

CHAPTER 7

DISCUSSIONS

7.1 INTRODUCTION

This chapter concerns the overall perspectives of Chapters 2, 3, 5 and 6. The latter includes (1) Yoga Texts, and (2) Modern Science, including a section on biophysics of *siddhi*. Last, we offer a new perspective on the concepts of *Jiva*, *Jagat*, and *Ishvara* that emerged during the study.

7.2 DISCUSSION

The yoga texts describe means of attaining *siddhis*. Some name *siddhis*, but most only provide a description of the *siddhi* mastered by performing a particular practice. In the modern scientific literature they are given objective descriptions along with specific names for each ability; so these are the methodological differences. The disparities between the goals are that ancient traditions aimed to bring *siddhis* to the aspirant as mile stones on path to enlightenment. The latter being the primary goal. In modern times transpersonal psychology aimed to bring acceptance of these phenomena and give each a name. The Institute of Noetic Sciences, USA has tried to conduct experiments demonstrating the existence of particular *siddhis* and to give psycho-physiological correlates of each. The problem has been that these psychophysiological correlates are usually considered in terms of quantum physics whereas they rather need to be considered in terms of instability physics. The instability physics that provides the basis for self-consciousness in physiological systems. This latter perspective has been used throughout the thesis.

7.2.1 YOGA TEXTS

The Yoga *Śāstra* group comprises two texts: Patañjali Yoga Sūtra and the Bhagavada Gītā.

The first lays out its *pādās* with the same logic as a modern scientific paper: Abstract, providing

an overview of the whole, then Introduction, Methods, Results and Discussion / Conclusion. The first *sūtras* of *Pādā* I provide an overview of the whole, just like an Abstract. The rest of *Pādā* I provides a context for the other 3 *pādās*, just like an Introduction. *Pādā* II, named Methods (*Sādhanā Pādā*), treats the first five Limbs of Yoga, outlining means of perfecting them; *Pādā* III, *Vibhuti Pādā* (literally fruits), enumerates the results of practising the last three *antarāṅgas* limbs of yoga. *Pādā* IV, *Kaivalya Pādā*, treats the goal, *Kaivalya*, in a discursive, philosophical way, bringing together practical aspects of yoga with the theory of removing the primary *klesha*, *avidya* and gaining *vidya*, supreme knowledge; a step that requires philosophical understanding. The final verses of *Pādā* IV act like a conclusion and summary. The parallels between the structure of Yoga Sutras and a modern scientific paper shows how deeply Maharshi Patanjali appreciated the logical sequence required to present ideas clearly.

Yoga Sūtras: Some key *sūtras* are: *Sūtra* IV.1, which states: *Siddhis* are born of birth, herbs, *mantras*, *tapas* or *samādhi*. Starting in *Pādā* I, I.40 a yogi gains mastery over all objects from the smallest atom to the infinitely large, through meditation. *Pādā* II, II.28 states that yoga practice destroys impurity and lack of discrimination, unveiling the light of spiritual knowledge. It then lists the *yamas* and *niyamas*, II.35 to II.45, describing perfections attained by being established in them. The rest of *Pādā* II concerns the fruits of perfecting the last three *bahirāṅgas*: *āsana*, *prāṇāyāma* and *pratyāhāra*. *Pādā* III, concerns the practice and applications of *Samyamā*, i.e. *dhāraṇā*, *dhyāna* and *samādhi* together, as the means to attain *siddhis*. Each *siddhi* that can be attained by performing *sanyamā* on a particular idea, but names are not given, only descriptions.

III.38 asserts that *siddhis*, as psychic powers in this world, may be obstacles to *samādhi*.

The Bhagavada Gītā: Rather than describing *siddhis*, the text utilizes the word as ‘success’, giving means of ensuring success. BG 6.45 states: ‘With accumulated merits from many previous births, when such yogis engage in sincere endeavors to make further progress, they are purified from material desires and attain *perfection* in this life itself’, a clear indicator of the working of *karma* and the truth of the cycle of birth and death. BG 8.15 states: ‘Having attained Me, the great souls are no more subject to rebirth in this world, ... because they have attained the highest *perfection*.’ BG 12.10 describes the means to attain such perfection: ‘If you cannot devotedly hold Me in mind, practice remembering Me with devotion, and try to work for Me. Performing devoted service to Me, you will achieve *perfection*.’

Yoga Upaniṣads: 13 of the 20 Yoga Upaniṣads have *siddhi* related verses. The majority are from Yogaśikhā Upaniṣad followed by Yogatattva Upaniṣad and Śāṅḍilya Upaniṣad. The Haṁsa and the Brahmavidyā Upaniṣads lay out the practice of ‘*Soham*’ repetition leading to *siddhis*. The Nāḍabindu Upaniṣad suggests practice of yoga while the Tejobindu Upaniṣad states all is *Brahma*, even *siddhis* are *Brahma*. The Yogatattva Upaniṣad states *mantrayoga* and *prāṇāyāma* as means to *siddhi*. It also warns the yogi that *siddhis* are obstacles to *mokṣa* and that he should not get stuck in them; nor should he demonstrate them. He should behave like a fool and keep his *siddhis* hidden. The Trisikhibrahmaṇa Upaniṣad suggests *prāṇāyāma* and meditation as means to *siddhis*. The Yogacūḍāmaṇi Upaniṣad states practice of *prāṇāyāma* in *Shanmukhi mudrā* leads to *siddhi*. The Advayatāraka Upaniṣad states meditation is the means, while the Śāṅḍilya Upaniṣad suggests *Samyamā* as the means. The Śāṅḍilya Upaniṣad has

an unnumbered section whose verses match those of Patañjali Yoga Sūtra *Pādā* III, wherein practice of *Samyamā* on various aspects leads to related *siddhis*. The Yogaśikhā Upaniṣad clearly states that *Kaivalya* can be attained only by the *siddhi mārga*. It states that practice of yoga and gaining of knowledge are needed to attain *mokṣa*. One of the verses states – a person who masters his organs of sense and action, mind, and overpowers lust, anger, greed etc., including all obstacles (on the path), nothing is an obstacle for him. It states that the world admits two types of *siddhi*: *kalpita* and *akalpita*. The former are attained by ingesting herbal juices, etc., and not permanent, their power reduces gradually, while the latter manifest by themselves without external means; by determined self-practice of yoga, are permanent, and very powerful. The Darśana and Varāha Upaniṣads suggest practice of *prāṇāyāma* to attain *siddhis*.

