

**A COMPARATIVE STUDY OF THE SUBJECTIVE EXPERIENCES OF
HYPNOSIS AND MEDITATION AMONGST A STUDENT SAMPLE**

by

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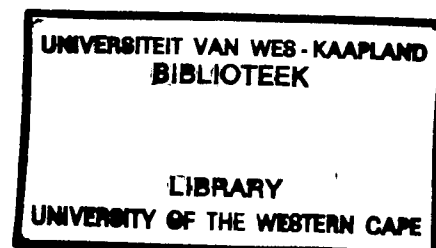
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ABSTRACT

This study reports on the nature of subjective experiences of hypnosis and meditation in a sample of volunteer University of the Western Cape students (N = 12). Historical developments in the field of psychology dictated that much of the research conducted during the past three decades into the phenomena of hypnosis and meditation, was concerned with physiological changes. The measurement of physiological responses is more amenable to scientific investigation, in comparison to the measurement of subjective experiences. As a result investigations into the nature of subjective experiences during hypnosis and meditation, as well as comparisons between the two, remain areas where continued research is encouraged.

The present study was undertaken with university post-graduate students who had minimal or no experience of meditation and hypnosis. These subjects from here on will be referred to as "naive" students. The aim of the study was to compare the subjective experiences of naive students undergoing hypnosis and meditation, and to determine whether there were similarities and/or differences in their reported experiences of these two states. The results derived from this comparison were in turn compared with what has been documented in the literature. A review of the literature elicited a host of theoretical variables which described the subjective experiences of subjects in both states. The empirical part of the study included a quantitative phase and a qualitative phase.

The quantitative phase sought to examine differences between hypnosis and meditation with the use of the Altered States of Consciousness Inventory (ASCI). Given, that to the knowledge of this researcher, the Altered States of Consciousness Inventory lacks prior validation criteria, a validation process was undertaken. The validation process consisted of a conceptual factor analysis where all 135 items in the scale were examined and classified according to the variables they were considered to measure. From this analysis 21 conceptual factors were identified. From these 21, eight variables were statistically factor analysed, resulting in the emergence of two broad factors. With these two factors it was possible to test differences across both conditions of hypnosis and meditation. This was done by employing the t-test for single samples.

The qualitative phase sought to elicit subjective experiences from the subjects with the use of the Group Hypnosis and Meditation Questionnaire (GHMQ). The GHMQ is an instrument which was designed during the study specifically to probe **subjective** experience and to provide qualitative data. After the protocols had been subjected to a content analysis, the results were analysed in order to monitor similarities and differences between the two states of hypnosis and meditation.

A critical synthesis of the quantitative and qualitative phases indicated that subjects experienced more similarities between the states of hypnosis and meditation than differences. Eight variables were found to coincide with those which have been previously identified in the literature. Variables identified in the literature are derived from both theoretical debate which is grounded in the clinical setting, and from scientific research. Finally, the study showed that the Altered States of Consciousness Inventory may be used effectively as an instrument with which variables describing subjective experiences may be identified. In conclusion, limitations are discussed, and recommendations are made for future research where this instrument (ASCI), or other similar instruments may be employed.



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CHAPTER ONE

INTRODUCTION

Hypnosis and meditation are altered states of consciousness which are both commonly induced by specialists and lay people alike. Hypnosis is widely used within the field of clinical psychology both as a mode of psychotherapy (Scott, 1993), and as a technique which can be self induced. It is also commonly used in dentistry as a means of anesthesia (Hartland, 1982). Meditation is widely practiced within the Buddhist tradition as a core means of facilitating self-healing and insight (David-Neel, 1977). The two phenomena are used within contemporary western society as methods of healing, yet both practices have differing historical and geographical origins. Both techniques are described in the contemporary literature. However, it appears that the literature in respect of hypnosis is largely confined to medical, psychiatric and psychological texts and articles, with increasing attention being devoted to hypnosis in "popular magazines", whereas meditation is discussed in specific psychology texts and articles, or in literature devoted to the Buddhist tradition. Hence, perusal of the contemporary literature may lead lay people into perceiving that the two phenomena are as divergent as the texts in which they are described. Furthermore, it is apparent that research in the area of the interface between hypnosis and meditation is scant; texts devoted to both states are readily available, however there is an apparent lack of research devoted to understanding the relationship that exists between these two altered states of consciousness.

The present study was undertaken to compare the subjective experiences of university post-graduate students undergoing hypnosis and meditation, and to determine whether there are similarities and/or differences in their reported experiences of these two states. The subjects had minimal or no prior experience of hypnosis and meditation and will from here on be referred to as "naive" subjects. This comparison of the two states is examined in relation to what has been documented in the literature. In this study subjects were exposed to both conditions, that is, hypnosis and meditation. This is in contradistinction to other research where separate groups have been

exposed to the conditions of hypnosis and meditation respectively (Barmark & Gaunitz, 1979; Berry, 1982).

Owing to the historical emphasis of research on physiological experiences, subjective experiences during hypnosis and meditation have received less exposure to research (Berry, 1982; Epstein & Lieff, cited in Wilber, Engler & Brown, 1986). Although it has been established that there are similarities between the physiological changes which occur during hypnosis and meditation, there is less evidence to suggest that this is the case in regard to the subjective experiences. As the discipline of psychology continues to gain status as a respected scientific area of study, there will be less focus on research into quantifiable phenomena such as physiological change. This will open important avenues such as developing an in-depth understanding of the subjective experiences during altered states such as hypnosis and meditation.

The sample in this study is comprised of naive subjects at the University of the Western Cape campus. While acknowledging the limitations involved with employing a student sample during the course of an academic year, the researcher believes that this approach offers specific insights into research in this area. This will be elaborated upon in the latter part of the study.

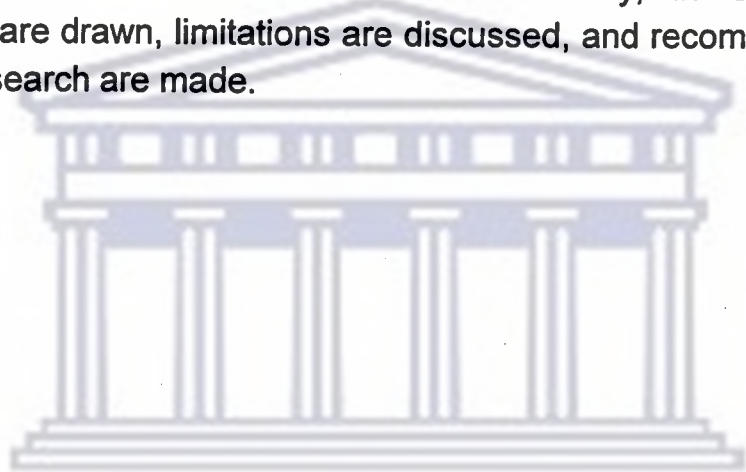
In Chapter Two attention will be given to several issues including the concept of altered states of consciousness, issues relevant to the history of hypnosis and meditation, descriptive variables used to delineate the experiences of hypnosis and meditation, and some descriptive similarities and differences as outlined in the literature. These topics are summarised in tabular form.

Chapter Three focuses on the empirical research, including an outline of the research problems and goals. The research methodology and design which were chosen are discussed. The design includes the collection of both quantitative and qualitative data through the use of two scales namely, the Altered States of Consciousness Inventory (ASCI), and the Group Hypnosis and Meditation Questionnaire (GHMQ).

The results were derived through statistical analysis and phenomenological content analysis respectively.

In Chapter Four the results of the ASCI analysis in the context of the literature review are presented. In addition the results of the GHMQ qualitative analysis, and the results yielded in terms of similarities and differences are presented.

In Chapter Five, the results are discussed in the context of the interface between the two scales, and between the two scales and the literature. Practical problems are also discussed. Finally, in Chapter Six conclusions are drawn, limitations are discussed, and recommendations for future research are made.



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CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter will review literature relevant to the concepts of hypnosis and meditation as altered states of consciousness. Subjective experiences of these two states will be a focus. The literature concerning the interface between the physiological and subjective experiences of these two states, will be considered. The various terms used in the literature to describe subjective experiences of hypnosis and meditation will be examined, and a comparison will be made between these terms, or variables, used to describe hypnosis and those used to describe meditation. Definitions and historical data will be reviewed within the narrow context of reported subjective experiences of hypnosis and meditation. The literature review was drawn from several data bases including ERIC, MEDLINE and PSYCHABS.

2.1 INTRODUCTION

The theory and practice of clinical psychology are concerned with the investigation and treatment of various mental and emotional states. Within the field of clinical psychology there also appears to be significant interest in the various "states of consciousness" that are reported from the clinical setting as well as from within the more academic and theoretical settings. Such states include dream states, waking states, sleep states, psychotic states, hypnogogic and hypnopompic states, meditative states, contemplative states, hypnotic states and a host of other states of being. It is beyond the scope of this study to launch into a full discussion of the "state debate" (Coe, 1992; Kirsch, 1992). It is relevant to note, however, that terms such as "altered state" or "altered state of consciousness" are subject to bitter debate in the literature. In the context of this study, these terms will be used to describe specific states of consciousness that differ from the usual states of consciousness (Pratt, Wood & Alman, 1988; Tart, 1972).

The occurrence of various states of consciousness has become a major area of interest for researchers and lay people (Berry, 1982). Despite the growing interest in this area of psychological research, there remains considerable controversy surrounding the existence or non existence of various "altered" or alternative forms or states of consciousness (Kirsch, 1992).

That the waking state of being is qualitatively different from a state of sleep or any of the states mentioned above has been well established (Berry, 1982; Tart, 1969). There is, however, less clarity on how these states differ from each other.

The question of the *quality* of subjective experiences becomes relevant if research is to answer questions surrounding the nature of states of mind and how they differ from one another. In the 1960's Stanislov Grof conducted research with LSD psychotherapy and concluded that his subjects transcended the psychodynamic level and entered the transpersonal realm (Walsh & Vaughan, 1980). According to Walsh and Vaughan (1980), one has the potential to reach this state of consciousness without chemical substances through processes such as meditation, yoga and advanced psychotherapy. It appears that this potential can also be reached through hypnosis, which is reported to be qualitatively different to the waking state (Hall, 1989; Scott, 1993).

The history of research into altered states of consciousness shows that the focus was not always on such subjective experiences. During the last two decades much of the research which focused on the relationship between such altered states of consciousness, concerned the measurement of objective physiological responses of subjects undergoing either hypnosis, meditation or both (Paul, 1969; Wallace, 1970; Walrath & Hamilton, 1975). Research into physiological responses of subjects during hypnosis and meditation provided researchers with exact scientific data concerning physical responses during these altered states of consciousness. This research left many questions unanswered, however, specifically with regard to the nature of subjective experiences.

Such research was taken a step further by Berry (1982) who addressed the issue of change in subjective experience. He demonstrated a move away from preoccupation with the detection of physiological responses. Berry researched whether or not a self-report inventory of subjective change in experience could be used to discriminate between subjects in different altered states of consciousness.

It appears then that during the past 30 years research in the area of hypnosis and meditation has focused, among other issues, on the three following areas:

- hypnosis and meditation as altered states of consciousness,
- physiological changes which occur during altered states of consciousness such as hypnosis and meditation,
- subjective experiences during states such as hypnosis and meditation.

2.2 ALTERED STATES OF CONSCIOUSNESS

One of the most comprehensive approaches to explaining the phenomena of hypnosis and meditation is to include them in the paradigm of altered states of consciousness (Pratt, Wood & Alman, 1988). This is a broad conceptual area but will be explored as the basis underlying the subjective experiences of states such as hypnosis and meditation.

2.2.1 Definition

Altered states of consciousness (ASCs), as polymorphous phenomena, remain surrounded by considerable controversy. Human beings appear to conduct their everyday activities within a state of awareness or a state of consciousness which can be understood as a distinct physiological and psychological condition of awareness (Pratt et al., 1988). Pratt et al. (1988) hold the view that different states of consciousness are not discrete, but are located on a continuum stretching from alert waking to deep dreaming. Charles Tart (1937, 1970), a pioneer in the area of state theory, identified what he termed the usual state of consciousness. According to his theory, a usual state of consciousness can be understood as any state that is experienced regularly, including sleep, waking and dreaming (Tart, 1937). According to the view of Pratt et al. (1988) any state that is qualitatively different from a usual state of consciousness can be broadly defined as an altered state of consciousness. They agree that several states are associated with the term altered states of consciousness. Both hypnotic states and meditative states are among these.

2.2.2 Hypnosis and Meditation as Altered States of Consciousness

It is evident in the literature (Kroger, 1977; Pratt et al., 1988; Tart, 1937, 1970) that debate and research surrounding hypnosis and meditation would be incomplete without a concurrent exploration of the concept altered states of consciousness. Pratt et al. (1988), suggest that altered states of

consciousness are achieved through the induction of hypnosis or meditation, and furthermore that to consider the states of hypnosis and meditation separately from altered state theory would be to dismiss the foundation of the two states. Hence, there exists a mutually reciprocal relationship between hypnosis and meditation, and altered states of consciousness. The induction of hypnosis and meditation give rise to an altered state of consciousness, and equally the states of hypnosis and meditation are regarded as altered forms of the usual state of consciousness.

Historically, the interface between these altered states of consciousness and usual states of consciousness, has fascinated human beings for centuries (Tart, 1937). People have been aware of the phenomenon of hypnosis at least since the mid eighteenth century and certain groups and nations have been meditating for several thousand years (Naranjo & Ornstein, 1972).

2.3 HYPNOSIS

2.3.1. History of hypnosis

The history of modern western hypnosis dates back to 1765 when Franz Mesmer expressed his beliefs in the existence of a magnetic fluid in which all human bodies were immersed. He began treating patients with the use of magnets and had astounding results with patients suffering from a variety of conditions including toothache and depression (Hartland, 1982). At this stage of its development hypnosis was very much in its infancy and hardly acknowledged within scientific circles. The major shift in the status of hypnosis from the unknown to a more acceptable psychological construct came with the contributions of J.M. Charcot (Craslineck & Hall, 1975). His authority did much to make investigation in this field respectable (Craslineck & Hall, 1975). Freud, together with his colleague Breuer, developed an interest in hypnosis. The former later rejected hypnosis when he felt that the system of psychoanalysis was superior to hypnosis (Kline, 1972). According to Glasner (1955), Freud's rejection of hypnosis, after his earlier enthusiasm, had a profoundly negative effect on the development of the field. Following Charcot's death in 1893, the scientific study of hypnosis declined and remained dormant until World War One, when interest in this technique was revived as a means of treating post traumatic war neurosis (Craslineck & Hall, 1975). Although hypnosis has its origins in the eighteenth century, it is only

since the 1960s that researchers have focused on understanding the physiological and subjective experiences resulting from this phenomenon.

