1 Introduction to hypnosis

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Before we can begin to understand the nature of hypnotherapy, its rationale, its aims, and the practical manner whereby these aims are realized, or at least attempted, we must first direct our attention to the nature of hypnosis itself. Hypnosis is a psychological phenomenon, not a therapy, and because it is a complex and contentious subject about which there is much misunderstanding and disagreement, it is necessary to devote a full chapter to an attempt to explain its nature and its many aspects, both theoretical and practical.

The hypnotic session

As it is practised, hypnosis refers to an interaction between two people, one of whom is identified as the hypnotist, the other as the subject. (There may, of course, be more than one subject, as in the case of group hypnosis.) The hypnotist administers the hypnotic procedures and the subject responds to them.

A session of hypnosis typically proceeds through a number of stages. First is the preparation stage. Depending on the purpose of the hypnotic session and whether it is the subject's first experience of hypnosis, this may be quite lengthy and will include the establishment of a good rapport between hypnotist and subject, an explanation of what hypnosis is and is not, the allaying of any anxieties and misconceptions on the subject's part, and so on.

The second stage is the induction of hypnosis. Many induction procedures have been described but the most commonly employed typically involve a series of instructions and suggestions by the hypnotist that encourage the subject(s) to narrow their focus of attention on just one stimulus, image or idea, and to become increasingly relaxed. Later stages of the induction are known as ‘deepening’ procedures and, whereas the initial stages of the induction may use an external stimulus for fixation (e.g. a spot on the ceiling), deepening procedures usually have an internal focus of attention such as relaxing imagery. According to what might be called the traditional model of hypnosis, as a result of a successful induction the subject enters an altered state of consciousness or trance.
During the third stage of the session, the hypnotist administers instructions and suggestions to the subject that directly concern the purpose of the hypnotic session. It is assumed that by virtue of being in a state of hypnosis the subject or patient is particularly receptive to these suggestions or therapeutic techniques.

The fourth stage occurs when the session of hypnosis is drawing to a close and the subject is alerted from the hypnotic state. A common procedure is for the hypnotist to count down from, say, five or ten, and to suggest that the subject is becoming increasing alert and energized, so that on opening the eyes at the count of one he or she will be fully alert and orientated again.

There is then likely to be a fifth stage in which the subject or patient is invited to talk about how he or she feels about the session and any issues or concerns that may have arisen.

Let us now examine in detail the major aspects of the above process and the assumptions underlying them.

**Suggestion**

Fundamental to an understanding of modern hypnosis is the phenomenon of suggestion. The term ‘suggestion’ in the present context may be used in two ways. First, it may be used to refer to something that the hypnotist does: he or she ‘makes suggestions’ or ‘suggests ideas’ to the subject, to which the latter may or may not respond. A suggestion may be defined as:

> A communication, conveyed verbally by the hypnotist, that directs the subject’s imagination in such a way as to elicit intended alterations in sensations, perceptions, feelings, thoughts and behaviour.

(Heap and Aravind 2002: 17)

Thus, responding to a suggestion means that a subject attends to the words and ideas of the hypnotist and the images that he or she describes, and experiences some of the responses that they would have if the suggested ideas were happening in reality. There is however something to add, namely that a ‘successful’ response is experienced by the subject as having a quality of involuntariness or effortlessness. In other words, subjects experience the suggested responses as ‘happening to them’ and not simply ‘performed by them’. (Note that the terms ‘involuntariness’ and ‘effortlessness’ are psychologically not the same as automatism or hyper-obedience.) In the words of Barnier et al. (2008: 141), ‘Hypnotized individuals typically show disruptions of personal agency and become transiently deluded about the source and reality of their experiences’.
These descriptions illustrate the second way in which the term ‘suggestion’ is used, namely to denote the subject’s manner of responding to the hypnotist’s communication. Consider the following example of suggestion. The hypnotist repeats to the subject the idea that his or her arm is feeling lighter and lighter, so light in fact that it will start to rise up involuntarily. As with most suggestions, the hypnotist may incorporate into the suggestion an appropriate image; in this case, it may be that of a balloon from which is hanging a piece of string that is wrapped around the subject’s wrist and is tugging at his or her arm. Let us say that the subject responds by raising the arm but perceives the action as involuntary and the arm as lifting ‘all on its own’. Thus we have an example of suggestion. However, we would not use this term in the case of another subject who knowingly produces the same movement entirely voluntarily. Other suggestions that illustrate well these subjective qualities of involuntariness and realism are the so-called ‘challenges’, such as eye catalepsy (‘At the count of three you will be unable to open your eyes’) and the finger-lock test (‘At the count of three you will be unable to separate your hands’).

