

Hypnosis and theory



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So, what is hypnosis and how does it work I think most hypnotists accept that hypnosis is caused through the communication of ideas from the hypnotist to the subject, and that this communication does not need any paranormal means ??“ in other words, talking and body language are sufficient. If you think that an energy flows between hypnotist and subject or that telepathy is somehow involved, then I??™ m sorry, but this article probably isn??™ t for you. In the simplest of cases, the hypnotist talks and the subject listens and as a result, the subject experiences hypnosis.

Definitions: What do we mean when we use the word hypnosis This is important to nail down because hypnotists often tend to disagree over exactly what is and what isn??™ t hypnosis. The lay person knows what hypnosis is, it??™ s making people do things they wouldn??™ t otherwise have done, whether that be quitting smoking or dancing like Beyonce.

There are two ways of defining hypnosis, the first is ??? hypnosis as process??™ and the second is ??? hypnosis as product??™ . Hypnosis as process is what I described in the previous paragraph ??“ the hypnotist talks and the subject becomes hypnotized ??“ in the case of waking hypnosis (including James Tripp??™ s excellent Hypnosis Without Trance), there is no obvious induction and the process appears to only consist of an introduction followed by a series of suggestions. This is actually the definition The Oxford Handbook presents ??“ an Introduction followed by a First Suggestion; the first suggestion could be an induction but the definition doesn??™ t preclude non-induction approaches to hypnosis. This is important to note: The Oxford Handbook considers response to suggestion without a preceding induction as hypnosis. The next question is ??? How do we know when hypnosis has

happened??? and that is wrapped into definitions of ??? hypnosis as product??™. It is possible, although unlikely, that everyone that has ever responded to a suggestion was simply playing along for their own reasons, knowing they weren??™t hypnotized and fooling the hypnotists in the process.

How would we know A more relevant scenario might be that most capable subjects respond to suggestion hypnotically but that your last subject was simply playing along. How would you know that they weren??™t They could slump in the same way and they could act in a fashion that simulates response to suggestion, including feigning amnesia for what they had done. It appears fair to suggest that the only person that knows whether they were hypnotized or not is the subject, as they are the only one who knows whether they did the things that happened or whether the things that happened appeared to happen to them by themselves. In essence, we are interested in whether the subject felt that they were hypnotized and, as they are usually a lay person, this usually translates to whether they feel that the hypnotist made them do something that they didn??™t intentionally decide to do.

This leads us to the ??? classic suggestion effect??™ ???“ the situation where the hypnotist suggests a particular effect (hand stuck to table, for example) and then challenges the subject to defeat it (??? Try to lift your hand???) and they fail (the hand remains on the table). This is ??? hypnosis as product??™; the product being the subject??™s sensation that something happened automatically or involuntarily and that the cause was the hypnotist or the hypnosis. Suggestions are often grouped into three categories: ideomotor, <https://assignbuster.com/hypnosis-and-theory/>

where physical movement is caused; challenge, where the subject cannot defeat the suggestion; and cognitive, which includes the realms of emotion, amnesia and hallucinations.

Now we know what we are talking about: hypnosis looks like the hypnotist introducing themselves and giving the subject suggestions, resulting in the subject feeling like the suggestions are happening to them rather than them being the cause of the resulting behavior. By not specifying the form of the process, we are including approaches to hypnosis that vary in how they look as long as they result in this directed, subjective sensation of automaticity or involuntariness. Given this relatively broad definition of hypnosis, let's now look at the popular models that attempt to describe how hypnosis might actually work. Erickson, Elman and Estabrooks

The Ericksonian model of hypnosis (as described in *Patterns of the Hypnotic Techniques of Milton H. Erickson*, M.

D, Vol. 1) by Bandler and Grinder) features two minds (often referred to as the two minds model): the conscious mind that is logical, rational and limited and the unconscious mind that is abstract, emotional and expansive. The model claims that when the conscious mind is bypassed, the unconscious resources can be accessed and directed; it is essentially a dissociative model whereby the conscious mind is dissociated from the unconscious mind, preventing it from interfering with the functioning of the suggestions.

The Elman model of hypnosis (*Hypnotherapy* by Elman) features three minds and is reminiscent of Freud's model of mind. Elman's model

focused on the role of the ??? critical faculty??™ which, he claimed, decides which suggestions to take. The aim of hypnosis in this model was to bypass the critical faculty and establish selective thinking.

It too is a dissociative model whereby the critical faculty is dissociated from the unconscious. Both the Ericksonian model and the Elman model feature hypnosis as a state or trance that subjects enter; typically it would be the induction that causes the subject to enter the state or trance, within which they would take suggestions. Both models feature a ??? watchdog??™ of sorts (unconscious mind in the Ericksonian model and critical faculty in the Elman model) that supposedly protects the subject from taking suggestions that would be detrimental to them. In contrast, Estabrooks (Hypnotism ??“ Estabrooks) did not outline a model as such (referring to the two minds model as unscientific), but he did appear to believe that a hypnotic state was induced and that this provided the ability to give suggestions to the subject. A significant difference was that he believed that capable subjects would take suggestions that were detrimental to them and did not appear to believe that there was an inherent, ??? best interests??™ protection mechanism to prevent this. The Elusive State and the Illusion of Consciousness State theories of hypnosis get quite a beating in academia, although there are still academics that appear to believe in the basic notion of state, as a shift of processing away from that which is considered ??? normal??™, un hypnotized behavior. The main reason that state gets a beating is because, regardless of the considerable effort expended looking for reliable physiological markers of the hypnotic state, none have been found.

Brain imaging can determine when a subject is acting upon a specific suggestion and when they are simply acting, but the confounding nature of inductions being made up of suggestions (if only the suggestion to enter hypnosis) means that attempting to study ??? neutral hypnosis??™ where a subject is hypnotized but no suggestions are given, has proved difficult. In other words, physiological markers for state are very difficult to separate from physiological markers for specific suggestions and this has been compounded by the fact that different inductions involve different suggestions, producing different physiological markers. In short, there is currently no reliable and consistent evidence from brain imaging that an independent hypnotic state or trance exists.

