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NOTE to the Reader

- (1) This is the fifth of six interconnected articles – the first two were published in the Journal's "Autumn 2018" issue (which, due to unavoidable delays, was not released until February 2019).
- (2) Due to the complexities of the source material involved, and the consequences of a number of unavoidable delays, the (originally proposed) set of four articles were subsequently expanded to six – the remaining four articles (including this one) were published in the "Spring 2018" issue of the Journal (which, again, due to unavoidable delays, was not released until late March 2020).
- (3) The entire set of six articles are part of a composite whole (i.e., rather than an associated set of six otherwise independent items).
- (4) From this, the reader is strongly advised to read each of the six articles in the sequence they have been presented.
The articles were specifically written on the embedded assumption that each reader would dutifully do so (with the consequence that certain matters, theories, practices, and concepts are developed sequentially as the narrative proceeds).
- (5) The original paper's content remains unchanged. For the reader's convenience, the original paper's pagination is indicated as **112**, etc.



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the art, science, and practice of hypnosis

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Editorial

In my Volume 40 #1 editorial of *The Australian Journal of Clinical Hypnotherapy & Hypnosis*, which along with this issue marks the 40th anniversary of its publication, I mentioned I had two takeaways from Lindsay Yeates' research on James Braid. This time, with the addition of the final four articles to the suite, I draw your attention to another two.

I'll start with a personal story from my university days in Canberra, ACT, when I befriended a wonderful young woman who also happened to be a devout Christian. Although we had different belief systems we got along incredibly well. After I completed my Arts Degree, I gravitated towards studying Clinical Hypnotherapy in Sydney, NSW, and subsequently took on four years of study before opening up a therapy practice. When I mentioned this undertaking to my friend, she suddenly grew serious and began warning me about the perils of hypnosis and hypnotherapy, mentioning they were tools of the devil. I was completely taken aback by her perspective, especially since she had modern values, and I gently pointed out that I could not fathom how hypnotherapy could be a force of evil when its underpinnings were focused on doing good in the community, namely helping people heal their themselves from within. I soon learned she knew nothing about hypnosis and when I asked her where she had come across such a notion of devilry in the rank and file of therapists around the globe, she mumbled something about this philosophy being a teaching of her church. I soon learned she had accepted this dogma without questioning it or indeed educating herself, as I'm sure many others have done. We never spoke of it again and remained friends for a few more years until we drifted apart, but for over 25 years I wondered where this false belief had emanated from and from whom. I finally received my answer when I read Lindsay Yeates' article, which delves into the Reverend M'Neile's personal attack from the pulpit in 1842 on James Braid and hypnotism whereupon the superstitious M'Neile had declared without any corroborating evidence that "all mesmeric phenomena were due to 'satanic agency'". Although James Braid responded to this the diatribe from the podium and in print, M'Neile's toxic seeds were sown—his sermon was published and distributed to tens of

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thousands of people in the UK and around the world for many years and where even to this day, 150+ years later, they are still inflicting damage on a noble and positive-outcome oriented humanistic therapeutic modality by being repeated (dare I say!) by thousands of supposed “modern” thinkers, living in a “modern” time but still hampered by out-dated views and a lack of critical thinking.

I can't help but think how exhausting it must have been for James Braid to have kept defending himself and his breakthrough scientific work during his lifetime. Again, I state that Lindsay Yeates' masterwork hopefully will redress the unjust, unfair, and ignorant views about Braid that have been perpetuated through the ages.

There is a lot more I could write about my deconstruction of and relationship to Yeates' masterwork but I will leave you with my final takeaway and that is about the profession of hypnotherapy itself, which has on occasion been politicised over the years by various stakeholders who wish to claim dominion over the practise of it. As Lindsay Yeates so eloquently explains, “despite the fact that hypnotic practices are still to be satisfactorily explained (or theoretically justified) today”, there is a science and an art to clinical hypnotherapy practise that is not the unique property of one particular professional group or another.

As a parting comment I wish to state that it has been a long and arduous journey for Lindsay Yeates to complete his six articles on James Braid. He pursued and uncovered thousands of obscure references, chasing up every lead like a private detective to give us an accurate picture as he could of Braid and his contribution to the field of hypnotism. Lindsay's attention to detail is extraordinary. These articles reflect his passion for his subject and his need to right a wrong and return Braid to his rightful place in hypnotherapy history. It was an honour to work with Lindsay and to lose myself in Braid's world, Lindsay's extraordinary scholarship and his beautiful command of the English language. I believe these articles need to be compulsory reading for any lay or established hypnotherapist to understand the roots of our present-day practise.

This issue of the journal marks the end of my five year term as journal editor, and I am most proud and grateful to the contributors who have brought their unique knowledge to the journal's pages. I thank the ASCH Board for their trust in appointing me to this position, and I now pass you over to the capable new editor Ann Moir-Bussy to cement her own voice and style in these pages and to bring you more wonderful articles from Australian and international hypnotherapy experts.
Farewell.

Julie Ditrich

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James Braid (V): Chemical and Hypnotic Anaesthesia, Psycho-Physiology, and Braid's Final Theories,

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Abstract

Following his November 1841 Manchester encounter with Charles Lafontaine, and due to the mesmerism-induced 'somnolence' that Lafontaine had demonstrated, and the sporadic reports of (mesmeric) pain-free surgery elsewhere, James Braid soon began investigating the potential of hypnotism as an anaesthetic agent. In addition to describing Braid's use of hypnotism for surgical anaesthesia, this article exhumes and examines the (long hidden) significant role of Braid as a committed advocate, experienced commentator, and early adopter of chemical anaesthesia – revealing the extent to which the erroneous misrepresentation of Esdaile's *Jhar-Phoonk* procedure (with which Esdaile performed hundreds of 'pain-free' operations) as either 'mesmerism' or 'hypnotism' has resulted in Braid and his (hypnotic and chemical) efforts being completely written out of the history of anaesthesia. This article concludes with an exposition of Braid's final developed theoretical position, his sophisticated representation of the domain of interest, and his far more appropriate set of technical terms

KEY WORDS: James Braid; James Esdaile; John Milne Bramwell; William Benjamin Carpenter; Daniel Noble; hypnotism; hypnosis; hypnotherapy; mesmerism; *Jhar-Phoonk*; dominant ideas; monoideism; psycho-physiology; double consciousness; anaesthesia; ether

1. Introduction

It is a pity to spoil a good story for the sake of a few facts.

(Elliot Coues [1874], p.324)

Having described Braid's early life and professional development in Part I (Yeates, 2018a), his encounter with Lafontaine and its immediate aftermath in Part II (Yeates, 2018b), his tenacious 'boundary-work' in promoting hypnotism, and his defence against unwarranted attacks by M'Neile and the medical section of the *British Association for the Advancement of Science* (BAAS) in Part III (Yeates, 2018c), the nature, form, and content of his major work, *Neurypnology* (1843) [113] in Part IV (Yeates, 2018d), and, before concluding with an appraisal of Braid's significance, priority, and undoubted pre-eminence in Part VI (Yeates, 2018e), we must fully recognise the

extent to which – despite his significant role as a committed advocate, experienced commentator, and early adopter of chemical anaesthesia – Braid has been completely written out of the institutional history of anaesthesia and, on Braid's behalf, exhume and examine his watershed work with both hypnotic and inhalation ether anaesthesia, before giving an account of the final stage of his 'boundary-work': that of creating, explaining and disseminating the fully developed, sophisticated representation of his final theoretical position and his revised, far more appropriate set of technical terms.

The hypnotic state ...is essentially a state of mental concentration, in which the faculties of the mind **of the patient** are so engrossed with a single idea or train of thought ... to be dead or indifferent to all other considerations and influences ... [and which] intensifies, in a correspondingly greater degree, whatever influence the mind of the individual can produce upon his physical functions during the waking condition. ...

[The suggestions made to the patient] draw and fix his attention to one part or function of his body, and withdraw it from others, [such that] whatever influence such suggestions and impressions are capable of producing during the ordinary waking condition [have] correspondingly greater effect during the **nervous sleep**, when the attention is so much more concentrated, and the imagination and faith, or expectant idea in the mind of the patient, are so much more intense than in the ordinary waking condition.

.....

[Given the influence of psychosomatic effects], it should follow ... that if we can attain to any mode of intensifying the **mental** power, we should thus realise, in a corresponding degree, greater control over physical action.

Now, this is precisely what my processes do—they create no new faculties; but they give us greater control over the natural functions than we possess during the ordinary waking condition, and particularly in intensifying mental influence, or the power of the mind of the patient over his own physical functions; and of a fixed dominant idea and physical state of the organs over the other faculties of the mind during the dominance of such fixed ideas.

Fig.1. Hypnotism: a means by which "natural functions" can be directed (Braid, 1853e, pp.4, 12).

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2. Preliminary Considerations

2.1 Histories of Anaesthesia

To the extent to which the confused and factually untrue accounts of the role of 'mesmerism' (whatever that might be) and 'hypnosis' (whatever that might be) in the history of anaesthesia –

transmitted through false 'creation myths' and misleading 'founders legends' – have been slavishly copied into the modern literature, it would seem uncharitable to identify these grossly mistaken modern works on the grounds that their authors have innocently repeated what they believed to be accurate, notwithstanding that “the perpetuation of [each] myth was not just an example of poor scholarship, but more importantly [was something that] served various ideological ends for those repeating [them]” (Abrahamson, et al., 2016).

While the complete story of the introduction of chemical anaesthesia belongs elsewhere, the fact that Braid was such an important player and, yet, so comprehensively written out of institutional 'anaesthetic history' – due, no doubt, to the widespread erroneous conflation of 'hypnotism' with 'mesmerism', the gross errors repeated in relation to *hypnotism*, and the repetition of misleading and inaccurate accounts of Esdaile's otherwise remarkable accomplishments in India – demands that certain facts be stated, certain ambiguities clarified, and certain errors corrected.

2.2 Freedom from Pain: Analgesia vs. Anaesthesia

The two related terms, analgesia and anaesthesia, denote entirely different circumstances:

- (a) analgesia ('not + pain'): where one is simply free of pain; and
- (b) anaesthesia ('not + sensation'): where one has neither pain nor sensation.

[Note that, “counter-intuitively, hypnotic analgesia ('no pain') or hypnotic anaesthesia ('no sensation') is far easier to achieve with organic pain, such as knife wounds, broken ankles, etc., than in cases of psychogenic pain, such as an intense pre-examination bellyache” (Yeates, 2016c, p.68).]

2.3 Resistance to Pain-Free Surgery

The applications of mesmerism, perhaps, first by Mesmer himself to facilitate the painless delivery of an infant (Gauld, 1992, p.62) and, then, intermittently, by others (e.g., Chapelain, to facilitate Cloquet's mastectomy in 1829, and Topham, to facilitate Ward's thigh amputation in 1842) clearly suggested the possibility of reliable surgical anaesthesia.

Yet, the very prospect of anaesthesia, mesmeric or otherwise, was extremely controversial; with many influential disciplinary figures, such as the eminent French surgeon Alfred Velpeau, opposed to it – declaring, in 1839, that, not only was the thought of pain-free surgery a fantasy, but that pain and surgery were inseparable, and that the experience of pain was an essential part of any cure [115] (Velpeau, 1839, pp.32-33). However, any further discussion of the philosophical, medical, and religious views that prolonged pain was an inevitable part of healing and was, therefore, medically dangerous to be removed, lie far beyond this article (for details see Stanley, 2003, pp.283-312).