The multi-modal nature of suggestion

Suggestion is a multi-modal phenomenon. Arm levitation is an example of a suggestion influencing motor behaviour and as such it is designated as an ideomotor suggestion, the prefix ‘ideo’ being used to convey the notion that the subject responds to the idea of a movement in the arm. ‘Challenge’ ideomotor suggestions (eye or arm catalepsy and the finger-lock test) have previously been mentioned and illustrate that suggestions may be negative as well as positive (i.e. ‘You will not or cannot do or experience something’ as distinct from ‘You will do or experience something’). A negative ideosensory suggestion is typified by glove anaesthesia (‘Your whole hand is now completely insensitive’). Ideosensory suggestions are also contained in the arm-levitation test (‘Your whole arm is feeling lighter and lighter’) and in instructions for relaxation (‘Your whole body is feeling heavy and relaxed’). Suggestions may also be directed to the olfactory modality (positive: ‘In a moment you will experience the most terrible smell in your nostrils’; or negative (tested by ammonia solution): ‘You have completely lost your sense of smell’). Similar positive and negative suggestions can be made in the gustatory modality (taste).

These kinds of suggestions are often termed ‘hallucinations’ (positive and negative) in the literature to emphasize that the subjective experience of the suggestions has a more real quality than normal imagery. This also applies to suggested ‘hallucinations’ in the auditory modality (positive: ‘You can hear a fly buzzing behind your head’; negative: ‘You can hear no sound at all in your left ear’) and in the visual modality (positive: ‘When you open your eyes you
will see your best friend sitting in front of you'; negative: ‘When you open your eyes you will not see the chair in front of you’).

Some suggestions give rise to alterations in one’s experience of time and one’s memory. For example, suggestions may be given of time appearing to slow down (‘Every second seems like a minute . . .’) or to speed up (‘Time is going faster and faster . . .’). It may also be suggested that the subject is going back in time and vividly re-experiencing an early event in his or her life, or that the subject is moving forward to a future period. The former experience, termed ‘revivification’ or, if it involves the recall of events at a radically earlier stage of development, ‘age regression’, may contain factually accurate recollections as well as fantasies of an entirely fictitious nature, particularly so the earlier the regression. The suggestion to move forward in time (age progression) of course evokes scenes that are pure fantasy, but these may be useful from the therapist’s point of view.

Suggestions of amnesia are usually intended to take effect at some point after the subject has been alerted. They may be global (‘You will remember nothing of what has happened while you have been hypnotized’) or selective (‘You will not remember my giving you this suggestion’). Suggestions like these, which are intended to be acted upon at some point after the subject has been alerted, are termed post-hypnotic. Post-hypnotic amnesia may occasionally arise spontaneously and may or may not resolve, but it is generally agreed that a true instance of suggested amnesia should be reversible; that is, it should be temporary, and the forgotten material should be recalled by the subject, say when the experimenter announces that it may now be remembered.

As another example of post-hypnotic suggestion, the hypnotist may say, ‘At some point after you have opened your eyes I will tap on the table and immediately you will experience an intense itchy feeling on the sole of your right foot’. Post-hypnotic suggestion is a common technique in hypnotherapy, as will be seen in later chapters.

Finally, there is evidence that hypnotic suggestions can influence specific physiological responses – that is, bodily reactions that are mediated by the autonomic nervous system and therefore not normally amenable to voluntary control. It is, of course, perfectly easy and natural for one person to intentionally influence the physiological responding of another by means of a verbal communication. This may be at a general level, such as increasing the person’s arousal (increasing heart rate, sweating, respiratory rate, and so on) by describing something exciting that is about to happen. However, we may be more selective in the responses that we influence. For example, we may focus on increasing salivary rate in another person by describing to them the experience of sucking a lemon, or we may influence their gastric activity by vividly relating a particularly disgusting and offensive scene that causes them to feel nauseous. In the hypnotic literature, of special interest are suggestions
of alterations in blood flow. Typically, these sorts of suggestion involve both visual imagery (e.g. ‘Imagine your right hand immersed in a bucket of warm water’) and direct suggestions of change (e.g. ‘Your hand is becoming warmer’ or even ‘The circulation is flowing strongly to your hand’). For a review of studies of such use of hypnosis, see Benham and Younger (2008).

