deepening life for the birth of uniquely individuated beings. It is the ability of the universe to form new centers on the wholeness-making and manifestation of each. It is expressed in homologous ways at different levels and orders of magnitude in the universe.

Power-3 Allurement: This is the attraction power for the entities of reality to hold together and draw forth into relationship of intimacy and union. It is the primordial attractive force, e.g., gravitation, in the cosmos that pervades all life, matter, space and time, to hold the entities together. It is the energy that enables to come into a deeper relationship with the cosmos.

Power-4 Emergence: This is the creation power for the entities of reality to transcend themselves beyond, e.g., the established limits, restless excitement, and polarized extremes. It is the capacity of each entity to bring forth new forms and qualities at all levels, featured by unprecedented properties of complexity due to the continually arising self-assembly and self-organization.

Power-5 Synergy: This is the cooperation power for the entities of reality to enhance mutual relationships in larger wholes, arrangements, or contexts and thus acquire more free energy, creativity, and productivity. It strengthens the vitality of things towards the deepening of diversity, complexity, and resilience in all living systems in collaborative relationships with others.

Power-6 Transmutation: This is the adaption power for the individual entities of reality to accommodate community. It is the energy of the universe to form or shape micro-or-macro-ecosystems in response to the requirements of the whole community, i.e., natural selection. It is the fundamental process of individuation to encourage individuals for a deeper incarnation into an expanded context.

Power-7 Transformation: This is the development power for the individual entities of reality to upgrade or thrive the whole. It is the drive of the macrocosmic effects due to the microcosmic causes; or, the capacity an individual entity to activate communion, community, and intimacy collectively, marked by an enhanced coherence with other powers and an expanded potential of coevolution.

Power-8 Cataclysm: This is the destruction power for the entities of reality to experience an overall extinction of obsolete properties, while strengthening the capacity of things to work together to create new forms and encourage the proliferation of interconnected relationships. However, the fluctuations within an entity are too great to maintain the existing system.

Power-9 Homeostasis: This is the maintenance power for the entities of reality to keep the unique, differentiated properties in the evolution. It is the energy or the balance force that serves to conserve the peculiarity and vitality of things in forms and processes that are the most valued through trial and error over millions of years, as well as the most resonant with the surroundings at all levels of consciousness.

Power-10 Interrelatedness: This is the care or humility power for the entities of reality to nurture or take care of the relationship with others that leads to a deepening of bondedness and life. It follows the anthropic principle to evoke a new direction, instinct, or decision to nurture a process that leads to increased intimacy, resonance, communion, differentiation, and complexity.

Power-11 Radiance: This is the magnificence power for the entities of reality to communicate in the deepened Interrelationship. It is the energy received by others at both a surface and a depth of perception. It is the experience of resonance and reverberation with natural phenomena; the celebratory revelation of the deep mystery of the cosmos; and, the conscious revelation of the termination of reality.

Power-12 Collapse: This is the annihilation power of reality to undergo the process of termination till a state that all the entities fall apart, all the forms are broken down, and the reality itself is decomposed to a "pure" nothingness where no reality exists, i.e., no matter, no energy, no laws, no space and no time. Seamlessness may emerge from it depending on the quantum probability.

The set of 12 cosmological powers present following three attractive features [6]:

- (1) Copious citations of illustrative extracts from the most advanced scientific findings, such as, to teach Cataclysm by making use of the fusion of the supernova, to illustrate Synergy by taking advantage of photosynthesis;

- (2) Resourceful and innovative designs of the connections to link the powers to specific expressions and tendencies in human consciousness, e.g., a person who thrives on creative tension would be someone who strongly expresses the power of Emergence in human form; and,
- (3) Demonstration of the subtlety for each power to build upon another and manifest in a diversity of styles and approaches in life, as well as to work as a spiritual training that leads one to cope with the Earth and fellow creatures.

Notice that the classification of these powers and the names of the powers are somewhat fluid rather than fixed due to the innate overlapping and mutually implicated processes happening over all macrocosmic and microcosmic levels and scales [7]. However, the terminologies are so scientifically motivated and physically defined that they can be easily integrated into the latest nomenclature of philosophy, psychology, epistemology, and/or spiritualism, while still relatively distinct enough to demonstrate the subtleties to differentiate respective primal actions of all the powers. These powers are correlated together to elucidate the modern ontocosmological paradigm. Fig. 1 illustrates the correlations.

