

Awareness and Its Development

A Note on the Future Direction of Consciousness

Marcus Grandon

気づきとその発展 意識の目指す方向についての覚書 マーカス・グランドン

この論文の目的は「気づき」(Awareness)についての考察で、特にその科学・芸術・宗教との関係を考察するものです。考察の結果は、これら三者の間の区別はそれほど明確ではなく、実はすべてにおいて関連をもつものであるということです。

The consciousness of human beings is a study that has been pursued in virtually all fields throughout history. In the age of reason, science has looked to discover empirical evidence of it employing such means as medical science and psychology. Digging deeper, we find that consciousness has been explored in places like literature, poetry and art. Earliest of all, religion functioned as a means for examining the so-called idea of consciousness. In more modern times people like Darwin, Freud, and even Einstein have been fascinated with the topic.

The study of consciousness seems to stem from the basal human yearning to inquire about a sense of purpose. Questions such as, 'Why are we here?', 'Where are we going?', and 'Is there another plane of existence?' have perplexed the minds of human beings since time immemorial. The same questions that people seek answers to today were also asked by our ancestors, and will no doubt continue to be pondered in the future.

Science continues to probe for hard facts supporting evidence of what constitutes

consciousness. Psychiatrists study the physiological workings of the brain. Surgeons perform miracle operations to assist in the health of the physical body. Physical and occupational therapists develop programs to further help the body after accidents. Constantly reinventing itself based on empirical data, science strives to bring about a better human condition.

The arts contain innumerable examples of studies of consciousness and its development. Great literary works from all cultures contain passages attempting to express elements of consciousness. Poetry often delves into sublime issues. Music brings color to the aural sense. Sculpture tries to immortalize muse in marble statues. From the arts usually come things that are clearly as yet unexplained by science such as emotion and intuition. Without doubt, these things are part of the human condition, but are difficult at this point to be measured accurately by science.

Religion seemingly goes to the opposite extreme of science when discussing consciousness. Christianity, Judaism, and Islam speak in terms

of faith and hope. Buddhists point to the attainment of other states of awareness labeled enlightenment or *satori* that may be related to a kind of sixth sense.¹ Hindus speak of the wheel of the universe infinitely turning. Claiming that their ideas and thoughts are spiritual, religions continue to attract throngs of followers not requiring rational evidence to believe. Religions do not want nor will they tolerate science standing in the way of their belief systems; however, it could be that science will eventually prove some of these religious ideas to be concrete.

Further development in these three main areas will probably come about as a result of combining aspects of each with one another. The combination of things from science, art and religion, as well as other areas, may bring about a sum that is much greater than individual parts. Part of the reason that they are even divided in the first place is so that they can be discussed in language or even understood. All of these subjects have things that are beneficial for human beings. This amalgamation will likely happen not only on an interdisciplinary level, but also on an intercultural one.

This combination is well underway. It can be seen all over the world today. Many people are working to bring about additional understanding in what consciousness is, how it can be studied, and how it can be advanced. It is being investigated by using thoughts from science, arts, and religion. For example, an entire science has been created to study it known as ‘consciousness studies’. Found in the realm of psychology, it is combining such things the body/mind relationship using cognitive science to further explain human experience. Another example is in some popular literature such as the best-selling

book, “Conversations with God”, by Neale Donald Walsh, which is a blending of psychology, art and religion.

Science, art and religion seem to have an inextricable bond. They are constantly shaping each other. Existing in the world today are variations of these combined. Consciousness is being studied by people in each of these areas, as well as in combinations of them. The main focus of this paper is to examine some of the ways these things interact with one another to produce ideas and facts so that we can more deeply understand consciousness.

SCIENCE AND AWARENESS

Psychology is one of the main ways now being used by science to establish a firmer grip on how to define consciousness. Many new branches of psychology have been established in the last 50 years to investigate this idea. Humanistic psychology, somatic psychology, educational psychology and even experimental psychology are heavily involved with research into consciousness. Interestingly, there seems to be an enormous relationship between psychology and Buddhism.