**Styles of suggestion**

A number of distinctions can be made regarding the style of delivery of suggestions that are of practical rather than theoretical significance, to the extent that they have any import at all. Two are outlined here. The first is the authoritative–permissive distinction. A suggestion may be delivered as an authoritative command (‘Your arm will begin to rise in the air now!’) or as an invitation to respond (‘Just allow your arm to become as light as it wants to’). It is possible that different subjects may be more comfortable with one or the other type (as indeed may therapists themselves) but little difference in their effects has been reported in laboratory research (Spinhoven et al. 1988). The permissive type has been more favoured in recent times and has the advantage that the subject’s failure to respond at all may be less of a problem than with the authoritarian type.

The second distinction is that of direct versus indirect suggestion. The above two suggestions are direct, even though one is in the permissive style. In the case of indirect suggestions, the instruction is expressed in a covert manner that does not explicitly demand that the subject behave in a prescribed way. For example, the suggestion may simply be embedded in a longer statement and the hypnotist may subtly mark it out by softening his or her voice (‘You don’t have to try to relax’ or ‘There may have been times when you have lost the feeling in one of your hands’). Another method is to imply that the suggested experience will take place, rather than directly state that it will (e.g. ‘You will not be completely relaxed before your hand has come to rest on your lap’ – implying that the subject will be completely relaxed once this has happened). Other examples are the use of paradox (‘Try not to go into hypnosis too quickly’) and creating an illusion of choice (‘You may go into hypnosis now or in a few minutes’). Other examples are given in Erickson et al. (1976).

One apparent advantage of the indirect methods is that they provide additional safeguards against the lack of any response by the subject. It is also assumed that the suggestions bypass the subject’s critical faculties and therefore avoid creating resistance in some cases (Yapko 1990). As with the authoritarian–permissive distinction, there is little evidence of any clear advantage of indirect over direct methods (Lynn et al. 1988; Matthews and Mosher 1988) but in therapy some patients may respond better to one type of suggestion than the other.
Suggestibility

There is a significant tendency for responsiveness to different kinds of suggestion to be correlated and people differ markedly in their suggestibility. The formal measurement of suggestibility will be discussed later in this chapter. Traditionally, it has been accepted that suggestibility is a stable trait, in contrast to the position adopted by what has come to be termed the ‘socio-cognitive’ approach, namely that differences in suggestibility are determined by subjects’ attitudes and response styles (Spanos et al. 1988; Spanos 1991). It has been established that a positive attitude to hypnosis and the expectation that one is a responsive subject are predictors of hypnotic susceptibility (Spanos 1991; Kirsch and Braffman 1999). Related to this is the observation that people who have anxieties about ‘losing control’ and therefore find it difficult to ‘go with the flow’ while attending to hypnotic suggestions, tend, on balance, to be less responsive (Barber 1999). Hence it is reasoned that people can be trained to become responsive by changing their attitudes and approach to hypnotic responding and to become ‘more strategically involved’ (Gorassini and Spanos 1999).

In contrast, there is now strong evidence that a person’s suggestibility is constant over time and is, at least in part, genetically determined (Morgan 1973; Piccione et al. 1989; Horton and Crawford 2004; Lichtenberg et al. 2004). However, it reaches a peak in early puberty and shows a gentle descent thereafter (see Chapter 6). When differences between the sexes have been noted, albeit marginal in magnitude, the trend has been for females to be more responsive (Fellows 1986; De Pascalis et al. 2000). There appears to be no strong relationship with IQ above a certain level, and correlations with scores on commonly used personality assessment procedures are at most marginal (Gibson and Heap 1991; Nordenstrom et al. 2002).

There is evidence that a tendency to become engrossed in real or imagined activity in everyday life (‘absorption’), as measured by a self-report questionnaire (Tellegen and Atkinson 1974), is correlated with hypnotic susceptibility, but the relationship is weak and unstable and some studies have obtained negative results when the two characteristics are assessed in separate contexts (Kirsch 1991; Oakman et al. 1996; Milling et al. 2000). A similar picture emerges with dissociative capacity – the ability to inhibit from conscious expression experiences, memories, perceptions, and so on, of which one would normally be aware, or to engage in two or more incompatible experiences, cognitions or activities without consciously acknowledging any inconsistency. Dissociative capacity may be measured by a questionnaire called the Dissociative Experiences Scale (DES; Bernstein and Putnam 1986). Some studies have reported small positive correlations between DES scores (e.g. Frischholz et al. 1992; DiTomasso and Routh 1993; Butler and Bryant 1997), whereas in others the correlations did not reach statistical significance.
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Some studies have reported a context effect (e.g. Spanos et al. 1993), while others have not (Oakman et al. 1996; Butler and Bryant 1997).