Yoga Tantra: Haṭha Yoga Pradīpikā in its opening verses states that knowledge of *haṭha* (yoga) is the supreme secret of yogis aiming to gain *siddhis*. To maintain its power, it should be kept secret; revealed it becomes powerless. It suggests yoga, specifically *siddhāsana*, *kevalakumbhaka* and *mudrās* as the means to attain *siddhis*. Further it states that one who controls subtle energies, eats moderately, renounces worldly ties, and regularly practices yoga, thinking of nothing else, rises to attain *siddhis*. Only by practice does one gain *siddhis* and not otherwise. It states the signs of success as a lean body, pleasant speech, experience of internal sounds, pleasing eyes, health, control of subtle energy, bodily *agni* like a radiant light, and clear *nāḍīs*. It states the outcome of the piercing of the three knots and *siddhis* associated with each. Similarly Gheraṇḍa Saṁhitā, Śiva Saṁhitā, and Haṭharatnāvalī give techniques that work

on body and mind to attain *siddhis*. They include various *kriyas*, *asanas*, *prāṇāyāma*, *bandhas* and *mudrās*. Śiva Samhitā states that knowledge imparted by a Guru, through his lips, is powerful and useful; else it is fruitless, weak and painful. It gives the signs of failure as keeping bad company, disbelieving, failing to respect the Guru, engaging with many people, participating in false controversies, speaking ruthlessly, and failing to give satisfaction to the Guru; all leading to non-attainment of success. It states that, the signs of success are, first, firm belief that it (*vidya*) will be fruitful; second faith; third respect towards Guru; fourth feeling of equanimity; fifth restraining organs of sense and action; sixth moderate eating.

7.2.2 MODERN SCIENCE

In modern scientific terms, attainment of *siddhis* presents a process of human divinization, as “gaining such powers represents ... a breakdown of boundaries between human and superhuman” (Sarbacker, 2013). As Swami Vivekananda said “There is no supernatural, ... but there are in nature gross manifestations and subtle manifestations. The subtle are the causes, the gross the effects. The gross can be easily perceived by the senses; not so the subtle.” (Vivekananda, 2016). *Siddhis* are not beyond natural law, they are, rather, supreme applications of laws of nature on the subtle level. Advanced yoga practices fine tune body and mind to access subtle, cosmic energy thereby developing *siddhis*.

Although *siddhis* are natural phenomena representing milestones on the path of yoga, modern science resists accepting them. They manifest at a subtle level, but express on a gross level. Each religion mentions extraordinary human abilities, using which saints have helped humankind. Though accepted by adherents to religion, the generally perceived dichotomy between science and religion means that scientists will not accept them at face value, but demand experimental demonstration and proof at the very least.

Siddhis raise scientists' eyebrows, their science education forces them to ignore anything so extra-ordinary. They lie at the intersection of man and nature. More precisely, they express when a human being becomes perfectly fine-tuned to body, mind and nature. Scientists tend to label any such experience or observation as exceptions, sidelining them and adhering to preconceived scientific ideas about the nature of the world around them. Historically, before the formulation of quantum theory, ideas like mechanism, physicalism, materialism, and reductionism were taken as fundamental, and related to the basic assumptions of realism, locality and causality.

While this was forced to change with the elucidation of atomic and subatomic physics, and the understanding of its quantum theory description, most scientists still understand these concepts from a prequantum perspective. For physicists, that has all changed, so quantum updates on the historical understandings are also given where appropriate. To elaborate further, we need to understand what these terms generally mean for science.

1. Realism: The physical world consists of objects with properties independent of observation, which may therefore be considered 'real', e.g. a cup of coffee has real properties, like warmth, flavor, aroma, and location in space-time. Such properties exist even when we're not paying attention to our beverage. In the everyday world, this assumption just seems to be common sense. Quantum theory tells us that at the atomic level, the values of location variables must be measured in order to be assigned values, and that the uncertainties in those variables are also important. This tells us that processes of measurement play an important role in defining the 'reality' of each object investigated empirically, and that Realism is far more complex than in classical physics. The French Physicist, Bernard D'Espagnat spent many years promoting his proof that quantum physics disproves our assumptions about the reality of each object, and, indeed of the entire universe. (D'Espagnat B., 1971) He concluded that each perceived object

can only be said to exist by virtue of its relationship to the whole of reality, a perspective originally stated in the Vedic Sciences, most powerfully in Advaita Vedanta.

2. Locality: Two objects, A and B, are completely separate; action at a distance is impossible. For A to affect B, A must move and collide with B. In quantum physics, this changes completely, because quantum correlations can exist between two entities; as a result, their behaviours may be connected. This is most powerfully seen in pairs of quanta originating from a single source.

3. Causality: time moves in a constant sequence of cause and effect, often taken as a mechanical account of the passage of time. Obtaining information from the future is, without exception, against the law. Quantum physics modifies this, since measurements of quantum systems yield results with various probabilities. Conservation laws like those of momentum and energy are still maintained. Causality is maintained in a quantum system to the extent that the experimental set-up defines the system variables.

Historically speaking, these three core assumptions were combined to yield the four Principles of the scientific worldview named above:

1. Mechanism: postulates that everything can be understood like clockwork. Events unfold in time in a strictly orderly, cause-and-effect fashion. Time goes forward and can't go backwards. Quantum theories probabilities and uncertainties modify this, as does Feynman's insight that an antiparticle can be considered the original kind of particle 'travelling backwards in time'. Events do still unfold in time in orderly sequences to which suitably modified cause and effect can be attributed. Mechanism takes on a 'softer' pose.

2. Physicalism: A strong definition is that, for a concept to be scientifically meaningful, it should be supported by a well-defined physical theory. A less rigid understanding is that every entity

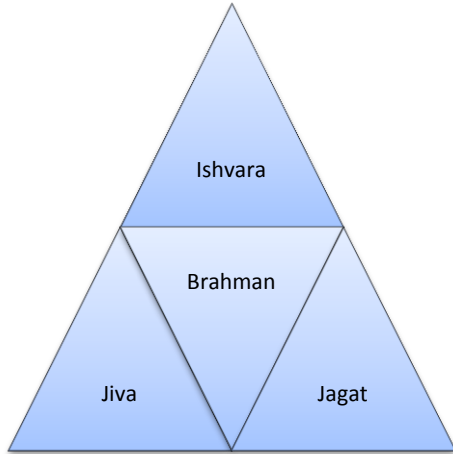
can be described in terms of real properties in space and time, together with meaningful statements provable by logic or mathematics, that can be empirically validated by repeatable experiments. In quantum physics, ‘real properties in space and time’ are modified according to the caveats made above under Realism. The second half of the sentence still holds. That is why the formulation of a physical theory of *siddhi* phenomena like that given in section 7.2.4 is important.