It??™s true that hypnotized subjects look like they are in a hypnotic state or trance and often report supportive statements, but it??™s also true that subjects that cannot remember their names look like they cannot and also often report the same if questioned. We accept that name amnesia is suggested, so why do we not accept that the state or trance is also suggested Lynn and Kirsch (Essentials of Clinical Hypnosis: An Evidence-Based Approach) highlight the case of how the unanimous Mesmeric ??? crisis??™ was replaced by Puysegur??™s ??? artificial somnambulism??™ simply because one of his subjects was entirely unaware of Mesmerism and its usual effects; when Mesmerised, the farm hand didn??™t fit and convulse for over an hour but instead went still and silent. Puysegur preferred this and all his subsequent clients achieved the same effect; Lynn and Kirsch concluded that the effect of Mesmerism was suggested and that it was mistaken for a state. It would be unwise to ignore this observation and

assume that our subjects are in a trance just because they look like they are and report that they are, especially given the lack of physiological evidence to back it up.

If that hasn't rattled your cage, then I expect the next observation to do so, that is unless you are already a step ahead of me. This video, produced as part of a programme for the BBC in the UK, features Marcus du Sautoy (the Simonyi Professor for the Public Understanding of Science) getting his head well and truly blown apart by a simple experiment featuring a couple of push buttons and an fMRI brain scanner. In case you fancy recreating it yourself, here is the likely Amex bill: Marcus du Sautoy (or own subject) £100; 2 x push buttons plus USB interface (from Farnell) £50; Laptop computer (from Apple) £995; fMRI scanner for an hour absolutely priceless. There do seem to be some things that money can't buy, and access to an fMRI scanner is probably one of them. Unless you're Alan Sugar? You're a neuron; you're fired! (Alan Sugar is a very successful British entrepreneur and the boss on the UK version of The Apprentice.) Seriously though, watch the video; it's amazing.

[http://youtu.](http://youtu.be/N6S9OidmNZM)

In the video, Marcus du Sautoy has his brain scanned while he is lying in the fMRI scanner. All he has to do is wait, then decide to push one of the two buttons (he has one in each hand), and as soon as he has decided which button, he is to push it. Then wait, then repeat, and again and again, etc. After calibration, it was possible to determine six seconds before Marcus pushed a button, which button he would push. Six seconds.

Marcus concludes that the consciousness of the person operating the scanner could tell six seconds before Marcus's own consciousness could tell, which button he would push. This implied to him (and to us) that the conscious awareness of decision making lags behind the actual decision making by a sufficiently significant delay that the conscious awareness cannot in any way be considered "in charge" or a "decision maker". It simply becomes aware of decisions that have already been made "there is no free will. Further implications of this are that conscious awareness must be generated by the unconscious and that the conscious mind is therefore an illusion. You're still you, but the sensation you have of thinking and deciding is not real; it has been generated by the biological computer that is your unconscious mind, otherwise known as your brain. Anthony obliges me to make our standard caveat at this point which is to say that whatever you do with this information is still your responsibility. If you decide to rob a bank to either demonstrate your belief in your own free will, or alternatively because you believe you actually had no choice in the decision and that robbing the bank was inevitable, then you are deluding yourself. You've existed thus far without robbing a bank (most of you) and nothing has changed other than possibly your perception of where decisions are made and how you become aware of them.

So don't rob a bank, but do question multiple-mind models, such as those of Erickson and Elman. Neuro-linguistic Programming (NLP) In the late 1970s, John Grinder and Richard Bandler modelled some great therapists. Out of this modelling process came methods for modelling excellence and methods for causing hypnotic change. NLP consists of solution focused, brief therapy,

using language patterns and reframing processes to change clients for the better. In 2011, Professor Irving Kirsch presented at change | phenomena, the hypnotism conference, and included research on NLP. He described studies that showed that the one-session phobia cure as outlined in *Frogs Into Princes* (fast phobia cure) was less effective than one session of a five session cognitive behaviour therapy (CBT) course of treatment; that subjects' use of representational system predicates in language were not consistent with their thinking styles; that eye-accessing cues were not reliable; that age-regression did not work because it required human memory to work in a way that wasn't consistent with the evidence; and that the 45-minute double-induction, that was claimed by Bandler and Grinder to hypnotize the most number of people and to the greatest depths, was less effective than a 15-minute, tape-recorded, basic progressive induction delivered by a radio DJ who wasn't a hypnotist. In short, the assumptions on which NLP is based are flawed, regardless of whether you have experience of the change patterns working.

These Head Hacking articles are interested in how hypnosis works, rather than whether a particular approach to therapy works in general. I'm not asking you to change what you are doing, but I am suggesting you may want to examine the reasons why you believe the approaches work. The Human Givens model (Griffin and Tyrrell) is a therapy model that is based around nine human needs and how well they are being fulfilled in each aspect of the client's life.

It uses the rewind technique, a variation of Bandler and Grinder's fast phobia cure, to reduce emotion connected with a past event or imagined

future event. The model of hypnosis presented by Griffin and Tyrrell does not use a multiple-minds model; it simply talks of firing the ??? orientation response??™, which fires up the ??? reality generator??™ or ??? dreaming brain??™, and then providing content in the form of suggestions. This definition avoids dissociation and state, although it is, in reality, a ??? special process??™ model of hypnosis. Special process in this regard refers to the concept of hypnosis triggering or causing a brain process that isn??™t otherwise running, or modifying one that is (or stopping one that blocks hypnosis). Special process models have sometimes been regarded as ??? state by the backdoor??™ as the presence of the special process (if it exists) could be used to distinguish between un hypnotised and hypnotised modes of operation, otherwise referred to commonly as states. Regardless, at Head Hacking we found the human givens model of hypnosis to be useful in terms of allowing (or forcing) us to question the various aspects of hypnosis as process.

The lack of depth in the model meant we could dispense with deepening techniques and we found no change in our results, other than that things took less time. The idea of the reality generator or dreaming brain provided a more tangible vision of who/what was taking the suggestions, which allowed us to change how we approached a hypnotized subject: instead of talking to a ??? sleeping??™ subject, we were talking to a ??? dreaming??™ subject and painting their dreams for them. Suddenly (to me, at least) the practice of telling a subject that in a moment they??™ll be dancing like Beyonce didn??™t seem quite so ridiculous. Firing the orientation response could be seen as an induction, and rapid and shock inductions could easily be viewed as

triggering or firing a process; conversational and progressive inductions could potentially achieve the same ends through a more gradual or sneaky process with the reality generator being drawn into action gently rather than as a response to the orientation response. As well as opening the door to an infinite number of ways of creating inductions, it also provided another way of viewing the model: that maybe you could fire the orientation response without using an induction. In 2006, Head Hacking worked on the pilot of I Know What You Did Last Friday ??” a game show that features a hypnotized contestant with amnesia for the events of a particular day.