Firstly, the powers have a cyclic, dependent arising evolutionary pattern: Seamlessness → Centration → Allurement → Emergence → Synergy → Transmutation → Transformation → Cataclysm → Homeostasis → Interrelatedness → Radiance → Collapse → Seamlessness (new cycle). Each power is the effect of the prior one; at the same time, it behaves as the cause of the following one. Yet, this cause-effect trend is not absolute to be shown in all evolving processes. In some biological circles (e.g., caterpillar - butterfly - caterpillar), a few powers may be integrated together as one power, or so weak as unable to be unfolded.

Secondly, the powers play reflectory roles in six pairs: (1) Seamlessness from pure nothingness ↔ Collapse to pure nothingness; (2) Centration toward wholeness ↔ Radiance against wholeness; (3) Allurement from primordial causality ↔ Interrelatedness for holistic causality; (4) Emergence from self-assembly and self-organization ↔ Homeostasis of individuation to overcome the self-imposed limitations; (5) Synergy for construction ↔ Cataclysm for destruction; and, (6) Transmutation to accommodate community ↔ Transformation to dominate community.

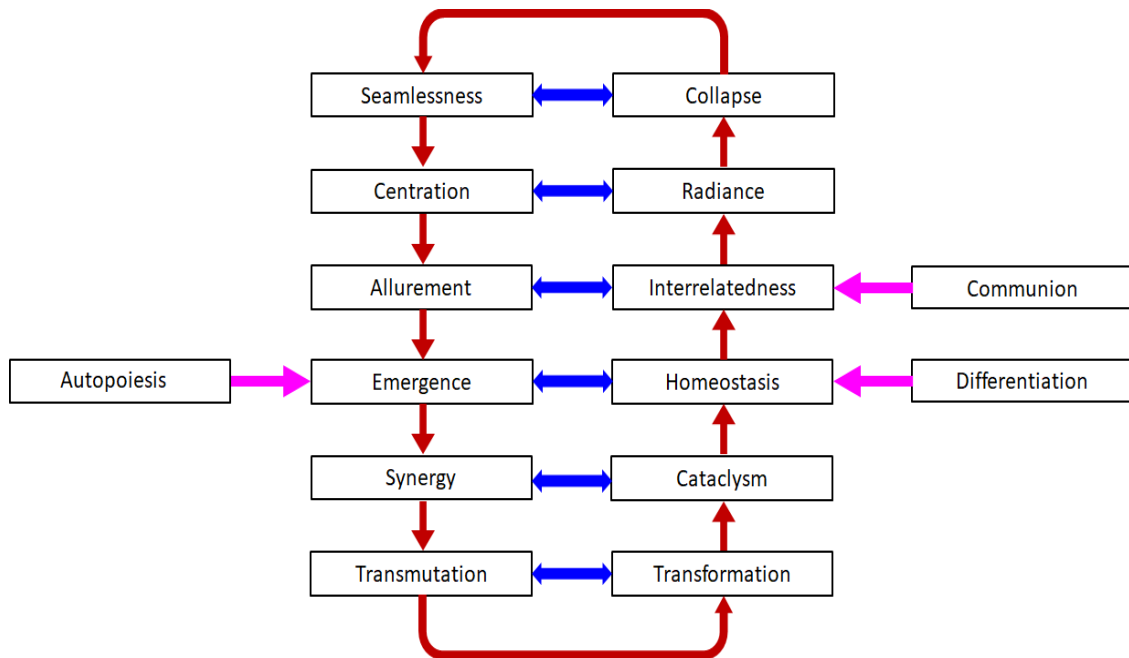


Fig. 1. Correlations among the 12 cosmological powers

Lastly, the 12 powers inherit and transcend Swimme & Berry's ontological "threefold cosmogenetic principles," [8] defined as "a trinity of cosmogenetic principles," [9] namely, Differentiation, Autopoiesis, and Communion. These principles are considered to govern the leading themes and the basal intentionality of all the existence [10]. They are nothing but alternative expressions of a group of three cosmological powers: Differentiation is equivalent to Power 5 of Homeostasis (or, Uniqueness); Autopoiesis is equivalent to Power 4 of Emergence (or, Self-creativity); and, Communion is equivalent to Power 10 of Interrelatedness (or, Interdependence), consistent to that "the universe orders itself by differentiating itself (i.e., differentiation or uniqueness) into recognizable different aspects or parts, each of which orders and regulates itself internally (autopoiesis or self-creativity), and is organized in relation to all other aspects (communion or interdependence)" [11].