There is evidence that people who have a rich fantasy life include a disproportionate number of highly hypnotically susceptible subjects (Wilson and Barber 1983; Barber 1999), although the correlation between measures of fantasy proneness and hypnotic suggestibility scores are quite modest (Lynn et al. 2004). The correlation between hypnotic suggestibility and the ability to produce vivid imagery per se is rather weak and not very reliable (Glisky et al. 1995).

The hypnotic induction

Before describing how suggestibility is measured, it is necessary to discuss two more components of the hypnotic process, namely the hypnotic induction and the ‘hypnotic state’ or ‘trance’. As was described earlier, following the preliminaries to a session of hypnosis, the hypnotist administers a series of suggestions known as induction and deepening, usually emphasizing relaxation and a focus on inner experiences such as feelings and imagery, while the subject remains attentive to the hypnotist’s communications.

What is the purpose of the induction? Clearly, as described above it is to help the subject achieve a state of relaxation. As was indicated earlier, however, there is another purpose. As a result of the induction, the subject enters a special state of consciousness in which he or she is presumed to be more receptive to the suggestions to follow (i.e. is more suggestible). Other properties have been claimed for the hypnotic state and these will be mentioned shortly.

What evidence is there for the above? It has certainly been demonstrated that, following an induction, on average there is an increase in suggestibility as measured by standard scales. However, it seems that the increase is on the whole rather modest and does not occur for everyone, some individuals even being less suggestible following an induction (Kirsch and Braffman 1999). But why do these gains occur at all?

This question has been investigated by substituting the usual ‘passive-relaxed’ type of induction with other kinds of instructions and suggestions. Examples of the latter are: ‘task-motivational instructions’ (encouraging subjects to fully engage with the suggestions to follow, use the full power of their imagination to ‘make things happen’, and so on); ‘alert-passive’ inductions (suggesting increasing awareness, alertness, and energy); ‘alert-active’ inductions (as before but substituting the chair or couch with, say, an exercise bicycle); and ‘placebo inductions’ (asking subjects to swallow a ‘hypnosis pill’ or ‘hypnosis gas’, both inert). The outcome is that the same
increase in suggestibility is found with these methods as with the passive-relaxed type of induction (Glass and Barber 1961; Barber and Calverley 1963; Vingoe 1973; Bányai and Hilgard 1976; Baker and Kirsch 1993). Hence, so far as the subject’s suggestibility is concerned, the principal role of the hypnotic induction appears to be to enhance his or her expectancy and commitment to engage in the suggestions to follow.

This conclusion is supported by the findings of McGeown et al. (2009), who analysed fMRI scans of subjects undergoing a passive-relaxed hypnotic induction. Highly suggestible participants showed decreased activity in the anterior parts of the ‘default mode’ circuit (cortical areas that are active in the absence of goal-directed activity) but no increase in other cortical regions. In low suggestible subjects, the hypnotic induction produced no such changes but appeared to deactivate areas involved in alertness. These results are consistent with the findings of the previously mentioned behavioural studies, namely that the effect of the hypnotic induction, at least with highly suggestible people, is to prime them to respond more effectively to the suggestions to follow. Importantly, the data confirm that relaxation is not a critical factor in this respect.

Notwithstanding all of this, it remains the case that passive-relaxed inductions are by far the most popular methods, both in the laboratory and in the clinic. They have the advantage of being consistent with the subject’s or patient’s expectations about hypnosis; they usually provide him or her with a very pleasant experience; and in the clinic it is often the case that the patient will be encouraged to practise self-hypnosis regularly as a form of relaxation. It also happens that relaxation itself is conducive to more vivid visual imagery (Nilsson 1990) and this may be important in many treatment strategies. Nevertheless, the above research suggests that therapists are at liberty to be more flexible in their choice of induction methods; this is something that is discussed in the next chapter.

The hypnotic trance

Where do the foregoing conclusions leave the concept of the ‘hypnotic state’ or ‘trance’? Before we examine this, let us note that hyper-suggestibility is not the only property that has been traditionally claimed for the hypnotic trance. Other alleged properties have included: hyper-obedience or automatism; profound insensibility to pain; ability to perform superhuman or even supernatural feats; hypermnnesia (the ability to remember accurate details of even remote events in one’s life); extreme literalism; and access to ‘the unconscious mind’. Hence trance is the pivotal concept in the traditional model of hypnosis. It is pivotal because it is used to explain the various phenomena that are observed or claimed to arise during hypnosis (i.e.
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following a hypnotic induction). However, none of these claimed properties has been convincingly demonstrated by experimental investigation (Gibson and Heap 1991; Gauld 1992) and, as noted above, we do not require the notion of an altered state of consciousness to account for the overall increase in a subject’s suggestibility following the induction procedure.