In 1951, Dr. Tomio Hirai decided to undertake a study of something that had interested him greatly. He and his staff wanted to measure the brainwave activity of Buddhist monks while in *Zazen* meditation. Armed with machines that could record electroencephalogram readings (EEG), he performed a study on meditating monks to see if there was any change in awareness during this time.

The results of the study showed that monks did indeed enter into a different kind of psychological state during meditation. It showed that during meditation, the brain wave activity of the monks passed from the normal waking brainwave pattern known as beta wave production to extended periods of alpha wave production. In normal human beings, the alpha wave state is usually only reached for a short time just before falling asleep. The monks in the study did not fall asleep, but were maintaining relatively long periods of alpha wave production while remaining awake. This state was labeled *“relaxed awareness accompanied by steady responsiveness”*²

At the same time, Dr. Hirai and his staff also set out to measure the respiratory functions of the meditating monks. They observed that before meditation, the monks breathed normally at the rate of 17-18 breaths a minute. However, during meditation, this was decreased to 4-5 breaths per minute. Clearly indicating a change in the breathing pattern of the monks, the study also discovered that while the monks were taking less breaths, their bodies were consuming less oxygen than while in the non-meditative state.³

The prolonged states of alpha wave production are meaningful for several reasons. It does represent a state of other consciousness that is not observed in the everyday life of ordinary people. While people do produce alpha waves on a daily basis, they usually do so only before sleeping, then soon fall asleep. Could the extended production of alpha waves lead to place of keener awareness? It is from this place that monks have experiences of enlightenment or *satori*.

Enlightenment or *satori* is a very misunderstood thing. Contrary to what people want to believe, it is not a wildly blissful experience anywhere near related to experiences associated with psychotropic drugs. It has been described by monks to be a very normal experience. It is considered more usual than unusual. Enlightenment is thought to widen perspective and clear the mind. It has been called a “natural state of the mind that has been temporarily obscured by habitual patterns or grasping and delusion.”⁴

There have been many other scientists that have used clinical experiments to try to explain details of consciousness. Notably, Dr. Moshe Feldenkrais, a physicist and Kodokan judo master, whose career included working along side Frederick Joliot-Curie on the discovery of artificial radioactivity, and helping pioneer submarine technology for the British government during World War II, conducted research on consciousness. He was interested in the relationship of the brain to motor functioning. His work assisted in creating an entire field of known in the world today as somatics.

The study of somatic psychology has mostly to do with human functioning. It is a field that relates how human beings learn to move with the ability to function in the world, and ultimately with human consciousness and awareness. How a person carries their body is thought to be a direct reflection of their mature functioning in the world.

Dr. Feldenkrais’ research, among other things concentrated heavily on the effect of gravity and posture on human functioning. Using his background in physics to understand the physical

movements of the skeletal and muscular systems, he made revolutionary discoveries relating to balance and the vestibular system. How human beings move through the world responding to gravity has a relationship to awareness. “The vestibular apparatus derives its importance from the fact that it co-ordinates motility, which is at the bottom of all configurations of sensations.”⁵

Somatic psychology has its base in education. It is a study of how human beings learn to move, but more importantly, it is a study of self-development for the individual participant. In other words, it attempts to teach individuals how to maximize their own human functioning so that they can develop and live comfortably in the world. This is synonymous with honing human functioning to such a degree that it is so well prepares a person to live a fruitful life.

The aim of education should be to help the individual achieve the state of an evolving being; it should make it easier for the individual to sever habitual dependence links, or at least less painful to perpetuate than when judgement demands it. Education that has not achieved this aim is a failure . . . ⁶

It is of paramount importance in this thinking that individuals arrive at a level of maturity. This is done less by striving, and more by not trying, a concept that evokes images of a Zen koan. This so-called maturity is a place where people can act for themselves, without the need for the approval of others or even society. This maturity is thought to represent free will or choice, which is

thought to be a primary characteristic of a healthy person.

The path of maturity is often blocked by habitual behavior. If maturity represents freedom, then unconscious habitual behavior resembles a kind of immaturity. Often times bringing unconscious behavior patterns into consciousness is not enough to assist a person in breaking the habit. Habits often get in the way of the performance of a desired act because they are actually in direct contradiction to the stated goal. The shortest distance between two points being a straight line, a habit is like a bend in the line. It deters a quicker route to the destination. It is superfluous activity that can even be diametrically opposed to the goal at hand.