[In 1847, having directly verified the anaesthetic effects of ether and, from that, having satisfied himself that easily reproduceable pain-free surgery *per medium* of the 'scientific' administration of an inhaled chemical substance was now an objective reality – and, thus, entirely distinct from the questionable, hard to replicate, and 'unscientific' practices of the magnetists – Velpeau predicted that “surgery will obtain benefits of great value from inhaled ether, from the point of view of the art itself as well as from a purely humanitarian perspective” (Velpeau, 1847, p.94, my translation).]

2.4 There were NO Religious or Doctrinal Objections to Pain-Free Childbirth

Although John Snow's administration of chloroform to Queen Victoria during childbirth on 7 April 1853 (AMJ.1) greatly assisted the wider public acceptance of obstetric anaesthesia, an extremely thorough scholastic examination of a very wide range of contemporaneous secular and religious sources made separately by Farr (1980 and 1983) and Abrahamson, et al. (2016), has failed to uncover any basis whatsoever for Simpson's (1847) self-aggrandising claim that there was a widespread institutional and theological opposition to anaesthesia for the relief of labour pain, based upon “In sorrow thou shalt bring forth children” (Genesis 3:16) – Simpson's fanciful claim, repeated over time, has unfortunately become the basis for one of the “Great Man” narratives of anaesthetic history (on “Great Man” narratives, see Carlyle, 1841; James, 1880; Butterfield, 1936; and Samelson, 2000).

2.5 Chemical Anaesthesia

Before proceeding with a brief historical account of the introduction of chemical anaesthesia, certain objective facts must be stated about chemical anaesthesia in general:

- (a) the wide range of chemicals designated “*anaesthetic agents*” (nitrous oxide, ether, chloroform, etc.) share no structural similarities of any sort with each other.
- (b) even today, the physiological means through which anaesthetic agents act on the nervous system – and the precise location, nature, and character of that physiological action – are yet to be exclusively determined.
- (c) as well as its effect on humans, ether can anaesthetise animals, snakes and other reptiles, birds, fish, and even plants (see Yokawa, et al., 2018).
- (d) although the inhalation (rather than ingestion) of anaesthetic agents reduced the risk of post-operative vomiting, the extra load it placed on the respiratory system brought the additional (lethal) risk of hypoxia, anoxia, asphyxiation, and/or suffocation.

[In early 1847, in order to avoid these issues, Jean-Marc Dupuy, in France, and Nikolay Ivanovich Pirogov, in Russia, independently 116 experimented with the rectal administration of ether (Proskauer, 1947; Secher, 1986).]

- (e) another peril associated with inhalation anaesthesia – especially with the red-hot cautery (rather than excision) of tumours commonplace in the 19th-century – were the fires and explosions caused by the volatile and highly flammable anaesthetic agents themselves (see Macdonald, 1994).
- (f) the volatile nature of the anaesthetic agents also presented a very serious threat in poorly ventilated operating theatres – the vapours the patient exhaled were almost as potent and disorienting for others as they had been for the patient in the first place.
- (g) *the therapeutic index* (i.e., ratio between the lethal dosage and the therapeutically effective dosage) of ether is more than three times higher than that of chloroform. The higher the index, the greater the safety (e.g., *diazepam* is around 100), the lower the index, the more dangerous (e.g., *digitalis* is around 2) – meaning that, for instance, unlike *diazepam*, only a small increase in the dosage of *digitalis* above the standard therapeutic dosage is likely to cause death.

3. Mesmerism and Anaesthesia

Ignoring Esdaile's impressive work in India – which employed neither 'mesmerism' nor 'hypnosis' (see below) – and the occasional use of mesmerism for *analgesia* rather than *anaesthesia* in minor dental procedures (teeth extraction, etc.), and in minor surgical procedures (incision of abscesses, etc.), the modern notion that there were countless numbers of perfectly pain-free major surgical operations conducted on completely comatose patients per medium of 'mesmerism' is entirely false.

3.1 Significance of Mesmeric Anaesthesia

In relation to the importance of 'mesmerism' in the evolution of modern anaesthesia, three facts must be stressed:

- (a) regardless of whether just one of the reported cases of pain-free surgery could legitimately be attributed to the agency of 'mesmerism' (or not), the procedures in question were certainly (objectively) pain-free, and the disciplinary mind-set was radically altered – with drug-free freedom from pain not only becoming *not preposterous*, but becoming *a definite possibility* (Rosen, 1946);
- (b) even if claims of 'mesmeric agency' for the (veridical) pain-free phenomena were fantastic and unfounded, the (post-mesmeric) pain-free phenomena (although 'unexplained') remained both real and substantial; and
- (c) the active rejection of 'mesmerism' and the active resistance to 'mesmeric practices' by the medical profession at large (see Palfreman, 1977) was a major factor behind the

reckless early adoption of the (otherwise) extremely dangerous practice of inhalation anaesthesia in Great Britain in December 1846 (Yeates, 2009).

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3.2 *Madame Plantin*

The first recorded (mesmeric) pain-free surgical procedure was on 12 April 1829 – i.e., 14 years after Mesmer's death – when French surgeon Jules Cloquet performed a total mastectomy (which took 10-12 minutes) on Madame Plantin (aged 64). Her physician, M. Chapelain, served as mesmerist. Having been told that she was being conditioned for later mesmerism-assisted surgery, she experienced no pain or sensation during the procedure, and was entirely free of her intense fear of being operated upon (Brierre de Boismont, 1855; Elliotson, 1843, pp.78-83). She was, however, *far from comatose*:

During all this time, the patient conversed calmly with the operator, and gave not the least sign of sensibility; no movement occurred [sic] in the limbs or FEATURES, no change in the RESPIRATION or VOICE, no emotion EVEN IN THE PULSE, was discernible; this patient remained uninterruptedly in the same state of automatic indifference and passiveness ... in which she was some minutes before the operation.

There was no necessity to restrain her, we had only to support her.

(Elliotson [1843, p.79: emphasis in original])

3.3 *Ten Operations*

In relation to major 'mesmeric pain-free' surgical operations, George Sandby – the cleric, and impassioned advocate of mesmerism, who had also responded to M'Neile's "*Satanic Agency*" sermon (i.e., "G.S.", 1843) – could only identify eight such surgeries in the UK (e.g., Topham & Ward, 1842) in the 17 years between Cloquet's mastectomy in 1829 and the introduction of ether in late 1846 (Sandby, 1848, pp.47-59); and *The Zoist* could only report two further such operations before it ceased publication in January 1856: one in India in 1851 (Elliotson, 1852), and the other in London in 1854 (Elliotson, 1854).

3.4 *American Civil War*

Despite countless assertions that mesmerism was widely used for pain-free surgery during the American Civil War, I have been unable to isolate even one instance of any such case in the contemporary literature (or in any of the official military/medical historical records of the time). In contrast, Houghton (2002, pp.253-254) reports that more than 800,000 chemical anaesthetics were administered during the Civil War (ether, 14.7% of the cases; chloroform, 66.2%; ether/chloroform mix, 9.1%).

4. Braid and Hypnotic Anaesthesia

4.1 Pre-Lafontaine

In 1841, Braid was an experienced surgeon-apothecary, who routinely used alcoholic intoxication or ingested narcotics/opiates to induce torpor, assuage pain, and reduce the intensity of pre-operative fear. The less-than-perfect effects of these agents not only demanded mechanical restraints – and the applied physical force of the surgeon's assistants – to assure an appropriate level of patient immobilisation, but they also caused post-operative disorientation, stress, and vomiting.

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4.2 Post-Lafontaine

Following his *experimentum crucis*, Braid's immediate concern was to determine the extent to which his "hypnotism" could replicate Lafontaine's phenomena; and, by the time of his second lecture, a week later, Braid had replicated Lafontaine's "somnolence", "catalepsy", and his "insensibility to pain". To Braid, the possibility of pain-free surgery was of immediate interest; and, within just nine weeks of his *experimentum crucis*, during his (22 January 1842) Liverpool lecture, he was reporting the extraordinary progress he had made in relation to freedom from pain:

He had, by means of [his system], extracted teeth without the patient suffering any pain; he had removed rheumatic pains, which had tortured the patient for months and years; he had in eight minutes cured a case of tic doloireux, under which a person had been suffering for eight weeks; he had restored paralytic limbs, which had been useless for twenty-four years; he had given hearing to the deaf, and the power of speech to the dumb; and even in cases where the persons had been born deaf, he had caused them to hear the tick of a watch in the space of ten or twelve minutes.

From experiments that he had for a short time been engaged in, he trusted to be able to show that by a modification of his method *the use of opiates might be dispensed with*.

(*The Sheffield and Rotherham Independent*,
5 February 1842 [SRI.1], my emphasis)

4.3 Attenuation of Pre-Operative Anxiety

In Braid's day, apart from the well-justified fear of pain, there were many other reasons to be terrified of surgery and its consequences. Throughout his works, Braid constantly refers to the extent to which hypnotism removed pre-operative fear and anxiety. His recognition of the need to avoid fear, explains why, whenever possible, Braid pretended to be training a patient (routinely taking a number of days) in preparation for future surgery, and would conduct the operation (unannounced and painlessly) immediately an appropriate level of insensibility had been attained:

I am quite satisfied that hypnotism is capable of throwing a patient into that state in which he shall be entirely unconscious of the pain of a surgical operation, or of greatly moderating it, according to the time allowed and mode of management resorted to. To insure [that patients are] ... quite unconscious of such an operation having been performed ... I consider that, in the majority of instances, it is quite necessary the patient should not, when he sits down, know or imagine the operation is to be performed *at that time*, otherwise the distraction of the mind, from this cause, may render it impossible for him to become hypnotized deeply enough to render him *altogether insensible to pain*. ...

From [my experiences] I infer, that if it is intended to perform a surgical operation *entirely without pain*, whilst in the hypnotic condition, the patient's consent should be obtained for it to be done *sometime*, but he ought on no account to know when it is to be done, otherwise, in most cases, it would foil the attempt.

(James Braid, *Neurypnology* [1843], pp.250-252)

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4.4 Efficacy

In the 1842 case of “an adult with the worst variety of *talipes varus*, of both feet, [that I had ever seen]” – and as one who had already “operated on upwards of three hundred club feet” – Braid operated on one foot “in the usual way”, and on the other using *hypnotism*. He noted positive differences in the hypnotised patient's “ease” during the operation, and that his post-operative condition was “most remarkable” (*Neurypnology*, “**Case LXI**”, p.253). Throughout all Braid's subsequent works, he notes significant reductions in both operative and post-operative bleeding, in post-operative recovery time, and significant increases in post-operative healing whenever hypnotism was used for anaesthesia.

Yet, despite this, and given that the labour-intense efforts required over a number of days to ‘train’ suitable-for-hypnotic-anaesthesia patients precluded those presenting for emergency procedures, there was always the additional and separate issue of less than one in five of those presenting for surgery being able to achieve the ‘depth’ of hypnotism required from a ‘suitable’ candidate anyway.

Mr. Braid, a surgeon practicing in Manchester ... found that this state (which he designated as Hypnotism) could be induced in a large proportion of individuals of either sex, and of all ranks, ages, and temperaments, who determinately fix their gaze for several minutes consecutively on an object brought so near to their eyes, as to require a degree of convergence of their axes that is maintainable only by a strong effort. ...

Mr. Braid's peculiar success in inducing this state seemed to depend partly upon his mode of working his method, and partly upon the "expectancy" of his subjects.