3. Materialism: all things consist of various kinds of matter and energy, e.g. atoms & molecules. This point remains essentially unchanged in quantum physics, though quantum correlations need to be carefully factored in. Vedic sciences distinguish between ‘gross’ and ‘subtle’ levels, but that requires the physics of critical phenomena to describe, not quantum physics, see 7.2.4.

4. Reductionism: says everything consists of a hierarchy of ever-smaller objects, with subatomic particles at the base. Effects flow strictly from microscopic to macroscopic. In quantum physics, quantum correlations enable systems to be connected as wholes. In particular, everything in the universe was completely interconnected by quantum correlations when the ‘inflationary process’ created all observed matter and energy at the time of creation. Reductionism fails.

These Assumptions and Principles, together with the qualifications given, are usually taken as the foundations of today’s science. But in the spiritual domain, all such rules change completely; they have little role to play. To understand this in detail, we need to summarize the basic concepts, by which Vedic, spiritual, philosophy observes the world including body and mind.

The basic building block of the Spiritual domain is One Truth, *Brahman*. Emerging from this, is the triangle of *Jiva*, *Jagat* and *Ishvara*. Each of these is complete; none is part of *Brahman*, each is a ‘Form’ of formless *Brahman*. *Jagat*’s development given in *Samhkya* philosophy in terms of 1 + 24 *tattvas*, each comprising varying proportions of the 3 *gunas* – *Sattva* , *Rajas* & *Tamas*.



The interactions of *Jagat* and *Jiva*, *Jiva* and *Ishvara*, and *Ishvara* and *Jagat*, are aspects of the spiritual domain, worthy of study. To understand the ‘*Aham Brahmasmi*’ *mahavakya*, to the extent of ‘owning the knowledge’ is the Goal of Life. *Jagat* is a ladder by which *Jiva* ascends to *Ishvara*, *Saguna Brahman*, and so realize the

truth, *Brahman*. *Jagat* is the play of *Brahman*. *Jiva* has had innumerable births to attain *mokṣa*, i.e., freedom from the cycle of births and deaths. Its Karma decides the next birth, including time, place and its form taken at birth.

Vedic philosophy states that everything animate and inanimate is an expression of the 3 *Gunas*: *Sattva*, *Rajas* and *Tamas* in their various degrees of manifestation. Chapter 14 of The Bhagavada Gītā is all about the *Gunas*, it is called *Gunatraya Vibhag Yoga*. The human body, *Sharira*, is categorized into three aspects, namely, the *Sthula Sharira* or gross physical body, the *Sukshma Sharira* or subtle body, and the *Karana Sharira* or causal body.

A second classification of *Sharira* is found in the Taittiriya Upaniṣad, the concept of *Pancha Koshas* or five bodily sheaths: the *Annamayokosha* or physical sheath (literally of food); the *Pranamayokosha* or sheath of subtle breath; the *Manomayokosha* or sheath of mind and emotions; the *Vijnanamayokosha* or sheath of intellect and understanding; and lastly, the *Anandamayokosha* or sheath of bliss. The two classifications can be seen to correspond to each other when we observe that *Sthula Sharira* comprises the *Annamayokosha*; the *Sukshma Sharira* comprises the *Pranamayokosha*, *Manomayokosha* and *Vijnanamayokosha*; while the *Karana Sharira* comprises the *Anandamayokosha*.

Samkhya philosophy lists 1 + 24 *tattvas* through which creation and its unfolding has taken place. Their order is as follows: First *Purusha*, then *Prakriti* with their interplay leading to *Samsara* bringing into existence *Mahat/ Buddhi*, *Ahamkara* and *Manas*. The 3 *Gunas*, existing at the level of *Prakriti*, unfold in the *panchajnanendriya*, *panchakarmendriya*, *panchamahabhutas* and *panchatanmatras*, 4 sets of 5 *tattvas* each. The *panchajnanendriya*, organs of perception, include *shrotru* – ears, *tvak* – skin, *chakshu* – eyes, *jivha* – tongue and *nasika* – nose. The *panchakarmendriya*, organs of action, include *vak* – speech, *pani* – hands, *pada* – legs, *payu* – anus and *upastha* – genitals. The *panchamahabhutas* are *prithvi* – earth, *aapaha* – water, *tejas* – fire, *vayu* – air and *akasa* – ether. The *panchatanmatras* are *gandha* – smell, *rasa* – taste, *rupa* – form, *sparsha* – touch and *shabda* – sound. The *tanmatras* are *sukshma*, subtle whereas the *bhutas* are *sthula*, gross. From *sukshma* comes *sthula* i.e. from the subtle comes the gross. With the above holistic understanding of the basic components of creation, we can now proceed to compare the scientific and spiritual views of the manifestation of *siddhis*.

7.2.3 SCIENTIFIC – SPIRITUAL RELATIONSHIP

The assumptions and principles at the foundations of science given in the previous section mean that the labels, ‘spiritual’ and ‘nonphysical’, weren’t meaningful for science in its historical framework. But the modifications due to quantum theory built the ground for their inclusion. *Siddhis* are no longer excluded from the scientific domain. Although some scientists still label such ideas as nonsense or mere superstitions, they are not justified in doing so. Further, when we acknowledge that experiment rules supreme, and must guide our understanding of science, empirical evidence for *siddhis* demands the construction of a new scientific paradigm.

To construct the necessary scientific framework to describe *siddhis* requires consideration of the Vedic concepts of ‘Gross’ (*sthula*) and ‘Subtle’ (*sukshma*). The ability to distinguish between

these develops as the mind becomes familiar with deeper levels of intellectual apprehension from the prolonged practice of meditation. It slowly becomes clear that underlying the world of words and language is a realm of ideas. *Shiksha* states that these occur at the level of the ‘spiritual heart’, the second of the four levels of speech, *para*, *pashyanti*, *madhyama*, and *vaikere*. While numbers three and four are at the level of the senses, and are ‘gross’, the second, at the level of the ‘spiritual heart’ is ‘subtle’. That level is described neither by classical physics, nor quantum physics, but by the physics of instabilities, which can encode ideas by means described in detail below.