3. AUTHORSHIP AND SIGNIFICANCE

The author, Brian Swimme, is a natural philosopher and mathematical cosmologist appointed to the graduate faculty of the Philosophy, Cosmology, and Consciousness (PCC) program at the California Institute of Integral Studies (CIIS), San Francisco. He received his Ph.D. in 1978 from the University of Oregon, specializing in gravitation, cosmology, and singularity. He is the founder of the Center for the Story of the universe, a CIIS' production and distribution affiliate. He has done an extraordinary captivating exploration into the powers of the universe and, more importantly, the links of their interdependent origination.

In this DVD series, he brought to light the context of the powers and their interrelations with insights that will shed light on the understanding of the 13.8-billion-year trajectory and the characteristics of the universe that have been demonstrated not only in vacuum, fields, subatomic particles, elements, stars, galaxies, and quasars of our observable universe, but also in biosphere, continents, oceans, and all kinds of lives including human beings, especially in the emergence and evolution of a flourishing biosphere in the Earth community.

In addition, parallel to Swimme & Berry's threefold ontological principle which "are remarkably coherent with expressions of the

nature of wisdom in the triadic form found in the world's great metaphysical traditions," [12] Swimme's paradigm of the interwoven powers offers the cosmological ground which matches a couple of ancient eastern wisdoms:

- (1) I-Ching's correlative & cyclic cosmology to express the macrocosmic celestial mechanism by means of the following 12 sovereign Hexagrams (H) with the ascending or descending of Yin-Yang Qi-powers [13]: H-1. Return (24 复 ䷗); H-2. Overseeing (19 临 ䷒); H-3. Tranquility (11 泰 ䷊); H-4. Great Power (34 大壮 ䷡); H-5. Parting (43 夬 ䷪); H-6. Sincerity (1 乾 ䷀); H-7. Meeting (44 姤 ䷫); H-8. Withdrawal (33 遯 ䷠); H-9. Obstruction (12 否 ䷋); H-10. Observation (20 观 ䷓); H-11. Stripping Away (23 剥 ䷖); H-12. Humility (2 坤 ䷁), where H-1 corresponds to Power 2, et cetera.
- (2) Buddhist doctrine of consciousness to express the microcosmic psychological process by means of a cyclical 12-fold chain of cause-effect dependent origination which is driven by the intimate force of karma (K): K-1. Ignorance (无明) [14] → K-2. Fabrication (行) [15] → K-3. Rebirth consciousness (识) [16] → K-4. Namarupa (名色) [17] → K-5. Six entrances (六入) [18] → K-6. Contact (触) [19] → K-7. Sense (受) [20] → K-8. Craving (爱) [21] → K-9. Attachment (取) [22] → K-10. Becoming (有) [23] → K-11. Birth (生) [24] → K-12. Aging and deceasing (老死), [25] where K-1 corresponds to Power 1, et cetera.

Last but not least, the 12 powers can be incorporated with the five incarnational principles, i.e., Sovereignty, Engagement, Generativity, Emergence, and Blessing, and with the related spiritual practices [26] which bring forth the planetary consciousness of beings a "continued evolution toward ever higher levels of insight, understanding, love, and compassion" for the survival of the whole community of life in the universe and on the Earth [27].

4. CONCLUSION

Swimme's 3-DVD set of lecture series describes an innovative paradigm of 12 intercorrelated

cosmological powers in the interdisciplinary field of modern physics, philosophy, planetary ecology, biology, and psychology. The paradigm fosters a so-called “onto-cosmological” dialogue with the universe in terms of the modern scientific discourse of a variety of known natural or physical laws and beyond. Based on the paradigm, it is promising to find a transcendent, modern ontological principle integrated with the cosmological ground of the 12 powers for the self-organized wholeness of reality, where explicable is the fundamental congruence between nature and humanity. It is preferable to label such an integration with a new terminology, *Swimmean Onto-Cosmology*.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