You can see a 9 minute fun-packed trailer here, courtesy of Eyeworks:

http://youtu.be/K_8tft8F5OQ During a break in filming, Anthony asked our subject if he could lift up a bottle that was on the table ??” he expected that he would be able to do so; he was then going to ask him to put it down and focus on it and then to ??? try and lift it and find you cannot???. Gaining or directing the subject??™s focus had become one method of induction by that time. Instead, our subject found that he could not lift the bottle, simply in response to Anthony??™s initial question. Anthony seized upon it and had the guy hallucinating in moments. Kev Sheldrake:- ??? After the location filming we had a break of three weeks where we did not have contact with the subject. Our next meeting was in a great (for fish lovers) restaurant in Amsterdam ahead of the studio filming.

Anthony repeated the exercise with the bottle with the same results and Permanosis (as we called it) was born: this was the idea that, once hypnotized, a capable subject remains permanently open to suggestion. I should add that when Ant was two suggestions in, I dropped in a ninja

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suggestion that his hand was stuck to Ant's arm; I hadn't hypnotized the subject before myself, which meant that there didn't need to be a pre-existing hypnotic relationship with the subject in order for suggestions to be taken. (Ninja hypnosis is the practice of stealing other hypnotist's subjects, while they are in the act of delivering suggestions. It's a lot of fun – you just need to be more of a hypnotist than the current hypnotist.)

Summary of Popular Models In summary, the most popular models among working hypnotists are state-based, multiple-minds models where hypnosis is caused by an induction (Ericksonian, Elman and NLP models).

Neuroscience suggests that the conscious mind is an illusion and not the source of decision-making, therefore causing multiple-minds models to look less likely. There is a lack of evidence for state or trance per se, although there is good evidence to show brain function changing in response to suggestion. The Human Givens model dispensed with depth and allowed us to dispense with the induction with subjects that we knew were capable.

Hypnosis Scales Many hypnotists have heard of the Stanford Hypnotic Susceptibility Scale Form C (SHSS: C – Weitzenhoffer and Hilgard original, Kihlstrom modified version) but I doubt few, outside of academia, have spent time understanding what it is and how it is used. It has often been referred to as the gold standard of hypnosis scales, with high reliability across the population and over time; subjects have been retested after 25 years and their scores were found to be reliably consistent with their original scores (Piccione, Hilgard and Zimbardo, 1989). The SHSS: C was designed as a means of measuring the hypnotisability of a subject; it consists of an eye-

closure induction, followed by deepening and 12 scoring tests ranging from easy (arm drop) to difficult (hallucinated voice).

Subjects score 1 point for each test passed and these are totaled to provide their overall score. While it is commonplace to refer to an arm drop suggestion as ??? easy??™ and a hallucinated voice suggestion as ??? difficult??™, in reality these could easily be described as ??? common??™ and ??? rare??™ instead; there is little to suggest that the hallucinated voice suggestion is at all difficult for a subject capable of it, but capable subjects do seem to be relatively rare. Instead, the notion of suggestions being easy or difficult rides with the hypnotist rather than the subject, with the perceived ease of achieving responses to them being determined by how often they achieve them. i. e. suggestions that are only responded to on rare occasions are considered more difficult by the hypnotist than suggestions that get responses most of the time, but this has nothing to do with the difficulty that the subject experiences when taking the suggestion. Importantly, the rarer suggestions are in fact no more difficult for the hypnotist; it??™s just that subjects capable of them are less common.

It is literally just as easy to suggest ??? I am invisible??? as it is to suggest ??? Your arm is heavy???; if you haven??™t tried it, do it. You might be suggesting it to a capable subject, and the results will be amazing. Back to the SHSS: C. If you were to take a random sample of the population and deliver the SHSS: C to them individually as prescribed, then you would be very likely to obtain results that followed the normal distribution, otherwise known as a bell curve. This is a curve on a graph where a small number of people achieve low scores, the majority score somewhere around the middle,

and a few score high scores. The reason you would expect the normal distribution is because multiple experiments using the SHSS: C around the world have resulted in just that with sufficiently high consistency between them to suggest that the general population would respond with a very similar normal distribution to these. If your group is a random sample then it is reasonable to assume that this group would also follow the normal distribution too (in fact it is more than reasonable, the range of deviation of each sampled group from the most average group also follows the normal distribution, allowing us to know how different our group would need to be for us to think that something had affected the results.

See Experiment, Design and Statistics in Psychology by Robson for more information on normal distributions and standard deviations). The results for the SHSS: C show that approximately 10% of the population achieve low scores in the range of 0 to 2; 80% achieve medium scores in the range of 3 to 8; and 10% achieve high scores of 9 to 12. As a general rule of thumb, subjects who score low only achieve ideomotor suggestions; subjects who score in the medium range achieve ideomotor and challenge suggestions with some achieving some cognitive suggestions; and subjects who score high tend to be able to achieve the majority of the phenomena. A range of other scales also exist with similar items, some being shorter and others being designed for group situations. All of the scales in use have produced results consistent with the SHSS: C. A range of clinical scales of ??? depth??™ also exist which are generally given during clinical settings rather than laboratory settings; these too are consistent with the academic scales. It is

fair to say that the various academic approaches to testing the capabilities of subjects are at least consistent.