Finding a bright object preferable, he usually employed his silver lancet-case, which he held in the first place at ordinary reading-distance, rather above the plane of the eyes; he then slowly approximated it toward the middle point, a little above the bridge of the nose, keeping his own eyes steadily fixed upon those of his "subject", and watching carefully the direction of their axes.

If he perceived their convergence to be at all relaxed, he withdrew the object until the axes were both again directed to it; and then again approximated it as closely as was compatible with their continued convergence.

When this could be maintained for a sufficient length of time upon an object at no more than about three inches' distance, the comatose state generally supervened.

Fig.2. Braid's induction –
as directly observed by William Carpenter (Carpenter, 1877, p.141).

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Even when (post-1847) ether, chloroform, and nitrous oxide was freely available to Braid (and regularly used by him), he continued to use hypnotism routinely (although sporadically) for anaesthesia, whenever appropriate, until his death in 1860 (see Fig.2).

4.5 'Response Expectancy' and Efficacy

In a letter written just before his death – recognising the significance of "expectant belief" – Braid announced his intention to measure the comparative anaesthetic efficacy of hypnotism in those who had already experienced chemical anaesthesia, contrasted with those who had not (1860a, p.159). He also promised to write on the similarities and differences between the application of hypnotism, and ether, and chloroform for surgical anaesthesia. He died before he could do so.

5. *Miscellaneous Hypnotic Matters*

5.1 *Charles Marie Étienne Eugène Azam (1822-1899)*

On 9 December 1859, a report was published on the use of Braid's hypnotism for pain-free surgery by a group of eminent French surgeons (Dechambre & Verneuil, 1859): namely, Azam, Broca, Denonvilliers, Follin, and Velpeau, the 'pre-ether' opponent of pain relief (see Schiller, 1992). Azam, who had learned Braid's technique from Carpenter's 1852 account (viz., Carpenter, 1852b) was the hypnotist, using Braid's technique with 30 experimental subjects; and in doing so, "proved that most of the assertions of Mr. Braid were rigorously exact" (Dechambre & Verneuil, 1859, p.770, my translation).

Having learned through the British medical press (TL.2, TL.3, etc.) that Azam had used Carpenter's 1852 account of his technique (viz., Carpenter, 1852b, pp.694- 695), Braid sent Azam copies of his publications (including his long out-of-print *Neurypnology*), specifically asking that Azam's associate, Velpeau (a Member of the French Academy of Sciences) present them, on Braid's behalf, to the Academy – which Velpeau did at its 27 February 1860 meeting (LAS.1).

On 22 March 1860 (three days before his death), Braid sent a hand-written (now lost) draft manuscript (dated 7 January 1860) – "On Hypnotism" (Braid, 1860b; Braid/Purcell, 1969/1860) – directly to Azam, as a personal gift, with the inscription: "Presented to M. Azam, as a mark of esteem and regard, by James Braid, Surgeon, Manchester, March 22nd 1860" (Bramwell, 1913, p.29).

The unpolished draft, comprised of fragments 'cut and pasted' from Braid's earlier publications – which gave Azam a description of status quo at the time of *Neurypnology's* publication, and an account of developments since then – contained nothing to advance the material Braid had already presented in York and Glasgow in 1855 (see Sections 11-13, below).

5.2 *John Milne Bramwell (1852-1925), MB CM (Edin.)*

James Paton Bramwell, the father of Scottish physician and surgeon John Milne Bramwell, had seen Esdaile at work in Perth; and, as a child, Milne had often witnessed his father replicating Esdaile's 'mesmerism'.

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Milne studied medicine at Edinburgh University in the same cohort as Braid's grandson, Charles Braid (they both graduated MB CN in 1873) – giving him unparalleled access to those 'Braid items' still held by the Braid family. Whilst at Edinburgh, he was inspired by the views of his physiology lecturer, Professor John Hughes Bennett (Bennett, 1851, 1858) on "the influence of predominant ideas on the healthy and disordered functions of the body".

Bennett was a strong advocate of Braid, and held out great hopes for the future medical applications of *hypnotism*. Bennett's enthusiasm was responsible for Bramwell's decision to fully investigate *hypnotism*. Bramwell eventually became a world-renowned medical hypnotist, an active promoter of *hypnotism* (TL.5, BMJ.1), a prolific author on hypnotic matters (1896c, 1909, 1913, etc.), and a dogged defender of Braid's legacy (1896a, 1896b, 1897a, 1897b, 1898, etc.).

A major area of Bramwell's interest was hypnotic anaesthesia (see Bramwell, 1913, pp.158-176):

- (a) as well as being entirely responsible for the 'hypnotic anaesthesia' of his own surgical patients, Bramwell often acted as the 'hypnotic anaesthetist' for the patients of other surgeons (*ibid.*, p.161);
- (b) In Leeds, on 28 March 1890, Bramwell demonstrated "the power of hypnotism to produce absolute an.sthesis" in teeth extraction, complex dental procedures, and other "very painful and severe [nondental] operations" on 'real' patients subjected to 'real' procedures to "upwards of sixty medical men and dental surgeons" (TL.5); and
- (c) the strength of the (then prevailing) Bernheimian, operator-centred atmosphere – which, in direct contrast to Braid's subject-centred *monoideism*, stressed the hypnotist's 'irresistible power', and the *inescapability* of the hypnotist's suggestions (see Bernheim, 1889, p.207) – generated widespread doubt as to whether an individual, in submitting to 'hypnosis', actually retained their '*freedom of will*'. This forced Bramwell, in all of his writings on anaesthesia (especially those centred on dental procedures), to constantly stress that "[his] patients in these cases, as in all others, retained full freedom of will, and were able not only to refuse to be hypnotised, but also to resist suggestions made while they were under hypnosis" (Bramwell & Turner, 1890, p.154).

5.3 Alice Magaw and Structured Suggestion

Alice Magaw (1860-1928), the *nurse anaesthetist* to the Mayo Brothers of Mayo Clinic fame (Nelson & Wilstead, 2009; Goode, 2015), had an unparalleled record of safe (chemical) anaesthesia practice involving ether, chloroform, and nitrous oxide in various combinations: with more than 14,000 administrations over more than a decade without a single anaesthetic death (Magaw, 1899, 1900, 1901, 1904, 1906) – at a time when such deaths were common, and a matter of considerable disciplinary concern.

The watershed significance of Magaw and her methods is not (as modern sources mistakenly suggest) due to her using "*hypnotic anaesthesia*". She did not use hypnotism [122] at all; *even though she had been well trained to do so by her father, an expert hypnotist* (Ewin, 2001). What she did do, however, was to very significantly reduce "the amount of the drug employed for anesthesia [to a

minimum, through] the free and intelligent use of suggestion as an adjunct to its administration” (Munro, 1917, p.235).

Immediately the anaesthetic began to ‘take’ – i.e., a moment when “the subconscious or secondary self is *particularly susceptible to suggestive influence* (Magaw, 1906, p.796 emphasis added) – she suspended its administration (topping it up from time to time if required), and delivered extended sequences of directives to her patient (Magaw, 1904, pp.96-97, 100-101), couched in positive, rather than negative language (see, for instance, Yeates, 2002; 2014), which not only significantly reduced fear, post-operative nausea, the possibility of shock, and the time needed to induce an appropriate level of “*comfortable narcosis*” (Munro, 1917, p.237), but was also far safer, having considerably reduced the total amount of anaesthetic used – Munro reports that those “who do not understand the use of suggestion [commonly] use from ten to twenty times the amount of ether in anaesthetising a patient that is used by Alice Magaw ... who make[s] use of suggestion in every possible way in a given operation” (ibid., p.236).

5.4 World War II

In 1945, whilst prisoners of war of the Japanese, the Australian military surgeon, Michael (later Sir Michael) Woodruff (1911-2001), and his Royal Netherlands Forces colleague, Rudolf Sampimon (1910-1990), a physician and dental surgeon, were jointly responsible for the treatment of Allied prisoners of war at a prisoner of war hospital. Working in very primitive conditions, and denied sufficient anaesthetics by the Japanese, they turned to hypnotism “instead of the more usual forms of anaesthesia, in selected cases” (Sampimon & Woodruff, 1946, p.393).

Their practice was to perform “at least one preliminary induction of hypnosis prior to that under which the operation was to be performed”. Because “most of [their] major surgery was concerned with acute abdominal emergencies in which no delay was permissible”, hypnotic anaesthesia was predominantly used only for minor procedures. In noting that “the sudden cessation of hostilities brought our investigations to an abrupt termination before we had progressed very far”, Sampimon and Woodruff also stressed that, although their patients “were for the most part suffering from comparatively minor ailments ... [this did] not imply that the method was considered unsuitable for major surgery” (ibid.). An extract from their conclusions is at Fig.3.

6. James Esdaile (1808-1859)

The de-stabilising impact upon the prevailing (UK) medico-surgical mind-set of the astonishing news of the nature and number of Esdaile’s successful ‘pain-free’ surgeries – more than three years after Braid’s first (hypnotic) pain-free operation – and how the challenges that Esdaile’s ‘pain-free’ procedures, mistakenly thought to be ‘mesmeric’, presented to the conventional

medicine of his day led to the hurried, widespread adoption of ether two years later are a significant part of the history of anaesthesia.

[123]

The use of hypnosis ... was found to possess certain advantages which may justify its use in selected cases in ordinary surgical practice.

The advantages referred to are as follows:

- (i) Nervousness of the patient is entirely eliminated.
- (ii) Full cooperation of the patient can be secured.
- (iii) Post-operative pain can be reduced to a minimum, and even in many cases prevented altogether.
- (iv) The usual complications of other forms of anaesthesia, including post-operative vomiting, do not occur.
- (v) It appears that in dental cases in which hypnosis is used there may be less haemorrhage and more rapid healing of the wound than normally occur when other methods are used.
- (vi) The method may be used in certain cases in which ordinary anaesthetics are contraindicated or cannot easily be employed—for instance, for patients requiring dental extraction in whom pronounced trismus renders the use of local anaesthetics difficult, when for some reason or other general anaesthesia is contraindicated.

The method appears to be safe and reliable, and in particular, once a satisfactory state of hypnosis is induced, the possibility of the patient's waking prematurely during the operation is remote.

There is, of course, the risk that by the abolition of post-operative pain complications which supervene may pass unrecognized; but once this possibility is realized the danger is thereby reduced to a minimum.

Fig.3. Advantages of hypnotic anaesthesia (Sampimon & Woodruff, 1946, p.395).

6.1 James Esdaile, MD

The son and brother of clerics, a keen salmon fisherman, and a prolific author (Esdaile, 1839; 1845a,b,c; 1846 (and 1957); 1847; 1849; 1850; 1851; 1852a,b; 1853; and 1856), thrice-married James Esdaile attended Edinburgh University from 1825 to 1829. One of the 99 who graduated MD in 1829, his dissertation was entitled *De Narcoticis* ('On Narcotics') (UoE.1, 1867, pp.iv, 87).

6.2 East India Company

Esdaile was appointed as a surgeon to the East India Company from 1830; and, although his decision to sign up was driven by the pension offered, the far from robust Esdaile was never happy with working in India.