Should we therefore abandon the idea of the hypnotic trance and even say that hypnosis does not involve any altered state of consciousness at all? Concerning the latter, it may be argued that the nature of the susceptible subject’s response to hypnotic suggestion, as described earlier, is itself indicative of an altered state, and perhaps the only point of disagreement is how ‘altered state’ is to be defined (see Kihlstrom 2008). However, the point at issue here is whether, according to the traditional model of hypnosis, the induction itself induces in the subject an altered state of awareness that accounts for how that person experiences and responds to the hypnotic suggestions.

This question will be revisited when we examine the results of modern brain-scanning procedures, but for the moment we shall address the matter from the standpoint of material already discussed. Consider what happens when a hypnotist performs a standard passive-relaxed hypnotic induction but does nothing more than this (this is sometimes called ‘neutral hypnosis’). When subjects are re-alerted they usually report that nothing particularly remarkable happened. They will probably say that they felt deeply relaxed and were absorbed in the images described by the hypnotist, but they will also usually say they were alert – certainly not unconscious or asleep – aware of where they were, aware of the hypnotist’s voice and even background sounds, and able to recall most if not everything that happened between closing and opening their eyes. In the case of self-hypnosis, again the experience will probably be no more profound than that just described. In fact, there is little to indicate that the state of mental and physical relaxation thus achieved is fundamentally different from that derived by other methods, including the various forms of meditation (Wagstaff 1981; Benham and Younger 2008), although highly suggestible people respond differently to these methods.

Now, this state of mental relaxation, absorption in inner experiences, and detachment from ongoing events in the external world, save for the hypnotist’s voice, could be labelled ‘trance’. This word may create problems for some because of its association with spiritualism or the supernatural, but the everyday connotations of the term convey very well what is intended by its use in the present context. We know what is meant when we say that so-and-so is ‘in a trance’ or ‘I must have been in trance when I did that’. Common examples occur when we are absorbed in a daydream, but the focus of our attention may also be in the external world – a book, a television programme or some thrilling music. In fact, hypnotic trances, as described above, and
everyday trances are very similar in their subjective quality. In both, the individual may experience time distortion – usually the impression that real time has gone by much more quickly than usual, so that, following half an hour of hypnosis, the subject, on alerting, may guess that only ten or fifteen minutes have passed by (Naish 2001, 2003). Occasionally, some spontaneous amnesia may be present that may or may not be reversible and this may occur in everyday trances. A commonly cited example of this is ‘the highway trance’ when, while driving on a long car journey, one can have no recollection of part of the journey already covered, even though one was engaged in the skillful task of driving the car.

Now there are many applications of hypnotherapy in which it is desirable that the patient experiences this kind of ‘trance’ and the passive-relaxed hypnotic induction procedures appear well suited to this purpose. Subjectively it may also be useful to speak of light, medium, and deep trance. Nevertheless, when we investigate the nature of hypnosis in the laboratory, we find that this concept of ‘trance’ is not a useful one for explaining and accounting for the behaviour and experiences of the subject. Indeed, as we have seen, relaxation itself is not an essential property of hypnosis, and during hypnotherapy itself there may be many occasions when patients are far from relaxed, such as when they are re-experiencing a distressing memory or an exciting event.

In view of these considerations, in the next chapter it will be argued that for the purposes of clinical applications, it is useful to keep in mind these two purposes of the hypnotic induction, namely to encourage the patient to experience ‘trance’ as described above and/or to be more responsive to suggestion. On this basis, the therapist may choose which induction procedure is appropriate for the purposes of the patient’s presenting problem and its treatment.

**Suggestibility scales**

For research purposes, if not for others, a subject’s response to a given suggestion can be measured, sometimes in different ways. For example, suggested hand analgesia may be measured by simply asking the subject to rate their pain when they place their hand in a bucket of ice and water or by recording how long they are able to keep the hand immersed.

Scales for measuring a person’s overall suggestibility typically consist of a range of suggestions; the subject’s response to each is scored and his or her suggestibility is the sum of scores for all items. Within the general population, suggestibility scores have a broad distribution and a clear central tendency.