If they are wrong, in that they are incorrectly measuring hypnotic capabilities, then the majority of hypnosis academics in the various laboratories have not spotted the error and given that a number of these also provide clinical hypnosis as part of a therapy programme, it would be unfair to claim that the academics approach hypnosis differently to hypnotherapists as many of them are also hypnotherapists too. I hope that all hypnotherapists care about “? what works?” “? I think the difference is that the academics want to use reliable data and statistical methods to determine “? what works consistently?” and I think they are right to do so. There is a problem with the SHSS: C however. By title, it measures hypnotic susceptibility, which has long been assumed to be a synonym for hypnotisability. Since the early days of hypnosis, it was assumed that an induction was necessary to create a hypnotic state in which suggestions could be given. Waking hypnosis (i. e.

without an established hypnotic state) was generally seen as producing only the ideomotor phenomena and that a hypnotic state was required to produce challenge or cognitive phenomena. We know from *Hypnosis Without Trance* and our own *Permanosis* that the full range of suggestions can be given without an induction, but this wasn’t the prevailing view when the scales were developed in the 1950s and 1960s. The problem was that by assuming that an induction was necessary, no one had tested to see if the subjects would take the suggestions anyway. Kirsch reports on experiments where the SHSS: C scoring suggestions were given to subjects who had not been

hypnotized (Kirsch, 2008) and shows that the induction makes very little difference to the scores. He suggests that such scales should be referred to as measures of response to suggestion rather than measures of hypnotic susceptibility or hypnotisability.

There has been debate about whether subjects respond in the same way when given suggestions without an induction as they do when hypnotized (following an induction). A paper by Raz et al (Raz et al, 2006) shows that 'highs' (subjects that score 9-12 on SHSS: C) can act on a suggestion that suppresses the Stroop effect without an induction. An example of the Stroop effect can be seen when naming the ink color that a word has been printed in; 'color' words ('red', 'blue', etc) printed in the same ink color as the word can be identified quicker than neutral words ('work', 'drive', etc), and these can be identified quicker than 'color' words printed in mismatching colored inks.

Suppressing the Stroop effect means to decrease performance on congruently colored words ('red' printed in red ink) and to increase performance on incongruently colored words ('red' printed in blue ink). Due to the nature of the tests, it is believed that the subjects cannot fake response to this suggestion, or in any way otherwise willingly improve their incongruent word performance, and that they are therefore (at least functionally) acting upon the suggestion in the same way as the hypnotized subjects (as both must be responding to the suggestion and not simply complying). We could assume that suggestions given without an induction can be taken just as readily and in the same manner as suggestions given following an induction. There is another problem with the SHSS: C and that is <https://assignbuster.com/hypnosis-and-theory/>

that it only records behavioral responses, or the overt actions of the subjects.

As I outlined in Part 1, only the subject knows whether they were responding to the suggestions or whether they were acting. The underlying assumption was that behavioral responses correlate with the subjective sensations, that if a subject raises their hand in response to a suggestion then this must have occurred non-volitionally. Spanos et al (Spanos et al, 1983) demonstrated that this was not the case with a study involving the Carleton University Responsiveness to Suggestion Scale (CURSS). The CURSS scores responses to suggestions on three dimensions: the objective score (CURSS: O) that records a point for each suggestion for which the subject makes the appropriate behavioral response; the subjective score (CURSS: S) that records between 0 and 3 points for each suggestion, depending on how much the subject experienced the appropriate sensations, from ??? Not at all??? to ??? A great deal???; and the objective-involuntariness score (CURSS: OI) that records between 0 and 3 points for each suggestion that was experienced as involuntary to some degree, ignoring those suggestions that did not elicit a behavioral response or a sense of involuntariness. Spanos et al showed that behavioral scores were substantially higher than objective-involuntariness scores, implying that scales that only measure the behavioral response, such as the SHSS: C, systematically over-estimate the response to suggestion. Hypnosis scales are important in academia but are probably irrelevant to the work of the average hypnotist.

What we can take from them are the expected results from hypnotizing random members of the public. For example, Kirsch et al (Kirsch et al, 1995)

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showed that approximately 25% of college students achieved suggested amnesia; this is quite useful if we plan to use hypnotic amnesia as part of a performance as we could assume that for every 4 people that we test, only one will achieve the amnesia suggestions. We can also benefit by incorporating their evolved pre-talk or introduction. A handful can be obtained from <http://www.hypnosisandsuggestion.org/scales.html> and from John Kihlstrom's website, http://socrates.berkeley.edu/~kihlstrm/hypnosis_research.htm they are worth reading as they have been tuned to make subjects as cooperative and at ease as possible.

Neodissociation Theories Ernest Hilgard developed neodissociation theory (Lynn and Rhue, 1994) which is based on the concept that hypnosis causes consciousness to be divided into parallel streams of processing that are separated by an amnesic barrier; a hidden observer would remain present which could later be interrogated to reveal information that the subject has post-hypnotic amnesia for. Hilgard's descriptions of neodissociation theory had sufficient latitude for Kenneth Bowers to define an alternative version of neodissociation theory, known as dissociated control theory (Woody and Sadler, 2008). More recently, Erik Woody and Pamela Sadler (2008) have integrated the two theories into a framework that could support either one exclusively or a combination of both theories.

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Hilgard's neodissociation theory suggests that when subjects take a simple suggestion, their stream of consciousness is divided into two streams of consciousness. One stream of consciousness produces the behavior

required by the suggestion knowingly and the other stream of consciousness, that is on the other side of an amnesic barrier, observes the effect as happening involuntarily, with no knowledge that the other stream is actually producing the behavior. The stream of consciousness that produces the behavior is aware that it has done so and can be quizzed by a hypnotist by simply suggesting that the ??? hidden observer??™ will answer. Hilgard produced evidence for the existence of the hidden observer, and used this to support his theory of multiple streams of consciousness, separated by amnesic barriers. Nicholas Spanos attacked the hidden observer and concluded (Spanos and Coe, 1991, quoted in Kirsch and Lynn, 1998) that ??? reports of experiencing a hidden part and ratings of hidden pain reflect the construals that people develop from the instructions used in hidden-observer experiments.??? This means that the existence and character of the hidden observer could be dictated in the instructions given to subjects in the pre-talk. Over a series of experiments, Spanos demonstrated that the hidden observer??™s presence depended on the instructions given by the hypnotist ??“ give one set of instructions and a hidden observer is present. Give a different set and there isn??™t one. He also showed that the hidden observer??™s reports could be influenced by the instructions given ??“ tell them the hidden observer sees a mirrored view of the world (due to brain-vision cross-wiring), show them the number 81, give them amnesia for it, ask the hidden observer what they saw and they will report the number 18. Further he showed that he could create multiple hidden observers (each amnesic of each other), and therefore supposedly multiple streams of

consciousness and multiple amnesic barriers, through variations in the instructions.