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14. Ignorance: not knowing the Four Noble Truths: ① suffering, ② the origination of suffering, ③ the cessation of suffering, and, ④ the way of practice leading to the cessation of suffering, due to the three poisons: ① greed (attachment, desire, passion), ② hatred (aversion, anger, aggression), and, ③ stupidity (illusion,

- confusion, delusion, bewilderment), and additional afflictions (e.g., anxiety, fear, jealousy, depression)
15. Fabrication refers to: ① bodily fabrication, ② verbal fabrication, and ③ mental fabrication.
 16. Rebirth consciousness: Activity (or defiled Alaya) consciousness which is the sentient, circulating ingredient in the Alaya consciousness.
 17. Namarupa: referring to the 5 skandhas or aggregates in: ① Bodhisattva Vasubandhu. *Panca-skandha-prakarana* (Mahayana Treatise on the Five Skandhas), Tripitaka Master Xuanzang Chinese translator. Qianlong Chinese Buddhist Canon. (Retrieved 15 May 2016)
Available: <http://www.qldzj.com.cn/htmljw/1170.htm>
② Sthirabodhih. *Panca-skandha-prakarana-vaibhāṣya* (in Chinese; Extended Mahayana Treatise on the Five Skandhas), Divakara (613–687). Translator. CBETA T31n1613_p0850c11(00)-p0855b06(00). (Retrieved 15 May 2016)
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The 5 skandhas are as follows: ① Form (both the physical body and external matters). In: *Yogacharyabhumi Shastra* (Treatise on the stages of Yoga Practice). In: CBETA, T30n1579_p0419a27(09)-a28(06). (Retrieved 15 May 2016)
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② Feeling or sensation. Referring to pleasant, unpleasant and neutral sensations through 5 internal sense organs, Eyes, ears, nose, tongue, body, in contact with external sense objects, and the associated consciousness. See: *Ibid.*, a28(06)-a29(03).
③ Perception or cognition. See: *Ekottaragama-sutra* (Numbered Discourses). CBETA, T02n0125_p0707b17(07)-b18(02). (Retrieved 15 May 2016)
Available: http://www.cbeta.org/result/normal/T02/0125_028.htm
④ Volition, formation, or fabrication. See: *Ibid.*, b18(02)-b20(02).
⑤ Recognition, integrated attention. See: *Ibid.*, b20(02)-b21(02). Note: “Sensory consciousness” is incorrectly used in Karunamuni. *The Five-Aggregate Model of the Mind*. SAGE Open. 2015;5(2):1-7. “Namarupa” contains four “nama (mentality)” elements of the 5 skandhas: ②, ③, ④, ⑤, and one “rupa (corporeality)” element ①.
 18. Six senses: Eyes, ears, nose, tongue, body, and perception.
 19. Contact: referring to the six contacts through eyes, ears, nose, tongue, body and perception. See: *Samyutta Nikaya*, Tipitaka: 12,2,10. (Retrieved 15 May 2016)
Available: <http://sites.google.com/site/palishengdian/pali/da/sn/sn12/sn12-1>
 20. Feeling: Which are of six forms: visual, auditory, olfactory, gustatory, and tactile sensations, as well as the mental activities in feeling. See: *Ibid.*, Vol.12,2,9.
 21. Bhikkhu T. (trans.). *Paticca-samuppada-vibhanga Sutta: Analysis of Dependent Co-arising*. SN 12.2 PTS: S ii 2 CDB i 534; 1997. (Retrieved 13 May 2016)
Available: <http://www.accesstoinight.org/tipitaka/sn/sn12/sn12.002.than.html>
There are these six forms of cravings: Cravings with respect to forms, sounds, smells, tastes, touch (massage, sex, pain), and ideas.
 22. *Ibid.*: There are four clingings: Sensuality, view, precept & practice, and doctrine of self-clinging.
 23. *Ibid.*: There are three becomings: Sensual becoming, form becoming, & formless becoming.
 24. *Ibid.*: Birth includes: Taking birth, descent, coming-to-be, coming-forth, appearance of aggregates, acquisition of sense media of the various beings, and acquisition of a new status or position.
 25. *Ibid.*: Aging includes: Decrepitude, brokenness, graying, wrinkling, decline of

- life-force, weakening of the faculties of the various beings in this or that group of beings; Deceasing includes: Passing away, breaking up, disappearance, dying, death, completion of time, breaking up of the aggregates, casting off of the body, interruption in the life faculty of the various beings.
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