2.3.2 Physiological changes during hypnosis

Although the focus of this study is on the subjective experiences during the states of hypnosis and meditation, any review of the literature would be incomplete without mention of research addressing physiological changes during hypnosis.

Prior to the development of interest in subjective changes during hypnosis, much of the research aimed at explaining altered states of consciousness in objective terms. It did so by means of measuring the objective physiological responses thought to be associated with hypnosis. These studies focused on the measurement of physiological responses for two primary reasons. First, measurement of physiological responses provided hard evidence in a field which was filled with speculation and skepticism. Secondly, at that time there were no other objective mechanisms available with which to measure or explain altered states of consciousness (Berry, 1982).

Physiological responses which were subjected to scrutiny included heart rate, respiration rate, galvanic skin response, and electroencephalograph readings. Reviews of these studies may be found in the articles of Davidson and Goleman (1977), Paul (1969), and Walrath and Hamilton (1975). Whereas the above studies focused on physiological responses such as galvanic skin response and heart rate, Morgan, Mac Donald and Mac Donald (1974) paid attention to EEG alpha waves. They correlated alpha waves with laterality of eye movement and reported that laterality of eye movement, specifically left-eye movement was associated with hypnotic susceptibility. Walrath and Hamilton (1975) addressed the question of physiological changes by exploring whether or not hypnosis and meditation could be discriminated from each other on the basis of three common physiological measures. They compared heart rate, respiration rate and galvanic skin response (GSR) in response to the procedures of meditation, self-hypnosis and instructed relaxation respectively. They found that while all three factors (heart rate, respiration rate and GSR) were significantly affected by the experimental procedures, there was no difference between the experimental groups on the physiological measures. Paul (1969) conducted a similar study but concerned himself with the effects of hypnotic suggestion and brief relaxation

training on subjective tension and physiological arousal (heart rate, respiratory rate, tonic muscle tension and skin conductance). He concluded that both experimental procedures produced significantly greater effects than controls.

2.3.3 The subjective experience of hypnosis

The studies which examined physiological responses to hypnosis were clearly scientific in that they made use of experimental designs and involved objective measurement of observable phenomena. The measurement of subjective experiences is, however, in contradistinction, a less clearly defined task.

2.3.3.1 *Definition and descriptors*

In spite of the many definitions and formulations of the subjective experience of hypnosis, the concept of hypnosis remains enigmatic in nature. Pratt et al., (1988) offer the following comment:

Hypnosis has always been an enigma. The more it is subjected to the light of modern empirical scrutiny, the more it eludes definition. Like the blind men in the fable who attempt to describe an elephant, researchers know a great deal about hypnosis but remain unable to fit the parts into a single conceptual whole (p.2).

In venturing a simple definition of hypnosis, Hartland (1982) makes clear connections between the hypnotic state and the unconscious part of the mind. According to Hartland:

Hypnosis is essentially a particular state of mind which is usually induced in one person by another. It is a state of mind in which suggestions are not only more readily accepted than in the waking state, but are also acted upon much more powerfully than would be possible under normal circumstances. Hence, the hypnotic state is always accompanied by an increase in the suggestibility of the subject. ...That suggestions should be accepted and acted upon more readily in the hypnotic state than in the waking state, can be linked to the following simple fact: in the hypnotic state, the power of criticism is either fully or partially suppressed (Hartland, 1982, p.13).

Naruse (1987) discusses the relationship between imagery and altered states of consciousness. Among those states of consciousness, he includes hypnosis. According to Naruse, hypnosis can be characterised as a state of meditative concentration. He furthermore defines hypnosis as an imaginal mental state which can be achieved and described by the following processes:

- mental and bodily relaxation,
- passive concentration,
- abandonment of alert attention to the outside world,
- dissociation from reality, objectivity and logic,
- increase in imaginal experiences
- increase in hallucinatory experiences.

Kroger (1977) comments on a number of phenomena associated with the state of hypnosis. Among these are amnesia, dissociation and time distortion.

Sheehan (Sheikh & Shaffer, 1979) discusses the nature of subjective hypnotic phenomena in the context of his research on imagery and fantasy. Sheehan argues that subjects entering the hypnotic state are actively engaging in a process of imagery and fantasy, where they may choose to imagine that which the hypnotist suggests. This argument simultaneously reinforces the strength of Hartland's argument for the factor of suggestibility. Sheehan goes on to suggest that subjects may experience primary process phenomena such as hallucinations and dreamlike phenomena during hypnosis. He indicates that this experience may be due to "the fading of everyday reality orientation into the background of awareness" (Sheikh & Shaffer, 1979, p.94). This results in ongoing experiences becoming isolated from their normal frame of reference. Hence, Sheehan suggests that a shift occurs from secondary process thinking to primary process thinking. The usual state of consciousness (Tart, 1937) is temporarily replaced by a state of consciousness which is dominated by primary process thinking.

In "Hypnotic Realities", a text by the influential pioneer in modern day hypnosis, Milton Erickson and his associates, the authors describe the state of hypnosis as a highly motivated state of inner focus (Erickson, Rossi & Rossi, 1976). The multiple foci of attention characteristic of everyday life become restricted to relatively few inner realities. Erickson makes use of the

inner realities of the subjects, and the trance state becomes a highly personalised experience for each individual. He describes the trance state as a period of free inner exploration.

Carey (1986), in his article "Paintings of the mind" presents a case study of clinical work where he illustrates the impact of guided fantasy, relaxation, a positive empathic approach and positive suggestion in the treatment of an enuretic young boy. Carey was able to successfully treat the child using techniques he describes as being a combination of hypnosis, guided relaxation and meditation. The child is encouraged to enter a world of fantasy, through concentration, which is aided by guided and progressive relaxation. The features highlighted by Carey in describing the experience of the child were relaxation, improved attention and ability to concentrate.

Barber and Wilson, (cited in Sheikh & Shaffer, 1979) indicate that there is a strong imaginative component involved in the hypnotic process, linked with the subject's ability to concentrate on specific imaginative stimuli. Furthermore, Barber suggests direct focusing to be a major part of the subject's experience. A situation is able to be imagined with greater intensity, and Barber goes on to note that this occurs without the usual internal and external distractions of everyday life (Sheikh & Shaffer, 1979).

2.3.3.2 *Theoretical variables as derived from the literature*

The literature provides a variety of definitions and descriptions of the subjective experiences of hypnosis out of which the researcher generated a number of theoretical variables. These are variables used to describe the experience of a specific state, and are derived from the theories encompassed in the literature. These variables are presented in a summarised form in Table 2.1.

TABLE 2.1: THEORETICAL VARIABLES AS DESCRIPTORS OF HYPNOSIS

VARIABLES	AUTHOR
Increased suggestibility	Hartland (1982), Sheehan (1979)
Mental and bodily relaxation	Hartland (1982), Naruse (1987), Craslineck et al., (1975), Pratt et al., (1988), Carey (1986)
A state of concentration; Improved attention and concentration	Naruse (1987), Carey (1986)
Abandonment of attention to the outside world; Alertness to inner experience; Motivated state of inner focus; Free inner exploration	Naruse (1987), Erickson et al., (1976), Sheehan (1979)
Dissociation from reality logic	Naruse (1987), Kroger (1977)
Increase in imagery and imaginal experiences	Sheehan (1979), Naruse (1987)
Perceptual phenomena	Sheehan (1979), Naruse (1987), Hartland (1982)
Time distortion	Kroger (1977)
Direct focusing of thoughts	Barber et al., (1979)
Physical sensations	Walrath & Hamilton (1975), Paul (1969), Kroger (1977)

It is evident in the above section, that specific descriptive terms emerge in the literature which are used by researchers to describe the subjective experiences of hypnosis. Furthermore, several of these descriptors of hypnosis such as a state of inner focus, levels of suggestibility, ability to focus thoughts, perceptual and imaginal phenomena, a state of concentration and physical sensations, are simultaneously concepts used within the **realm of psychiatry**¹, to describe certain subjective and objective mental experiences (American Psychiatric Association, 1994; Kaplan & Sadock, 1991). The terms psychiatric feature(s)/phenomena will be used throughout this study to represent the types of experiences outlined above. As will be shown further on in this research study, there is considerable overlap between these

¹NOTE: The use of the word psychiatry is not intended in any way, to represent or indicated the presence of, or similarities with psychopathology. The word is used in order to indicate experiences of a mental nature, which have been identified by those in the field of psychiatry.

descriptive terms (variables), and those which emerged from the Altered States of Consciousness Inventory (ASCI).

2.4 MEDITATION

2.4.1 History of meditation

Meditation, one of the central practices within the Buddhist tradition (David-Neel, 1977) has a history which dates back to the 6th century B.C. (Encyclopedia Britannica, 1963). According to Blair (1970), meditation has always been an integral part of Asian religious, philosophical, and metaphysical teachings. Blair suggests that, "The western tradition of meditation is sketchy. We have been obliged to turn to the East for instruction" (p.61). In line with the orthodox traditions of Buddhism, meditation takes a place in the religion as one of the eight paths of right living. The eight paths of Buddhism are aimed at the process of personal continuous change, leading to the ultimate state of growth, namely, Nirvana (Encyclopedia Britannica, 1963). As it is described within Buddhist doctrine, meditation is understood to be Right Concentration. Accordingly, Right Concentration is,

concentration on a single object so as to induce certain special states of consciousness in deep meditation. By following the path a disciple aims at complete purity of thought and life, hoping to become an arahat, one freed from the necessity of rebirth, ready for Nirvana (Encyclopedia Britannica, 1963, p.355).

In his book "The spirit of Zen", Allan Watts (1973) explains that the word meditation is a transliteration of the Sanskrit Dhanya which derives from the Chinese Ch'an, which in turn derives from Japanese word Zen. According to Watts, meditation is "a high state of consciousness in which man finds union with the Ultimate Reality of the universe" (p.21). The ultimate purpose of Buddhism, and therefore of meditation, is to reach a state of enlightenment (Hoover, 1977; Watts, 1973). Watts uses the word meditation with specific meaning and explains that the distinction must be made between meditation as described above, and meditation as it is understood by "the Westerner" (Watts, 1973). Accordingly, to the westerner meditation is often understood to be little more than deep thought and reflection.

Although meditation has been practiced for several thousand years, scientific research on it began only some twenty years ago (Naranjo & Ornstein, 1972; Walsh & Vaughan, 1980). According to Blair (1970), in adapting Asian techniques of meditation to the West, it is important to be aware of the spiritual and cultural milieu in which they developed. As meditation became popular in the United States of America in the early 1970's, new forms and patterns of meditation relevant and suitable to the American culture began to emerge. The Eastern tradition of meditation focused strongly on the role of the teacher, however this appeared less appropriate in the American culture (Blair, 1970). Experimentation with the group approach to meditation began during the 1970's, as can be observed in contemporary practice of transcendental meditation.

2.4.2 Physiological changes during meditation

It was during the 1970s and early 1980s that important research was conducted in the United States of America, exploring the nature of physiological changes during meditation. The work of Wallace (1970) appears to have played an important role in this area. According to Forem (1973), Wallace was the first American scientist to undertake an extensive examination of the state of consciousness experienced in meditation. Wallace's work demonstrated conclusively that physiological changes can be monitored in subjects during meditation, changes which differ significantly from those which occur during the sleep and dream states. The areas of physiological change noted by Wallace include:

- a decrease in cardiac output,
- a decrease in the monitored heart rate,
- change in Galvanic Skin Response.

The work of Wallace is cited by several authors, including Berry (1982), Forem (1973) and Barmark and Gaunitz (1979).

Other studies conducted during this same period include the works of Carrington (1978), Shapiro and Giber (1978) and Woolfolk (1975). Meditation was shown to result in:

- decreased oxygen consumption,
- decreased blood pressure,
- drop in blood lactate level.

In a study conducted by Meissner in 1983, the effects of meditation upon perceptual efficiency of the cerebral hemispheres were assessed. The study demonstrated that meditation gives a significant advantage in a simple reaction time task. Meissner suggests that "meditation suppresses the left hemisphere and facilitates the right hemisphere" (Meissner, 1983, p.71).

Epstein and Lieff (1986), in their paper on psychiatric complications of meditation, state that research on meditative phenomena has focused on psychophysiological effects, while attempts to understand or measure the subjective experience of the meditator have been conceptually and methodologically more demanding (Epstein & Lieff, in Wilber, Engler & Brown, 1986).

2.4.3 Definition and descriptors of meditation

Meditation forms a core function within the framework of the Buddhist tradition (David-Neel, 1977; Kennedy, 1985). It is within this framework that meditation will be defined. Accordingly, meditation is understood to be "one of the ways which leads to the cessation of suffering" (David-Neel, 1977, p.25). David-Neel describes the perfect meditation as:

A concentration of the mind, a physical and psychical education which aims at producing mental and bodily calm, acuteness of the senses and the awakening of new perceptions. This enables the mind to extend the field of its investigations (David-Neel, 1977, p.25).

In their discussion of the domain of meditation, Naranjo and Ornstein, (1972) indicate that there is a great diversity of practices within the realm of meditation. Various techniques emphasise different foci. Some forms of meditation pay attention to mental imagery, others involve sense organs and yet others make use of music, mandalas and various other activities. Despite the array of modalities, Naranjo and Ornstein believe that meditation extends beyond modalities and procedures and in its entirety is concerned with the development of a presence, a way of being (Naranjo & Ornstein, 1972). In their description of the subjective experience of meditation, they suggest that all meditation is a *dwelling upon* something. It involves an effort to stop the perpetual flow of mental and other activity and set attention upon a single object, sensation, issue or activity. They go on to suggest that there is a

general *stilling of the mind*. The mind does not become inactive, it merely focuses on fewer stimuli than during usual states of consciousness.

Richard Mann (1984), in his text "The light of consciousness" introduces and explores the interface between transpersonal psychology and personal psychology. His work is an account of his interaction with the world and work of Swami Muktananda. Meditation plays a central role as it is the medium used to access the transpersonal realm. Mann describes meditation as a spiritual practice. Accordingly, meditation is understood to be a medium through which meditators can move beyond the confines of the ego and move toward realising the self. It involves a gradual stilling of the mind's internal chatter and buzz. According to Mann:

This practice is designed to loosen the hold of egoic patterns that determine how we describe ourselves and how we view others. It does this by generating the optimum conditions for the mind to register something beyond its usual tendencies and assumptions, reduce the input of sensory data, invoke the Other's presence and guidance.... (Mann, 1984, p.140).

It is evident that Mann's perspective suggests meditation to be far more than a mere process of deep relaxation.

Epstein (1990), in the introductory pages of his article on the psychodynamics of meditation, refers to concentration as a prerequisite for the absorption into a meditative state. The state of meditation itself is described as a progressive experience, one which ultimately leads to what Epstein calls "formless states", states of infinite space, infinite consciousness and nothingness. Keywords used by Epstein in describing meditation are, *relaxation, tranquillity, contentment and bliss*. Brown (Barmark & Gaunitz, 1979) suggests that meditative techniques often involve a procedure which restricts the attention of the meditator.