Having returned from the two years' furlough he had been granted to recover his health (1836-1838), he served out his contracted twenty years, and retired to Scotland in 1852 (see Myers, 1889; Harte, 1903, pp.83-114; Gauld, 1992, p.221-124225; and Ernst, 1995, 2004). He initially served as *Civil Surgeon* to the East India Company's Hooghly Imambara Hospital (and, thus, also responsible for the hospital at Hooghly Gaol); and, also, as an employee of the East India Company, he served as Principal of the Hooghly College, devoted to the "English" education of Muslim and Hindu boys, from November 1839 to December 1841.

There are three very important facts that are generally overlooked in appraising Esdaile's Indian circumstances:

- (1) Unlike others (e.g., Braid, who conducted his own private practice), Esdaile was an employee – which meant he could not choose who (or what conditions) he treated.
- (2) Located in Bengal, and employed as a hospital surgeon, the majority of Esdaile's 'pain-free' patients were poor, illiterate Hindus and Muslims (most of whom were prison inmates) – "the mental range of my patients is so circumscribed, that the topics of food, drink, and clothing, almost exhaust it, and with most of them I have no common language" (Esdaile 1846, p.110) – a large proportion of whom required the surgical removal of the massive "elephantiasis" tumours (e.g., NLM.1) due to the *filariasis* caused by local-mosquito-borne parasites, some of which were as large as 103 pounds (Esdaile, 1856, p.28).
- (3) Unlike Braid, whose first interest was in *hypnotism's* therapeutic applications (and only later in investigating its anaesthetic capacity), Esdaile's first and only interest, as a compassionate man deeply interested in the relief of needless human misery, was the acquisition of a means through which the pain of his patients, surgical and otherwise, might be attenuated.

6.3 Esdaile: the 'Founders Legend'

Disciplinary histories dutifully assert that James Esdaile delivered 'pain-free' major surgery (amputations, removal of cataracts, removal of massive tumours, lithotomies, etc.) in more than 300 cases from April 1845 to June 1851 in the hospitals at Hooghly and Calcutta (Esdaile, 1851) – the preponderance of tumour excisions is entirely due to the presenting circumstances of his 'pain-free procedure' patients, who were either local prison inmates or "natives" that had heard of his reputation, "being [collectively] the poorest and most ignorant of the people" (Esdaile, 1846, p.27), rather than to any overall speciality-preference on Esdaile's part.

6.3.1 *Esdaile and the US Senate's Inquiry of 1853*

In 1853, a somewhat agitated Esdaile wrote to the US Senate, expressing his “great astonishment” that—in its endeavour “to decide who discovered the anesthetic virtues of ether” during the Second Session of the thirty-second Congress (i.e., 1852-1853)—the Senate had been “grievously misled by culpably ignorant or corrupt witnesses” who, in promoting the view that Morton’s discovery of ether “[as] the means of producing insensibility to pain” was *the first discovery of its* [125] *kind*, had “suppress[ed] important evidence” and, Esdaile protested, it was matter of record that he, Esdaile, had “performed] a painless operation upon a person in the *mesmeric trance* ... in April, 1845” (Esdaile, 1853, p.294). The details of the Senate’s investigation of the claim for a reward of \$US100,000 was published in a limited edition in 1853, and re-issued to a wider audience in 1858 (i.e., Smith, 1858).

[Esdaile seems to have conveniently forgotten his October 1851 letter to Braid (Esdaile, 1851; Braid, 1852, pp.77-80) in which he acknowledges his prior knowledge of Braid’s work; however, Esdaile’s point is still well made.]

6.4 *A Matter of Record*

As Myers observed in 1903 (§.507, p.160), in relation to “[the] deep anaesthesia, under which [Esdaile] performed hundreds of serious operations” —and, especially, given his “success in this direction was absolutely unique” —“had not [Esdaile’s] achievements been matters of official record [viz., Esdaile, 1845a, b, c, 1846, 1847, 1852a, 1856; Atkinson & O’Shaughnessy, 1847; Elliotson, 1847a,b, 1848, etc.], the apparent impossibility of repeating them would probably by this time have been held to have disproved them altogether”.

6.5 *Post-Operative Shock*

The official records also reveal the entirely unanticipated consequence (cf. Merton, 1936) of Esdaile’s approach to the attenuation of (otherwise) excruciating pain: the extraordinary reduction in the mortality rate of his “native” surgery patients from 50% to 5%, *due to a significant reduction in post-operative shock*.

7. *Esdaile’s ‘Pain-Free’ Surgery*

The devil can cite Scripture for his purpose.

(Shakespeare, *The Merchant of Venice*, Act I, Scene 3)

The ‘true facts’ about Esdaile, his moral courage, and his extraordinary game-changing decision—as a medically trained European, and as a colonial official—to use a local, indigenous folk-procedure known as *Jhar-Phoonk* to facilitate the ‘pain-free’ delivery of surgery have been

completely occluded by the selective cherry-picking of 'facts' to serve the needs of particular false (modern) 'creation myths' and 'founders legends' of mesmerism, anaesthesia, and hypnotherapy.

7.1 Braid's Reticence

The massive set of 'pain-free' surgeries Esdaile published in his regular reports to his East India Company superiors in relation to the performance of his duties as surgeon at the Company's hospital in Hooghly – i.e., in contrast to few parenthetical allusions Braid made in relation to his own *hypnotic anaesthesia* (when he could have, instead, written another pharmacopœia-style textbook, à la *Neurypnology*, with descriptions of classic cases, case-load statistics, etc.) – the misleading (and unchallenged) contemporary representations derived from those official reports of Esdaile-as-mesmerist, and the entirely false accounts within the modern literature of Esdaile-as-hypnotist have all combined to exclude Braid from the anaesthetic [126] literature and, in doing so, have consigned Braid-as-hypnotic-anaesthetist and his (equally extraordinary) 'true' hypnotic anaesthesia to the dustbin of history.

7.2 Errors of Fact

Despite the significance of Esdaile's performance of 'pain-free' surgery – and without diminishing the magnitude of what Esdaile actually did, and what he actually achieved – it must be stressed that there are serious errors in the way Esdaile's contributions to anaesthesia are represented within (and understood from) the modern hypnotism literature; and hypnotherapists, in particular, must be disabused of the misconceptions so many of them have innocently adopted as fact.

- The assertions that Esdaile used 'mesmerism' to attain what Esdaile described as the "inducement of coma for surgical purposes" (1846, p.27) are, at least, grossly *inaccurate*.
- The assertions that Esdaile was the operator in such cases are *entirely without foundation* – the induction of 'coma for surgical purposes' routinely took very many hours over very many days to achieve (if it was achieved at all) and, so, "owing to the great bodily and mental fatigue it caused", the induction was routinely performed by Esdaile's assistants, working in teams, one after the other, rather than by the physically frail Esdaile, who needed to save his limited strength for the surgery itself (Esdaile, 1846, pp.11-12).

Esdaile reports that, in the first six weeks of using *Jhar-Phoonk*, he had, through his own efforts, "reduced about a score of persons to the state of coma, and performed a variety of operations upon them without their knowledge or consent"; but, "having spared neither mind nor body in the wonder-working labour. I found myself, at the end of six weeks, suffering from [such] extreme nervous exhaustion, accompanied with irritability and sleeplessness [that I ceased the

...during the year 1847, in 49 consecutive operations in the hospital,

17 took place with the patient like a corpse,

14 with no difference from the appearance of a corpse except slight contractions of the brow, fingers, or toes,

13 with considerable indications of suffering, but subsequent denial of it, and

5 failures, or partial failures, the patients becoming sentient before the operation was completed.

0 disagreeable symptoms before or after the operations.

49

Fig.4. Esdaile's report of the degree of "perfect insensibility" attained in 49 consecutive surgical cases in 1847 (cited in Elliotson, 1848, p.170).

[127]

practice] ... [However, from my view] that all men possessed the power, more or less, if they know how to use it, I set my hospital attendants, door-keepers, and cooks, all to work upon patients in both my hospitals; and, one by one, they reduced their subjects to insensibility" (1852a, pp.16-17).

- The assertions that all of Esdaile's patients experienced "perfect insensibility" are, by Esdaile's own account, *entirely untrue* (see, for instance, Fig.4); and
- The assertions Esdaile used 'hypnosis' for surgical anaesthesia – e.g., "James Esdaile, in India, performed a remarkable series of operations on patients who had been hypnotized" (Marmer, 1963, p.101) – are so far from historical truth that, to use Wolfgang Pauli's expression (Woit, 2006, p.6), *they are not even wrong!*

7.3 Why Jhar-Phoork?

That Esdaile, in adopting *Jhar-Phoork* as both an anaesthetic and curative agent, "established a new and powerful means of alleviating human suffering among the natives of Bengal" which brought "painless surgical operations, and other medical advantages [to them]" (Esdaile, 1846, pp.v, vii) is a matter of record.

By Esdaile's own considered (post-India) account (1856, pp.13-17), he only became aware of something called "mesmerism" in early 1845, through a casual conversation with an acquaintance who had witnessed "mesmeric phenomena"; and, prior to this conversation, "[he] had never seen anyone mesmerised, nor read a mesmeric book", and that subsequent to it, "[he] could get no books upon the subject" (p.13).

On 4 April 1845, greatly distressed by the extreme agony displayed by one of his surgical patients, he asked his surgical assistant (who was, at the same time, a Hooghly College student) "if he had ever seen a person mesmerised?" (p.13). The assistant said he had witnessed an unsuccessful demonstration at the Calcutta Medical College and described the procedure to Esdaile (later specifically identified as *Jhar-Phoonek*: Bagnold, 1848; Esdaile, 1850, pp.361-362, 1852b, p.52-55; and Davidson, 1851, pp.3-4).

7.4 First Application of *Jhar-Phoonek*

Once the operation was over, Esdaile experimented with the procedure described by his assistant; and, after an hour's hard work, the patient was free of pain (see 1846, pp.43-48). Two days later (i.e., on 6 April 1845), with the patient once again experiencing pain from the operation he had performed two days earlier, Esdaile rendered him insensitive to pain in 45 minutes (p.49). On 11 April 1845 Esdaile performed the second operation on the patient; this time the patient was rendered pain-free *pre-operatively* by Esdaile's procedure (pp.54-57).

7.5 What was *Jhar-Phoonek*?

Jhar-Phoonek was a secular "white magic" folk treatment procedure, derived from certain aspects of a solemn Islamic exorcism ritual (known as *Ruqyah*), and routinely performed by itinerant *fakirs* or dedicated practitioners (*Jhar-Phoonek Walas*) [128] upon poor, illiterate, and impoverished Northern Indian rural workers to alleviate distress, to dispel illness and infirmity, and to treat disease. The folk treatment, as adopted by Esdaile – which was generally performed on naked subjects whose heads had been shaved (Esdaile, 1846, p.34) – involved an intense combination of the operator continuously stroking a subject (thus, *jhar* "to sweep") and, at the same time, continuously breathing on them (thus, *phoonek*, "to blow away"): see Fig.5.

The following is the routine observed in the six different hospitals in which I have practised [*Jhar-Phoonk*]; and if the plan has any advantage over the European method, I presume it is from the more intimate and extensive connection established between the two systems; **the bodies of both parties being usually naked to the waist**, is also of service, no doubt.

The patient is desired to lie down in bed in a darkened room, and go to sleep if he can; his head is brought to one end of the bed, and the [operator] seats himself so as to be able to breathe upon the head, and extend his hands readily to the pit of the stomach.

He then begins making passes from the back of the head down to the pit of the stomach, **breathing gently on the head and eyes also**.