The simple conclusion is that the hidden observer is the result of suggestion and is therefore not part of the mechanism of hypnosis, but part of the effect. Kenneth Bowers attacked the amnesic barriers by pointing out that suggested amnesia was a relatively rare occurrence (25% of subjects achieving it), yet it was being used implicitly to provide the mechanism that allowed the more common ideomotor and challenge suggestions to be achieved. Instead he favoured his model of dissociated control that claimed that in hypnosis, suggestions can be accepted by subsystems of control below that of executive control without the awareness of this executive. It implies that suggestions bypass the executive control (the central decision making entity) and act directly on the parts of the brain that cause things to happen (the subsystems of control) by dissociation between the executive control and these subsystems. What Bowers's theory fails to explain is the physiological mechanism that permits the dissociation and also the granularity of selection in how the dissociation manifests. For example, some suggestions are taken and others are not and differences can be seen within the same subject on different occasions – why are there these differences in which dissociations are possible on different occasions? Another example would be selective amnesia; a subject can be amnesic for very selective information (their name, for instance) but have access to other memories as normal. A mechanism of dissociated control would need to be flexible enough to cope with very specific dissociation on some occasions and very broad ones on others.

In addition to these questions, Kirsch and Lynn do a thorough job (Kirsch and Lynn, 1998) concluding, ??? The evidence supporting either version of dissociation theory is slim, and both are beset with serious conceptual difficulties.??? Woody and Sadler (Woody and Sadler, 2008) propose an integrated framework that supports dissociated control theory and a revised version of neodissociation theory, known as dissociated experience theory. Dissociated experience theory suggests a dissociation between the executive control and the executive monitor, which is the part that observes the current situation. In this version of the theory, the executive control acts out the suggestion but the executive monitor is unaware that it is doing so, thereby causing the subject to experience the effect as involuntary. While this simplified version of neodissociation theory (lacking the amnesic barriers, hidden observers and streams of consciousness) stands up to much of the previous criticism, it doesn't provide a mechanism for causing the dissociation and therefore does not explain why some suggestions are taken and others are not.

It also still suggests a form of amnesia as the effect of the dissociation, falling to Bowers' original criticism of neodissociation theory, that explaining the occurrence of common suggestions (ideomotor and challenge suggestions) through the use of a rarely displayed occurrence (suggested amnesia) is contradictory. Social Cognitive Theories If neodissociation theories don't stand up or tell the whole story, then what are the alternatives The main ones are social cognitive theories; these are theories of hypnosis that assume that hypnotic behavior is, in fact, normal behavior that is interpreted as being hypnotic, due to the social context and the

resultant, elicited cognitive strategies. The social cognitive arena is quite broad and represents a number of viewpoints, but it can often be too easily (and wrongly) generalized to represent only ??? social compliance??? theories of hypnosis, the over-simplification that the subject is only ever playing along and is always entirely in control of their own behavior. By generalizing in this way and dismissing the ??? social compliance??? answer, it is possible to (wrongly) dismiss the whole social cognitive arena and miss out on the fascinating evidence and insights that it has to offer. Graham Wagstaff proposed that subjects enlist cognitive strategies in an attempt to achieve the suggested phenomena with the sense of hypnotic involuntariness, and in some cases succeed, but when they fail they would often fall back on simply complying with the suggestion without the hypnotic sensations, in order to meet the demands of the social context.

There are two key ideas: the first is that successful hypnotic responding involves cognitive strategies and only accounts for the highly hypnotisable subjects; the second is that the majority of the moderate and low hypnotisable subjects (and potentially a proportion of the highly hypnotisable subjects) are playing along, pretending to be hypnotized and pretending to accept the suggestions. There is an argument that is often levied (wrongly) at stage hypnosis by some hypnotherapists, often as part of their marketing literature, that subjects on stage in a hypnosis show are natural show-offs that want to act in outrageous ways. The equal and opposite argument is also often made, that the shy person who ends up on stage actually secretly wants to do outrageous things and that stage hypnosis provides the acceptable context within which to do so, without having to take

responsibility for their actions. These could both be true, accounting for different subjects with different natural personalities and different responses to the context, but for the fact that no one can act as well as a hypnotized subject, especially without acting lessons or any acting experience. Hardly any subjects that appear on stage at hypnosis shows have any acting abilities in their normal life, but somehow they magically manage to instantly turn out excellent performances when vague, improvised scenarios are sprung upon them. What we should take away from Wagstaff is that the people on stage are probably the highly hypnotisable subjects who naturally manage to experience the suggestions in an involuntary way, because if they were not, then their acting abilities would let them down as they attempted to comply in order to show-off. With these subjects, the suggested scenarios are perceived as real and their behavior is not an act, but their natural response to what they perceive to be reality.

Unfortunately, if we are to accept the social compliance argument then we have to accept that most of the people who visit a hypnotherapist will end up complying, or pretending, rather than actually being hypnotized and acting upon the suggestions in an automatic fashion. There are other social cognitive views, however, and they provide more hopeful and promising evidence. Donald Gorassini and Nicholas Spanos (Gorassini and Spanos, 1986) proposed that successful response to suggestion was due to a skill and that the skill could be acquired. They developed a 75 minute training course, the Carleton Skills Training Package (CSTP), that involved three key components: the first was being given information aimed at removing misconceptions and improving attitudes to hypnosis; the second was

watching a video of a highly hypnotisable subject being hypnotized and successfully acting upon suggestions ??” the subject narrated their thoughts during the hypnosis session and was interviewed about it afterwards; the third was practicing acting like a highly hypnotisable subject in pretend hypnosis sessions. Gorassini and Spanos randomly allocated low and medium responding subjects to four groups. All subjects were scaled for response with the CURSS. One group was then given the CSTP hypnosis training, two groups were given different partial versions of the CSTP training, and the final group, the control, was given a personality questionnaire to fill in (to consume the same amount of time). All groups were then scaled with the CURSS again and a version of the SHSS: C, modified to include subjective and objective-involuntariness scores.

In the group that was given the full CSTP, half of the originally low responding subjects and 80% of the original moderates, responded as highly hypnotisable subjects when rescaled after the hypnotic training. The control group showed no change and the partial groups showed partial improvements. In 75 minutes, Gorassini and Spanos had changed how the subjects responded to hypnosis; not only that, but the subjects retained their new scores when retested later and the effect appeared to be permanent. Gorassini went on to develop a shorter hypnotic training course (Gorassini, 2003) that took only 4 minutes. It actually involved a 2 minute script: the subject was given a transcript to read while listening to it being read on tape; they were then given a further 2 minutes to read the transcript again, totalling 4 minutes.