Brown and Engler (Wilber et al., 1986), suggest the conceptualisation of a stage model of meditation. One such stage model known as *Vipassana* or mindfulness meditation, is understood to be divided into three major systems. These systems are known as Moral Training, Concentration Training and Insight Training. Moral Training is described as the most basic model and is suggested for beginners. The latter two are described as more refined systems. Brown (1977) describes meditation as a process of deconstruction

of the more complex thinking and perceptual processes. Accordingly, in the process of awareness training the subject enters a meditative state in which subtle levels of information processing can be observed. Such subtle levels of the cognitive experience are inaccessible to daily thinking and perceptual processes.

According to Walsh and Vaughn (1980), meditation can be described as any discipline that aims at enhancing awareness through the conscious directing of attention. Although meditation as described by Walsh is more than one mere technique, he maintains that the core practice is that of focusing attention and concentration. The mind may easily become restless in this process, and any unresolved psychological conflicts tend to surface as soon as attention is turned inward. These descriptors of meditation are summarised in tabular form in Table 2.2.

2.4.3.1 Theoretical variables as descriptors of meditation

As was the case with hypnosis, the literature provides a variety of definitions and descriptions of the subjective experiences of meditation out of which the researcher generated a number of theoretical variables. These are variables used to describe the experience of a specific state, and are derived from the theories encompassed in the literature. These variables are presented in a summarised form in Table 2.2.

TABLE 2.2: THEORETICAL VARIABLES AS DESCRIPTORS OF MEDITATION

VARIABLES	AUTHORS
Mental Imagery	Naranjo (1972)
Stilling of the mind	Naranjo (1972), Mann (1984)
Spiritual practice	Mann (1972)
Attention and Concentration	Brown (1986), Epstein (1990), Naranjo (1972) Walsh (1980),
Relaxation	Naranjo (1972), Epstein (1990), Brown (1986)
Alertness to the inner experience; Surfacing of unresolved psychological conflicts	Walsh (1980)

Several of the descriptors of meditation including alertness to inner/outer experiences, spiritual experiences and stilling of the mind, are concepts used within the discipline of transpersonal psychology. David-Neel (1977), suggests that the process of inner focus and alertness has as its aim, the freedom from covetousness and the liberation of the heart (David-Neel, 1977). The statement of purpose of The Journal of Transpersonal Psychology (1970) claims that it is concerned with the nature of phenomena including "...mystical experiences, cosmic awareness, transcendental phenomena and sensory awareness" (p.i). The nature of several descriptors of meditation outlined above has lead the present author to view them as *transpersonal phenomena/factors*. The terms transpersonal feature(s)/phenomena will be used throughout this study to refer to the types of experiences outlined above.

2.5 SIMILARITIES AND DIFFERENCES BETWEEN HYPNOSIS AND MEDITATION

During the past two to three decades, there has been an increasing interest in altered states of consciousness, where researchers have been trying to explain altered states of consciousness in the most objective terms possible. The two most widely studied altered states of consciousness have been hypnosis and meditation (Berry, 1982). These two states were shown to produce measurable *physiological changes*. Not only were physiological changes noted, but it became evident that the physiological changes which occurred across the two phenomena differed minimally from one another (Davidson, 1976; Walrath & Hamilton, 1975). Research was taken a step further in the late 1970s and early 80s when scientists began showing greater interest in the *subjective experiences* of subjects undergoing hypnosis and meditation. This was demonstrated in the work of both Barmark and Gaunitz, (1979), and Berry (1982). Barmark and Gaunitz addressed this question by exploring whether transcendental meditation and hypnosis could be conceived of as different altered states of consciousness based on either subjective or physiological data. They obtained subjective reports pertaining to attentional processes, body image and experience of time, as well as objective measures of three physiological variables: heart rate, respiration rate and finger skin temperature. They concluded that changes in subjective experiences were not identical in the experimental procedures of transcendental meditation and hypnosis, and that significant physiological changes were noted under both experimental conditions.

The literature indicates that both hypnosis and meditation have been investigated individually, as well as comparatively (Barmark & Gaunitz, 1979). In the individual exploration of both phenomena, hypnosis and meditation can be described in terms of a number of descriptive variables (see Tables 2.1 and 2.2). Further review of these variables by this researcher, revealed the existence of shared features between these two phenomena. This comparison is presented in Table 2.3.

TABLE 2.3: DESCRIPTIVE VARIABLES: SIMILARITIES AND DIFFERENCES BETWEEN HYPNOSIS AND MEDITATION

HYPNOSIS	MEDITATION
Increased suggestibility	*
Mental and bodily relaxation	Heightened state of relaxation
A state of concentration; Improved attention and concentration	Direct focusing of attention and concentration; Increased concentration
Abandonment of attention to the outside world; alertness to the inner experience	Restriction of attention
Dissociation from reality and logic	
Increase in imagery and imaginal experiences	Mental imagery
Perceptual phenomena	Unfamiliar perceptual experiences
Time distortion	
Motivates state of inner focus	
Direct focusing of thoughts	
Free inner exploration	
Physical sensations/experiences	Physical sensations/experiences
	Stilling of the mind
	Spiritual experience
	Surfacing of unresolved psychological conflicts

*=Blank cells indicate that this particular variable, as represented in the opposite cell, was not encountered in the current review of the literature. This is **not** an indication that these variables do not exist.

It is clear that physiological changes do occur across both hypnosis and meditation with significant commonalties between the two.

2.6 SEARCH FOR INSTRUMENTS

As part of the literature review, a search for instruments to identify similarities and/or differences between altered states of consciousness, in particular hypnosis and meditation, was conducted. A number of instruments, for example scales measuring hypnotic susceptibility, were found. However, only one instrument which has the capacity to identify similarities and differences between hypnosis and meditation was located, namely the Altered States of Consciousness Inventory (ASCI) by Berry (1982). The ASCI was created as part of a Ph.D. study. A copy of the dissertation was obtained through University Microfilms International (UMI), and a copy of the instrument was obtained via personal communication with Berry.

2.7 SUMMARY

Various writers suggest that hypnosis and meditation are both states of consciousness which differ qualitatively from the normal or usual state of consciousness (Pratt et al., 1988; Tart, 1972). There is, however, less clarity on how these states differ from one another. Prior to the 1980's researchers attempted to address this problem by investigating physiological changes which occurred during both states. There is evidence to suggest that similar physiological changes occur during both the states of hypnosis and meditation (Paul, 1969; Walrath & Hamilton, 1979).

The work of Christopher Berry (1982) was an endeavour to create a self-report inventory, the Altered States of Consciousness Inventory (ASCI), which would enable researchers to distinguish differences between the subjective experience of hypnosis and meditation. His research proved successful in distinguishing between the two states. The focus of Berry's research was on the development of the instrument (ASCI), with a lesser emphasis on describing the qualitative experiences during both states.

Various authors identified variables with which they described the experience of hypnosis and meditation respectively. The researcher noted an overlap between the descriptors of both states (see Table 2.3).

This is of significance in this study, which is concerned with the further exploration and comparison of subjective experiences during hypnosis and meditation.

2.8 HYPOTHESIS

It is apparent that there is a need for further clarification of the similarities and/or differences in the nature of states such as hypnosis and meditation. In this study, the following hypothesis will be tested:

More similarities than differences will be reported by subjects, concerning their subjective experiences of hypnosis and meditation.



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CHAPTER THREE

METHODOLOGY AND PROCEDURE

This chapter presents the research design and methodology which was employed in the operationalisation of this study. The chapter will describe the methods and procedures which were elected for use, in order to elicit and compare information gained from subjects, concerning their internal experiences during hypnosis and meditation.

3.1 PROBLEM STATEMENT

It is evident from the literature review that there is an ongoing need for further exploration of qualitative subjective experiences during altered states of consciousness. Research into the nature of physiological change during these states has been conducted, and appears to be more conducive to scientific research methods than the exploration of subjective experiences (Barmark & Gaunitz, 1979). While it is clear that Berry's inventory is reported to discriminate between hypnotic and meditative states (Berry, 1982), the inner experience of the subject during such an altered state remains an area open for further exploration.

For the purposes of this study, the important distinction is being made between descriptions of hypnosis and meditation as found in the literature, and reported subjective experiences of these two states. Authors of hypnosis and meditation texts are often directly involved in their respective disciplines (Hartland, 1982; Mann, 1984), which may be assumed to directly influence any ideas or descriptions which they may offer. Whether the naive subject, who has had little or no exposure to hypnosis and meditation, will necessarily report experiences similar to those described in the literature, is the question under investigation in this study. Furthermore, will the naive subject report similarities and/or differences in his/her experience of the state of hypnosis and meditation?

3.2 GOALS

The first goal of the study, was to identify *theoretical variables* incorporated in the Altered States of Consciousness Inventory.

In attaining this goal, the research would be able to offer confirmation of the theoretical variables derived from the literature.

Second, it was the purpose of the study to further explore **qualitative subjective experiences** during the states produced by hypnosis and meditation respectively.

Third, it was the goal of the study to assess whether there are **commonalties and/or differences** in reported subjective experiences of subjects during hypnosis and meditation.

3.3 SUBJECTS

3.3.1 Subject participation and dropout

Twenty-six subjects aged 18 - 30 years ($x = 23.5$ years) were involved in the study, out of the 47 subjects who initially volunteered to participate. Of these 26, the data from 12 subjects was suitable for use in the final analysis ($N=12$). This dropout from 26 to 12 subjects, was due to subjects not having attended the required four sessions. The implications of high dropout is dealt with in Chapters Five and Six.

The subjects were volunteers from classes at the University of the Western Cape, in Bellville, Western Cape. Volunteers enrolled for participation in the study in response to leaflets distributed on the campus, as well as in response to verbal communications. The data on subject participation and mortality rates are diagrammatically represented in Table 3.1.

TABLE 3.1: THE SAMPLE

SUBJECTS INVOLVED IN THE STUDY	26
FINAL NUMBER OF SUBJECTS	12*
PERCENTAGE OF TOTAL NUMBER OF SUBJECTS	38.7

$n=12$; Original $n= 26$

Key: *=Subjects used in the final analysis.

3.4 MEASURING INSTRUMENTS

Two questionnaires were used in the study:

3.4.1 The Altered States of Consciousness Inventory (ASCI)

The ASCI, a 135-item inventory, was designed by Berry (1982) in order to facilitate "measuring the occurrence of and discriminating Altered States of Consciousness" (Berry, 1982, p.ii). Berry's research showed that the ASCI can discriminate between subjects in the hypnotic and meditative states of consciousness. It was, however, not clear which theoretical variables were assumed to be measured by the 135 items. Data on validity was not available.

The ASCI also provides a one item Lickert type scale, a sub-scale of the ASCI, which measures the global experience in terms of what is described as "depth of experience" (Berry, 1982, p.80). The item measured on this scale can be rated from 0 to 100. This item was also used in the statistical analysis of the variables (Appendix A: ASCI protocol).

3.4.2 The Group Hypnosis and Meditation Questionnaire (GHMQ)

This 12-item instrument was drawn up by the author in order to elicit descriptive qualitative information from the subjects. The questionnaire facilitates qualitative responses to questions concerning the subjective experiences of both hypnosis and meditation. The questionnaire also includes four questions which probe the interface between the normal waking state and sleep, and hypnosis and meditation. These questions are included for optional use. This unstandardised questionnaire required that the subjects describe their subjective experiences of both states of consciousness (Appendix B: GHMQ protocol).

3.5 RESEARCH DESIGN

In all experimental designs comparisons are made (Kazdin, 1980), and in this study the purpose was to investigate subjective experiences of two states, and explore qualitative similarities and differences between hypnosis and meditation. The study involved 26 subjects who were exposed to two experimental stimuli, hypnosis and meditation according to a crossover design. Following exposure to hypnosis and meditation, subjects were assessed using two instruments, the Altered States of

Consciousness Inventory, and the Group Hypnosis and Meditation Questionnaire. The assessment was designed to elicit subjective responses. This experimental format (within-subjects design), is in contradistinction to a between-subjects design, where two separate groups may be exposed to two different stimuli. The operationalisation of a within-subjects design indicated that the subjects would serve as their own controls, eliminating the need for separate control groups.

3.5.1 Rationale

According to Kazdin (1980), in the context of a within subjects design, if an experiment consists of two different treatments, the sequence in which the treatments occur may determine the pattern of results, rather than the specific treatment. "When the order of the intervention might account for the results, this is referred to as the *order effect*" (Kazdin, 1980, p.161). In order to balance the treatments across all subjects, a research design was required which would counterbalance the order effect. The crossover design was used in this study, because of its applicability in the case of two different treatments (Kazdin, 1980). According to this methodology, "two groups of subjects are constructed through random assignment. The groups differ only in the order in which they receive the two treatments...part way through the experiment, usually at the midpoint, all subject *cross over* to another experimental condition" (Kazdin, 1980, p.161). The reader is referred to section 4.3.1 for statistics depicting the integrity of this aspect of the research design. The design is represented in Table 3.2.

TABLE 3.2: RESEARCH DESIGN (CROSSOVER DESIGN)

GROUP	TREATMENT 1	ASSESSMENT 1	TREATMENT 2	ASSESSMENT 2
A	Hypnosis A	ASCI*	Meditation A	ASCI; GHMQ**
B	Meditation B	ASCI	Hypnosis B	ASCI; GHMQ

Keys:

*=Altered States of Consciousness Inventory

**=Group Hypnosis and Meditation Questionnaire

The methodological criteria of the crossover design, as outlined above, were precisely adhered to in the process of composing and structuring the two groups. It is important to note that the study involved 26 subjects who were divided into two subgroups (groups A and B)

specifically according to the criteria stipulated in the application of a crossover design. Thus one group (A), was first exposed to two sessions of hypnosis and then to two sessions of meditation, while the other group (B), first received the meditation and then the hypnosis interventions.

3.6 PROCEDURES

3.6.1 Allocation of subjects

Subjects were allocated to one of two subgroups, A or B, on a random basis. They were informed that both groups would undergo the same experimental treatment, i.e. hypnosis and meditation. It was also made explicit to the subjects that they were discouraged from discussing their subjective experiences with subjects from the same or alternate groups. Each subject was provided with an information sheet informing him/her of the date, time and venue of the experimental sessions. Subjects agreed to participate in four experimental treatment sessions; two hypnotic induction sessions and two meditative trance sessions.

3.6.2. Introductory Tasks

The following tasks occurred prior to the experimental sessions and involved all the subjects. These tasks included:

- presentation of introductory statement to the subjects (see AppendixE),
- final signing-up for involvement in the study,
- checking subjects for histories of negative past experiences with either hypnosis or meditation,
- final allocation of subjects to respective groups.