The most widely used scales are those developed by André Weizenhoffer and Ernest Hilgard, namely the Stanford Scales of Hypnotic Susceptibility
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(SSHS; Weitzenhoffer and Hilgard 1959, 1962). Of these, Form C samples a broader range of suggestions than Forms A and B and discriminates among more highly susceptible subjects. It is now regarded as the ‘gold standard’ measure of susceptibility for the purposes of research. A version for group administration, the Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C, has also been developed (Bowers 1998). The Harvard Group Scale of Hypnotic Susceptibility (Shor and Orne 1962) is based on Form A of the SSHS but the scoring is suitable for a group administration.

There are significant and reliable differences between suggestions in terms of the proportion of subjects who respond to (i.e. ‘pass’) them. On the SSHS Form C, for example, 92 per cent of subjects in the normative group passed the ‘hand lowering’ suggestion, 43 per cent passed ‘age regression’, and only 9 per cent passed ‘negative visual hallucination’. In this sense, it is meaningful to talk about some suggestions being more ‘difficult’ than others. Broadly speaking, ideomotor suggestions tend to be the easiest suggestions to pass; challenge suggestions are somewhat more difficult; and cognitive suggestions (e.g. involving hallucinated experiences) are the most difficult of all.

There are a number of other scales and the reader is referred to Woody and Barnier (2010) or Barnier and Council (2010) for a more in-depth account, including details of children’s scales, which are also summarized in Chapter 6.

Not all of these scales include an induction. Suggestions not preceded by an induction are often called ‘waking suggestions’, and Kirsch (1997) has cogently pointed out that the correlation between waking and hypnotic suggestibility is as high as the test–retest reliability of the standard scales. He proposes that hypnotizability may be defined as the increment in suggestibility following a hypnotic induction procedure and that imaginative and hypnotic suggestibility denote suggestibility before and after induction. In fact, in the literature the terms hypnotizability, hypnotic susceptibility, hypnotic suggestibility, and hypnotic responsivity tend to be used interchangeably.

All of these scales have high internal consistency, demonstrating that responsivity to one hypnotic suggestion is correlated with responsivity to others on the scale. They also have high test–retest reliability and, as was noted earlier, an adult person’s suggestibility score tends to remain stable over time.

Finally, it is clear that, for example, two people may have the same high score on a scale but their profiles can be quite different. It is perhaps easier to understand that some people are more responsive to hypnosis than others, but the observation that two people may be ‘good at’ different elements of hypnosis is more puzzling. However, there is evidence that different people bring different cognitive strategies to bear in their responding to hypnotic suggestions (e.g. Barber 1999; see also McConkey 2008).
Theories of hypnosis

Twenty years ago, the theoretical landscape of hypnosis was dominated by what came to be known as the ‘state versus non-state’ controversy or, more technically, ‘special process’ versus ‘socio-cognitive’ (see Lynn and Rhue 1991). Theories of the latter designation attempt to explain hypnotic phenomena in terms of normal cognitive and social psychological processes such as imagery (Hull 1933), role-enactment (Sarbin and Coe 1972), relaxation (Edmonston 1981), compliance (Wagstaff 1981), response expectancy (Kirsch 1991), and various combinations of these (e.g. Barber et al. 1974; Spanos 1991). The susceptible hypnotic subject is perceived as actively engaged in deploying his or her available skills, which may include deception, to create the experiences and responses suggested by the hypnotist. In contrast, special-state theories attribute the behaviour and experiences of the responsive subject to some mechanism that is activated by the process of hypnotic induction. Hence such theories are compatible with the traditional conceptualization of hypnosis, whereby the subject is said to be in an altered state of consciousness or trance, the properties of which explain the phenomena observed.

Probably the most influential theory today that comes closest to the above is the ‘dissociated control’ model of Woody and Bowers (1994). According to this theory, the induction of hypnosis has an inhibitory effect on certain functions of the frontal lobes, subsumed under the ‘supervisory system’, that are responsible for the executive control of activity (as opposed to habitual or automatic responding that is characteristic of much of our learned behaviour). Hypnosis disengages the supervisory system from its influence on the behaviour and experiences of the subject, who thus responds in a genuinely automatic and involuntary manner to the suggestions of the hypnotist.

There is no reason to suppose that the socio-cognitive factors listed above do not play an important role in accounting for the behaviour and experiences of the hypnotic subject, and their relative significance may vary from individual to individual. However, before proceeding further, it may be useful to consider what exactly a theory of hypnosis should attempt to explain.