The fingers are held loosely in the shape of claws, and are carried slowly over the parts, at the distance of an inch from the surface, dwelling longer over the eyes, nose, mouth, and sides of the neck; and on reaching the pit of the stomach, the hands are suspended there some minutes.

Having continued this process for a quarter or half an hour, the passes may be advantageously ended by pressing both hands lightly on the pit of the stomach for some minutes.

Fig.5. Esdaile's *Jhar-Phoonk* procedure (1852a, p.16, emphasis added).

7.6 Mis-Represented as "Mesmerism"

If it could be said that 'mesmerism' (whatever that might be) – when viewed from the perspective of its British advocates in the first half of the 19th-century, and contrasted with the direct physical intervention of a surgeon's knife or an apothecary's mixture – was an 'energy field manipulation in accordance with some newly discovered law of nature'; then, despite its '100% non-mesmeric' roots, and despite its absence of implements (magnets, iron bars, etc.) *Jhar-Phoonk* certainly involved some sort of 'natural energy field manipulation'. The erroneous view that Esdaile's *Jhar-Phoonk* was 'mesmerism' seems to be due to two mistakes:

[129]

- (a) *Equivocation*: where the term 'mesmerism' is used to denote both the super-ordinate class and its (European) sub-division. Thus, it's clear that the title of Esdaile's *Mesmerism in India* (1846) should have been construed as something like 'an account of the application of *Jhar-Phoonk*, an energy field manipulation peculiar to Upper India' (as distinct from 'the clinical application of European mesmerism in India').

(b) *Wrong referent* (due to excessive exactness: “Never aim at more precision than is required by the problem in hand”: Karl Popper, 1983, p.7): although the term ‘mesmerism’ was applied to Esdaile’s *Jhar-Phoonk* in the vaguest sort of a way – in that, when compared with, say, the application of leeches, it certainly seemed to be a sort-of-kind-of-mesmeric-process – it was being universally interpreted in a very narrow way.

7.7 Esdaile’s ‘Insensibility Tests’

Esdaile routinely subjected “[his] patients to indignities and even tortures that were highly effective in validating the [freedom from pain] but that no high-caste Indian or member of the European community would tolerate” (Winter, 1998, p.197); for examples of Esdaile’s ‘pain-free’ criteria see Fig.6:

[By the time of his move to Calcutta in November 1846] it had become Esdaile’s practice to test the readiness of his patients for operation by dropping a hot coal on the inside of a leg, or by giving them the strongest electric shock which his machine could produce, or (most often) by powerfully squeezing their testicles.

Only if the patient did not respond in any way did Esdaile feel able to proceed to surgery.

Otherwise magnetization [by Esdaile’s assistants] was continued.

(Gauld [1992], p.223)

From the [objective facts of the] foregoing [cases], I consider myself entitled to say, that it has been demonstrated, that patients in the mesmeric trance may be insensible to,

- The loudest noises.
- Painful pricking and pinching.
- The cutting of inflamed parts.
- The application of nitric acid to raw surfaces.
- The racking of the electro-magnetic machine.
- [and]
- The most painful surgical operation ...

James Esdaile, M.D. Calcutta, 1st January, 1847.

Fig.6. Esdaile’s ‘mesmeric’ freedom from pain (cited in Elliotson, 1847c, p.186).

[130]

7.8 “The Esdaile State”

When discussing his own innovative techniques for hypnotism-induced anaesthesia – involving ‘deep hypnosis’ – and, having taken the inaccurate account of Bankoff (1946), an otherwise reliable author on medical subjects, as his authority, the influential Dave Elman (1900-1967) mistakenly conflated Braid’s “hypnotic coma” with Esdaile’s entirely disparate *Jhar-Phoonk*-induced “coma for surgical purposes” under the generic title of “the Esdaile State” (see, for instance, Elman, 1964).

8. *The Introduction of Chemical Anaesthesia*

If any one had been asked last year, whether it would be safe and practicable to induce such a state of insensibility as would prevent the most serious surgical operations being felt, and that without any ill consequences, he would, I think, undoubtedly have considered it an impossibility.

(John Snow, Lecture on 12 May 1847 [Snow, 1847, p.551])

By my estimate, Braid was one of the first thirty surgeons in the UK to operate using inhalation ether as an anaesthetic (for details of some of the others, see Robinson, 1847, pp.7-63).

Modern scholarship clearly reveals that, *IF* it had been the case that the most significant participants “[were] of a less retiring disposition”, and *IF* they “[had actively sought] greater publicity at the time” (Baillie, 1965, p.952), and *IF*, unlike chloroform – the anaesthetic properties upon humans of which were ‘medically discovered’, in Scotland, by the Professor of Medicine and Midwifery at Edinburgh University, on 4 November 1847, and immediately freely broadcast to all and sundry in the medical literature – ether had *NOT* been ‘discovered’ in the USA (the British-American War had only ended in 1815), by dentists, kept secret, and vigorously promoted commercially (Greene, 1971), quite a different and far more accurate ‘consensus reality’ might have prevailed in the UK at the time.

Given that confused state of affairs – viz, the difference between the ‘consensus reality’ and the ‘real truth’ – certain facts and observations are important to deliver a reliable perspective from which the development of the circumstances under which Braid chose to adopt inhalation anaesthesia in early 1847 can be understood, and the significance of Braid’s (long buried, herewith exhumed) disciplinary efforts and contributions be measured:

- (a) In 1792, responding to the political and social pressures he was experiencing due to his sympathy for French revolutionaries, Thomas Beddoes (1760-1808), MD, resigned his position of Professor of Chemistry at Oxford University and, for his own safety, moved to Bristol (see Levere, 1977, 1984, 2007; Hunting, 2008; and Jay, 2009, *passim*). Beddoes’ ‘safety concerns’ were legitimate, given the fate of other French revolutionary sympathisers in the UK at the hands of mob unrest; for instance:

[131]

- (i) Joseph Priestley, discoverer of oxygen – and, through his work, *Experiments and Observations on Different Kinds of Air*, published in six volumes over twelve years (from 1774 to 1786), the inspiration for Beddoes’ “*factitious airs*” project – was the target of a mob in Birmingham, in July 1791, which burned his house (and laboratory) to the ground. Priestly moved to Hackney; but, still unsafe, was forced to leave England for the USA in 1794.

- (ii) William Maxwell, Braid's Dumfries colleague – target of Burke's famous "dagger speech" of 28 December 1792 (at Debrett, 1793, pp.215-224, esp. p.224; see Gillray, 1792) – had to hide from malicious London mobs on several occasions in 1792 (he was living in London at the time) before leaving for France, where he was in the guard that that led Louis XVI to the guillotine on 21 January 1793.
- (b) Once settled in Bristol, Beddoes began experimenting with the production of various "factitious airs" ('artificial gases specifically manufactured to serve a specific purpose'), initially concentrating on the gaseous treatment of tuberculosis, using gas-production apparatus specifically designed for Beddoes by James Watt (see Beddoes & Watt, 1794, 1795, 1796, and Watt, 1796).
- [Watt's son was dying from tuberculosis. A daughter had already died of tuberculosis.]
- (c) Beddoes established the *Pneumatic Institution for Relieving Diseases by Medical Airs* (*pneumatic*, 'related to breathing'), which included a laboratory (supervised by a 19-year-old Humphry Davy), a surgery, and a residential hospital.
- (d) In 1799 Davy conducted experiments that not only (unexpectedly) revealed the pain-relieving nature of nitrous oxide, but also its "laughing gas" qualities (Beddoes, 1799; Davy, 1800).
- (e) In 1808, in his Pennsylvania University doctoral dissertation, the (later) US-navy surgeon and eminent botanist, William P C Barton, AB, MD, conducted an experiment with nitrous oxide, from which he concluded that, "from the result of this experiment, I am decidedly of opinion with Mr. Davy, that this gas has the power of removing intense physical pain" (Barton, 1808, p.74). Again, no-one seemed to notice.
- (f) "Laughing gas" became very widely used as a "recreational drug". "Laughing gas parties" were all the rage long before the application of nitrous oxide to the pain-free extraction of teeth was established in the early 1840s.
- (g) The dangers of ether inhalation, including ether-induced death, were well-known long before it was ever used for anaesthesia (Godman, 1823; Silliman, 1831, p.526; Mitchell, 1832, p.172; Pereira, 1839, pp.210-211; Miller, 1845, etc.).

According to Professor Godman of Rutgers Medical College, Wesley Smead, a prominent Cincinnati 'druggist' who routinely (*à la Beddoes*), "direct[ed those] patients labouring under Pulmonary Consumption, Asthma, and other chronic affections of the lungs, to inhale the vapour of Ether as a palliative" – apparently unaware of Faraday's [132] observations that, "when the vapour of ether mixed with common air is inhaled, it produces effects very similar to those occasioned by nitrous oxide" (1818, p.158) – "accidentally

discovered [in early 1823] ... that when inhaled by persons in health it produces effects ... [in particular] violent muscular action and [a] great exhilaration of spirits ...not unlike [those of nitrous oxide]" (1823, p.111).

Godman reports the distressing sequelae of a young woman's 'social experimentation' with ether in 1823 – her case was not an isolated one: "I understand that several other young persons have been similarly affected by respiring the gas" (ibid. p.112). Miller (1845) reports a 15-year-old female's death following 'social' use of ether in 1845.

(h) Despite the plethora of legitimate and imaginary claims, counterclaims, and counter-counterclaims for priority asserted by particular actors in nineteenth century USA – and, also, despite the assertions embedded within the annual celebration of "Ether Day" (16 October) at the "Ether Dome" of the Massachusetts General Hospital – the current, universally accepted 'true' story is simply that:

- (i) William Edward Clarke (1819-1898), the (later) president of the Chicago Medical Society – already "in the habit of entertaining his companions with inhalations of ether" whilst pursuing the early stages of his medical studies at Massachusetts' Berkshire Medical College – was the first to apply ether for a tooth extraction, which he did in Rochester, New York, in January 1842 (Lyman, 1881, p.6), and
- (ii) Crawford Williamson Long (1815-1878), a surgeon, was the first to apply ether for surgery, which he did, in Jefferson, Georgia, on 30 March 1842 (Long, 1849, pp.707-710) – an event celebrated by the issue of a 2¢ US postage stamp on 30 March 1978.

[NB: Both of these entirely unrelated events preceded Morton's so-called "Ether Day" Massachusetts demonstration on 16 October 1846 by more than three and a half years.].

(i) In December 1844, following one of G Q Colton's theatrical "laughing gas exhibitions", Horace Wells, a dental surgeon in Hartford, Connecticut, who experienced the pain-free extraction of one of his own teeth *per medium* of the "laughing gas" administered by Colton on 11 December 1844, began using pure nitrous oxide for pain-free tooth extraction.

In January 1844, J C Warren, invited Wells to demonstrate his nitrous oxide anaesthesia to Warren's students and colleagues at the Massachusetts General Hospital. At the last moment, Warren's scheduled patient refused to have the operation (a leg amputation); and, rather than waste the opportunity, Wells offered to painlessly extract a student's troublesome tooth. According to Wells' account (reprinted at Erving, 1933, pp.426-428) there was a problem with the apparatus: the gas was not properly administered, the

student was [133] not pain-free, and those assembled jeered Wells.

[Greatly affected by these events, Wells withdrew from his dental practice in 1845, and committed suicide in 1847.]

