

CHAPTER 3

REVIEW OF SCIENTIFIC LITERATURE

3.1 INTRODUCTION

The chapter systematically presents the scientific literature available on *siddhis*. It first explains the subject in terms of modern sciences of physics and psychology, and goes on to expand on relevant recent research published on both these topics and related fields. Finally, a table listing scientific research findings in the various fields is presented.

3.2 THE PHYSICS OF CONSCIOUSNESS, SUBTLE PHENOMENA & BIOPHYSICS

A new approach to understanding conscious experience has been developed over the last seven years. (Hankey, 2014, 2015, 2017) Since experience is based at instabilities, the physics of which is entirely different from that previously supposed, entirely new realms of phenomena can be scientifically described. Among the new phenomena are *siddhis*, and the new theory can be extended to develop theories for various of them. (Shetkar et al, 2017) Experience Information (Sankaran et al, 2017) conforms to the Vedic sciences' description of the various levels of speech. At its basis, the Self knows Itself, by Itself and through Itself, which encodes ideas or 'forms' as its fundamental representation of information.

The state cognized as the Self thus encodes ideas (Hankey, 2015), in agreement with *Paśyanti* in the *Vedāṅga*, *Śikṣā*; and the western philosophers, Descartes (1641), Plato (375 BCE) and Immanuel Kant (1781) (Smith, 2011). Physical models of *siddhis* constructed on this basis can describe such things as telepathy, knowledge of distant events, creative cognition, and the ability to rescale the subtle body, making it larger or smaller. The thesis will indicate how to model most *siddhis* identified in the texts.

3.3 TRANSPERSONAL PSYCHOLOGY

Transpersonal Psychology is concerned with the study of humanity's highest potential, and with the recognition, understanding, and realization of spiritual, transcendent and unitive states of awareness. The thinkers who set the stage for it were William James (Taylor, 1996), Carl Jung (2012), Roberto Assagioli (2007) and Abraham Maslow (1962). Transpersonal Psychology utilizes psychological methods and theories to examine spiritual subject matter. It considers human experience as a whole. It was originally developed by Abraham Maslow (Maslow, 1969, 1971, 2013), who, along with Antony Sutich, founded the Journal of Transpersonal Psychology (Sutich, 1968, 1969), in order to provide a platform for better defining and expanding the field.

In her 2009 book, Mariana Caplan wrote: "Transpersonal psychologists attempt to integrate timeless wisdom with modern Western psychology and translate spiritual principles into scientifically grounded, contemporary language. Transpersonal psychology addresses the full spectrum of human psycho-spiritual development—from our deepest wounds and needs to the existential crisis of the human being, to the most transcendent capacities of our consciousness." (Caplan, 2009)

Among the aims that Maslow and Sutich stated at the journal's founding was to bring the concept of integrated mind-body-spirit into the world of science. (Maslow, 1969) The method advocated was 'Sharing Subjective Experiences' (Maslow, 1969), a challenging task as many scientists and psychologists ardently denied the validity of subjective experience as a tool of exploration. Maslow predicted the emergence of a 'Fourth Force' in psychology alongside the then major schools, Psychoanalysis, Behaviorism and Humanism – Behaviorism has since died a well-deserved death. The history of the journal has been well documented. (Grof, 2008)

All this occurred when western society was at its peak of materialism, and popular cults, which paid no attention to science. In this context, the work of Maslow and Sutich and their colleagues presented a bold new departure. The connection of work on yoga and *siddhis* to the new field came from the discovery by Davis and Wright (1987) that, in transpersonal psychology courses taught at colleges and universities, meditation was the primary experiential technique.

Issues considered in transpersonal psychology include spiritual practices, development and evolution, transcendence, self beyond ego, peak experiences, altered states of consciousness, and other expanded states of being. The discipline attempts to formulate new ways to encompass such experiences, and to integrate them into modern psychology. Dean Radin (2006, 2013, 2018) Chief Scientist at the Institute of Noetic Science (IONS) and Associated Distinguished Professor of Integral and Transpersonal Psychology at the California Institute of Integral Studies, in his books *Entangled Minds*, *Supernormal* and *Real Magic* has provided insights into the subject.

3.4 SUMMARY TABLE OF SCIENTIFIC RESEARCH

TABLE 3.1 REVIEW OF SCIENTIFIC LITERATURE ON <i>SIDDHIS</i>		
Sr. No.	REFERENCE	CONDENSED STATEMENTS
1.	Sharma, B. R. (2012)	In yoga, supernatural abilities fall within the spheres of mind & nature. Gaining control of states of mind brings everything in the universe under control, so that any power can be exercised at any time.
2.	Kelly, E. F. (2019)	The key aspect of such phenomena is information flow between two places, e.g. a human and some other part of the external world, despite the presence of barriers like physical shielding or separation in space, which current physical science says should prevent any such flow. In a crisis-apparition case, for example, percipients gain detailed, verifiable information about the death of a distant loved one and its cause.
3.	Mayer, G. A. (2014)	This <i>fakir</i> could make his body pain-free or numb by concentration and autosuggestion. New wounds, added daily, did not bleed. "Bleeding is a warning that the suggestion isn't strong enough", he said healed wounds were tiny white points.

4.	Flood, G. (2011)	Supernormal powers can be attained through persistent application of spiritual technologies of yoga including meditation.
5.	Pflueger, L. W. (2005)	The supernormal <i>siddhi</i> powers of yoginis are the topic of more <i>sūtras</i> than any other in Maharshi Patanjali's Yoga Sutras.
6.	Bryant, E. F. (2020)	Fundamental and intrinsic to the <i>Sāṃkhya</i> /Yoga traditions, <i>siddhis</i> form an essential aspect of their metaphysics.
7.	Sarbacker, S. R. (2013)	Supernormal powers of perception and action arise for a variety of reasons. Some can be developed oneself by yoga, or may arise due to one's nature or status at birth, i.e. one's <i>karma</i> from previous lifetimes.
8.	Arnikar, H. J. (1996)	Substantial evidence of the existence of <i>siddhis</i> latent in man. Under the guidance of a Guru, ESPs like clairvoyance etc. may be developed.
9.	Burke, R. V. (2015)	Like the experience of Self in the Logos, Yogic potentials grow as transpersonal experiences of body, mind and soul. They operate in the deep silence of wholeness and peace bordering cosmic consciousness.

3.5 SUMMARY

The physics underlying conscious experience is now well worked out. In agreement with Vedic sciences, it shows how critical instabilities in biological regulatory systems support self-awareness and encode information as ideas. The information has two aspects: it uniquely supports awareness and it shows how 'Consciousness Collapses Wave Functions', as the founders of Quantum Theory supposed. The theory thus agrees with criteria stated by David Chalmers, the most prominent philosopher of consciousness. (Chalmers, 1996) It brings understanding of *siddhis* and phenomena described by yoga authors like Paramahansa Yogananda (1946) (Yogananda, 2005). It thus links to Transpersonal Psychology as laid out by Abraham Maslow in his book, 'The Farther Reaches of Human Nature'. Texts by authors likes Dean Radin and Rupert Sheldrake corroborate these ideas.