Still, with only 4 minutes of training, subjects improved their response as measured on a standard scale. Modification of response to suggestion has been criticized, however, for only causing behavioral responses without the sense of involuntariness (Bates and Brigham, 1990); in other words, the subjects learn to act like good subjects but do not actually become good subjects. Still, other studies have confirmed that the subjects significantly improve on their subjective ratings of involuntariness, even if the effects are not as pronounced as Gorassini and Spanos originally reported (Gearan, Schoenberger and Kirsch, 1995; Cangas and Perez, 1998). Modification techniques have extended to working successfully with subjects with zero response to suggestion (Cangas Diaz and Perez Alvarez, 1998). A study testing a ten minute brief training, however, failed to find any significant improvements in response to suggestion and specifically for the effect of analgesia (Milling, Kirsch and Burgess, 1999). Overall, the evidence suggests that response to suggestion is modifiable through training, even if it is not fully understood what the training needs to include and how it needs to be delivered. The fact it works, however, has ramifications for all hypnotists. If it is possible to condense the training into something that approximates a pre-talk or introduction, then we could improve all of our subjects before we even attempt to hypnotize them, thus significantly raising our success rates. More importantly, however, it indicates that what the subjects do when they are given a suggestion matters; if they engage in the right cognitive strategies then they are more likely to succeed at taking suggestions. These cognitive strategies appear to result in subjects experiencing the effects of the suggestions with the sensation of involuntariness. At this point, it is

worth remembering that response to suggestion is not dependent on an induction and that a trance may be the effect of the induction suggestion, rather than a special state or process. The social cognitive theories have resulted in brief training courses that modify subjects' abilities to respond to suggestion in a manner that feels involuntary. The evidence points towards cognitive strategies being the mechanism of hypnosis, with the experience or appearance of dissociation being an effect rather than a cause. With that in mind we approach a key social cognitive theory from our heroes, Irving Kirsch and Stephen Jay Lynn. Response Set Theory Remember earlier, I told you that we had no free will. Well that actually has further implications for models of hypnosis.

If we do indeed have no free will, as the neuroscience suggests, then everything we do is automatic and therefore involuntary. Response to suggestion is no different, it is just as automatic and involuntary as all of our other normal actions. The difference, as I highlighted in earlier, is that response to suggestion is accompanied with a sense of involuntariness. If everything we do is involuntary, then normally we must (automatically) ascribe an illusion of intention to our actions; this causes us to believe that we intended to cause our actions, supporting our illusion of free will.

Response to suggestion, on the other hand, removes this illusion of intention and leaves us with the reality; we become aware of the true, involuntary nature of the behavior associated with acting on the suggestion, while preserving the illusion for all our other behavior.

That's probably worth reiterating: in normal life our actions are automatic but we perceive them as being voluntary and intentional; when we respond

to suggestions, this perception is removed for the associated behavior and we get to observe it without the artificial sense of intention we would normally feel if we perceived that we were acting ordinarily and voluntarily. This viewpoint was suggested by Irving Kirsch and Stephen Jay Lynn (Kirsch and Lynn, 1997) as part of their Response Set Theory. The theory suggests that in all waking moments, we elicit appropriate behavior (response sets) in response to stimuli, then act, and then ascribe intention to our actions.

For subjects that respond to suggestion, the hypnotic context provides the stimulus for the hypnotic response set; this includes acting on the suggestions and experiencing the effects as happening automatically. For subjects that do not respond to suggestion, the elicited response sets do not result in a hypnotic experience. Kirsch and Lynn's approach to researching response set theory could be characterized as the search for the personality traits or cognitive strategies that are associated with good subjects and therefore good response sets for hypnosis. They have identified that the subjects' expectation of their response to suggestion, particularly after they have been given a suggestion and had a chance to act upon it, is correlated with their actual response. Experiments where the researchers gave suggestions that the subjects' vision would slowly change color, while also (secretly) simultaneously slowly changing the color of the room lighting in sympathy (providing the effect that the subject was experiencing the effects of the suggestion automatically), had the effect of increasing the subjects' expectations of responding to suggestions and therefore also increasing their actual response to suggestion (discussed in Kirsch, 1985). It has been shown that the personality traits of absorption,

fantasy proneness and dissociation are not indicators of response to suggestion, while expectation and attitudes towards hypnosis are to a degree (Kirsch, Comey and Reed, 1995). Response set theory, while embracing the illusion of free will, fails to fully explain what leads to good response sets for responding to suggestion and how those response sets remove the veil of ascribed intention to lay the automatic processes bare for us to become aware of. It does, however, provide a simple and grounded model from which to explore and answer these questions.

Summary of The Science Hypnotic scales are reliable and consistent although not directly applicable to working hypnotists. They can, however, be a useful source of data and the pre-talks are good. Dissociation theories suggest that one bit of our brain become less aware of another bit when acting upon suggestion; these theories generally suffer from conceptual problems. Social cognitive theories suggest that cognitive processes are key to successful response to suggestion but suffer from failing to fully identify what those processes actually are. Response set theory highlights that response to suggestion removes the illusion of intention over our actions rather than adding the illusion of involuntariness, but fails to fully specify how this occurs. The Automatic Imagination Model What do we Want As hypnotists, we are interested in the subjective experience that our subjects are having; the sensation of involuntariness or automaticity, that the behavior is happening by itself and that they (their conscious awareness) is just a mere observer.

If you're performing with hypnosis, then you want the subject to be hypnotized, not acting, because no one can act as well as a hypnotized subject. If you're a hypnotherapist, then you want the subject to be

hypnotized, not pretending, because if your therapy model relies on the hypnosis then it may not work if the client is pretending. What we want to achieve in our subjects is this sense of involuntariness. Imagination John F. Kihlstrom, a social cognitive theorist, stated (Kihlstrom, 2008): “Hypnotic experiences take place in the realm of imagination” there isn’t really a balloon lifting up the subject’s hand, or glue holding the subject’s hands together, or a loudspeaker on the wall; nor does the age-regressed subject grow smaller in the chair. Nevertheless, the relationship between hypnosis and mental imagery is rather vexed.