The presentation of an introductory statement served the dual purpose of welcoming the subjects as well as introducing them to the nature of the study (See Appendix E). When the introductory statement had been made, subjects were asked to consider any medical complications which they might have, and whether they had recently been advised by medical practitioner(s) not to participate in practices such as hypnosis and meditation. There was no positive response to this question.

3.6.3 Experimental manipulations

3.6.3.1 Hypnosis induction

The treatment variable for the hypnosis groups was an induction procedure based on the work of Erickson, Rossi and Rossi (1976). The induction procedure which included 10 hypnotic suggestions was typed in point form onto an A4 sheet. This format was adhered to during all hypnosis groups. The induction was timed, and recorded at 33 minutes with a variation of 3 minutes. A transcript of the induction is provided in Appendix C. A direct induction approach was used in combination with certain basic Ericksonian principles such as the use of truisms and the utilization theory (Erickson et al., 1976). The significance of this approach lies in the combination of direct suggestions and truisms/double binds which allow the subjects to find meaning in their own inner as well as physiological experiences. Hence simple physiological phenomena such as the tiring eyelid may be observed by the hypnotist and offered to the subjects as a comment on the early phase of hypnotic induction. According to Erickson et al., it is the regularities of behaviour that are of great significance. These regularities are tools Erickson uses to shape hypnotic phenomena and behaviour. Although he worked largely with indirect methods of induction, his work suggests that in instances of "inevitable behavior" direct suggestions can be appropriate (Erickson et al., 1976, p.29).

3.6.3.2 Meditation induction

The meditation induction and deepening was a classic Theravadic Buddhist meditation as adapted from the work of Baker (1994). The duration of the meditation was approximately 30 minutes. The meditation constituted three phases:

- relaxation (9 minutes)
- stilling of the mind (6 minutes)
- deep meditation (15 minutes)

Throughout meditation, between moments when instructions were issued, periods of silence were created during which subjects were able to focus inwardly. A description of the protocol is provided in Appendix D.

3.7 METHODS OF ANALYSIS

The process of data analysis was a five-phase procedure. Analysis of the ASCI involved both a non-statistical (theoretical) and a statistical component, and analysis of the GHMQ was accomplished with the implementation of a phenomenological content analysis. The phases of analysis as they occurred are set out below:

Phase One: Validation of the ASCI.

a) Theoretical variables of the ASCI were identified in terms of the literature.

b) *Face validity grouping of the ASCI items by inspection, to identify variables.* In the absence of validation criteria, a conceptual theoretical analysis of the 135 items was carried out. With the employment of this conceptual approach, the 135 items on the ASCI were categorised according to the psychological variables they were considered to measure. This is a method similar to construct validity techniques, except that, in this instance, variables were inferred from the items. Utilising this approach, the 135 items on the ASCI were categorised into twenty-one variables (Appendix A: ASCI protocol, Appendix F: Variables and the items assumed to measure the ASCI variables).

Phase Two: Empirical validation of the theoretical ASCI variables.

A factor analysis exploring the integrity of the eight-variable theoretical description of the ASCI scale, employed the criterion of maximum likelihood estimation. The factor analysis also allowed the possible factors to correlate with each other.

Phase Three: Checking of the order effect of the research design using the t-test. This internal check would reveal whether or not, the order of treatment administration had influenced subjects' responses. This analysis of the order effect was employed across both sections of the ASCI; the 135 items, as well as the global depth indicator.

No difference was found between groups on basis of order of administration of experimental manipulations (Hypnosis and meditation

groups: $p = 0.64$ and 0.25 , respectively greater than 0.05). Therefore, the subgroups were collapsed into one large group.

Phase Four: Comparison of hypnosis and meditation experience on the ASCI for one large group, using the t-test. This phase included the global ASCI comparison.

Phase Five: Qualitative analysis of the GHMQ, using a Giorgian phenomenological content analysis. This method involves a four step approach:

a) Reading the entire description in order to get a general sense of the statement. The aim of this process is to achieve a holistic sense of the protocol (Stones, 1985).

b) Discrimination of meaning units, with a focus on the phenomenon being researched.

c) Scanning the meaning units and expressing the psychological meaning contained within these units. Meaning units which are expressed in everyday language of the subject are transformed into a language which expresses the psychological perspective of the phenomenon (Stones, 1985, p.70-71).

d) Synthesising transformed meaning units into consistent statements regarding the subjects' experience.

Once the descriptors were identified they were comparatively analysed in terms of existing similarities and differences. In the context of this study, eight of the 12 GHMQ items were used; the four questions concerning the normal waking state and sleep were excluded.

The results yielded in this study are presented in Chapter Four.

CHAPTER FOUR

RESULTS

In the first section of this chapter the findings from the *quantitative* analysis of the ASCI scale are presented. The second section details the results of the *qualitative* analysis of the GHMQ. The emergent theoretical and statistical variables are discussed. This chapter also provides an outline in sequential order of the developing analytic process.

4.1 VALIDATION OF THE ASCI: THEORETICAL VARIABLES

4.1.1 Surface validity of ASCI theoretical variables

The 135 items on the ASCI were categorised into twenty-one variables (See Appendix F: Variables incorporated in the ASCI). The criterion that any variable with fewer than *four* ASCI items was being underrepresented, was employed. Only those of the 21 variables which were measured by four or more items were therefore included. Eight theoretical variables could be identified by means of inspection (see Table 4.1). These were :

- motivated state of inner focus and relaxation (*relaxation*)¹,
- alertness to inner and outer experience (*alertness*),
- levels of suggestibility (*suggestibility*),
- direct focusing of thoughts (*thoughts*),
- increase in perceptual and imaginal phenomena (*perceptual phenomena*),
- levels of concentration (*concentration*),
- spiritual experiences (*spiritual experiences*)
- physical sensations (*physical sensations*).

¹ Abbreviated terms, will be used throughout the text.

TABLE 4.1: THEORETICAL VARIABLES REPRESENTED IN THE ASCI

VARIABLES	ASCI* ITEMS	
Relaxation	6,21,22,25,42,50,52,54,56,74,76,77,80,84 88,93,94,95,98 100,103,111,112,127	24**
Alertness	3,26,40,44,58,68,85,117	8
Suggestibility	5,29,53,61,81	5
Thoughts	8,13,17,18,27,46,79	7
Perceptual phenomena	11,12,24,34,37,41,49,55,57 64,66,71,73,83,87,105,109 110,115,120,123,129,131,134	24
Concentration	45,78,89,96,97,114,119,122	8
Spiritual experiences	91,102,107,118,132,135	6
Physical sensations	7,14,16,19,20,28,31,33,36,39,43,51,59,60 62,63,65,69,72 82,101,104,116,128,	24

Key: * = Altered States of Consciousness Inventory
 ** = Numbers indicate the number of items per variable as well as maximum score for the variable when applied in the statistical analysis.

The theoretical variables of the ASCI were identified in terms of the literature pertaining to hypnosis and meditation. The variables are listed in Table 4.2, with the definitions and authors which coincide with each variable. It was concluded on the basis of this analysis, that the scale was useful for the purpose of this study because the variables it measures can be tied to the literature.

TABLE 4.2: THEORETICAL VARIABLES AS INDICATED IN THE LITERATURE AND MEASURED BY THE ASCI

VARIABLES	ASCI ITEMS	DEFINITION AND AUTHOR	EXAMPLES OF ASCI ITEMS AS REPRESENTED IN THE SCALE	MAXIMUM SCORE *
Relaxation	24 items	The patients' motivation will bind them to the task of inner focus (Erickson et al., 1976)	My emotions were stronger; It was easier to express my feelings	24
Alertness	8 items	Conscious directing of attention resulting in the enhancement of general levels of awareness (Walsh, 1980)	I felt more alert; I was more aware of my surroundings	8
Suggestibility	5 itemsthe hypnotic state is always accompanied by an increase in the suggestibility of the subject (Hartland, 1982)	It was easy; I tried very hard	5
Thoughts	7 items	...an intensified imaginative process where subjects are involved in thinking and imagining things that are suggested.(Sheikh & Sheehan, 1979)	My thoughts were more clear; I had many thoughts	7
Perceptual phenomena	24 items	Then comes the hallucinatory experience.....subject partially takes imagery for perception (Naruse, 1987)	I saw many images; I felt like I was sinking	24
Concentration	8 items	Active concentration is replaced by passive concentration (Naruse, 1987).	It was easier to concentrate; I was easily distracted	8
Spiritual experiences	6 items	...movement beyond the ego toward realising the self (Mann, 1980)	I saw universal truths; I felt I had an increasing understanding of life	6
Physical sensations	24 items	a marked reduction in autonomic responses during meditation and hypnosis (Walrath & Hamilton, 1975)	My heart was beating slower; I was breathing slower	24

*Maximum score for this variable when applied in the statistical analysis

4.1.2 Empirical validation of the theoretical ASCI variables

Given the lack of validation criteria provided by the ASCI (Berry, 1982), it was decided that the first pass at the data would entail a factor analysis to confirm the integrity of the eight variable description of the ASCI scale. Utilising the scores for the eight variables, a factor analysis was conducted employing the criterion of maximum likelihood estimation. Given that the variables are part of the holistic experience and therefore should relate to each other, the factor analysis also allowed the possible factors to correlate with each other.

Two factors were identified with an eigenvalue of more than one. The first accounted for 61% of the variance, the second for 16.4% of the total variance, resulting in a cumulative percentage of 77.4 (see Table 4.3).

TABLE 4.3: STATISTICS FOR FIRST FACTOR ANALYSIS

FACTOR	EIGENVALUE	CUMULATIVE PERCENTAGE OF VARIANCE
Factor 1	4.87	61.0
Factor 2	1.31	16.4
Total		77.4

The descriptive variables which loaded onto these factors were relaxation, suggestibility, thoughts, perceptual phenomena, concentration and physical sensations for factor 1, and alertness and spiritual experiences for factor 2. The degree of relatedness between the variables and the two factors is depicted in Table 4.4 using a scale of zero to one, where zero represents no relationship, and one represents the strongest relationship possible. The factor one variables appear to be characteristic of concepts used in psychiatry to describe certain subjective and objective mental experiences (Kaplan & Sadock, 1991; American Psychiatric Association, 1994), and will therefore be labeled *psychiatric features*. Factor two variables appear to characterise concepts used within the discipline of transpersonal psychology to describe the suggested aims of meditation (David-Neel, 1987; J. of Transpersonal Psychology 1970; Mann, 1984), and will therefore be labeled *transpersonal features*.

TABLE 4.4: FACTOR PATTERN MATRIX FOR EIGHT COMPOSITE VARIABLES.

DESCRIPTIVE VARIABLES	FACTOR ONE (PSYCHIATRIC FEATURES)	FACTOR TWO (TRANSPERSONAL FEATURES)
Relaxation	.81917	
Suggestibility	.85407	
Thoughts	.89467	
Perceptual phenomena	.82000	
Concentration	.94220	
Physical sensations	.73942	
Spiritual experiences		.93190
Alertness		.87808

* These loadings indicate the degree to which the variables define the factors. The values of the loadings range between zero and one, where zero = no relationship, and where one = the strongest relationship possible.

Factor one was identified by six variables and factor two by two variables. Based on the number of items loading onto each of the first order factors (Table 4.1), a maximum score could be calculated for each of the factors: Factor 1 maximum score = 92; Factor 2 maximum score = 14. These two factors were subsequently used to test for differences across experimental conditions.

4.2 VALIDATION OF THE RESEARCH DESIGN

In this section the validation process will be reported on in relation to the two categories of the ASCI. The two ASCI categories are a 135-item questionnaire on descriptors of subjective experiences, and a one item Lickert type scale (referred to as the Global Evaluation) probing depth of experience during hypnosis and meditation. Separate tables will be presented for these two categories.

4.2.1 Order of treatment effect based on ASCI factors

The order effect was investigated. Both groups A and B experienced two sessions of hypnosis (from here on referred to as Hypnosis 1 and Hypnosis 2). Similarly, both groups experienced two sessions of meditation (from here on referred to as Meditation 1 and Meditation 2). Given that the two groups experienced hypnosis and meditation in different sequences, differences between the order of administration of the ASCI mean scores were investigated by means of the t-test (see Table 4.5).

TABLE 4.5: THE TWO FACTORS AND THE ORDER EFFECT: ANALYSIS OF DIFFERENCES IN CONDITIONS BETWEEN THE TWO GROUPS*

	GROUP A	GROUP B	t-value	p-value
HYPNOSIS 1				
Psychiatric features	39.00	30.75	1.04	0.33
T ^{personal} features	04.75	05.50	0.32	0.97
HYPNOSIS 2				
Psychiatric features	38.25	37.25	0.14	0.90
T ^{personal} features	03.62	06.00	0.99	0.39
MEDITATE 1				
Psychiatric features	36.25	39.00	0.92	0.39
T ^{personal} features	04.75	06.50	1.36	0.25
MEDITATE 2				
Psychiatric features	34.65	39.75	1.19	0.27
T ^{personal} features	03.75	05.00	1.86	0.11

Group One n = 8

Group Two n = 4

*= Scores indicate strength of response according to ASCI factor scores:

Psychiatric features maximum score = 92

Transpersonal features maximum score = 14

No significant difference was found between the two different sequences of administration. This indicates a successful implementation of the cross-over research design.

4.2.2 Order of treatment effect based on Global Evaluation ASCI scores

The insignificant effect of order of treatment was confirmed when data from the Global Evaluation ASCI mean scores were subjected to t-tests (see Table 4.6). All the p-values obtained were greater than 0.05.

TABLE 4.6: THE GLOBAL EVALUATION AND THE ORDER EFFECT

	GROUP A MEANS	GROUP B MEANS	t-value	p-value
HYPNOSIS 1	51.25	50.00	0.09	0.93
HYPNOSIS 2	58.60	62.50	0.39	0.71
MEDITATION 1	53.21	55.00	0.39	0.70
MEDITATION 2	61.85	64.50	0.44	0.68

Group One n = 8

Group Two n = 4

4.3 COMPARISON OF SIMILARITIES AND DIFFERENCES BETWEEN HYPNOSIS AND MEDITATION ON THE ASCI

The lack of difference between the two groups with different sequences of treatment (order effect), allowed combination of the groups into a unitary sample. According to the results of the t-test as presented in Table 4.7, there was no statistically significant difference between the reported experiences of hypnosis and meditation, on the basis of the mean scores of the two ASCI factors.