This means that levels that are gross and subtle are not distinguished by classical as opposed to quantum physics. The latter may distinguish descriptions of the macroscopic world from those of the microscopic world of molecules, atoms and subatomic particles, but not gross from subtle. Quantum physics is merely a more accurate scientific description of the world of sense perception, and, indeed, most sensory phenomena require descriptions in terms of molecular and atomic physics by quantum theory: molecules detected by smell and taste, light quanta detected by the eye, neurotransmitters triggered by touch, and phonons detected by the ears.

In contrast, the realm of ideas used by the brain to think and decide our response underlies the world of words and language. It can be described neither by ordinary classical physics, nor by quantum physics. The physics of instabilities is, in a certain sense, different from both. Certainly, it is different from quantum physics, because quanta exist only in stable systems; and it differs from classical physics in the sense that systems described by classical physics are so described because they are too large for quantum theory to handle. In that sense, classical physics may be considered a macroscopic approximation to quantum physics.

Western science and philosophy largely deal with gross phenomena, a limitation which results in

extraordinary problems, such as the downright refusal of Willard van Quine to discuss the possibility of free will with Oxford's J.R. Lucas (Hankey, 2021).

The sciences of the East distinguish between gross phenomena and subtle phenomena, recognizing that the subtle underlie and control the gross, the levels of speech providing an excellent example. Another example is given in Ayurveda, where the three *doshas*, *vata*, *pitta* and *kapha dosha*, can be equated with the three main systems functions, input / output, turnover, and storage at each level of biology: whole organism, organ systems, organs, tissues and cells. They also regulate these processes from instabilities. By acting on the regulators of systems functions, Ayurveda and related systems of medicine can cure conditions for which modern medicine can only provide palliative treatments, the side effects of which create long-term problems. By acting on a subtle level, in these and other ways, the Vedic sciences achieve results inconceivable in western science and technology. In this sense, Eastern sciences are far more powerful than their western counterparts.

The perspective of *Jiva* – individual, *Jagat* – the world, and *Ishvara* – the supreme must be maintained in the spiritual domain. Similarly, from the scientific perspective, everything can be placed in these three categories, though science chooses to omit the *Ishvara* component. The entire creation and existence of the universe inclusive of human beings is a play, divided into various sciences. In the golden days of Greece, all was Philosophy, which later branched out into subjects like physics, psychology, etc. In the knowledge tree of *Siddhis*, we might metaphorically consider Yoga as the root, Physics as the trunk and branches, Psychology as leaves, while manifestation and expression of *Siddhis* are like the flowers and fruits. Scientific experiments to measure *siddhis* are not always possible; contemporary science focuses on the gross level of the psychophysiology, such as the biochemistry and electrical potentials. What is required are

measurements of changes in subtle energy, like changes in acupuncture meridian energies. Although machines purporting to do this are in widespread use, they are not widely understood outside the field of complementary medicine – which derives its power by working on subtle levels as explained above.

Above, the concept of ‘subtle’ was added to the description of the physical world as a means to extend science to the spiritual domain. Next, we must start building the other end of the bridge.

Consider the Vedic perspective on the terms Realism, Locality and Causality, so that extensions of these historical scientific assumptions are seen to fit more precisely in the spiritual domain.

Realism: In Vedic thought, Realism corresponds to *Vyavahaarika satya*, transactional truth, in contrast to *Pratibhasika satya*, phenomenal or temporary truth, and *Paramaarthika satya*, absolute truth. Whether or not you pay attention to it, a thing exists independently of you by virtue of its relationship to the Whole. It is inevitably an aspect of the overall wholeness of existence, *Brahman*. This is entirely compatible with how entities are understood to exist in the context of quantum physics. Observation generates the information that affirms an entity’s existence. On a personal level, an entity comes into existence for you, when your consciousness becomes aware of it, and pays attention to it. Consider the question, “Where is the revered Mt. Kailash?” The moment you hear the words, “Mount Kailash”, you recollect it, and your knowledge and experience of it become available. Thus, the world, which exists primarily for experience and so for liberation, is ‘Real’. Whatever we pay attention to grows stronger in our mind. Through this world we gain the knowledge required for liberation. Realism is thus valid in the spiritual domain.

Vedic teachings on reasoned argument and dialectic, *Tarka Shastra*, explains its statements in a logical and sequential manner. Its *Saptabhangivada*, Seven Predicate Theory, offer seven ways

that a statement qualifies the nature of an object's existence – its reality. They offer a classic example of advanced logic developed in Indian philosophy. (1) Arguably, it (some object) exists. (2) Arguably, it does not exist. (3) Arguably, both (1) & (2) may be true. (4) Arguably, it is non-ascertainable. (5) Arguably, it exists; arguably, it is non-ascertainable. (6) Arguably, it doesn't exist; arguably, it is non-ascertainable. (7) Arguably, it exists; arguably, it doesn't exist; arguably it is non-ascertainable. Vedic thought thus proposes a seven-fold qualification of Realism. Interestingly, these include how Realism is understood in Classical physics, and in all the interpretations of quantum mechanics.

Locality: In the spiritual domain, this concept of limitedness is less confining. Nothing is disconnected from the whole. All things are interlinked, forming a holistic pattern that exists within the Consciousness of the Whole. Therefore, nothing is completely independent, i.e. not dependent on another. An unseen, intangible, 'field' of Divine Awareness connects all things, be they animate or inanimate. Indian philosophy thus holds that everything is conscious, to varying degrees that distinguish each from the rest. For example, a stone is inert; plants have instincts (Bose reference); animals function through intelligence connecting perceptions to responses (and can communicate their concerns); humans additionally possess intuition and other subtle abilities. *Siddhi* phenomena like telepathy and telekinesis, accepted by Transpersonal Psychology, suggest constant communication on subtle levels all around us in the universe; we are all interconnected. The means of communication or action need not be tangible for a response or reaction to be received. (Sheldrake, 2009) In nature, this occurs all the time. In the spiritual domain, the material appearance of strict localization of each entity is quite illusory, as quantum non-locality indicates.

Causality: In the eastern spiritual domain, the concept of *karma* presents a theory of cause and

effect corresponding to this third historical assumption of science. But because it acts at subtle levels, it seems more profound. According to Vedic accounts of *karma*, each thought or action produces well defined fruits for the person concerned. Their soul will have to endure them, either immediately or sometime in the future – “As you sow, so shall you reap.” The details of this Vedic theory of cause and effect are elaborated in such texts as the *Smritis* and *Jyotisha*, Vedic astrology, which presents it meticulously with precise calculations.