Breaking habits can be done with awareness. To stop a habit, it is usually not enough simply to bring habitual behavior into consciousness thought. It takes more. In developing the Feldenkrais Method® of Somatic Education, Dr. Feldenkrais designed thousands of movement sequences, that is, patterns of ‘exercises’ or ‘lessons’ that he labeled “Awareness Through Movement” (ATM’s). ATM’s are verbally directed movement patterns whereby students follow directions, and learn about body mechanics among other things. It is believed that prolonged study using these movement sequences leads to a greater degree of awareness, which can be further used as a tool for the breaking of habits leading toward maturity. These movement sequences are also thought to have the remarkable effect of accessing the inborn capacity for the central nervous system to better itself. Of these lessons, Dr. Feldenkrais wrote, “Becoming aware is the significant part of your

learning, and it is not at all important which movement is used for the lesson . . .”⁷

THE ARTS AND AWARENESS

In the arts and humanities, there are countless references to the subject of awareness. These exist both figuratively and literally. When the arts point in this direction, they usually do not have any intention to claim any scientific justification. They allude to awareness in a much more Dionysian manner. In literature, for example, there are such constant references to awareness that it could be considered to an essential part of every story. According to Joseph Campbell,

In a word: the first work of the hero is to retreat from the world scene of secondary effects to those casual zones of the psyche where the difficulties really reside, and there to clarify the difficulties, eradicate them in his own case. . . and break through to the undistorted, direct experience and assimilation of what C.G. Jung called ‘the archetypal images’⁸

In all great works of literature, there comes a time, usually in the beginning of the story, where the hero begins the journey toward awareness in some kind of representational fashion. In *Alice in Wonderland*, the heroine had to step through a mirror. She is looking at herself in a very deep way, and by jumping through she is exploring her mind. In *The Lion, the Witch and the Wardrobe*, the two main characters crawl down a dark corridor or elongated secret passage before being transported into the land of Narnia. They are

exploring an unknown part of themselves. In *The Hobbit*, the hero initially enters into a dark forest. He is entering an unknown part of his psyche. In each of these cases, the hero goes to a new place, an unfamiliar place that is quite different from their normal habitat. By breaking the habit of routine existence, they are taking the first steps toward a new awareness.

The literary works of today cannot escape the depicting of awareness. It is really a fundamental part of any story. This can be seen time again, for instance, in the immensely popular bestseller “Conversations With God, Book 1”. In this book, the author Neal Donald Walsh constantly makes reference to awareness.

You cannot experience what you don’t know. And you don’t know that you are in ‘heaven’ right now because you have not experienced it . . . You cannot – have not found a way yet to – experience what you do not know, and you do not know what you have not experienced.⁹

Here, Walsh eludes to the point that if one wants to learn about the god-like part of him or herself they have to go through a process of discovery. The passage leads the reader to the idea that awareness exists, although as yet an undiscovered thing. This means that there is potential for awareness.

This search for awareness is all a part of the hero’s journey found in all literature. The yearning for self-discovery has always existed. It may even have a relationship to evolution. It could be some kind of secret being handed to us

generation after generation masked in the printed pages of literature resting cryptically, waiting for people to pluck it like a piece of ripe fruit off a tree.

The search for awareness is, of course, not limited to literature. People across the ages have been discussing the subject in art of all forms. Painters speak of divine inspiration when working. Musicians point to being in touch with a certain sublime feeling when playing. Actors go to a certain place within themselves to transform into a role. The idea of awareness is found in all of the arts

Japanese painter Sachiko Adachi made direct reference to the subject of awareness. She created paintings that seem to be in touch with divine inspiration. Her art is thought to have special powers that are believed to be in harmony with cosmic consciousness. For example, it is claimed that precious and semi-precious stones dulled by years wearing return to their original luster by placing them on top of one of her paintings. During her life, she gave constant lectures about awareness, and her paintings are thought to reflect such an idea.