- (j) On 16 October 1846, the devious Boston dentist, William T G Morton— who, for a short time (during the winter of 1842/1843) had conducted a joint dental practice with Wells, and who already had a long-established history of dodgy business practices, embezzlements, and of having “conducted illegal activities and cheated business partners who unfortunately placed trust in him” (LeVasseur & Desai, 2012, p.239) — following his direct representations to J C Warren (Wolfe, 2001, pp.69-71), administered “*Léthéon*”, at Warren’s invitation, to allow Warren to painlessly excise a tumour in what is now known as “The Ether Dome” at Massachusetts General Hospital.
- (k) Although Morton kept the formulation of his agent (“*Léthéon*”) secret at the time of his “Ether Dome” demonstration (Bigelow, 1853, p.321), it was soon revealed to be nothing more than ether, with various perfumes added to disguise ether’s characteristic smell (e.g., *ibid.*, p.323). [*Léthé* (Λήθη) was the mythical river of the Greek underworld, the waters of which, when drunk, induced complete forgetfulness.] Rather than being concerned with the dissemination of knowledge and the alleviation of human suffering, Morton’s only concern, right from the outset, was to convert the possibility of making a fortune from licensing fees into a reality.

PATENT LETHEONIC APPARATUS

Notice is hereby given, that making, using, or vending, in England, without licence from me, the Apparatus for the Inhalation of the Vapour of Ether, of which a drawing and a description were published in the *Medical Times* of January 9th, page 290 [viz., TMT.3], and in which a valve, or valves, prevent the return of vapour, once inhaled, into the vessel containing the ether, and sponge is used to increase the evaporating surface, is *a direct infringement* of the Patent secured on the invention, named the “*Letheon*”, and *all persons are hereby cautioned* against making, using, or vending, without such licence, that, or any similar apparatus.

Terms of Licence may be found on the second advertizing page of *The Lancet*, of Jan. 9th.[viz., Dorn, 1847b]

James A. Dorn, Agent for the Proprietors of the Patent.
London, 18, Duke-street, St. James’s, Jan. 13th, 1847.

Fig.7. Dorr’s declaration on Morton’s behalf (Dorr, 1847c).

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In answer to your question with respect to the patent alleged to have been obtained for "a process for procuring insensibility to pain by the administration of the vapour of ether to the lungs", I beg to say, that I am clearly of opinion no patent can be valid, giving the patentee the exclusive privilege of **administering the vapour of ether to the lungs**.

If the word "process" is used to denote some particular apparatus for the convenient administration of the vapour, then the validity of a patent for such apparatus will depend upon whether the patentee is the first inventor, and the apparatus was not known to, or in use by, the public before the granting of the patent.

The power of the Crown to grant patents is defined by the 21st Jac.I, chap.3, which was passed to put an end to the abuse of the power of the Crown to grant monopolies. This power was, by this statute, limited to the granting patents **for any manner of new manufactures**. In commenting upon this statute in *Rex v. Wheeler, (2nd Barn. and Ald. Reports, 245,)* Lord Tenterden, describing the sort of inventions for which patents can be granted, says,—

"The word **manufactures** has been generally understood to denote either a thing made, which is useful either for its own sake, and vendible as such—as a medicine, a stove, &c.—or to mean an engine or instrument to be employed either in making some previously known article, or for some other useful purpose, as a stocking-frame, or steam-engine for raising water from mines; or it may, perhaps, extend also to a new process to be carried on by known implements or elements acting on known substances, and **ultimately producing some other known substance** in a cheaper or more expeditious manner", &c. ideas.

Fig.8a. Barrister's opinion on the administration of inhalation ether by surgeons and dentists, dated 4 January 1847 (Boott, 1847b).

In concert with the equally flawed Charles T Jackson, MD, Morton applied for, and was granted a patent (USP.1). Jackson assigned all of his rights to Morton on the day the application was lodged (27 October 1846) for a single dollar. The patent was approved on 12 November 1846.

[NB: The patent was *not* for the apparatus, and *not* for the agent, it was for the *inhalation process* itself (neither the first nor the last time a US patent has been issued for "an entirely natural animal function"). In his precedent-setting decision of 1856, US Attorney-General Caleb Cushing, declared that (Cushing, 1858) the patent was void

(viz., it had been *granted in error*) because it was not “*original*” – thus, “*not patentable*”.] Jackson soon claimed priority over Morton (who, it must be said,

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I could cite abundance of other authority to the same effect, but it must be sufficiently plain that **no construction** of the word **manufactures** can give the Crown the power to confer by patent the exclusive privilege of administering the vapour of sulphuric ether for the purpose of producing insensibility to pain; or of **administering** any particular drug, or compound of drugs, for the purpose of producing any particular effect, although an inventor may have a patent for the **manufacture** of particular medicinal preparations.

But who ever heard of a patent for the performance of a new operation in surgery (as, for example, that by which squinting is cured)?

I can see no distinction **in principle** between such a patent and the patent supposed to be claimed for the administration of ether.

If this patent could be supported, the patentee might grant a monopoly to any particular surgeon of all operations to be performed with the assistance of the ether, or he might grant it to such surgeons in each town as he might please to select, to the exclusion of others; for though he might sell licences to **all**, he would not be **obliged** to do so.

He might almost be said to hold in his hands, in some cases, the power of life and death.

Upon the whole, I am satisfied you may safely advise your professional friends to continue the use of ether in their operations, without the slightest fear of legal consequences.

Whether the instruments which are manufactured for the purpose are an infringement of any valid patent will be a question between the patentee and the manufacturers; but the operators can have nothing to do with this; and it would be most deplorable to have any interruption to such a mitigation of human suffering.

Fig.8b. Barrister’s opinion on the administration of inhalation ether by surgeons and dentists, dated 4 January 1847 (Boott, 1847b).

didn’t have “priority” either). [This was a habit of Jackson’s: he also falsely claimed priority over the discoveries of C F Schönbein (for guncotton), S F B Morse (for the telegraph), and W Beaumont (digestive action of the stomach).] Jackson asserted that he, rather than Morton, had ‘discovered’ ether, and that all that Morton, the dentist, had done was to ‘administer’ the first ether anaesthetic under his direction (see Wolfe, 2001, *passim*; also, Gay, 1847, Esdaile, 1853; Morton, 1853; Smith, 1858, etc.).

- (l) The news of Morton's demonstration reached the UK, per medium of the Cunard steamer *Arcadia*, which docked at Liverpool on 16 December 1846, via two avenues (Ellis, 1976):
- (i) a parcel of documents, newspaper clippings, an article (Bigelow, 1846), and a personal letter (see Boott, 1847a), sent by Henry Jacob Bigelow, MD (see, for instance, Bigelow, 1853) to his **[136]** London friend, American botanist and physician Francis Boott, MD (Ellis, 1977), which reached Boott on 17 December 1846;
 - (ii) the testimony of the *Arcadia's* ship's surgeon, William Fraser, MD, who, on reaching his mother's house in Dumfries on 17 December 1846, immediately contacted his colleagues and told them of Morton's innovation (Scott, 1872)
- (m) On 19 December 1846, having constructed a suitable inhalation device with Boott, dental surgeon James Robinson painlessly extracted a tooth under ether, at Boott's London residence (Boott, 1847a, p.8).
- (n) On 19 December 1846, acting on Fraser's intelligence (Scott, 1872), Dumfries' surgeons William Scott and James M'Lauchlan performed the first operation using inhaled ether as an anaesthetic in the British Isles at the Dumfries and Galloway Royal Infirmary, when they amputated a fractured limb (Scott, 1872; Baillie, 1965; although Martin, 2004, doubts that they performed an amputation).
- (o) On 21 December 1846 – and having been urged to do so, by Boott, following Boott's own success two days earlier – the eminent University College Hospital surgeon, Robert Liston (whose 6'2", 188cm., towered over his hated former 'mesmeric' colleague John Elliotson's 5'0", 152cm.) painlessly amputated the leg of a man who had been 'etherised' using an inhalation device constructed by pharmacist, Peter Squire (Boott, 1847a, p.8).
- (p) On 21 December 1846, a British patent (UKP.1; COP.1, p.146) was issued to the experienced patent agent Moses Poole, on Morton's behalf, for his administration apparatus (NB: not the inhalation process).
 [Non-British subjects were expressly excluded from the patent process. Morton's American lawyer, R H Eddy, secretly sent London colleague, James A Dorr, the appropriate documents and instructions; they reached Dorr on 16 November 1846, and he immediately engaged Poole (Ellis, 1988, p.72).]
- (q) Despite Dorr's many threats, submissions, and entreaties on Morton's behalf (e.g., Dorr, 1847a-h) there were never any prosecutions for infringements of Poole/Morton's patent rights in the UK; although Morton did (unsuccessfully) attempt to prosecute the New

York Eye and Ear Infirmary in the US in January 1862 – his case was dismissed, with Judge Shipman reiterating Cushing's views (Wolfe, 2001, p.448). In his 9 January 1847 advertisement (1847b), having already identified himself as Morton's agent (1847a), Dorr gives details of the licensing agreements available to appropriate physicians, surgeons, and dentists. Then, in the following edition (16 January 1847) – once again inserted as an advertisement (Fig.7) – Dorr declares that Morton's patent will be vigorously defended against all infringements.

These threats were of such lowering menace that Boott sought the reassurance of a barrister's opinion (Figs.8a,b) on the matter (Boott, 1847b; Dorr, 1847d).

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- (r) Aside from Boott, Dorr's threats immediately drew responses from other professional individuals, such as Peter Squire (1798-1884), J Chitty Clendon (1809-1879), James Robinson (1813-1862), Alfred Smee (1818-1877), and James Startin (1806-1872), who not only developed and used inhalation apparatus of their own design, but also published the design's details in the medical literature for all to see (Squire, 1847; Clendon, 1847; Robinson's at TMT.3; Smee, 1847; Startin's at TMT.4; also, for details of other apparatus c.1847 see Ford, 1946).

9. *Braid and Chemical Anaesthesia*

9.1 *Braid's Early Adoption*

Given his five-years' experience of being able to easily conduct otherwise difficult surgical procedures on those capable of hypnotic anaesthesia, Braid saw it as his disciplinary duty to determine the extent to which the claims of 'ether insensibility' were veridical; and, especially, in his own case, to compare and contrast the applications and effects of the two. There was the added impetus of Braid's responsibility to stand firm with his colleagues, as a well-respected member of the *Provincial Medical Association*, and dilute the intensity of the risks presented by Dorr's bizarre commercial threats.

Although Braid was not the first Manchester surgeon to operate on an 'etherised' patient, he was, most likely, the second to do so. The first was the removal of a tumour under 'etherisation' on 31 January 1847, by surgeon Thomas Turner (1793-1873), on behalf of the physician James Lomax Bardsley (1801-1876). Significantly, neither the patient nor the apparatus had been tested beforehand. The anaesthetic effects lasted only four and a half minutes (Harrison, 1847).

On 9 February 1847, James Braid – assisted by Daniel Noble, and with Braid's son, James, administering the ether – performed a total mastectomy (rather than just a tumour excision). The newspaper report clearly indicates that this was not the first ether operation for Braid. Noting

that, “[this] operation was performed with neatness, coolness, and celerity” and that, “it is gratifying to state that up to the present time no case could have gone more prosperously, the patient neither having suffered mental confusion, sickness, or headache, or any other uncomfortable symptom, and has done well both nights since the operation”, it also records that Braid was continuing his already established (hypnotic) practice of testing his patients on several occasions prior to surgery: “the judicious precautions used by Mr. Braid, on this and other occasions of testing the effects of ether once or oftener before the day of operation, so as to ascertain precisely how far the influence requires to be carried out in each individual case ... is a precaution which we can easily perceive is of the utmost benefit both to operator and patient, as the ether is found to affect the patient very differently both as respects the nature and extent of its influence” (MT.1).