TABLE 4.7: COMPARISONS OF ASCI FACTOR SCORES ACROSS HYPNOSIS AND MEDITATION FOR SINGLE SAMPLE: MEAN SCORES*

	HYPNOSIS 1	MEDITATION 1	t-value	p-value
PSYCHIATRIC FEATURES	36.25	37.25	0.23	0.83
T'PERSONAL FEATURES	05.00	05.25	0.42	0.68
	HYPNOSIS 1	MEDITATION 2		
PSYCHIATRIC FEATURES	36.25	36.75	0.02	0.98
T'PERSONAL FEATURES	5.00	4.85	0.18	0.86
	HYPNOSIS 2	MEDITATION 1		
PSYCHIATRIC FEATURES	37.90	37.20	0.30	0.77
T'PERSONAL FEATURES	4.40	5.35	1.23	0.24
	HYPNOSIS 2	MEDITATION 2		
PSYCHIATRIC FEATURES	37.90	36.30	0.68	0.50
T'PERSONAL FEATURES	4.40	4.80	0.50	0.63

n = 12

* = Scores indicate strength of response according to ASCI factor scores:

Psychiatric features maximum score = 92

Transpersonal features maximum score = 14

The Global Evaluation mean ASCI scores for hypnosis and meditation were compared by means of t-tests. Scores represent depth of experience on a percentage scale (Table 4.8).

TABLE 4.8: GLOBAL EVALUATION - COMPARISONS OF DEPTH OF EXPERIENCE ACROSS HYPNOSIS AND MEDITATION FOR SINGLE SAMPLE: MEAN SCORES*

TOTAL	HYPNOSIS 1	MEDITATE 1	t-value	p-value
	50.83	53.75	0.71	0.49
TOTAL	HYPNOSIS 1	MEDITATE 2	t-value	p-value
	50.83	62.75	3.04	0.01
TOTAL	HYPNOSIS 2	MEDITATE 1	t-value	p-value
	59.91	53.75	1.60	0.14
TOTAL	HYPNOSIS 2	MEDITATE 2	t-value	p-value
	59.91	62.75	0.79	0.44

n = 12

* = Mean scores represent percentage rating of global evaluation.

Of the four results reported in Table 4.8, only one result indicated that there was a statistically significant difference between the *depth of experience* of hypnosis and meditation, as measured by the Global Evaluation category of the ASCI. This significant difference was reported between the first administration of hypnosis (Hypnosis 1) and the second administration of meditation (Meditation 2). This finding is in relation to *depth of experiences*; it does not have bearing upon the *descriptors of experiences* where no significant results were found. The reader is reminded that the ASCI has two categories of measurement namely, 135 items pertaining to *descriptors of experience*, and a 1-item Likert scale pertaining to *depth of experience* (Global Evaluation).

This significantly different score was possible to anticipate. There appears to be an intensification of the experiences, as indicated by the increase in the mean scores from the first to the second experience of each state. Although significant, this difference is of little relevance in this study as there is no difference recorded in the comparison of hypnosis 2 and meditation 2. These results do, however, have implications for further research. This will be addressed in Chapter Five.

4.4 GHMQ: SUBJECTIVE FEATURES OF HYPNOSIS AND MEDITATION

The second phase of the data analysis was qualitative, and was based on responses yielded from the Group Hypnosis and Meditation Questionnaire (GHMQ), an instrument designed specifically for this study.

4.4.1 Subjective features of hypnosis

Subjective descriptors were extracted from the raw data of the GHMQ, according to the Giorgian method (Giorgi, 1985), and subjected to phenomenological analysis (Stones, 1985). Statements describing subjective experiences during the states of hypnosis and meditation were yielded with the use of the GHMQ. Open-ended questions were used in the questionnaire, in order to encourage voluntary subjective descriptors. Summaries of the individual protocols are provided in Appendix G. The results of the analysis revealed thirteen features as identified in Table 4.9.

TABLE 4.9: SUBJECTIVE FEATURES OF HYPNOSIS

SUBJECTIVE DESCRIPTORS	NUMBER OF SUBJECTS	PERCENTAGE OF SUBJECTS
Relaxed state of being	9	75%
Pleasurable experience	3	25%
Perceptual phenomena	4	33.3%
Increased level of concentration	4	33.3%
Aware of surroundings	3	25%
Time factor - time passed quickly	2	16.6%
Loose/illogical thoughts	2	16.6%
Spiritual experience	4	33.3%
Felt sleepy	3	25%
Improved coping skills	1	8.3%
Increased levels of confidence	1	8.3%
Vivid thoughts	1	8.3%

n = 12

The responses indicated in Table 4.9 were based on GHMQ questions 1 and 3, which refer to hypnosis. The experience of relaxation was

identified by 75% of subjects. The various levels of relaxation were described by 25% of subjects as pleasant.

4.4.2 Subjective features of meditation

The analysis of the questions pertaining to descriptors of meditation revealed fewer features. These were based on GHMQ questions 2 and 4. Nine features were identified, and are presented in Table 4.10.

TABLE 4.10: SUBJECTIVE FEATURES OF MEDITATION

SUBJECTIVE DESCRIPTORS	NUMBER OF SUBJECTS	PERCENTAGE
Relaxed state of being	10	83.3%
Felt sleepy/fell asleep	4	33.3%
Perceptual phenomena	2	16.6%
Inner distractions and thoughts	6	50.0%
Increased concentration	1	8.3%
Decreased concentration	2	16.6%
Aware of surroundings	3	25.0%
Spiritual experience	2	16.6%
Clarity of thought	2	16.6%

n = 12

4.4.3 GHMQ similarities and differences between reported subjective experiences of hypnosis and meditation

Analysis of the protocols revealed that 75.0% of subjects (see Table 4.11) experienced similarities between the two states. These results are based on GHMQ questions 9, 10, 11 and 12. The similarities which were reported appeared strongly related to the occurrence of relaxation.

Subjects qualified this by stating that there were some differences to report. Differences between the two states were indicated by 16.6%, while 8.3% indicated that the states are the same. The results of this analysis are summarised in Table 4.11.

TABLE 4.11: PERCENTAGE INDICATIONS OF SIMILARITIES AND DIFFERENCES BETWEEN HYPNOSIS AND MEDITATION

	NUMBER OF RESPONDENTS	PERCENTAGE	DESCRIPTION
SIMILAR	9	75.0	Both characterised by relaxation
DIFFERENT	2	16.6	Hypnosis; Awareness of surroundings, external experience, feeling of being awake, deeper state of relaxation. Meditation; tendency to fall asleep, internal experience, many thoughts/intrapsychic conflicts, not aware of surroundings.
NOT DIFFERENT	1	8.3	Feeling of being awake

n=12

Further investigation of these results indicates the following. Between 75 and 83.3% of subjects reported relaxation as being a core feature of hypnosis and meditation. It was this feature which lead the majority of subjects to conclude that these states of consciousness are similar. Of note, is that the variable **relaxation**, *does not* emerge as one of the eight variables in the ASCI.

Thirteen descriptors of hypnosis and nine descriptors of meditation were identified. In comparing these, it was evident that six descriptors were reported which are common to both hypnosis and meditation, namely,

- relaxed state of being
- perceptual phenomena experienced
- increased levels of concentration
- awareness of surroundings
- spiritual experience
- vivid thoughts

Internal comparison indicates that subjects experienced commonalities between the states of hypnosis and meditation. It is also clear that these six descriptors share common features with five of the eight variables, derived from the ASCI analysis. The features which were found to be common between the two scales, for both hypnosis and meditation, are presented in Table 4.12:

TABLE 4.12: ASCI ANALYSIS AND GHMQ ANALYSIS: COMMON FEATURES

ASCI VARIABLES	GHMQ DESCRIPTORS
Affective experience	
Ease/difficulty in achieving the state	
Thought processes	Inner distractions and thoughts
Perceptual phenomena	Perceptual phenomena
Attention and concentration	Increased levels of concentration
Physical sensations	
Spiritual experience	Spiritual experience
Levels of awareness	Awareness of surroundings

4.5 AN OVERALL VIEW: ASCI VARIABLES, GHMQ DESCRIPTORS AND THE LITERATURE

The two questionnaires and the literature yielded varying descriptors of hypnosis and meditation. It appears, however, that subjects reported having experienced many phenomena which were common to both hypnosis and meditation, and which emerged in the analyses of both questionnaires as well as the literature. The phenomena which emerged from all three sources are presented in Table 4.13.

TABLE 4.13: ASCI VARIABLES, GHMQ DESCRIPTORS OF HYPNOSIS AND MEDITATION, THE LITERATURE: AN OVERALL VIEW

ASCI VARIABLES	GHMQ DESCRIPTORS	THE LITERATURE
*	Relaxed state	Mental and bodily relaxation
Affective experience	Pleasurable experience	
Perceptual phenomena	Perceptual phenomena	Perceptual phenomena
Attention and concentration	Increased level of concentration	Improved attention and concentration
Levels of awareness	Awareness of surroundings	Abandonment of attention to the outside world
	Time factor	Time distortion
Thought processes	Inner distractions and thoughts	Direct focusing of thoughts
Spiritual experience	Spiritual experience	Spiritual experience
	Felt sleepy	
	Improved coping skills	
	Increased levels of confidence	
Physical sensations		Physical sensations
Level of ease/difficulty in achieving the state		
		Increased suggestibility
		Stilling of the mind

Key:

* = Open spaces indicate that the variable/descriptor did not emerge in the analysis, or was not encountered in the literature. This is **NOT** an indication that these missing phenomena do not exist either as subjective experiences or in the literature.

4.6 SUMMARY

In this chapter the results of the study have been presented. The results indicate no statistically significant difference between the experiences of the two subgroups A and B, therefore validating the research design. The study also yields results indicating the existence of eight theoretical variables within the ASCI scale. Furthermore, it was apparent that these eight variables form the underpinnings of two broad factors, namely, psychiatric and transpersonal factors.

In comparing hypnosis with meditation, in relation to the theoretical variables, the results suggest no statistically significant difference between the subjective experience of the two treatment stimuli. In relation to the global evaluation of the depth of experience, one statistically significant result was found.

Results of the qualitative analysis of the GHMQ indicate the existence of 13 descriptors of hypnosis and nine descriptors of meditation. Analysis reveals that subjects experience more similarities between hypnosis and meditation than differences. Some differences were reported on. The details of both the qualitative and quantitative analyses and their interrelations, will be discussed in Chapter Five.



CHAPTER FIVE

DISCUSSION

In this chapter the findings from the literature review as well as the results as presented in Chapter Four, will be discussed. The chapter will be divided into four sections. The first section will deal with core issues underlying the importance of the study. The second section will discuss the results relating to descriptors of hypnosis and meditation as they emerged from the literature and the empirical work. The third section will discuss the validation of the research design. The fourth section will be concerned with issues surrounding comparisons between hypnosis and meditation, on the basis of the empirical results (i.e. ASCI comparative analysis and GHMQ analysis).

5.1 EMPIRICAL AND THEORETICAL REASONS FOR THE STUDY

Empirically, the aim of the study has been to provide quantitative and qualitative data to depict both the nature of, and comparisons between subjective experiences of hypnosis and meditation. It has been pointed out that hypnosis and meditation are both recognised as altered states of consciousness which can be described as being different from normal states of consciousness (Pratt, et al., 1988; Tart, 1972). Both states are considered to facilitate healing processes, irrespective of whether the states are self induced or induced by a healer/clinician (Erickson, et al., 1976; David-Neel, 1977). It has also been shown that the induction of hypnosis and meditation produces similar physiological changes in the human body (Paul, 1969; Walrath & Hamilton, 1975).

It is in respect of the historical origins that hypnosis and meditation appear to differ. Whereas hypnosis as it has been described in this study, has its origins in modern western psychology, meditation is rooted in the eastern religious tradition of Buddhism. This may have implications with respect to the differing degrees of public exposure which the two states receive. This will be commented on further in Chapter Six.

5.2 THEORETICAL DESCRIPTORS OF HYPNOSIS AND MEDITATION

5.2.1 Insights from the literature

5.2.1.1 *Active and passive influencing factors*

The literature offers a diverse set of explanations leading to a deeper understanding of what subjects may experience during hypnosis and meditation. Authors such as Naruse (1987) and Sheehan (1979) are concerned with concepts such as imagery, phantasy and motivation as determining factors in the induction of an altered state. These authors state that imaginal phenomena may prompt the onset of altered states of consciousness. The altered state, in this case hypnosis and/or meditation is described by Naruse and Sheehan in the terms set out in Tables 2.1 and 2.2. If there is to be a shift away from a normal state of consciousness to an altered one, certain influencing factors would need to be introduced to induce the change. A review of contemporary literature on hypnosis and meditation generated the existence of ten broad descriptors of hypnosis and six broad descriptors of meditation. This does not imply that these are the only descriptors of subjective experiences of the two states. Of the 16 variables which emerged as descriptors of hypnosis and meditation, the researcher proposes that five can be clustered as active influencing factors, namely,

- imagery and imaginal experiences,
- improved attention and concentration,
- heightened suggestibility,
- mental and bodily relaxation,
- stilling of the mind.

The word active implies the deliberate initiation of these stimulating factors by the subject. Alternatively, the active nature of the phenomenon can be interactive, where suggestions toward initiation of the phenomena are made by a clinician/healer, implying an interaction between clinician/healer and subject. The active nature of the change is alluded to by Naruse (1987) in his discussion of altered states of consciousness. Naruse refers to hypnosis as a state of meditative concentration where the essential condition of the state is "vigorous imaginal mental activity which deals with or creates a subjective world of unreality" (p.137). The implication of this is that entering an altered

state of consciousness is likely to be a decisive and active process. This has further implication for the common myth that a subject is likely to lose total self control once in a trance state.

It may also be argued that in addition to the existence of these active influencing factors, there are certain variables which manifest as a result of the imaginal and mental activities which are taking place during trance induction. These variables, it is proposed, may be called **passive influencing factors**. They include:

- physical sensations,
- perceptual experiences,
- dissociation from logic,
- surfacing of unresolved psychological conflicts.

Hence, specific variables which have been identified by clinicians and researchers, influence the shift away from a normal state of consciousness, and other variables may be understood to be derivatives of the induced altered state. The apparent nature of these changes which occur during hypnosis and meditation has lead the researcher to view them as active/interactive and passive influencing factors respectively.

5.2.1.2 *Preconceived ideas*

It is noticeable that in the descriptions offered of the states of hypnosis and meditation, there appears to be little interest shown in the social impact of the dichotomous manner in which these two states are described. This is in respect of their apparent diverse historical origins. Further, there has been little investigation into the possible implications of these diverse origins for subjective perceptions of the two states. The general public may have preconceived ideas about the nature of hypnosis and meditation, possibly perceiving them as similar forms of alternative healing, despite their divergent historical and geographical origins. The researcher argues that although the two practices are couched within differing historical traditions, the attainment of an altered state of consciousness is possibly a universal phenomenon which transcends cultural, historical and geographical influences. The results of this study in which naive subjects experienced the states as being largely similar, support this position. This may also add meaning to the

notion that hypnosis and meditation are natural states, although altered states, which can be experienced by subjects across a broad geographical and cultural spectrum.