Sachiko often spoke of awareness. She would make direct and indirect references to it. It was found that when she painted, her brain went into a state of theta wave production, indicating altered consciousness, perhaps related to awareness. Since it is nearly impossible to define awareness with a short definition, in a general way Sachiko used ideas like intuition, inspiration, and spirituality in her talks to give direction to the idea. Sometimes she spoke specifically. "I think it is far more natural to gain awareness

through your work or everyday actions than it is by attending a seminar."¹⁰

Awareness is not thought to be a special thing. It is more like an ordinary thing. It is the kind of thing that human beings are expected to have. Awareness is more like a normal state than a spectacular ecstasy. Awareness is like the everyday workhorse. When it is present in the mundane aspects of life, a person could be said to be living more fully.

The famous Russian acting teacher Constantin Stanislavski often taught about awareness. He knew that the greatest actors needed to be in a higher state in order to play a convincing role on stage. This was not really *his* teaching so much as it was the teaching of the great Russian tradition of acting. He was merely the torchbearer during his lifetime, and he had the ability to write down a variety of information on the subject.

Stanislavski taught students how to act by using techniques that seemingly had no relationship to acting whatsoever. He had students do things like develop their imaginations, enhance their skill of concentration, learn the physics of the human body, and to be in touch with their emotions. These ideas are more related to awareness. " 'An actor should be observant not only on the stage, but also in real life. He should concentrate with all his being on whatever attracts his attention. He should look at an object, not as any absent-minded passerby, but with penetration.'"¹¹

Some of the techniques used by Stanislavski appear closely related to techniques used by Moshe Feldenkrais in teaching the Feldenkrais

Method®. These are mostly ‘exercises’ that resemble Feldenkrais’ Awareness Through Movement lessons. They relate to the superfluous tightening of muscles unrelated to performing a desired movement. This is needless activity that relates to the awareness of the body and may further relate to awareness on a broader scale. Ideas from this school of acting could very well be a precursor to the Feldenkrais Method®. It should come as no surprise that many modern actors devote themselves to learning the Feldenkrais Method® as a part of their training.

RELIGION AND AWARENESS

The religions of the world seem to speak about awareness. No where is this more evident than in the *satori* of Zen Buddhism. Then again, some insist that Zen is not religion at all. There are also some awareness-like teachings in the Christian canon. Close research would most likely reveal teachings related to awareness in all religions.

The Zen Buddhist tradition in Japan contains a certain sect in which a bamboo flute (shakuhachi) is used as a tool for meditation. This sect is known as the *Myoan (Meian) Ryu*. It is headquartered in small branch of *Tofuku-ji* in Kyoto, appropriately named *Myoan-ji*. Illegal for anachronistic political reasons, the sect is not really allowed to operate as an independent entity. Sometimes, this group is known as *Fuke-shu*. The monks of the *Myoan-ji* are called *Komuso*, the literal translation being monks of emptiness and nothingness.

The pieces of music played by these monks are not considered to be music at all. The playing style is called *sui-zen*, or blowing Zen. The flute

was to be used for meditation, not to make music or accompany songs. Listening to a *kumoso* meditate with the shakuhachi evokes an almost indescribable feeling. To the Western ear, the melodies seem haunting, or even eerie.

In the aforementioned section entitled ‘Science and Awareness’, Dr. Tomio Hirai measured the brainwave activity of monks in meditation. The results were that he found monks could enter into and sustain extended periods of alpha wave activity, which is the state that the brain falls into briefly just before sleep in human beings. No one has yet measured the brainwave activity of *kumoso* monks as they play shakuhachi. It can easily be theorized that since the *kumoso* monks were using the shakuhachi for Zen meditation, that they too would enter into a similar brain wave state as regular Zen monks.

Taking this theory a step further, perhaps even listening to a *kumoso* playing the shakuhachi could alter the brain wave activity of the listener. This idea has theoretical precedence. Tibetan Buddhist chanting monks wholly accept the thought that those listening to their chants are imbued with the same spirit of the divine that the monks themselves believe they are accessing by chanting. It is as if some kind transference occurs by listening. If this alpha wave activity is at all related to higher awareness, then what we have here is an ability to learn it and transmit it. This raises two important questions. Is alpha wave production related to higher awareness? Can alpha wave production in mind of a person be transmitted to another by sound? Buddhists would emphatically answer yes to both questions. Science would say ‘prove it’.