There appear to be two major characteristics of hypnosis that any theory should account for. First, there are the key experiences of realism and involuntariness, described by Kihlstrom (2008: 21) as ‘a degree of subjective conviction bordering on delusion, and an experienced involuntariness bordering on compulsion’. Second, a theory must also explain why people differ in their hypnotic responsivity, as described above, and why their level of responsivity is so stable.
Hypnosis, attribution, and dissociation

One way of explaining the two attributes of hypnotic responding is by reference to the process of attribution. Although responsive subjects are actively involved in creating the experiences suggested by the hypnotist, his or her instructions and the context cause them to attribute their experiences as ‘happening to them’ rather than being an outcome of their own agency. An alternative explanatory mechanism is some form of dissociation, which was described earlier.

Dissociation is central to one of the most influential theories of hypnosis, that due to Ernest Hilgard (Hilgard 1986), which is usually described as a ‘state’ or ‘special process’ theory. This assumes that hypnotic phenomena occur through a process of dissociation within high-level cognitive control systems. Very briefly, although part of the person’s executive system (the ‘organizing and planning’ part of the brain) continues to function as normal during hypnosis, a dissociated part is concealed from awareness by ‘an amnesic barrier’. The hypnotist’s suggestions operate by influencing this dissociated part of the executive to instigate actions or changes in cognition. As the person is only aware of the resultant changes in behaviour and experience, and not the cognitive activity by which such changes are brought about, he or she experiences the execution of suggestions as involuntary. (This contrasts with the more recent dissociated control theory described earlier, whereby the hypnotized person actually surrenders some control of executive functioning to the hypnotist.)

One way that Hilgard demonstrated his model was by the ‘hidden observer’ effect (Hilgard 1986). Highly hypnotizable subjects who respond to suggestions of profound analgesia while their hand is immersed in ice and water are informed that there is a hidden or ‘unhypnotized’ part of the mind that is still aware of the pain. The part is then instructed to give the ‘true’ pain ratings ‘out of awareness’, for example in writing or by pressing numbered keys. These ratings are indeed much higher than those elicited when the subject is asked directly. Similar experiments have been performed on hypnoamnesia, hypnotically suggested deafness, and ideomotor responding (see Contemporary Hypnosis, 22(3), 2005).

The exact mechanism of the hidden observer effect is a topic of some controversy (see, for example, the above journal issue). It does however illustrate a common theme that runs through the behavioural, cognitive, and experiential characteristics of susceptible subjects when they are responding to hypnotic suggestions, as provided by another example, namely ‘trance logic’ (Orne 1959, 1962). Suppose that a subject is given the hypnotic suggestion that when they open their eyes they will not see a chair in front of them. Some very susceptible subjects report not seeing the chair, yet when they are asked to get up and walk forward, they avoid the chair. Orne reported that subjects who are asked only to pretend that they are deeply hypnotized are more likely to collide with the chair. In another experiment, subjects who were able to ‘hallucinate’ a friend sitting in a chair opposite were also able to
describe the parts of the chair that would normally be obscured by its occupant. Again, simulators were more inclined to deny being able to do this. Finally, Orne (1972) described an age-regressed subject who was only able to speak and understand German at the age to which he was regressed, yet when asked several times in English whether he understood that language (using a different phraseology each time) he replied, illogically, ‘Nein’.

As with the hidden observer, the concept of trance logic and the associated experimental demonstrations have drawn criticism both on methodological and theoretical grounds (see Wagstaff 1981, 1988; Sheehan 1986). However, the theme that emerges from these studies is that, under the influence of suggestion, very responsive subjects may be able to inhibit from explicit conscious expression perceptual and cognitive experiences to which they nevertheless respond unconsciously or implicitly. Another example is that of suggested deafness for one’s own voice. Subjects who indicate that, in response to this suggestion, they are unable to hear their voice nevertheless show the usual speech disruption with delayed auditory feedback, whereby their speech output is played back to them over earphones with a slight delay (Barber and Calverley 1964). Most compelling of all is the finding that in response to suggestions of post-hypnotic amnesia for material such as lists of words, explicit memory (i.e. conscious recall) but not implicit memory is impaired. For example, responsive subjects show electroencephalographic changes when presented with items from a word list for which they deny any conscious recall, but not with new material (Allen et al. 1995; Schnyer and Allen 1995). Moreover, the ‘forgotten’ material still has the potential to interfere with the recall of a word list presented earlier that is not included in the amnesia suggestion (Coe et al. 1976). Indeed, the target material is manifest in a range of indices of implicit memory such as word associations and the completion of word fragments. This is now an established finding (for a review, see Mazzoni et al. 2010). Hence once again it appears that hypnotically suggestible subjects are able to temporarily inhibit activity from conscious expression, yet this activity still exerts an influence on behaviour and cognition. Finally, it has been similarly demonstrated that visual information that is apparently unperceived by hypnotically blind subjects can nevertheless influence later performance on cognitive tasks (Bryant and McConkey 1989).