5.2.2 Insights from the empirical work

The value of the ASCI in this study lies not only in its usefulness in comparing the states of hypnosis and meditation (Berry, 1982), but also in providing an opportunity to identify descriptive variables of the two states. The presence of descriptors in the literature which coincide with those identified by the ASCI inspection, serves to reinforce the value of this instrument in extracting descriptors of hypnosis and meditation.

According to the surface inspection of the ASCI, there appeared to be two factors which contribute to both states. These results (Table 4.4) suggest a polarisation of responses into a pattern matrix, where descriptors of a psychiatric nature clustered together, and where descriptors of a more transpersonal nature grouped together. The researcher is of the opinion that these two factors which emerged in the statistical analysis, constitute both states, and that both these factors entail inter/active and passive aspects.

These results offer further insight into the discussion concerning the historical and cultural influence on both perceptions, and experiences of these two altered states. Because the ASCI was developed with its base located in the literature on hypnosis and meditation, it might have been anticipated that the review of literature in the present study would show this same pattern. This was, however, not necessarily the case. It was apparent that although authors such as Mann (1984), Naranjo (1972) and Naruse (1987) express views which may be located within the discipline of transpersonal psychology, their descriptions of the two altered states appeared objective, as if to describe the states as natural. Hence, the origins of the states were not described as determining factors in predicting and discussing the nature of experiences thereof. According to the findings of this study, they are perceived by naive subjects as similar enough to be regarded as more similar than different. Further, the two states incorporate both a psychiatric and a transpersonal nature.

The hypothesis that hypnosis and meditation are more similar than different is borne out by the results reported in Table 4.11, while Table 4.13 summarises the theoretical descriptors identified in both the literature review and the empirical work (ASCI and GHMQ). With respect to differences, the GHMQ yielded data which described differing experiences between hypnosis and meditation with regard to the notions of *awareness* and *sleepiness*.

5.2.2.1 Awareness

One subject offered the following description: "I felt less aware of my surroundings during meditation than during hypnosis, I was preoccupied with many conflicting thoughts during meditation. This did not happen during hypnosis". The subject describes decreased awareness of surroundings during meditation with a simultaneous increase in thought processes. According to another subject: "During meditation many thoughts entered my mind and I felt very in touch with my inner self". This lack of awareness of the surroundings which was described by several subjects, and which constituted a difference between hypnosis and meditation confirms existing contemporary thought in the literature. According to Pratt et al., (1988), and Hartland, (1982), subjects report that during hypnosis they remain alert to their immediate environment, and at times question whether they have experienced hypnosis.

5.2.2.2 Sleepiness

A number of subjects described sleepiness as a typical experience during meditation. One subject stated: "I often felt sleepy, and at times it was as if I had fallen asleep". Another subject offered the following: "During meditation I experienced intense relaxation, a decrease in tension and I felt sleepy". Yet another subject said: "I had difficulty concentrating and fell asleep". While subjects seem to remain alert to their surroundings during hypnosis, the results of this study indicate that meditation is characterised by a decrease in ability to concentrate and an increase in sleepiness. Several subjects reported sleepiness during hypnosis, but to a lesser degree.

5.3 THE RESEARCH DESIGN

5.3.1 Validation of the research design

Several studies have used between-subject designs in which different treatments have been experienced by different subject groups. The intention of this study was to offer subjects an opportunity to experience both treatments, and then report on the comparison between their subjective experiences. The order-of-treatments problem (cross-over effect) was attended to by the implementation of the cross-over design and a statistical validation process.

A curious result emerged from the global evaluation on the ASCI analysis, which might be understood in relation to the ordering of treatments. A significant difference was noted between reports of depth of experience from the first hypnosis treatment (Hypnosis one), and the second meditation treatment (Meditation two) (see Table 4.8).

Had there been a statistically significant difference between Hypnosis one and Meditation one, or Hypnosis two and Meditation two, such a significant difference between the two might have had implications for conclusions in respect of actual differences between the two states. In this case, however, the difference may be seen as a possible chance difference, having little impact on the findings. This difference does demonstrate that hypnotic and meditative experiences intensify on repetition. This conclusion might have been strengthened had there also been a significant difference between Hypnosis two and Meditation one. Qualitative results provided by the GHMQ indicated some variation in reported experiences, although in general, hypnosis and meditation were described as similar. It may therefore be that there are some subtle differences between hypnosis and meditation which could not be unambiguously identified in quantitative terms with a sample of this size.

5.3.2 Attrition of subjects

There are several possible explanations for the high dropout rate, which resulted in considerable loss of subjects and a decrease in the generalisability of the conclusions. The hypnosis and meditation groups were run at the University of the Western Cape, during the third quarter of the academic year. With the limited amount of free time available to students during the latter half of the academic year, some of the students involved in the study might have been unable to continue with their commitment to the research, due to other demands, e.g. final examinations.

The initial list of volunteers was sufficient in number to provide both a research group and a backup short list (N=47). However, fewer students than initially volunteered, enrolled for participation in the study (N=26). This number was considered sufficient for the scope of the study, and therefore no backup short list was created. What was not anticipated was that of those who enrolled, a number did not participate for the required number of sessions.

5.4 COMPARING HYPNOSIS AND MEDITATION

In this sub-section the results of the study concerning patterns of similarity as well as difference are discussed.

5.4.1. Descriptors from the literature and empirical results

In the review of the literature a number of descriptors of the experience of hypnosis and meditation were identified. The researcher grouped those descriptors concerning hypnosis into ten categories, and those pertaining to meditation into six categories. The categories which were developed were not distinct, that is, there were similarities in the literature's descriptors of hypnosis and meditation. This overlapping pattern of similarities was also evident in the findings of the ASCI and the GHMQ. The GHMQ yielded 12 descriptors of hypnosis and 9 descriptors of meditation. The examination of the GHMQ showed striking similarities between the descriptors of these two states, with six descriptors being common between the two (see Tables 4.9 and 4.10). The pattern of similarity identified both in the literature and the empirical

work, reinforces the thesis that hypnosis and meditation on an experiential level share more commonalities than differences.

5.4.1.1 Subjective descriptors of similarities between hypnosis and meditation as offered in the GHMQ

In the literature, mental and bodily relaxation is cited as the variable which is a common denominator between hypnosis and meditation. The analysis of the ASCI variables indicated relaxation as one of the categories with a large number of items (see Table 4.1). Analysis of the GHMQ indicated that 75 percent of subjects regard relaxation as the dominant subjective experience. Therefore, the results of this study confirm the trend in the literature that relaxation is a central feature in the similarity between the two states.

Subjects volunteered the following descriptive statements with respect to hypnosis:

"Sensation of relaxation where there could be a loss of control over one's body and maybe mind"; "Hypnosis to me was a process of deep relaxation. I was totally relaxed but still very much aware of what was happening to me."; "An extremely relaxing experience, a feeling of unusual calmness is experienced. Something similar to a sleep that is ideal, a sleep you never experience." "It is a state of deep relaxation which is brought about by a decreased consciousness and an increased unconsciousness, so much so, that I tended to feel detached from the world, alone but not lonely..." "I felt relaxed accompanied by wonderful sensations." "

The following descriptive statements with respect to meditation were offered:

"Relaxation, but gradual. Letting my thoughts wander off, accepting interference thoughts and letting them go again. "I made each part of my body surrender to relaxation and it felt as if warm water was slowly poured over me from my head to my toes. I found this more relaxing than hypnosis." "Meditation was a process of deep relaxation to me. It was very relaxing and at times I actually fell asleep." "A state of relaxation is experienced. It is an experience you can pull yourself out of when you want to." "An intense and complete state of relaxation of body and mind. It is

basically very stress relieving." "All I can say is that I was totally relaxed. My body was moving but nothing significant." "I relaxed, the tension flowed out of every part of me. I felt like sleeping."

Another feature which was reported as common between the two states was **perceptual phenomena**. The following descriptive statements with respect to hypnosis were offered:

"I saw vibrant pulsating colours in hues I've never seen before. I also felt like I was sinking into this jelly mass, and it was not frightening in there at all." "You experience forces, sensations, see different images and colours."

The following descriptive statements with respect to meditation were volunteered:

"I saw images but they were vague. Most of the time they were in colour." "Images, forces and colours are visualised." "My cognitions were clear and I was aware of bodily sensations."

Subjects reported on **increased levels of concentration**. There were also reports on meditation which associated it with decreased concentration, linked to the experience of intrusive thoughts (see 5.4.1.2). The following descriptive statements with respect to hypnosis were offered:

"My concentration also improved. I resisted a little in the beginning, but as I started to relax my resistance disappeared." "My concentration was amazing." "I could concentrate more on things that I saw." "

The following descriptive statement with respect to meditation was offered:

"The sessions helped me to concentrate."

The descriptive statements which have been outlined above show overlap between subjective experiences of the states of hypnosis and meditation. This may also be regarded as a confirmation of the similarities between these two states, as they have been documented in the existing literature (see Table 4.13).

5.4.1.2 Subjective descriptors of differences between hypnosis and meditation as offered in the GHMQ

Although subjects regard hypnosis and meditation largely as more similar than different, there were a number of differences reported upon. A closer look at some of the reported differences may help to further our understanding of the subjective experiences of hypnosis and meditation.

There appeared to be a **decrease in concentration** during meditation, with subjects reporting on an increase in conflictual thoughts. There appeared to be a trend toward increased concentration during hypnosis. The following descriptive statements were offered:

"During most of the hypnosis session I could not concentrate." I was very aware of noises during meditation and I could not concentrate." "During meditation it felt that I was trying hard to concentrate. I could not concentrate for a long period of time on a particular sensation. During hypnosis it was much easier to concentrate." "During meditation I seemed to try to figure out my thoughts."

Subjects reported being **preoccupied with many distracting thoughts** during meditation. With respect to hypnosis, subjects offered reports of wandering thoughts more than intrusive thoughts. The following descriptive statements were offered:

"During meditation many thoughts came to mind." "Many thoughts filtered in during the meditation sessions, found myself thinking about problems..." "During hypnosis I felt calm, relaxed and problemless." "During meditation there was an acceptance of interference thoughts and letting them go again." "Different and confused ideas and thoughts entered my mind during meditation." "During hypnosis there were clear and vivid thoughts which would wander."

Subjects reported that **time passed quickly** during hypnosis. This did not appear to be the case during meditation. The following descriptive statements were volunteered:

"The time factor, the session seemed to have gone extremely quickly." "Time seemed to fly by, it was over very quickly."

With respect to the similarities and differences outlined above, it is possible to state that hypnosis and meditation can be described as two altered states of consciousness which are fundamentally characterised by relaxation of body and mind. Further, during both states subjects report experiencing various perceptual phenomena, as well as variations in levels of concentration. Some differences are also reported between hypnosis and meditation. The differences are not distinct however, and it can be concluded that overall, hypnosis and meditation are similar variations of the same state.

5.4.2 Physiological versus subjective experiences

An evaluation can also be made in terms of the relationship between physiological and subjective experiences. Much of the research conducted on hypnosis and meditation has been concerned with understanding these phenomena in terms of physiological descriptors. Findings from these research studies indicated similarities between hypnosis and meditation. Of interest to the researcher was whether this pattern of similarity would be evident in research focused on the subjective experiences of these phenomena. This appeared to be the case as has been documented in Table 4.12. The implication of this for our understanding of these two states is that when viewed from a different perspective (subjective experiences), the pattern of similarity between hypnosis and meditation persists.

5.5 CONCLUSION

It is the opinion of this author that there is value in the combined use of the ASCI and GHMQ. Whereas the ASCI has empirical origins and was designed by Berry (1982) to serve statistical purposes, the GHMQ poses open-ended questions concerning similar issues. Furthermore, scrutiny of the GHMQ results indicates that subjective descriptors of hypnosis and meditation as reported by naive subjects, share noticeable similarities with the descriptors identified by review of the literature, as well as by the ASCI analysis (see Table 4.13). It is then possible to regard the results of this study as a confirmation of the legitimacy of descriptive terms, as they are reported in the literature. The study may

also be seen to confirm the value of the ASCI in identifying descriptors of hypnosis and meditation.

Conclusions, limitations and recommendations are the topic of discussion in the final chapter. Suggestions for future research will be made.



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CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS OF THE STUDY

This study was undertaken to compare the subjective experiences of subjects undergoing hypnosis and meditation, and to determine whether there are similarities and/or differences in their reported experiences of these two states. The results of the study confirm the researcher's hypothesis that there are more similarities than differences between the subjective experiences of hypnosis and meditation, and the study provides qualitative descriptors of the two states. The research study also offers insights concerning the influence of the historical and geographical origins of these two states. Finally, the study offers valuable information with respect to an extension to the use of the ASCI.

The review of the literature and the empirical work in the study, support the position that hypnosis and meditation are experienced as more similar than different in terms of physiological changes and subjective experiences. With regard to expectations and preconceived ideas about hypnosis and meditation, naive subjects may have overlapping ideas about the two states. There appear to be many myths which continue to exist concerning hypnosis (Pratt, et al., 1988), and great skepticism regarding the scientific legitimacy of both states. The divergent historical backgrounds of the two states may have little impact on the lay person, but may, however, have greater impact on the professional psychologist or healer. Due to developments in the early history of hypnosis, which occurred primarily in the western world, and strongly linked to a western medical model, publicity and academic commentary on hypnosis will often occur in the context of scientific forums. This seems to be less prevalent with respect to meditation. This is particularly pertinent in the context of South Africa, which has a multi-cultural population, a proportion of which engages in spiritual and religious practices as legitimate forms of healing. Consequently, practitioners trained in a western psychiatric model are likely to prefer

hypnosis which is described in terms syntonically with this tradition (see Table 2.1). According to the results of this study, naive subjects experienced hypnosis and meditation as more similar than different, and it is hypothesised that they are less aware of and/or less influenced by the differing origins of these states than are trained professionals in the helping professions.

With regard to the myths and preconceived ideas surrounding hypnosis and meditation (Pratt, et al., 1988), the negative contribution made by stage hypnotists, makes a strong impact on the maintenance of these myths. This has relevance with respect to South Africa, where the past decades have been characterised by social, political and economic processes which have stressed and traumatised large numbers of the population. Given the ratio of professionals to those requiring intervention, short-term psychotherapeutic interventions are often indicated. The value of hypnosis as a short-term psychotherapeutic intervention is significant (Scott, 1993). The usefulness of such an intervention in the South African context, as well as in other developing nations, will continue to be devalued by lay-people and professionals alike, if existing myths are not challenged by empirical research which disproves them. It is for this reason that the conversion of subjective experience to the objective is of relevance, specifically exploring that which people experience during hypnosis and meditation.