Now come to the four principles of historical science: mechanism, physicalism, materialism and reductionism, and their quantum updates, which seem to create a successful framework for understanding the physical universe. They are understood best by persons with *vivekabuddhi*, discriminating intellect, since they are subtly related and need to be precisely distinguished. *Vivekabuddhi* is also recognized as an ability underlying the *siddhi* of seeing past, present and future, described in PYS *Vibhuti Pada* III.16.

Mechanism: the principle underlying mechanics, which gives equations for the time evolution of the universe. In the spiritual domain, ‘mechanisms’ acting on subtle levels of existence underlie a soul’s progress on its path of evolution to liberation. They utilize the ways that a soul generates *karma* by its actions. To gain spiritual liberation, the soul must learn to avoid accumulating *karma* by living in a state of divine grace, as did Arjuna under Lord Krishna’s guidance in the battle of Kurukshetra. In this context, *karmic* ‘mechanism’ parallels its scientific meaning, controlling evolution in time, but now on a subjective level. Note also that the PYS III.16 *siddhi* of being able to see past present and future at the same time suggests that evolution in time, as understood by modern science, may be illusory.

Physicalism: Understanding the spiritual domain requires connecting deep spiritual qualities and ideas existing on subtle levels with more obvious, physical properties existing on the gross level.

Once this is achieved, connections between the gross level of reality and its subtle more spiritual counterpart are established, and the spiritual concepts are given connections to physical theory. An example is the theory of self-awareness based on the physical properties of instabilities identified in fractal physiology – as discussed in section 7.2.4.

Materialism states that everything consists of matter and energy. Spiritual understanding instead names *Jada* and *Chetana* as constituents of all things: *Jada* is inert whereas *Chetana*, consciousness, is active / dynamic. In addition, Vedic thought asserts that each manifest entity expresses a unique combination of *sattva*, *rajas* and *tamas*, the 3 *Gunas* defined in BG 14, with specific properties enumerated in BG.17.

Reductionism – The spiritual domain also seems to embody a form of reductionism in that it has an ultimate foundation: at its root is ONE Truth, *Brahman*. But this root is holistic in that all entities are pervaded by it: As Lord Krishna says in the Bhagavad Gita, BG 6.30, “For one who sees Me everywhere and sees everything in Me, I am never lost, nor is he ever lost to Me.”

Examples of Siddhis: To underline the need for a Scientific Theory, as presented in section, 7.2.4 below, several well authenticated examples of *siddhis* are given from literature, ancient and modern. Scientists have recorded many instances of extraordinary human capabilities such as pre-cognition, clairvoyance, telepathy, telekinesis, etc., which they have described under Transpersonal Psychology. Vedic science expounds a concept called *Tanmatra*, a property of the soul, which functions as ‘organs of perception’, but on the subtle level. Within the body-mind-soul complex, *tanmatras* work at the level of *pashyanti*, ideas, and, unlike the five *gyanendriyas*, physical senses, do not involve digital information. According to spiritual understanding, *siddhis* develop at this subtle level.

Vedic thought assigns the law of *Karma* and associated theory of reincarnation central roles,

about which no doubt exists; e.g. in B.G. IV.5, Lord Krishna tells Arjuna that they both have experienced innumerable previous births. While he remembers them all, Arjuna does not. This *siddhi*, described in PYS III.18 means that reincarnation is well accepted in the spiritual perspective, and presents the background for the concepts of spiritual emancipation / liberation. At the present time, the *siddhi* is occasionally found in children gifted with such powers as past life memories from birth, or who later develop *siddhis*. They are considered prodigies.

Higher intellectual abilities recognized in the west, thus seem to be connected to *siddhi* abilities recognized in Vedic times. Celebrated examples of naturally manifesting *siddhis* include: Anjani Putra Hanuman in the revered Ramayana, who was blessed with the *Aṣṭa Siddhis* that he used to his best ability whilst serving Shri Rama; and in the Mahabharata, Sanjaya, to whom sage Vyasa gave the *siddhi* of *divyadrishti*, divine sight, so that he could narrate the story of the Battle at Kurukshetra to King Dhritarashtra. Such seers should not be ignored.

In modern times, the great saint, Saibaba of Shirdi in Maharashtra possessed the *siddhi* of *aparigraha*, the fifth of the *Niyamas*, PYS II.39, for which reason, people entrusted him with large sums of money. Another modern example was Ramana Maharshi who possessed the *siddhi* of *ahimsa*, as brought out by the following story: one evening, he told his disciples that dacoits would soon descend on the ashram, warning them not to resist in any way. When the dacoits arrived and had beaten everyone, they were very surprised and upset to find that no one had any money to speak of. Ramana Maharshi simply spoke to them kindly and offered them food. They left without accepting the invitation. Ramana Maharshi could also see previous incarnations: in the later years of his life, his ashram was supplied with milk by a cow who had arrived voluntarily, as it were, and of whom Ramana remarked that she was the reincarnation of the lady who had fed and cared for him in his first years in Tiruvannamalai; she had returned to him in

order to gain *mokṣa* in this cow form. Perhaps his most powerful *siddhis* were: a. to transfer deep inner silence into the hearts of those present at his discourses; and b. to answer their deepest questions in detail without being asked. He could evidently gain detailed knowledge of peoples' hearts.

7.2.4 THE BIOPHYSICS BEHIND *SIDDHIS*

Modern biology is very different from what most scientists are trained to understand, because at both undergraduate and graduate levels no mention is made of fractal physiology or complexity biology. The universal property, self-organized criticality, which plays such an important role below is never mentioned, so professional biologists and biotechnologists never learn about the key role of critical instabilities in the regulation and function of all organisms. Molecular biology implicitly teaches that all life is based on molecular mechanisms. Rather than being purely mechanical, however, organisms use highly complex structures of regulation, centred on points of instability. These endow organisms with the adaptability required to survive in real environments. Because of the instabilities, the biophysics of regulation manifests physics totally different from anything previously thought possible in biology. As a result, self-awareness (PYS I.3), pure consciousness (Swami Rama, 2007), creative intelligence (PYS I.48) and *siddhis* (PYS *Pada* III) become possible. How this comes about is explained in detail below.

Consider, for example, the phenomenon of consciousness (Swami Rama, 2007) with its self-interacting dynamics bringing potentially unlimited creative intelligence. (Domash, 1977) It cannot be supported by a purely mechanical system composed of atoms and molecules. Even a strictly quantum system cannot generate consciousness, with its inherent self-awareness. Human consciousness can generate creativity like that manifested by genius. (Hofstadter, 1979) Such possibilities cannot result from a mechanical system. They rather emerge from systems with

creative intelligence. When we come to *siddhi* powers, their scientific acceptance, initiated by Maslow, Grof and Sutich (Maslow, 1969), will require science to move further beyond its current historical, restrictive assumptions and principles discussed in the last section.