There are now several theories of hypnosis that posit some form of dissociation mechanism or cognitive inhibition and the reader is referred to Nash and Barnier (2008) for an account of these.

**Neurophysiological and neuropsychological evidence**

The advent of sophisticated brain scanning techniques has the potential to settle a good many of the theoretical debates in hypnosis. Not all issues are yet
resolved, but with the clearer pattern that is emerging there has been a movement towards common ground.

One of the first issues to be settled was the reality of the hypnotic experience. For example, early scanning studies revealed that, while hallucinating, highly susceptible subjects produced patterns of brain activity very like those associated with the corresponding real experiences. This was demonstrated both for auditory (Szechtman et al. 1998) and visual hallucinations (Kosslyn et al. 2000). Importantly, asking the same people, while not hypnotized, merely to vividly imagine the experiences produced brain activity that only partially resembled ‘the real thing’. Findings of other research are proving consistent with the reported subjective experience of involuntariness of responding and inherent difference between people who are high and low in hypnotic susceptibility. A comprehensive review of the literature is beyond the scope of this chapter, and the reader is referred to recent overviews by Oakley (2008), Oakley and Halligan (2010), and Raz (2011).

Summary and conclusions

In this chapter, we have surveyed current ideas, knowledge, and controversies concerning the phenomenon we call ‘hypnosis’. A similar survey twenty years ago (Heap 1991) revealed much greater disagreement and lack of clarity than is the case today. Real progress has been made and this is not only important for our academic understanding of hypnosis – it is crucial that the application of hypnosis in clinical practice is based on a sound, scientifically informed understanding of the subject, grounded in mainstream psychology and its related disciplines. Let us therefore summarize the present position.

1 Hypnosis refers to an interaction between the hypnotist and subject (or subjects) in which the latter is encouraged to focus on various ideas and images with the intention of creating specific changes in the way they are feeling, thinking, perceiving, and behaving.

2 Subjects may deploy a range of cognitive strategies in attempting to achieve the intended effects but true hypnotic responding is characterized by a sense of involuntariness on the subject’s part, to the point of compulsion, and the subjective reality of the experiences, to the point of transient delusion.

3 People vary markedly in their ability to experience hypnotic suggestions in the above way, and their suggestibility can be reliably measured using standardized scales. These reveal that suggestibility is a very stable individual attribute, at most only weakly correlated with major personality dimensions, although it correlates modestly with fantasy proneness.
4 It is customary during a session of hypnosis to precede the suggestions with a hypnotic induction consisting of a series of suggestions and imagery intended to encourage the subject to physically and mentally relax and to maintain an inner focus of attention while remaining alert to the hypnotist’s communications. Traditionally, it has been assumed that by this means the subject enters an altered state of consciousness or trance, a major property of which is enhanced responsiveness to suggestion. Research has revealed that the gains in suggestibility do not occur for all subjects and are obtained with any procedure that enhances the subject’s expectation and motivation and his or her engagement with the suggestions to follow; relaxation itself is not a prerequisite. It may also be the case that the outcome of the hypnotic induction (and its use for the purposes of self-hypnosis) is no different than other relaxation and meditative procedures; nevertheless, in clinical practice the passive-relaxed induction methods have obvious advantages.

5 A number of theoretical approaches have now evolved that posit some mechanism of dissociation or inhibition in the cognitive-behavioural system to explain the experiences of subjects responding to hypnotic suggestion. Experimental research investigating these ideas has been augmented by studies of brain scans of subjects responding to hypnotic suggestions. These and neuropsychological investigations support the reported reality and involuntary nature of the hypnotic experience and have confirmed that there are inherent differences between high and low suggestible subjects both within and outside of the hypnotic context.

This chapter is a condensed overview of the nature of hypnosis, intended to prepare the reader for the clinical chapters to follow. Many details and complexities have been glossed over and the reader may be interested in pursuing in greater depth some of the theoretical and research areas described. Two recent and very substantial volumes on theoretical and applied hypnosis are Nash and Barnier (2008) and Lynn et al. (2010). Ideas for further reading on specific topics may be gained from the various chapters in this book.

The authors have avoided giving the historical background to hypnosis. Gauld (1992) remains an excellent text for the serious scholar, or for an overview see Heap and Aravind (2002) or Lynn et al. (2010).

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