6.2 CONTRIBUTIONS OF THE STUDY

This study makes contributions with regard to both theory and methodology. With respect to theory, three core data sources, contemporary literature, a statistically based inventory (ASCI), and a questionnaire probing empirical data (GHMQ) offered a constellation of descriptive variables of the two states, which bear noteworthy similarities. These were organised into a set of theoretical variables which can be used as guides to generate and validate data collection instruments, and for further research into these phenomena. In addition, a comparison table (see Table 2.3) was drawn up, which provides theoretical evidence of the similarities between hypnosis and meditation.

With regard to methodology, a contribution was made through the validation of the ASCI which now can be used not only as an instrument

with which to identify similarities and differences between hypnosis and meditation (Berry, 1982), but also to isolate theoretical variables. In addition, a qualitative data collection instrument, namely the GHMQ, was designed. This instrument complements the quantitative ASCI, and therefore the study enables future research using both quantitative and qualitative data collection instruments.

6.3 LIMITATIONS OF THE STUDY

Despite demonstrating the apparent similarities between hypnosis and meditation, and illustrating the usefulness of the ASCI in identifying descriptive variables, the study could not offer generalisable answers because of certain limitations:

6.3.1 Subject mortality

A higher than expected dropout rate occurred. This high dropout rate influenced the external validity of the study (Kazdin, 1980), and is therefore relevant to the generalisability of the findings. With regard to external validity, the issue of small sample size renders these results non-conclusive, despite their meaningfulness. Any generalisations of the results to the population at large would be, at best, questionable.

6.3.2 Limited number of treatment sessions

Owing to time constraints during implementation of the study, each subject was exposed to a maximum of two treatment sessions in respect of both hypnosis and meditation. In relation to the progressive intensification of these two states proportional to the number of sessions experienced, an increased number of treatment sessions would have been of greater value. Because of the low number of sessions, in combination with the small sample group, conclusions about the experiences during hypnosis and meditation can be made only tentatively.

6.4 RECOMMENDATIONS FOR FUTURE RESEARCH

In the light of the above conclusions and the limitations which have been identified, the following recommendations are being made for future research into subjective experiences during hypnosis and meditation.

6.4.1 Subject Mortality

It is recommended that during the phase of subject recruitment, researchers emphasise sample size drawing on a larger sample group, and take precautions in order to avoid subject mortality. Such precautions may include:

- the use of a short list of reserve subjects, possibly equaling the number of recruited subjects,
- the time availability of student subjects is an important issue, an issue which researchers will often need to negotiate. It is ideal to conduct the research during the first half of the academic year. During this period students are often motivated, and time availability is improved enabling more students to participate.
- the nature of research using students as subjects may lead to difficulties with regard to availability and reliability of subjects. The researcher found this to relate to the commitment of students to study schedules, such commitments often taking priority over volunteer involvements in research projects. This becomes problematic for researchers because of high dropout rates. The problem can be negotiated however, with the use of explicit contracts and the timing of research implementation during holiday periods.

6.4.2 Number of treatment sessions

Increasing the number of treatment sessions would allow more substantial conclusions to be drawn from the results. The intensification process could be explored in more depth over a number of sessions, as opposed to only two. By increasing the number of treatment sessions, the number of data sets available for comparison is increased, leading to improved statistical reliability and confidence in findings.

6.4.3 Apriori investigation of preconceived ideas

Research into preconceived ideas held by naive subjects concerning hypnosis and meditation, appears to be an area of interest. It is recommended that if such a study is undertaken, subjects be questioned on beliefs held in respect of the nature of the two states prior to engagement in treatment groups. This would allow investigation into the socially constructed meanings attributed by subjects to hypnosis and meditation, and the role these meanings play in subjects' perceptions of differences between these two phenomena.

6.5 Conclusion

Altered states of consciousness such as hypnosis and meditation, if not probed and explored will remain purely *subjective*, with few possibilities of *objectifying* these phenomena. Therefore, ongoing research is necessary in order that these subjective experiences become objectified, which will ultimately enable psychologists and other researchers to understand them with greater scientific utility.



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APPENDIX A

TITLE
ALTERED STATES OF CONSCIOUSNESS
INVENTORY
(ASCI)
FORM A

Name: _____	I.D.#: _____		
Date: _____	Age: _____	Sex: _____	Session #: _____
Group: _____	Instructor: _____		

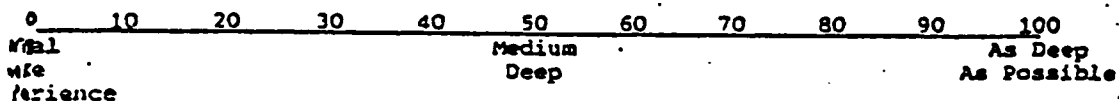
INSTRUCTIONS

This inventory is designed to measure changes in your experience of the world and yourself. The preceding session was an attempt to alter some of those experiences you normally have. If the session was successful you should have noticed that various elements of your experience changed as a result of the things you did during the session.

On the following pages you will find a number of true or false statements that may describe some of the experiences you had during the session immediately preceding this. You are to answer those statements on the basis of the experiences you remember having during the session. There will be many statements which describe an experience you can easily identify as having occurred in the previous session. Other statements will describe strange or unfamiliar experiences that you did not have in the preceding session or do not understand.

Compare the experiences you had during the session with your normal experiences then answer True to those statements that describe an experience you can identify as having occurred during the preceding session and False to those statements which describe experiences you did not have or do not understand. If you do not understand the statement chances are you have not had the experience. Work quickly, do not puzzle over what each statement may mean. Analyzing each statement just results in confusion, your first response is usually the correct one. Do not leave any statements blank.

A measure of the size or amount of change in your experience is called depth. Your subconscious mind always knows how deep your experience has been. As you look at the continuum below a number will appear in your mind which represents the average depth of your experience in the previous session. Record that number at the right. (Example, 35)



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ITEM (T) (P) During the session....	Item (T) (P) During the session....
1 () () I felt sleepy	40 () () I was more aware of my surroundings
2 () () Time went faster	41 () () I saw a steady bright light
3 () () I felt more alert	42 () () It was easier to express my feelings
4 () () I enjoyed it	43 () () My breathing seemed deeper
5 () () It was easy	44 () () I was less aware of sights & sounds
6 () () I felt more sensitive	45 () () It was easier to concentrate
7 () () I felt heavier	46 () () My thoughts were more confused
8 () () My thoughts were more clear	47 () () I didn't enjoy it
9 () () Things seemed bigger	48 () () Parts of my body seemed to get smaller
10 () () I felt more confident	49 () () I didn't see any images
11 () () I saw many images	50 () () I felt unusually calm & peaceful
12 () () I felt like I was sinking	51 () () I felt uncomfortable
13 () () I had many thoughts	52 () () It was more difficult to express my feelings
14 () () I felt hot	53 () () I didn't need to try
15 () () I felt nervous	54 () () It was easier to make decisions
16 () () My heart was beating slower	55 () () Things seemed smaller
17 () () I felt dazed	56 () () I had more control over my emotions
18 () () I had fewer thoughts	57 () () Distance seemed exaggerated
19 () () I was breathing slower	58 () () I was more aware of sights & sounds
20 () () I felt more tolerant of pain	59 () () I was less tolerant of pain
21 () () My emotions were stronger	60 () () I felt a rush of energy in my body
22 () () I felt more vibrant & alive	61 () () It was difficult
23 () () Time went slower	62 () () I had less control over my body
24 () () I saw flashing lights	63 () () I felt my heart pounding
25 () () I felt less sensitive	64 () () I heard a buzzing or ringing in my ears
26 () () I was more aware of my body	65 () () I was breathing faster
27 () () My thoughts were logical	66 () () I felt waves or vibrations in my body
28 () () I felt lighter	67 () () It was easier to remember
29 () () I tried very hard	68 () () I was less aware of my surroundings
30 () () I felt restless	
31 () () My breathing seemed shallow	
32 () () I felt more relaxed	
33 () () I felt cold	
34 () () I felt like I was floating	
35 () () I felt less confident	
36 () () I had a headache	
37 () () I felt like I was moving	
38 () () I fell asleep	
39 () () I felt pain	

(F) During the session....	Item (T) (F) During the session....	(F) During the session....	Item (T) (F) During the session....
9 () My heart was beating slower	99 () () Things seemed unfamiliar	125 () My experiences fluctuated greatly in the session	131 () () Colors took on new qualities of texture or brilliance
10 () Parts of my body seemed to get larger	100 () () I felt strange forces or pressures	126 () Things didn't happen in the right order	132 () () I sensed things I didn't know were there
11 () Light was more intense	101 () () I started shaking	127 () I seemed to have more or new potentials	133 () () My experience seemed to transcend time or space
12 () I had more control over my body movements	102 () () I sensed an order in the universe	128 () I felt an unusual energy in my body	134 () () I hallucinated (I saw or heard things that weren't really there)
13 () I saw more colors	103 () () I felt more in touch	129 () I heard sounds I don't usually hear	135 () () Space seemed filled with something unusual that I can't describe
14 () The things I experienced seemed meaningless	104 () () I had less control over my body movements	130 () Time seemed to lose its meaning	
15 () My mind seemed empty	105 () () I felt things that I saw		
16 () I felt closer to my experience	106 () () I had more insight into problems		
17 () It felt like a dream	107 () () I had a feeling of <u>deja-vu</u>		
18 () It was more difficult to concentrate	108 () () I lost the sense of where I was		
19 () I had more creative thoughts	109 () () I <u>felt</u> sounds		
20 () I had less control over my emotions	110 () () Parts of my body seemed to disappear		
21 () It was difficult to resist	111 () () The things I experienced were meaningful		
22 () I was more aware of my body movements	112 () () I felt distant from my experience		
23 () I felt energy around me	113 () () I felt more accepting of myself		
24 () It was more difficult to make decisions	114 () () I noticed but wasn't distracted by other noises, etc		
25 () Things seemed unreal	115 () () I felt separate from my body		
26 () I saw meaningful patterns in things	116 () () I was less aware of my body movements		
27 () My perceptions were vivid	117 () () I did things without realizing I was doing them		
28 () I felt detached from my thoughts or feelings	118 () () I felt an increased understanding of life		
29 () I was easily distracted	119 () () It was easy to focus on what I was doing		
30 () It was more difficult to remember	120 () () I saw things I don't usually see		
31 () I saw universal truths	121 () () My body seemed to change shape		
32 () I had little control over what happened	122 () () I was bothered by other thoughts		
33 () I felt a presence	123 () () I was aware of new shades of color		
34 () I felt resistance to the technique of the session	124 () () I had more control over what I was doing		
35 () I felt a sexual energy			
36 () My attention seemed turned inward			
37 () I was involved			
38 () Things didn't fit together right			

Directions: If you feel you had the experience the statement describes the blank as best you can. If you can not identify the experience or did not have it, leave it blank.

- _____ seemed more real.
- _____ was brighter, more luminous.
- _____ seemed to move.
- _____ changed size or shape.
- felt closer to _____
- lost my separateness and began to merge with _____
- saw a halo of light around _____
- felt heat radiating from _____
- felt a part of _____
- felt distant from _____
- had these pleasant body sensations _____
- felt separate from _____

Directions: Please list or explain any feelings, sensations or experiences that you had during the session that were not described earlier in the inventory.

APPENDIX B

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DEPARTMENT OF PSYCHOLOGY

GROUP HYPNOSIS AND MEDITATION QUESTIONNAIRE OCTOBER 1993

Name: _____

Age: _____

Gender: _____

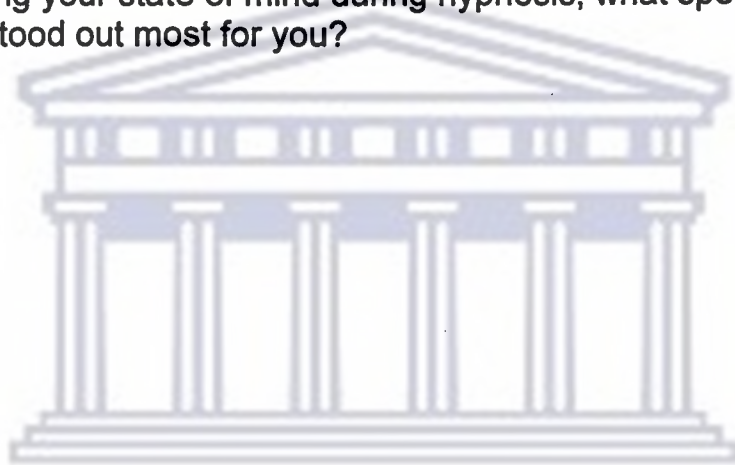
Group: _____

Your co-operation in this research study and your commitment towards it has been invaluable. I would like to extend my thanks to you! In order that your experiences of hypnosis and meditation can be understood to the fullest extent, and therefore be of maximum value in the final analysis of this study, I request that you answer the following questions to your best ability. Please be as extensive and as true to your experiences as is possible. Be as descriptive in your answers as possible.

1) Describe in your own words what characterised your experience of hypnosis.

2) Describe in your own words what characterised your experience of meditation.

3) In describing your state of mind during hypnosis, what specific experiences stood out most for you?

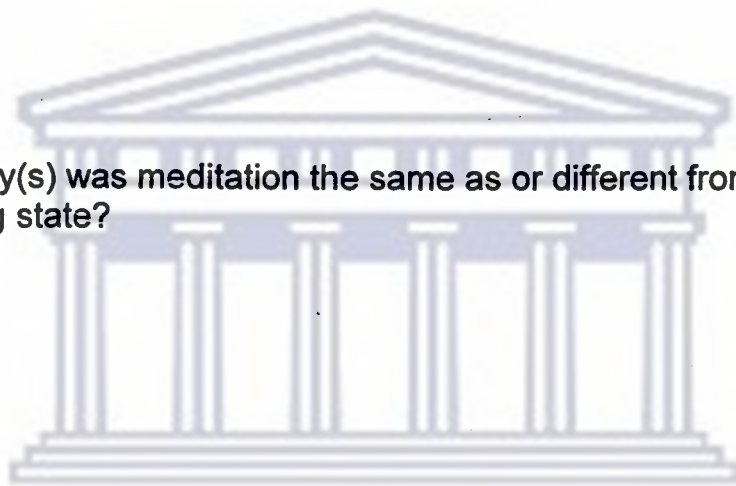


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4) In describing your state of mind during meditation, what specific experiences stood out most for you?

5) In what way(s) was hypnosis the same as or different from your normal waking state?

6) In what way(s) was meditation the same as or different from your normal waking state?



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7) In what way(s) was hypnosis that same as or different from sleep?