How then has biology begun to generate the grounds for these phenomena? The research initiatives that have achieved a possible explanation started with the studies of regulation of gene expression, epigenetics, carried out by Stuart Kauffman while still a student at Stanford University Medical School. Having elucidated very important initial laws with the help of Warren MacCullough at M.I.T. (Kauffman, 1969), Kauffman helped to start-up the Santa Fe Institute (Waldrop, 1994), thereby becoming a leader in the study of complexity (Kauffman, 1996), and edge of chaos functioning. (Langton, 1990) This developed the concepts of Fractal Physiology (Bassingthwaight et al, 2013), and Self-Organized Criticality (Bak et al, 1987), well recognized now by top biologists. Nobel laureate, Sir Paul Nurse, has commented that: “*For future understanding of biology, we have to get to grips with complexity*” (Nurse et al, 2014). The word ‘fractal’ in the term ‘fractal physiology’, refers to how physiologies yield fractal distributions of response to sequences of identical stimuli (Sankaran & Hankey, 2017): Critical instabilities (Stanley, 1972) are the sites of loci of control of organism regulation. Physiologies achieve this through self-organized criticality.

In yoga, meditation, *dhyana*, requires refinement of the experience of an inner stimulus, *dharana*. The end goal of *dhyāna* is the resting state of mind in pure awareness. Jonathan Shear, a founder of western consciousness studies, studied the state of Pure Consciousness (Shear, 1983, 1997), described in *Mandukyopanishad* as the fourth state of consciousness, *Caturtham* (Radhakrishnan, 1953). He emphasized that it is the foundation for all cognitive states, a state where ‘the Self knows the Self alone’ (c.f. PYS I.3), a state of perfect self-observation (Hankey,

2014). *Siddhis* are developed by stabilizing that state, and learning to function from it through use of the process that Maharishi Patanjali calls Samyama. (PYS Pada III.1-4) Their biophysics is that of pure consciousness, several accounts of which have been published (Sankaran & Hankey, 2017), (Shetkar et al, 2017), (Hankey, 2014, 2015, 2017). We may understand how this occurs as follows: if we accept that consciousness controls actions like musculo-skeletal movements in the ways that we commonly experience, then it should be sited at places in the physiology where that can be achieved. Fractal physiology introduces the concept of ‘loci of control’ of physiological functions, so these ‘loci of control’ automatically become preferred sites to locate consciousness. The work of Danish physicist, Per Bak and his colleagues (Bak, 1987), proposed that the fractal properties of fractal physiology imply that such loci of control obey ‘Self-organized Criticality’ (SoC).

The questions arise: how does that happen? And, why? The easiest way for loci of control to obey ‘self-organized Criticality’ is for them to be sited at critical instabilities. This flow of understanding leads us to conclude that physiological control systems obeying fractal physiology have their loci of control sited at critical instabilities. But the physiologic properties that make a physiology fractal have been found to be universal. That means that all control systems in all organisms site their loci of control at points of critical instability.

Now, add the conclusion of the first sequence of reasoning: consciousness should be sited at physiological loci of control. As we have just seen, loci of control are sited at critical instabilities. This leads us to conclude: *the kind of physics that supports consciousness, experience and creativity, is that of critical instabilities, rather than the physics of stable systems.* Such physics is taught in specialized courses on Phase Transitions and Critical Phenomena (Stanley H.E., 1972), so it is less well known. Nevertheless, to properly understand

how consciousness connects to the physiology, it must be learned in depth.

Now consider *siddhis*: since they are developed by practising *samyama*, which first takes the practitioner to the state of pure consciousness (PYS III.4 and III.11), any attempt to develop a theory of *siddhis* should start with the physics of pure consciousness, i.e. of critical instabilities. At first sight, this seems promising. As discussed in Chapter 6, various properties of instabilities suggest that their physics may indeed be able to describe *siddhis*, e.g. point (c): physical states at instabilities are highly coherent. Such ‘critical coherence’, is stable at room temperature refuting objections of the kind aimed at Domash. Their critical coherence allows instabilities to become coupled to external systems, which also possess internal coherence. Moreover, those external systems could possess either quantum coherence or critical point coherence.

The next important point is that ground states of systems at instabilities are degenerate point (d) in Chapter 6. Many states are at the same energy, zero for the system. If one of those states has zero information content, another of the states may, in contrast, represent some experienced information. This suggests that such systems can support or encode information without requiring additional energy to do so.

Now put these two points together and consider what happens when a system at a critical instability, at or close to its ground state couples to another such system in its ground state, via their critical point correlations. The mutual coherence between the two sets of critical point correlations may result in similar transitions occurring in both systems. If one transition represents an idea arising in the mind of a master yogi(ni), then the transition in the second system means that the same idea will arise in their two minds. This presents the start of a model for telepathy.

To put this more formally, it is theoretically possible for systems with degenerate ground states to become correlated with each other, in ways such that their critical point correlations lead the

same information state to arise in both systems. If, for example, two people, **a** & **b**, are represented by System **A** and System **B**, then System **A** (Person **a**) can influence the state of System **B**, i.e. person **b**. In one direction, this might represent the ability of **a** to know the contents of **b**'s mind, a stated ability of spiritual Gurus. In the other direction, it represents the ability of the Guru to plant an idea in a *Shishya*'s mind. Also, because such states connect to physiological regulation, the coupling should enable the Guru to perform distance healing, as is recounted in many texts. (Yogananda, 2005)

Furthermore, such mutual coherence will couple the two systems whatever their relationship in space and time. Physicists make much of Einstein's well-proven theory of special relativity, which states that the speed of light is a limiting velocity, and that no causal influences can travel from one system to another faster than the speed of light. However, this argument does not apply to the case we are considering here of an influence relying on mutual correlations. The argument applies to the case of all influences requiring energy to transmit them, since special relativity says that all energy transmission is limited by the speed of light. This leads to the concept of a 'light cone', an expanding sphere of influence emanating from any point in space-time. Energy departing in any direction from that point can only exert an influence at a second point in space-time that can be reached at speeds less than or equal to the speed of light. Such points are said to be 'within the light cone' of the first point.

However, the reasoning in the previous paragraphs explicitly used states at the same energy, where making the transition requires zero energy. The systems being discussed can thus be outside each other's light cones, no matter the magnitude of their physical separation, as no physical energy is involved. They will still be able to exchange ideas or influence each other's physiologies. Such examples can be extended to provide physical models explaining many more *siddhis*. Most depend on coupling between a person's internal critical coherence, and either critical coherence or quantum coherence in an external entity.