Christian thought also references the idea of awareness. It is not so straightforward, but in

some ways Saint Paul the Apostle eludes to it. With his little known doctrine of being-in-Christ, St. Paul points a finger in the direction of union with God. This union, which may be the realization on a higher level of consciousness while in the corporeal body, may be related to awareness or cosmic consciousness.

Being-in-Christ and the Christ-in-you is a topic that ultimately ends with love. Here love is the thing that is the bridge between heaven and earth. Love is the tie that reaches across generations and that which binds people to God. The path of love is said to travel from a person to Christ then to God. "Love is the highest of the spiritual gifts because it is the only one which is eternal."¹²

Albert Schweitzer asserts that the idea of love being the central feature of being-in-Christ is represented further by liberty. In other words, love is freedom. Bringing freedom into the picture also lends itself more to the thought that it has some relationship to awareness. One thing that is common to teachings that revolve around awareness is the idea of freedom. In religion there are notions such as free will, and freeing oneself from the wheel of reincarnation. In the arts there is freedom of expression and freedom of the mind to produce quality work. Finally in science, psychologists point to the ability to truly exercise free choice as tantamount to a healthy mental state.

CONCLUSION

This is a multi-disciplinary look at the idea of awareness. Nowhere was a concrete definition of awareness provided because there are simply too many ideas about it for an all inclusive dictionary definition to exist. Awareness is being explored

on all fronts of humanity. Science strives to explain it rationally, religion with faith, and the arts with some kind of representational element residing somewhere in between. There surely is something to awareness, about this there is no doubt. Perhaps as time goes on humanity will be able to not only understand it, but employ it as well.

Notes

- ¹ Francisco J. Varela, Evan Thompson, and Eleanor Rich, The Embodied Mind, (Cambridge, MA and London, England: The MIT Press, 1993) 256. Note that Appendix B lists consciousness as one of the Five Aggregates of Buddhism (*skandhas*). Here consciousness is defined as: visual, auditory, olfactory, gustatory, tactile and mental. Reference is to the last item.
- ² Tomio Hirai, Zen and Psychotherapy, (New York and Tokyo: Japan Publications, 1989) 74.
- ³ Hirai 77-78.
- ⁴ Varela, Thompson, Rich 26.
- ⁵ Moshe Feldenkrais, Body and Mature Behavior, (Madison, CN: IUP, Inc., 1949) 82.
- ⁶ Moshe Feldenkrais, The Potent Self, (San Francisco, CA: Harper Collins, 1985) 11-12.
- ⁷ Moshe Feldenkrais, The Elusive Obvious, (Capitola, CA: Meta Publications, 1981) 105.
- ⁸ Joseph Campbell, The Hero With a Thousand Faces, (Princeton, NJ: Princeton University Press, 1949), 17-18.
- ⁹ Neale Donald Walsch, Conversations with God, (New York, NY: Putman, 1995) 99.
- ¹⁰ Sachiko Adachi, tr. Mayuni Mori with Victor Debuque, To Live as We Are, (Tokyo and Woodstock, NY: The Angel Sachi Foundation, 2000) 28.

- ¹¹ Constantin Stanislavski, An Actor Prepares, trans. Elizabeth Reynolds Hapgood (New York, NY: Theatre Arts Books, 1936) 86.
- ¹² Albert Schweitzer, The Mysticism of Saint Paul the Apostle, trans. William Montgomery (New York, NY: The Seabury Press, 1931) 305.