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9.2 Braid's Immediate Advocacy

As one who had “personally tried both [hypnotism and ether and] satisfied [himself] of their respective powers for suspending consciousness, and thus saving patients both from the dread and [the] suffering of surgical operations” (1847a, p.381) and, from this, as one who now presumed that “it will no longer be contended that the anguish of body and mental dread of the knife are desirable, either as respects the patient or [the] operator” (1847b, p.590), Braid wrote a lengthy piece for *The Medical Times* (1847a) (i) in support of the adoption of inhalation ether, (ii) describing the means of its application, and (iii) comparing and contrasting the use of mesmerism, hypnotism, and ether for pain-free surgery. This was a very significant contribution; because, it was not only coming from an already well-respected surgeon, it was also being made from the highly-informed perspective of:

- (a) Braid's ongoing experiences and observations of the heretofore 'conventional' methods for attenuating pain, first gained as a surgical apprentice in 1810 (i.e., more than 37-years pre-ether);
- (b) Braid's ongoing experiences and observations of 'hypnotic anaesthesia', since early 1842 (i.e., 5-years pre-ether);
- (c) Braid's (informed) understanding and perspective of Esdaile's 'painfree' surgery in India per medium of *Jhar-Phoonk* (i.e., 3-years post- Braid's 'hypnotic anaesthesia', and 2-years pre-ether);
- (d) Braid's own direct experiences and observations of:
 - (i) the actual administration process of 'ether anaesthetisation' and its aftermath;
 - (ii) the actual effects of 'ether anaesthetisation' on 'etherised' patients;

- (iii) the comparative ease of performing major surgery on 'etherised' patients; and, finally,
- (e) Braid's unique position, as, perhaps, the only individual in the entire UK with direct experience of the surgical application of 'conventional', 'hypnotic', and 'etheric' anaesthesia (and a well-informed 'insider-view' of Esdaile's applications of *Jhar-Phoonk*).

His article was published in two parts, on 13 February, and 27 February 1847; and, as a testament to its disciplinary importance, a slightly 'edited' version was republished in *The Edinburgh Medical and Surgical Journal* on 1 April 1847 (1847b).

9.3 The "Grantham Case": William Robbs and Mrs Ann Parkinson

On 11 March 1847, Mrs Ann Parkinson, aged 21, died forty hours after 'etherisation' performed by (an otherwise unidentified) Mr Dibben to facilitate the painless surgical removal of a tumour by the Grantham surgeon, William Robbs (1810- 1875), LSA, MRCS (Eng.).

A coroner's inquest was held. A number of possible causes of death were considered: the tumour's malignancy, the patient's health, the pre-surgery prognosis, the appropriateness of surgery, the delivery of the surgery, post-surgical shock, the decision to use ether, the ether's administration, and the patient's peculiar or idiosyncratic response to the ether, etc.

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The jury's verdict was "that the deceased Ann Parkinson died from the effects of the vapour of ether, inhaled by her for the purpose of alleviating pain during the removal of a tumour from her thigh, and not from the effect of the operation, or from any other cause" (TL.1; TMT.5). In Snow's view (2008, p.40), the reason no charges were pressed against Robbs was that his "right and honourable intentions [had been] to save the patient [from] the pain of surgery"; and, from this precedent, an (astonishing) collective immunity from prosecution was established, such that, "despite the many anaesthetic fatalities to occur during the nineteenth century, doctors were not held responsible for the vagaries of the anaesthetic's action, though they were beholden to administer the drugs as carefully as possible" (ibid.).

9.4 Braid on the Use of Ether

The Lancet commentator 'Scrutator' (1847) expressed concern that "one of the greatest blessings that has ever been bestowed upon the profession is in danger of having its fair fame undeservedly tarnished" by the (justified) verdict that Mrs. Parkinson's death "was caused ... by the inhalation of ether ... [striking] a certain amount of terror into the minds both of the public and of the members of the medical profession". And, given that, "had the ether been more judiciously administered the patient would in all probability not fallen a victim to its effects", he saw the

urgent need “to dispel as much as possible any unnecessary alarm that this case may have created”.

Driven by similar views on the need to encourage the widespread adoption of chemical anaesthesia, Braid wrote a second article (1847c), in which he expounded on the issues of dosage and patient preparation, attributing Mrs Parkinson’s death to the medical personnel involved not having adequately tested her responses to ether prior to her surgery. He also included recommendations for the “safe and efficient use of ether in surgical practice” based upon his extensive in-the-field anaesthetic experience.

9.5 Braid on the Potential for “Moral Abuse”

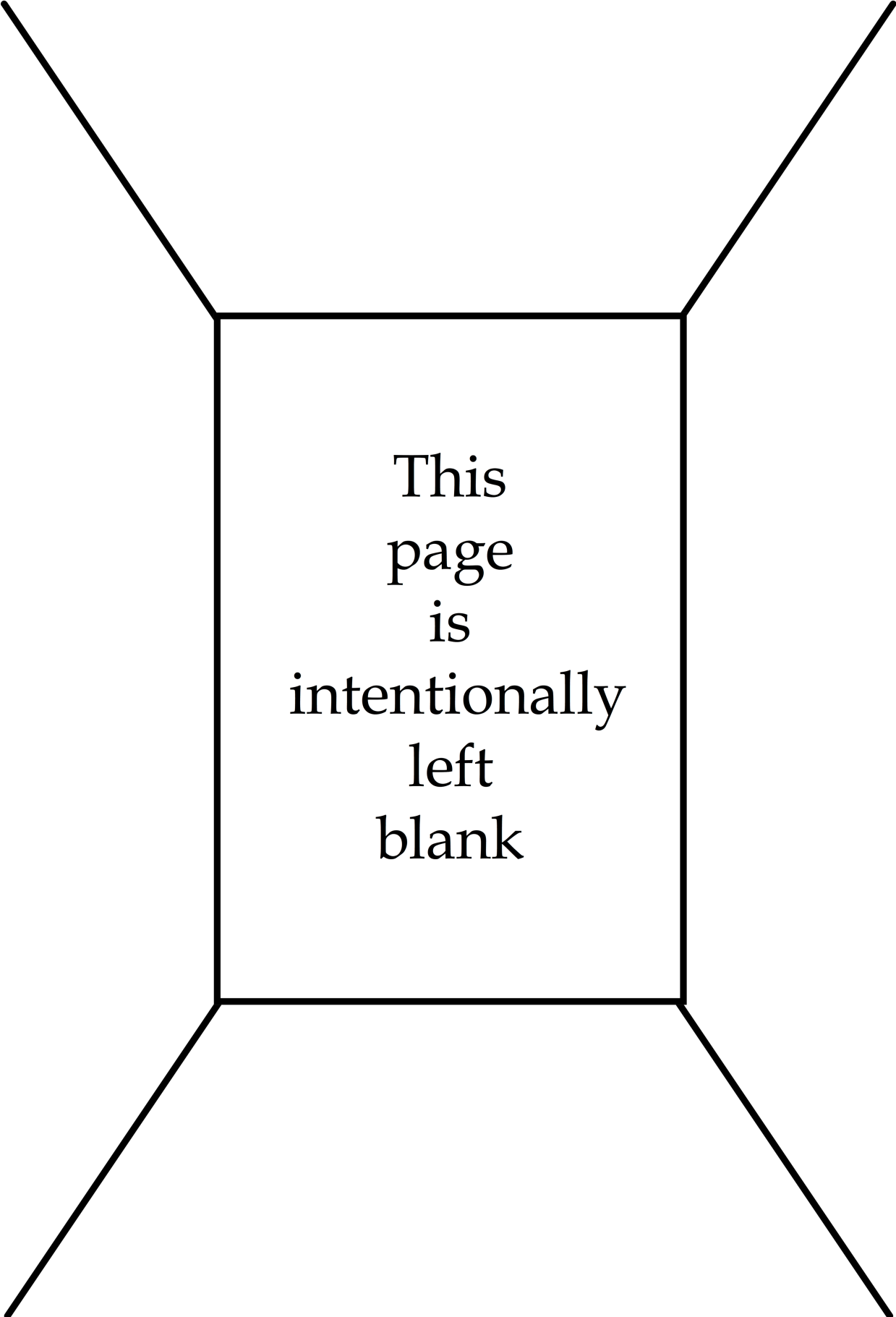
The title of Braid’s second paper “Observations on the Use of Ether for Preventing Pain during Surgical Operations, and the Moral Abuse which it is Capable of Being Converted to” (1847c) requires additional explanation, in relation to Braid’s self-perceived “duty” to draw “special attention” to particular worrisome aspects of ‘etherisation’ that had not yet been addressed by others:

There is one other caution which I wish to advert to, as it appears to me to be one of great importance, whilst, at the same time, so far as known to me, it has not yet been formally adverted to by any of the numerous writers who have shed so much ink on the ether question.

I refer to the *moral* abuse to which ethereal narcotism is capable of being turned by cruel and unprincipled individuals.

Much has been said and written on this point *against mesmerism* by dogmatic sceptics and unscrupulous fanatic opponents of mesmerism; but no such allegations have been made to the prejudice of the indiscriminate use of the narcotizing fumes of ether.

(James Braid [1847c, p.131])



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I beg leave to urge in the most earnest manner:—

1. That no important surgical operation should be attempted under ethereal narcotism without one or more preparatory experimental trials having been made prior to the day of operation.
2. That well washed and purified ether alone should be used for such purposes.
3. That the air breathed at first trials should always have a moderate charge of ether vapour, either by the temperature of the air being regulated, or the apparatus provided with double-working valves, so as to regulate the proportion of ether, the strength of which to be gradually increased, so that the proper strength and quantity should be determined on for each individual case prior to the day of operation.
4. That when any circumstance may render it necessary to perform the operation without delay, it should rather be done with the risk of slight manifestation of pain to the patient, than be carried so far as to endanger his ultimate safety.
5. That the tubes and valves of the inhaling apparatus should be sufficiently large and easy in their action to permit the respiration to be carried on with the least interruption possible.
6. That the nostrils should not be stopped for the few first respirations, so that the respiratory organs may become tolerant of the etherized air at a low charge, before being inhaled at what may be considered sufficiently strong for fully narcotizing the patient; and, when the respiratory organs are very irritable, a

Fig.9a. Precautions for the safe and efficient use of ether (Braid, 1847c, pp.131-132).

9.6 Sexual Assault

Braid recognised the opportunities that a fully comatose, oblivious, and post-procedurally unaware 'etherised' patient might present to the potential perpetrator: e.g., two 'etherised' young women were raped by a Parisian dentist, on consecutive days, in July 1847 (Hartshorne, 1854, pp.724-726). Braid recommended that, regardless of whether ether or *hypnotism* were involved, "a third party" should always be present (p.131) — not only safeguarding patients, but also protecting potential perpetrators from themselves. [These 'oblivious' circumstances are entirely different

from the cases of “rape under hypnosis” (see Temple, 1989) wherein the victim has an awareness of what is taking place but is unable to raise any physical resistance.]