Training in the Siddhis: The first condition named above, the degree of internal coherence can be increased by training. Higher states of consciousness require increased levels of internal coherence (Hankey, 2017). Regular meditation practice, particularly automatic self-transcending meditation (Travis & Shear, 2010) achieves this. *Sāadhanā* (Shearer, 1982) is thus the correct way to train a *sādhakā*. Mastering a *siddhi*, requires sensitivity to information available in consciousness. Use of a *siddhi sūtra* can result in various possible excited states of consciousness. Training makes the *sādhakā* familiar with such states.. One *sūtra* (III.29) requires *saṁyamā* on ‘The Pole Star’ (Shearer, 1982) to gain ‘knowledge of the motion of the stars’. Jonathan Shear noted that one of the effects is to produce a picture described in Plato’s Republic. (Shear, 1981) Shear related this to structures of consciousness used in creativity.

7.2.5 PSYCHOLOGY

PYS *Pādā* III states how to develop the *siddhis* that it describes without naming them. This contrasts with modern psychology, which names all supernormal abilities. Table 7.1 provides comparisons of the two, listing various *siddhis* from Yoga texts, while giving the most suitable equivalents named in transpersonal / para psychology, with those not recognized left blank.

Table 7.1 : LIST OF *SIDDHIS* IN YOGA TEXTS AND PSYCHOLOGY

Sr. No.	Text & Verse #	Name / Description	Psychology Name	Psychology Description
1.	PYS - 2.35	Abandonment of Hostility in Vicinity	N/A	N/A
2.	PYS - 2.36	Actions Achieve their Fruits	N/A	N/A
3.	PYS - 2.37	All Wealth Present Themselves	N/A	N/A
4.	PYS - 2.38	Subtle Energies are Gained	N/A	N/A
5.	PYS - 2.39	Realization of Purpose of Life	N/A	N/A
6.	PYS - 2.40	Indifference towards Body and Non-Attachment to Others	N/A	N/A
7.	PYS - 2.41	Purity, cheerfulness, one-pointedness, mastery over <i>indriyas</i>	N/A	N/A
8.	PYS - 2.42	Supreme Happiness	N/A	N/A
9.	PYS - 2.43	Impurities Destroyed, Perfection in the Body and <i>indriyas</i>	N/A	N/A
10.	PYS - 2.44	Communion with a chosen deity	N/A	N/A
11.	PYS - 2.45 YTU(105)	Perfects <i>samādhi</i>	N/A	N/A
12.	PYS - 2.48	Pairs of Opposite Cease to Impact	N/A	N/A
13.	PYS - 2.52	Removes the inner light's veils	Psychometry / Psychoscopy or Divination	Ability to obtain information about something by touch or using occult skills
14.	PYS - 2.53	Mind gains steadiness for <i>dhāraṇā</i>	N/A	N/A
15.	PYS - 2.55	Supreme mastery over the <i>indriyas</i>	N/A	N/A
16.	PYS - 3.16	Knowledge of Past and Future	Retrocognition	Ability to perceive past and /

	SU– K7 YTU (127) HU (20) TU (108) YSU (5-48) SS (5-66, 86)		/ Precognition	or future events
17.	PYS - 3.17 SU– K7	Understanding of sounds produced by all living beings	Telepathy	Ability to transmit or receive thoughts
18.	PYS - 3.18 SU– K7	Knowledge of past Incarnations	Psychic surgery	Disorder of the body tissue is removed by an "energetic" incision, which heals instantly
19.	PYS - 3.19 SU– K7	Knowledge of the quality of another's mind	N/A	N/A
20.	PYS - 3.21, HU(20), YTU(74) SU– K7 SS (3-54)	Invisibility <i>Adṛśyakaraṇī</i> - vanish from sight	N/A	N/A
21.	PYS - 3.22	Disappearance of sound and other sense perceptions	N/A	N/A
22.	PYS - 3.23	Knowledge of time of death & omens	N/A	N/A
23.	PYS - 3.24	Strengthens (those qualities)	N/A	N/A
24.	PYS - 3.25 YTU(59) SU– K7	Corresponding Strength is developed	N/A	N/A
25.	PYS - 3.26	Knowledge of Subtle, Obscure or Distant objects	Psychokinesis / Telekinesis	Influence a physical system without physically interacting

				with it
26.	PYS - 3.27 SU – K7	Knowledge of Cosmic Spaces	N/A	N/A
27.	PYS - 3.28 SU – K7	Knowledge of Arrangement of Stars	N/A	N/A
28.	PYS - 3.29 SU – K7	Knowledge of Movement of the Stars	N/A	N/A
29.	PYS - 3.30 SU – K7	Knowledge of Arrangement of Body	Energy medicine	Energetic or informational interaction with a biological system to restore the organism to homeostasis
30.	PYS - 3.31 SU – K7 YSU (5-49) HYP (2-55) SS (5-43)	Hunger and Thirst cease	N/A	N/A
31.	PYS - 3.32 SU – K7	Steadiness	N/A	N/A
32.	PYS - 3.33 NU(30) SU – K7 SS (5-82, 87)	Vision of the <i>Siddhas</i> , perfected ones	Mediumship Channeling	Ability to communicate with spirits
33.	PYS - 3.34 HU(19) SU – K7 DU(6-19)	Knowledge of everything	N/A	N/A

34.	PYS - 3.35 DU(6-19)	Knowledge of the Citta	Automatic writing	Ability to write / draw unintentionally
35.	PYS - 3.36 SU – K7 HYP (4-103)	Knowledge of <i>Puruṣa</i>	N/A	N/A
36.	PYS - 3.37	Intuition & higher levels of <i>Pancha Jyanendriyas</i>	N/A	N/A
37.	PYS - 3.39 YSU (5-48) SS (3-54, 5-81)	One can enter another body	Astral/ mental projection	Out-of-body experience, when consciousness voluntarily separates from the body
38.	PYS - 3.40 YSU (1-148) YSU (5-50)	Ability to avoid contact with water, mud, thorns etc., and float over them	N/A	N/A
39.	PYS - 3.41	The Body shines with radiant light	N/A	N/A
40.	PYS - 3.42 YTU (73) YSU (5-47) SS (3-54) SS (3-75, 5-86)	Divine Hearing <i>Dūraśruti</i> - clearly hear what is spoken at a great distance	Clairaudience	Distant hearing
41.	PYS - 3.43 YSU (1-43, 148 & 149) SU – K7 HYP (4-27) GS (5-56) SS (3-41) SS (3-54, 5-64)	Ability to travel through space	Levitation / Transvection	Ability to float / fly around