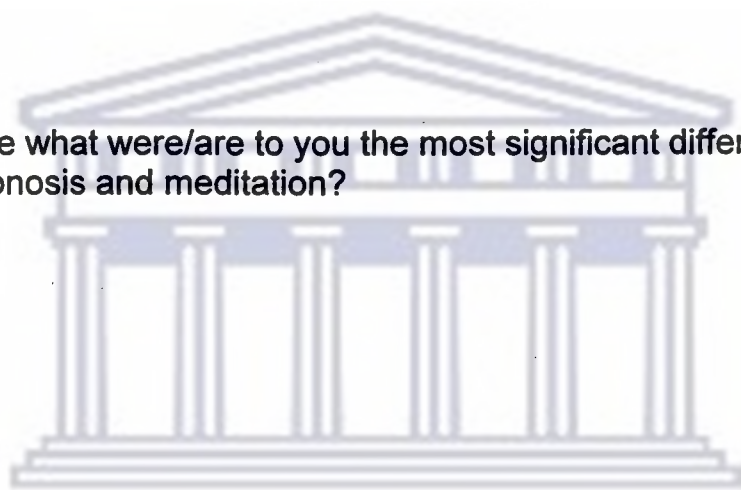
8) In what way(s) was meditation that same as or different from sleep?

9) From your experiences of the states of hypnosis and meditation do you feel, or not feel that there is a relatedness between these two states? Please explain your answer.

10) Based on your experiences of hypnosis and meditation, do you feel that these two states are the same, similar, or different to be in? Please explain your answer in some depth, based on the specific experiences you had in both hypnosis and meditation.

11) Describe what were/are to you the most significant similarities between hypnosis and meditation?

12) Describe what were/are to you the most significant differences between hypnosis and meditation?



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ONCE AGAIN, MANY THANKS! GOOD LUCK WITH YOUR FUTURE EXPERIENCES OF HYPNOSIS AND MEDITATION

APPENDIX C

HYPNOTIC TRANCE INDUCTION AND DEEPENING

The following suggestions and instructions were given during the induction procedure.

- 1) Relax and find a comfortable seated position.
- 2) Look at the ceiling and focus on a designated mark.
- 3) Sooner or later at some point, your eyelids will become heavier and heavier (*truism utilising time*).
- 4) You may even close your eyes, not because you have to but because you want to. You don't have to talk or move or make any sort of effort. You don't even need to keep your eyes open (*utilising not doing, not knowing*).
- 5) You don't even have to listen to me because your unconscious is here and can hear just what it needs to in order to respond in just the right way (*conscious-unconscious double bind*).
- 6) As you gradually become more relaxed, more deeper relaxed you may begin to experience a numbing feeling, similar to when your doctor injects an anesthetic into your arms (*ideomotor signaling toward the acceptance of the suggestions*).
- 7) Certainly your body won't feel completely numb and be in a trance state before you've counted backwards from 100 to zero (*psychological implication*).
- 8) Will your right arm begin to feel lighter and move upwards, or will your left arm feel this way or will it be both? (*Double bind linked to physical experience and time*).

9) When your left or your right arm falls into your lap, or both together you will be able to let go completely. You will be in a very deep state of hypnosis.

10) If you feel comfortable, visualise your self at the top of a staircase, hilltop, a long road to a familiar place. As you move gradually down the path, you will feel yourself becoming deeper relaxed, deeper relaxed, your body will feel heavier and heavier. (*Gradual suggestive deepening*).



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APPENDIX D

MEDITATION INDUCTION AND DEEPENING

1) Relaxation

Subjects relax starting with the head and face including all minor parts of the face and working down the body to the toes. Words used during the induction include: freeing the tension, relaxing, allowing yourself to release tension, softening of the muscles, melting, allowing the body to be what it wants to be.

2) Stilling of the mind

All parts of the body are uncrossed, hands hang loose and spine is lengthened in the seated position. Subjects are guided through a visualisation of a stormy lake with intense winds, choppy water and restlessness. One final wave crashes on the shore leaving the lake in total calm. The image of a mirror is suggested. Allow subjects to feel the calmness and stillness flowing throughout their systems. Several minutes of silence follow.

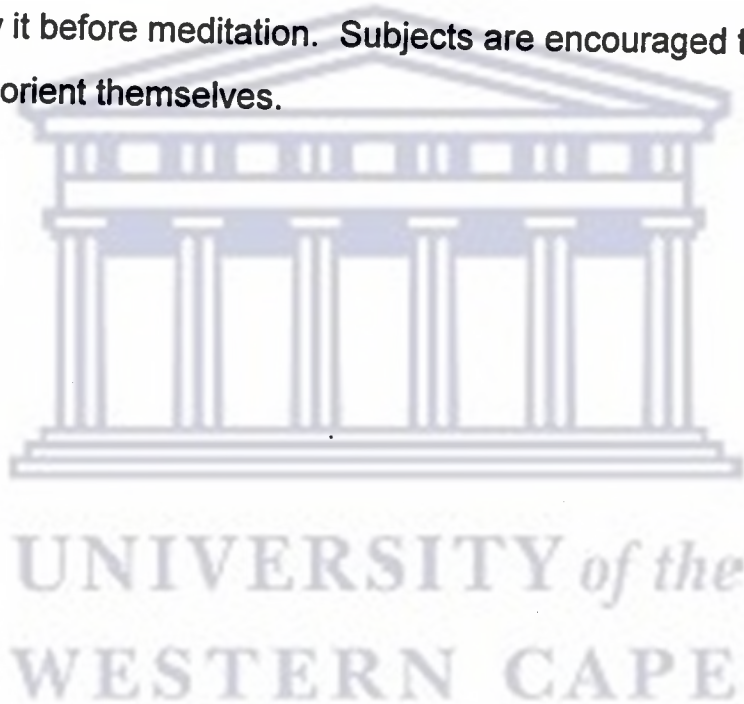
3) Deep meditation

Subjects concentrate on their breath, specifically on the nostril area, with instructions of "in-out gently....in-out gently.....Cool air in.....Warm air out.....". Guidelines follow the breath into the emptiness of the body, deep into the depths of the body and then follow the breath out of the body. Instructions are given toward letting go of stress, tension, irritation and anger. Subjects are enabled to feel more peaceful. The word peace is

used throughout this phase of the meditation. Subjects are invited to focus their breath on a place on the face, for example the upper lip. They are encouraged to just allow the breath to find a place there, almost imperceptibly. They keep breathing regularly and gently, just allowing the breath to remain at that one place.

4) Close

Subjects are invited to continue breathing regularly, allowing the breath to remain stable, and in their own time to slowly emerge back into the room as they knew it before meditation. Subjects are encouraged to take several minutes to reorient themselves.



APPENDIX E

INTRODUCTORY STATEMENT

I'd like to talk to you about a study I am doing on hypnosis and meditation. Although both have been around for a long time, there is still much about them that we do not know. There is still lots of room for clarification of what people are going through when they are in hypnosis and meditation. What I am doing is trying to learn more about what people are experiencing when in hypnosis and meditation.

There are a number of factors that we do know about hypnosis:

- 1) Hypnosis is a harmless state in which to be.
- 2) You as a subject are in control and not the hypnotist.
- 3) Hypnosis can be very useful in helping people to relax and reduce stress.

Some of you here today have experienced hypnosis before, and will be able to tell your contemporaries about your experiences. This might help to put those at ease who are still feeling a little anxious about hypnosis. As I mentioned to some of you at an earlier meeting, I am looking for volunteers who would like to experience hypnosis and meditation. This is an excellent opportunity to experience both hypnosis and meditation, and also to participate first hand in a scientific study.

As participants in this study you will sign up for four sessions, to be held during the coming two weeks. During two of the sessions you will be

seated in a quiet room where you will be induced into a hypnotic trance. During the other two sessions you will be seated in a quiet room where you will experience meditation. After each session you will be asked to answer a questionnaire, and after all four sessions you will be asked to answer a second questionnaire. The duration of each session is 50 minutes. After the study has been completed, I will make a copy of the results and an explanation of the study available to those participants who are interested.

I will now hand the sign-up sheets out, which indicate to which sub-group you are assigned, the times, venues and dates of your sessions. If you miss a session it will be problematic to include your results in the analysis. Are there any questions?

I would like to thank you all for your attention.



APPENDIX F

VARIABLES INCORPORATED IN THE ALTERED STATES OF CONSCIOUSNESS INVENTORY (ASCI) (with corresponding item numbers)

1. Sleepiness :1,38
2. Time Factor :2, 23, 130, 133
3. Alertness to inner and outer experiences :26, 40, 44, 58, 68, 85, 117
4. Enjoyment :4, 47
5. Levels of suggestibility :5, 29, 53, 61, 81
6. Motivated state of inner focus and relaxation :6, 21, 22, 25, 42, 50, 52, 54, 56, 74, 76, 77, 80, 84, 88, 93, 94, 95, 98, 100, 103, 111, 112, 127
7. Physical Sensations :7, 14, 16, 19, 20, 28, 31, 33, 36, 39, 43, 51, 59, 60, 62, 63, 65, 69, 72, 82, 101, 104, 116, 128
8. Direct focusing of Thoughts :8, 13, 17, 18, 27, 46, 79
9. Distortions :9, 48, 70, 121
10. Self-image :10, 35, 113

11. Perceptual Phenomena	:11, 12, 24, 34, 37, 41, 49, 55, 57, 64, 66, 71, 73, 83, 87, 105, 109, 110, 115, 120, 123, 129, 131, 134,
12. Levels of Anxiety	:15, 30, 32
13. Levels of Concentration	:5, 78, 89, 96, 97, 114, 119, 122
14. Cognition	:67, 90
15. Quiet Mind	:75
16. Insight	:86, 106
17. Spiritual Experiences	:91, 102, 107, 118, 132, 135
18. Suggestibility	:92
19. Orientation	:99, 108
20. Self-control	:124, 126
21. Consistency of Experience	:125



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APPENDIX G

The individual protocols

Subject One

Age 22 years

Gender Female

Subject described hypnosis as a pleasurable experience which is described as having become progressively deeper. She felt relaxed and indicated improved performance in her working environment. Improved concentration ability was also noted. She describes having seen pulsating colours, as well as experiencing strange physical sensations.

During meditation subject reported improved ability to concentrate, felt more at ease and was able to focus on her experiences. During meditation she reported feeling sleepy, in a dream-like state. Often saw colour images.

Subject describes both similarities and differences between the two states. Images were seen during both states. Differences related to level of depth of experience. Hypnosis was experienced as deeper. During meditation she often felt sleepy.

Subject Two

Age 25 years

Gender Female

Subject describes experiencing sleepiness during hypnosis, as well as, awareness of surrounding activities. Described improved ability to concentrate.

Subject reports feeling deeply relaxed during meditation. Suggests feeling at peace with herself. Clarity of thoughts was described.

Meditation was associated with deep relaxation and a peaceful mind. Hypnosis was associated with a stable mind.

Subject Three

Age 29 years

Gender Female

Hypnosis was described as a relaxing experience, where there was potential to lose control over her body. Time is reported to have passed more quickly than usual, and subject reports having seen colour images.

Subject described meditation as an experience of relaxation, where she remained in touch with the environment. Described wandering thoughts.

Subject described relaxation as the common factor between the two states. Hypnosis was described as out of oneself, whereas meditation was described as toward oneself.

Subject Four

Age 27 years

Gender Female

Hypnosis was described as a movement of consciousness to another place. Subject felt in touch with something much deeper inside.

Meditation described specifically as an experience of deep relaxation. Subject experienced emptiness of the mind.

The two states were described as different. Meditation was described as a deeper state of relaxation than hypnosis. During hypnosis she felt preoccupied with intrapsychic conflict.

Subject Five

Age 30 years

Gender Male

Hypnosis was described as a relaxing, enjoyable experience, where time seemed to pass quickly and vivid thoughts and perceptions were experienced.

Subject described meditation as a relaxing experience, however he had many confusing thoughts.

More aware of surroundings during hypnosis than during meditation. During meditation subject was preoccupied with intrapsychic conflict, something that did not occur during hypnosis.

Subject Six

Age 18 years

Gender Female

Hypnosis was described as a relaxing and enjoyable experience. It shared similarities with a dream-state. The subject was fully aware of the surroundings.

The experience of meditation was similar to that of hypnosis.

Subject Seven

Age 24

Gender Female

Hypnosis was described as an intense experience during which the subject was able to look deeper into herself and her emotions. She was able to relax and find peace within herself.

During meditation the subject experienced intense relaxation, a decrease in tension and she felt sleepy.

An interrelationship between the two states is described, specifically in relation to relaxation. While both states resulted in relaxation, the subject reported a difference in levels of intensity of relaxation. Meditation is described as less intense and more clearly related to the conscious state of being.

Subject Eight

Age	25
Gender	Female

Hypnosis was reported to have been a calm and relaxed state, during which the subject felt at peace with the world and was able to forget about her problems.

Meditation was characterised by relaxation. The subject was aware of her body and her feelings. Many thoughts entered her mind.

Hypnosis and meditation were described as similar states. Both lead to feelings of calmness and relaxation. Hypnosis was described as a deep state, however meditation was reported as having been a more relaxed state of being.

Subject Nine

Age 24
Gender Male

Descriptors of hypnosis included tranquillity, peace and de-ja-vu. Subject reported that the experience was very deep, almost transcendental.

Meditation was described as a lesser form of hypnosis. Subject found himself easily distracted, and was aware of sounds and noises around him.

Although hypnosis and meditation share the common feature of induced relaxation, the subject highlights the hierarchical order of intensity. He reported that meditation is a prelude to hypnosis, a lesser form of hypnosis. Hypnosis was experienced as a far deeper state.

Subject Ten

Age 23
Gender Female

Hypnosis was experienced as a deep state of relaxation, and the subject was simultaneously able to maintain alert to her external experiences. Focus was on her internal processes, and she found that this enabled ease of concentration.

During meditation the subject felt deeply relaxed, and reported having fallen asleep. She was easily distracted, and had difficulty concentrating.

The two states were experienced as similar, on the basis that both lead to a state of relaxation, both mentally and physically. The exception to this involves alertness to the outside world. During hypnosis subject remained alert to external stimuli. This was not the case during meditation.

Subject Eleven

Age 22
Gender Female

During hypnosis, subject withdrew from the external experience, and reports having entered a new dimension. Subject was relaxed and alert.

The experience of meditation was primarily characterised by relaxation. Subject reports having become in touch with her "inner self".

The two states were reported as being similar. Both result in relaxation. Hypnosis felt similar to being awake, however this was not the case with meditation.

Subject Twelve

Age 20

Gender Female

Hypnosis was described as a state of extreme relaxation, with a feeling of unusual calmness. Non sensical images and colours were seen. Subject was unable to understand why she saw colours and images.

Meditation was described as a state of intense relaxation. Images and colours were visualised. Many thoughts filtered into her mind, and subject found herself thinking about problems.

The two states were described as similar, however during meditation more free floating thoughts appeared to enter her mind.



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