Bibliography

- Adachi, Sachiko To Live as We Are, Trans. Mayumi Mori, Tokyo and Woodstock, NY: The Angel Sachi Foundation, 2000.
- Campbell, Joseph, The Hero With A Thousand Faces, Princeton University Press, Princeton, 1949.
- Clark, Ronald, The Life and Times of Einstein. New York: Avon Books, 1971.
- Conze, Edward. Buddhism: its essence and development. New York: Harper & Row, 1951.
- Damasio, Antonio. Descartes Error. New York: Avon Books, 1994
- Deshimaru, Taisen. The Zen Way To The Martial Arts. Trans. Nancy Amphoux. New York: Arkana, 1982.
- Eliade, Mircea. Yoga: Immortality and Freedom. Trans. Willard R. Trask. Princeton: Princeton University Press, 1958.
- Feldenkrais, Moshe. Body and Mature Behavior. International Universities Press, Madison, 1949.
- Feldenkrais, Moshe. The Elusive Obvious. Meta Publications, California, 1981.
- Feldenkrais, Moshe. The Potent Self. New York: Harper Collins, 1985.
- Fogel, Alan. Developing Through Relationships. The University of Chicago Press, Chicago, 1991.
- Goleman, Daniel. Emotional Intelligence. New York: Bantam, 1995.
- Gurdjieff, G.I. Meetings With Remarkable Men. New York: Arkana, 1985.
- Gurdjieff, G.I. Views from the Real World. New York: Arkana, 1984.
- Herrigel, Eugen. Zen in the Art of Archery. Trans. R.F.C. Hull. New York: Random House, 1953.
- Heckler, Richard, Strozzi. Aikido And The New Warrior. Berkley, California: North Atlantic Books, 1985.
- Hirai, Tomio. Zen Meditation and Psychotherapy. Tokyo and New York: Japan Publications, 1989.
- Huang, Chungliang Al. Embrace Tiger, Return Mountain. Berkley, California: Celestial Arts, 1973.
- Hyams, Joe. Zen In The Martial Arts. New York: Bantam, 1979.
- Johnson, Don Hanlon. Body. Berkeley: North Atlantic Books, 1992
- Jung, C.G. Mandala Symbolism. Trans. R.F.C. Hull. Vol. 9, Part 1 of The Collected Works of C. G. Jung. Bollington Series XX. Princeton: Princeton University Press, 1959.
- Kamata, Shigeo and Kenji Shimizu. Zen and Aikido. Trans. Aiki News Staff. Tokyo: Aiki News, 1992.
- Kano, Jigoro. Kodokan Judo. New York and Tokyo: Kodansha, 1986.
- Liu, James, J. The Art of Chinese Poetry. Chicago and London: Chicago University Press, 1962.
- Noss, David and John
Noss, John and David. A History of the World's Religions. New York: Macmillan, 1999.

- Ouspensky, P.D. In Search of the Miraculous. Arkana, London, 1965.
- Ouspensky, P.D. Tertium Organum. New York: Alfred A. Knopf, 1951.
- Suzuki, Shunryu. Zen Mind, Beginner's Mind. New York and Tokyo: Weatherhill, 1970.
- Reischauer, Edwin. The Japanese Character. Kyoiku Tosho, Osaka 1957.
- Robinson, C.E. Hellas. New York: Pantheon Books, 1948.
- Russell, Bertrand, A History of Western Philosophy, Simon & Schuster, New York, NY, 1945.
- Schweitzer, Albert, The Mysticism of Saint Paul the Apostle, Trans. William Montgomery, New York, NY: The Seabury Press, 1931.
- Stanislavski, Constantin. An Actor Prepares. New York, Theater Arts Books, 1936
- The Bhagavad-Gita. Trans. Barbara Stoler Miller. New York: Bantam, 1986.
- The Upanishads. Trans. Swami Prabhavananda and Frederick New York: Mentor, 1948.
- The Taoist I Ching. Trans. Thomas Cleary. Boston And London: Shambhala, 1986.
- Todd, Mabel. The Thinking Body. Dance Horizons, New Jersey, 1939.
- Tzu, Lao. Tao De Ching. Trans. Richard Wilhelm. Trans. H.G. Ostwald. London: Arkana, 1985.
- Varela, Francisco, Evan Thompson, and Eleanor Rich, The Embodied Mind, (Cambridge, MA and London, England: The MIT Press, 1993) 256.
- Walsch, Neale Donald, Conversations with God, New York, NY: Putman, 1995.
- Watts, Alan. The Way of Zen. New York: Random House, 1957.
- Watts, Alan. TAO The Watercourse Way. New York: Pantheon, 1975.
- Zimmer, Heinrich. Myths and Symbols in Indian Art and Civilization. ed. Joseph Campbell. Princeton: Princeton University Press, 1946.