For example, hypnotizable individuals have no better mental imagery abilities than the rest of us. He notes two clear things: first is that hypnosis relies on the use of the imagination; and second is that subjects that respond well to suggestion generally have no better skills of imagination than those that do not. This is quite significant because it means that what you see when you imagine a rat, for example, is the same as what you would literally see if you were acting on a suggestion that you could see a rat; obviously, they would feel different because when you simply imagine the rat it doesn’t feel real at all. The difference isn’t in the quality of the imagining, but how it is perceived. If hypnosis causes subjects to imagine, then what is it that they are imagining Traditionally, suggestions have contained what academics refer to as goal-directed fantasies (GDFs); these are instructions to imagine that helium balloons are lifting the arm or glue is sticking it down.

If the goal of the suggestion is arm levitation, then a goal-directed fantasy would be an imagined scenario that would be likely to cause the goal to

occur, such as hundreds of bright red helium balloons attached to your wrist, pulling it upwards. If the goal is a stuck hand, then a goal-directed fantasy could be imagined glue sticking the hand down. GDFs are also referred to as means imagery, to distinguish them from goal imagery. If the goal of the suggestion is arm levitation, then the goal imagery would be imagining the arm lifting up; if the goal is a stuck hand, the goal imagery would be imagining that the hand is stuck and cannot lift.

Means imagery (GDFs) and goal imagery are quite different and it is important to appreciate the difference. Means imagery is indirect, creative and expressive, while goal imagery is direct and specific. Gail Comey and Irving Kirsch investigated whether instructions to imagine goal-directed fantasies (means imagery) affected how well suggestions were taken (Gail Comey and Irving Kirsch, 1999). They took 259 subjects who had no prior experience with hypnosis and randomly divided them into two groups.

One group received the standard Carleton University Responsiveness to Suggestion Scale (CURSS) and the other group received a modified version of the CURSS, with all instructions to imagine GDFs taken out and replaced with repetitions of the remaining suggestions. For example, ??? Imagine that your arm is like a balloon. Imagine that air is being pumped into it making it feel lighter and lighter, ??? was replaced with, ??? lighter and lighter.

.. the arm is becoming more and more light, and is rising, rising ??|moving up ??|higher and higher.??? Each subject scored their objective behavior (CURSS: O), their subjective sensation (CURSS: S), whether the effect of the suggestion was experienced as being involuntary, whether they believed in

the reality of the suggested situation, whether they engaged in goal imagery, whether they intentionally engaged in GDFs, and finally whether they noticed any spontaneously occurring GDFs. Subjects were also scored for their ??? passive responding???, which was an indication of whether they remained passive and didn??™t engage in any strategies at all, i. e. ??? Did not report intentional behaviors of imagery.

??? The results revealed three striking observations. The first was that, ??? Passive responding was negatively correlated with subjective response.??? This means that the subjects that remained passive, didn??™t engage in any intentional behaviors and didn??™t imagine anything relating to the suggestion, were more likely to not respond to suggestions, than subjects that did engage in some way. This indicates that, in general, subjects have to do things in order for hypnosis to occur; passively waiting for it to happen is not a good strategy. If you are telling your subjects or clients that they can just relax and let it occur, then you are probably reducing your effectiveness.

The subjects that you fail to hypnotize are not necessarily resisting your suggestions; they might simply be waiting for hypnosis to happen which, as long as all they do is wait, it appears it will not. (Given that they think that their job is waiting for hypnosis to happen, further instructions to ??? Let go??? are unlikely to be understood as any different to what they are already doing. It is easy to see how this situation could be misconstrued as ??? resistant??? by a hypnotist, even though the subject is willing and cooperative.)The second striking observation was that, ??? The only GDFs that are positively associated with successful responding are those that are judged to be nonvolitional.??? This means that subjects that reported

spontaneously imagining GDFs (i. e. did not feel that they were intentionally imagining them) responded better to suggestions than those that did not. Spontaneously occurring GDFs were rare, however.

It also means that subjects that intentionally imagined GDFs (i. e. volitionally) did not respond better to suggestion; in fact, they responded worse than those that did not intentionally imagine GDFs! Intentionally imagining GDFs was negatively correlated with response. The group that had been given the modified version of the CURSS (with the instructions to imagine GDFs removed) scored higher for objective behavior, subjective sensation, involuntariness and, to a lesser significance, the perceived reality of the suggested situations, than did the group that received the standard CURSS, with the instructions to imagine GDFs. This shows that instructing subjects to imagine GDFs –“ the balloons of an arm levitation or the glue of a hand stick –“ will, in general, reduce the effectiveness of the suggestions. Comey and Kirsch suggested that one reason why intentionally imagining GDFs reduces response might be because the effort involved in intentionally imagining GDFs distracts or detracts from whatever effort is required for the suggestion to succeed. In other words, doing something that isn’t™t involved in making the suggestion work (imagining the GDFs) reduces the brain power available to attend to the task of making the suggestion work (whatever that is).

This turns the typical format of suggestion on its head –“ asking subjects to imagine GDFs actually reduces the effect of suggestions, whereas the rare, but spontaneously occurring GDFs may simply be an occasional effect of suggestion rather than a mechanism that is significant in their working. If

that wasn't enough, the third striking observation was that,

Intentional use of goal imagery was very common and was significantly associated with subjective responses to suggestion, and, Our data indicate that intentional goal imagery is a modal strategy even for very difficult responses (i. e., auditory and visual hallucinations). Comey and Kirsch sorted the data to reveal which strategies the successful responders were using, broken down by suggestion. Successful response was judged as passing the behavioral criteria of the suggestion.

In all suggestions other than amnesia (in which they asked if the subject tried to forget rather than whether they imagined they couldn't remember), successful responders reported engaging in goal imagery (imagining the goal of the suggestion), on average, in 73% of cases, and this was reasonably consistent regardless of suggestion: arm rising was 79% and hallucinated kitten was 77%. Imagining the goal of the suggestion is correlated with feeling the effects of the suggestion. This means that imagining the goal of the suggestion is a good strategy for succeeding at experiencing suggestions. It also works equally well for all phenomena, rather than only working for a particular class of phenomena, meaning that is a good strategy in general, rather than only being a good strategy for, say, ideomotor suggestions. It has long been known that imagining an action can cause its effect (James, 1890, and Arnold, 1946, ideomotor hypothesis, cited in Comey and Kirsch, 1999) and most of us should be able to experience this. Chevreul's pendulum is a good example; if you take a pendulum (about 30cm of string with a metal washer tied to the end) and hold the free end with your fingertips, resting your elbow on a table and allowing the

pendulum to hang freely over the table, then if you imagine that it will move in a straight line backwards and forwards, then it will begin to do so; equally, if you then stop imagining that and imagine instead that it will move around in a circle, then it will change and follow your newly imagined scenario.