42.	PYS - 3.45 SS (3-54) SS (3-78) SS (5-49)	Mastery over <i>Panca Bhutā</i>	Teleportation / Apportation Materialization Pyrokinesis Dowsing	Ability to make articles appear and disappear Create or manifest matter controls flames, fire, or heat using one's mind. Ability to locate water or metals underground using a 'Dowsing rod'
43.	PYS - 3.46, TBU(6-29) BU(24), YTU(22 & 105), TU(160), AU(11), YSU(1-138 & 2-6, 19, 5-51, 52) HYP (3-30, 50, 130) SS (3-52, 78, 4-56, 5-40, 78, 142, 147) HR (2-34, 52)	<i>Aṣṭa siddhi</i> , <i>aṇimā</i> , etc., & perfection of the body's appearance and no limitations to its function	N/A	N/A
44.	PYS - 3.48	Mastery over the <i>Indriyas</i>	N/A	N/A
45.	PYS - 3.53	Brings discriminative knowledge	N/A	N/A
46.	YTU (59) SS (5-77, 88)	<i>Bhuchara siddhi</i> (wandering over the earth at large, without restraint)	N/A	N/A
47.	YTU (73) YSU (5-47)	<i>Divyadr̥ṣṭiḥ</i> / <i>Dūradr̥ṣṭiḥ</i> - see what is very distant	Remote-viewing/ sensing	Ability to see a distant / unseen target using ESP.

	HYP (2-30, 3-98) GS (1-35, 51, 54) SS (3-54, 75, 5-86)		Telesthesis / Clairvoyance	
48.	YTU (73) YSU (1-148) SS (5-86)	<i>Kṣaṇādhdūrāgamastathā</i> - to travel far in but a moment <i>Pavanavegavān</i> - move like wind	N/A	N/A
49.	YTU (74) YSU (3-10) SS (3-54, 4-11)	<i>Vāksiddhiḥ</i> - the speech-siddhi	N/A	N/A
50.	YTU (74 & 111) YSU (1-43 & 44)	<i>Kāmarupattva</i> - change his physical form at will <i>Ichhārupo</i> - take any physical form that he desires <i>nānārupāṇi dhārayet</i> - can take different forms	N/A	N/A
51.	YTU (74) SS (3-54, 5-82)	<i>malamūtrapralepanena lohādeḥ svarṇatā bhavet</i> - convert iron into gold by rubbing it with a paste of his urine and excrement	N/A	N/A
52.	YTU (75) YSU (5-51) SS (3-42, 94, 96, 4-25) HR (3-88)	<i>khe gatistasya jāyeta</i> - masters roaming in the sky <i>Vayu siddhi</i> – rise in the air	N/A	N/A
53.	YSU (1-42)	<i>dehaḥ ākāśādapi nirmalaḥ</i> - body becomes like <i>akasha</i> and also even purer than <i>akasha</i>	N/A	N/A
54.	YSU (1-42)	<i>sūkṣmātsūkṣmataro' dṛśyaḥ</i> - make body subtler than the	N/A	N/A

		subtlest – invisible		
55.	YSU (1-42)	<i>sthūlāt sthūlo</i> - grosser than grossest	N/A	N/A
56.	YSU (1-42)	<i>jaḍājjāḍaḥ</i> - make body as large or as heavy as desired	N/A	N/A
57.	YU (115) HU (16) HYP (4-70, 85, 86) GS (5-79,80, 81 & 82) SS (5-26, 27)	<i>Nādasiddhi</i> - expereinces the various sounds <i>Bhrahmari siddhi</i>	N/A	N/A
58.	HYP (1-41) HR (3-81)	<i>Unmani</i> – mind state free of thoughts	N/A	N/A

Caption: *Siddhis* described in Yogic Texts and their often approximate counterparts in psychology. Abbreviations of Upaniṣad names as follows: Shandilya SU, Hamsa HU, Nādashikha NU, Yogashikha YSU, Yogatattva YU, Brahmavidya BU, Trishikhibrahmana TU, Advayataraka AU, Tejobindu TBU, Yogacudamani YU, Darshana DU, Hatha Yoga Pradipika HYP, Gheranda Samhita GS, Shiva Samhita SS, Hatharatnavali HR.

Table 7.1 was constructed with several aims in mind. The first being to incorporate into the thesis a complete list of *siddhi* powers named in East & West, one of the stated objectives of the thesis. Secondly, the table enables them all to be seen in a single location, at a single glance, as it were. Having different columns devoted to East, columns 2 and 3, and to the West, columns 4 and 5, allows each *siddhi* to be compared to a western supernormal power if one exists. In this context, the left column, numbers 1 to 58 is complete, in contrast to the right hand pair of columns, which was generated using texts and research papers from parapsychology / transpersonal psychology. The large number of gaps in the right two columns (44 out of 58) suggests that knowledge of *siddhi* powers is far more extensive in the east than in the west.

7.3 SUMMARY

The idea that, ‘a miracle is not a momentary suspension of natural law, but application of a higher one’, is generally agreed. Manifestation of *siddhis* depends on higher functioning of the mind. Today's science is rich and complex and capable of yielding explanations for them.

Large numbers of well-recorded phenomena from many different cultures have no present scientific explanation within science’s current level of development. Sheldrake (2009, 2012) is a good example of a scientist who has written extensively about such phenomena, and run into skeptic opposition from senior members of the Royal Society.

Although *siddhis* have largely been rejected by the scientific community, some professionals in physical science accept their existence, considering them ‘Supernormal’, while the social sciences call them ‘Transnormal’. (Ferrer, 2001) They may not be explained in the usual material terms of physical science, but section 7.2.4 shows that many can be described by the less known physics of instabilities in biological regulatory systems. The great interest in Yoga today means that increasing number of people are developing or possess *siddhis*. Some may even be willing to

demonstrate such abilities in scientific tests. Careful experimental design may avoid problems like those encountered by J.B. Rhine (2014). The experiments should be replicable; methodology should be robust; and there must be accurate record keeping, and honest reporting. Researchers should aim to make their studies acceptable to modern science, and so accelerate the spiritual evolution of humanity. Study of *siddhis* may then become a normal aspect of physics of mind; eventually being accepted as natural psychological states, as suggested by Maslow (1969) when founding Transpersonal Psychology.