You should be aware of imagining the desired action, but unaware of the tiny muscle movements required to make it happen. Through imagination, the mind creates the physical effect without the awareness of moving the muscles. A good question could therefore be, is everyday imagination enough? The pendulum task requires constant attention in order to experience its effects – if you stop imagining or get distracted then it is likely to stop – and therefore doesn't really feel involuntary, even if we do temporarily experience a sense of dissociation from the actual muscle movements. The Raz et al paper (Raz et al, 2006), referred to earlier, shows that suggestion alone (without an induction) can reduce the Stroop effect. Is this possible with just the imagination? The following video shows Marcus Lewis being tattooed under hypnosis without any pain, awareness or bleeding. Is that possible with just imagination? <http://youtu.be/WnfMgCGMzIQ>

It may be possible to simply imagine these effects and cause them to happen, but, as with the pendulum, the process would require effort and attention and would not feel involuntary.

Clearly something else is required beyond everyday imagination, and that is the sense of automaticity or involuntariness. Quick recap At this point I think it is worthwhile to quickly recap what we know. Imagination: * Goal imagery is significantly associated with subjective responses to suggestion (Comey and Kirsch, 1999). * Goal imagery can cause behavioral responses akin to

hypnotic responses but without the required sense of involuntariness (James, 1890, and Arnold, 1946, ideomotor hypothesis).^{*} Highly hypnotisable subjects do not have greater skills of imagination than others (Kihlstrom, 2008).^{*} Therefore, goal imagery is a good strategy for succeeding at taking suggestions, but it isn't sufficient as the results of everyday imagination do not feel involuntary. Automaticity:^{*} All thoughts and behavior are automatically generated, some of which we become aware of and to which we usually ascribe intention (Kirsch and Lynn, 1997).

^{*} Hypnotic responses are defined by their subjective sensation of automaticity or involuntariness, because they lack the knowledge or feeling of intention. (Kirsch and Lynn, 1997). We are automatons, presented with an on-going illusion of consciousness and agency. No matter how much it feels like you have conscious control, you don't – that's just an illusion created by your automatic brain. Altering this illusion causes actions to be perceived as happening automatically or involuntarily.

While we are imagining the effect of the suggestion, it is not that we need to create the sensation of involuntariness – for everything is actually involuntary – it is that we need to remove the sensation of intention that has been ascribed to the action. The following text is from Kev Sheldrake (Head Hacking), explaining their methods and opinions on the automatic induction method The Automatic Brain This is our simple model of the automatic brain. In pictorial form, the green/yellow part is essentially the brain; and the white part is the body. Awareness, the yellow part, is generated automatically by the brain. The brain senses the environment through our senses; generates an imagined reality based on what it already

knew and what it has sensed; generates awareness of this reality including the automatic thoughts about the reality; senses the effect of the awareness of the imagined reality, such as the imagined sights, sounds and sensations; and, combining the data with the real senses, produces action in the form of muscle movement, hormone production and emotions, by matching these ??? inputs??™ to the most appropriate ??? output??™.

This happens continuously and rapidly and, because our awareness only has access to the imagined reality, we are largely (completely) unaware of it going on. The permanent ??? amnesic barrier??™ prevents us from accessing our actual thought processes and brain functions as these lie literally outside of our reality; instead we confabulate or guess at the reasons why we do or think certain things from the information available to us from within our imagined reality. Automatic Imagination

The insight that Ant and I had, that I referred to in the opening of this part, was that if everyday imagination can create reality, other than the fact we know that we??™re imagining it, then we should be able to use the same mechanism (imagination) to create a reality in which we were unaware that we were imagining! In other words, use imagination to create the effect and then use imagination again to cover up the fact that we know that we??™re imagining the effect. This should result in us experiencing the effect as if it is real, while being unaware that we are imagining it, hence being unable to stop it, and experiencing the effect as occurring automatically. This can be tricky to convey, so I??™ll try again.

If we imagine that our hand is stuck to the table, then while we continue to imagine that, we will be unable to lift our hand; we will know that we??™re

imagining it, however, and can stop imagining it any time we want, in the blink of an eye, simply by needing our hand for something else. While we continue to imagine that it is stuck, though, it should remain stuck (based on the ideomotor hypothesis). If, while we're imagining that it is stuck, we also imagine that we are unaware of imagining that it is stuck, as if it has happened all by itself, then we should experience the stuck hand without knowing how it happened, and therefore no way of undoing it. Exactly! That's a wacky idea to come up with, isn't it? Well it was initially a joke; it was a simple application of pseudo-logic to the evidence that we had become aware of.

We didn't expect it to work; it was just a bit of fun. Even so, we ended up playing with the idea that evening and it worked for us. Neither of us had been particularly high responders before – we could both achieve arm levitation and I could get catalepsy, but little else – but that night I had amnesia for my name and Ant hallucinated his hand turning into a modelling balloon.

I explained the process to Marcus on the phone the next day and he tested it with another known low responder and achieved the same classes of phenomena with him. The format of these sessions resembled a normal conversation where the hypnotist simply asked a series of questions and gave clear instructions, and the subject remained awake and fully alert throughout. Can you imagine that your hand is stuck to the table? Can you continue to imagine that and also imagine that you're not aware that you're imagining that, like it's happening by itself? By assuming that the ideomotor effect can be generalized to include

all phenomena, the same process can be used to achieve any hypnotic phenomena. The theory suggests that, as long as the subject can imagine the scenario (including it happening automatically), then all phenomena are equally as likely as each other. This can be seen in how Ant, Marcus and I all use slightly different approaches. I prefer to stick to the conversational, question style where I simply ask questions and modify what I'm asking them to imagine based on their answers; I start with a hand stick, then arm levitation with laughter, followed by am