In passing (and implicitly explaining the reason for his stressing the issue), Braid observed that, with ‘etherisation’, “on awakening, the patient had no remembrance whatsoever of the injury inflicted on her” – whereas, by contrast, in the case of *hypnotic anaesthesia*, “[no matter] however completely the transactions which took place during the sleep may be forgotten”, if the patient were re-hypnotised, she would be “[just] as competent to give accurate testimony of all that occurred in

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slight admixture of watery vapour should be used, as recommended by Mr Startin [viz., TMT.4].

7. That etherization should never be attempted in the case of **females, without the presence of a third party.**

8. That in no case should the narcotizing influence be carried, immediately preparatory to the operation, beyond that stage which previous trials have proved are readily recovered from.

9. That in protracted operations the patient should be caused to breathe a less concentrated form of the vapour after the first incisions; or made to breathe pure air and etherized air alternately, in such proportions as may seem requisite to keep the patient slightly under its influence, but carefully guarding against inducing such degree of collapse as may seriously interfere with the function of respiration; as, if that becomes seriously depressed, we have no certain means of rousing the patient and removing the impending danger, as it is through the lungs chiefly that the ether is eliminated from the blood.

10. That an operation should never be undertaken when the patient is only partially etherized, and still capable of feeling acute pain, as in such condition with, many patients, the pain and emotion and shock to the nervous system are likely to be greater than if they were in the natural state. (Braid's footnote: I strongly suspect that the fatal result of the Grantham case arose from this cause—not from **too much** of the ether, but from **too little** being used, when used at all.)

Fig.9b. Precautions for the safe and efficient use of ether (Braid, 1847c, pp.131-132).

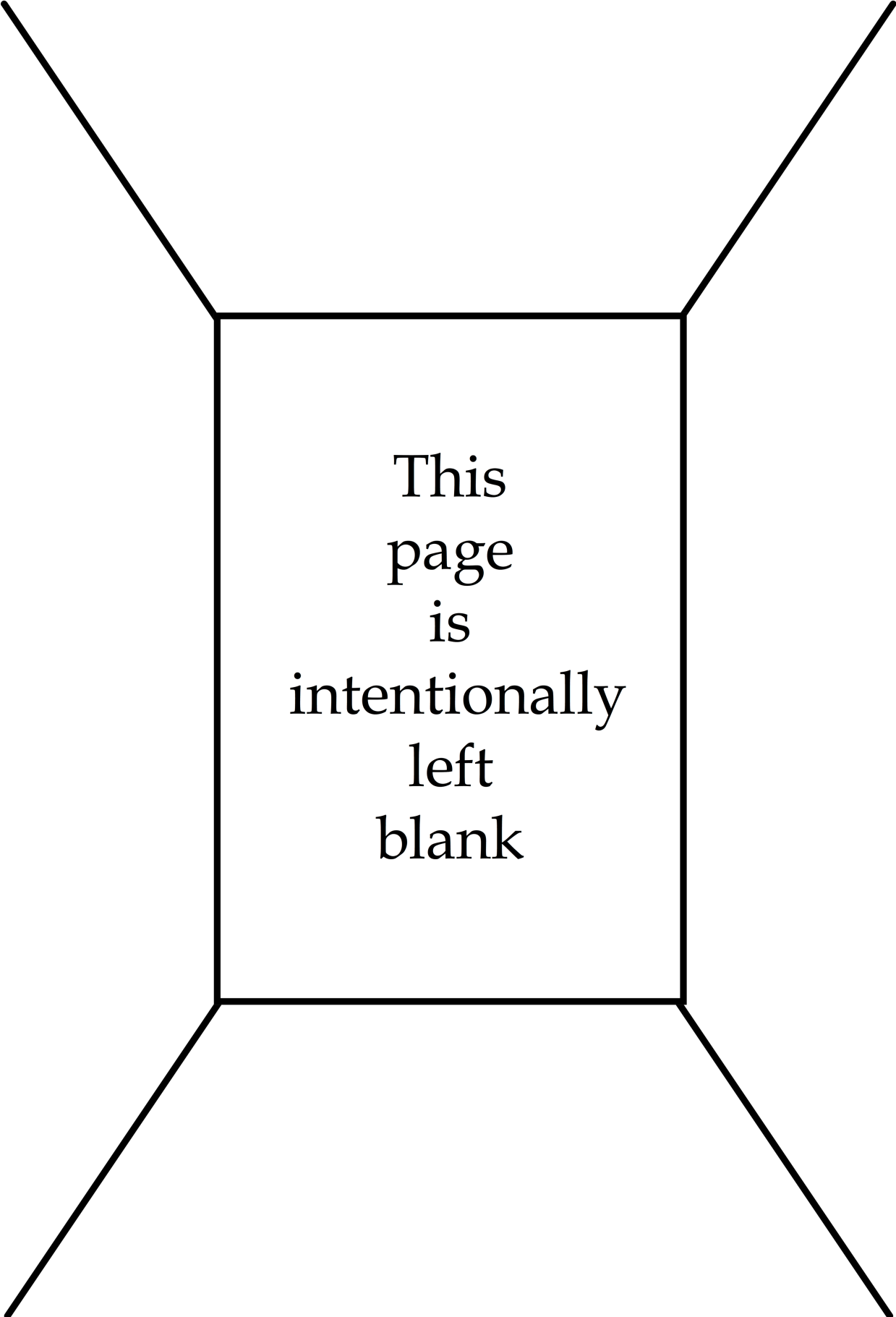
her former state of nervous sleep” as she would have been, in her “waking state”, to “testify to facts which occurred in her waking condition”, due to the state of “double consciousness” that was responsible for her anaesthesia (ibid.).

9.6.1 *The (Innocent) False Accusation of Sexual Assault*

The vivid sexual hallucinations that individuals can experience under anaesthesia – resulting in extremely distressing (to both parties), innocently and honestly made, but completely unfounded post-operative accusations of sexual impropriety, interference, and/or assault – are universally recognised, and their lack of objective truth is well-established (see Balasubramaniam & Park, 2003; Strickland & Butterworth, 2007). Braid drew attention to these, and the distress that they cause – once again stressing the importance of the presence of third-party witnesses.

9.6.2 *The (Malicious) False Accusation of Sexual Assault*

Over and above the need to protect oneself from the malicious false accusations of specific patients, Braid also warns of the need to protect oneself against the manufactured claims of those “wicked and malevolent individuals” who “assail the



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All the phenomena ... when attentively examined, will be found to consist in the occupation of the mind by the **ideas** which have been suggested to it, and in the influence which these ideas exert upon the actions of the body.

Thus the operator asserts that the 'subject' cannot rise from his chair, or open his eyes, or continue to hold a stick; and the 'subject' thereby becomes so completely possessed with the fixed belief of the impossibility of the act, that he is incapacitated from executing it, not because his will is controlled by that of another, but because his will is in abeyance, and his muscles are entirely under the guidance of his ideas.

So again, when he is made to drink a glass of water, and is assured that it is coffee, or wine, or milk, that assurance, delivered in a decided tone, makes a stronger impression on his mind than that which he receives through his taste, smell, or sight; and not being able to judge and compare, he yields himself up to the 'dominant idea'.

... it is not really the **will** of the operator which controls the **sensations** of the subject; but the **suggestion** of the operator which

Fig.10a. The effect of 'dominant ideas' (Carpenter, 1852a, pp.148-149).

characters of innocent people with crimes which they allege against others". Again, the only protection is the presence of a third-party witness.

9.7 Ether-Induced "Libidinous" Behaviour

Braid also alerts his readers to the distressing, unpredictable, and quite regular consequence of 'etherisation' – that of "libidinous manifestations" – which, in his long experience of *hypnotisation* and 'conventional' anaesthesia, he had never seen before: "I have witnessed the most intense manifestations of erotism arise spontaneously on several occasions during the primary or exciting stage of etherization, and that even [being manifested] in a patient of high respectability, and of the most modest and virtuous conduct, and pious disposition, in her general deportment when awake" (1847c, p.131).

[This is still an issue: Bricker (1988) reported the display of "amorous and disinhibited behaviour" in more than 12% of his 130 cases of "anaesthetics for minor gynaecological surgery".]

9.8 Braid's 'Ten Precautions'

Using his wide experience of the applications of hypnotism and ether, Braid ended his article with a valuable, detailed list of ten precautions to be observed for the safe administration of inhalation ether for surgical anaesthesia (see Figs.9a,b).

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excites a corresponding *idea*, the falsity of which is not corrected, simply because the mind of the subject, being completely engrossed by it, cannot apprehend the truth less forcibly impressed on it through his own senses.

Not only muscular movements, but other bodily changes, attest the reality of this domination; thus a [hypnotised] subject may be brought to feel the apartment so intensely hot, that a perspiration breaks out upon his skin; or he may be so persuaded of its coldness, that he forthwith begins to shiver; and sleep may often be induced, by assuring him that in a few minutes he will be obliged to give way to it.

In a case witnessed by [Carpenter], a lady to whom chloroform had been twice administered (so that she was aware of the mode of its action) was made to believe that she was again inhaling it; she soon passed into the usual insensibility, and remained perfectly unconscious for a few minutes, after which she came to herself in the manner she would have done if she had really been under the influence of chloroform.

Fig.10b. The effect of 'dominant ideas' (Carpenter, 1852a, pp.148-149).

10. *Dominant Ideas and the Ideo-Motor Principle of Action*

10.1 William B. Carpenter (1813-1885), MD (Edin.), FRS (Eng.)

In March 1852, Braid's friend and colleague, William Carpenter, addressed the Royal Institution of Great Britain (Carpenter, 1852a), proposing a mechanism through which Braid's *hypnotism* produced its effects. Carpenter attested to the "genuineness" of Braid's hypnotic phenomena based upon his own direct observations of Braid at work, stressing that the belief, held by some, that "*the will* of the [hypnotised] subject is entirely subjected to that of the operator," was completely wrong (p.147).

Firmly standing with James Braid and Thomas Brown, Carpenter explained (ibid.) that “the state in question” was entirely determined by the subject’s *dominant* ideas, “in which the voluntary control over the current of thought is entirely suspended”, and that, due to “the individual being for the time (so to speak) a mere *thinking automaton*, the whole course of whose ideas is determinable by suggestions operating from without” (see Figs.10a,b).

10.2 *The Ideo-Motor Principle of Action*

Carpenter introduced a new term, “*ideo-motor*”, ‘the guidance of movement by ideas’ (*idea + motor*), as well as the insightful top-down concept of an (otherwise unspecified: *hypothesis non fingo*, again!) “*ideo-motor principle of action*” – through which “ideas [became] the sources of muscular movement, independently either of volitions or of emotions” (1852a, p.152) – and, moreover, his “*ideo-motor* [144] *principle of action*” could “be applied to the explanation of numerous phenomena which have been a source of perplexity to many who have been convinced of their genuineness, and who could not see any mode of reconciling them with the known laws of nervous action” (p.153). Aside from the specific focus of his address – Braid’s *hypnotism* – he also identified “the moving of the ‘divining rod’, and the vibration of bodies suspended from the finger” (p.153).

10.3 *Pendulums, Divining Rods, Table-Turning, etc.*

Forty years earlier, in 1812, French research-chemist and scientist Michel Eugène Chevreul conducted a series of experiments that conclusively proved the motion of the hand-held pendulum was due to muscular movement. Chevreul’s findings were published twenty years later (Chevreul, 1833; translated at Spitz & Marcuard, 2001, pp.37-39). Also, as chairman of the 1853 French Academy of Sciences’ investigation of the movements of hand-held pendulums, diviner’s rods, and spiritualists’ table tops, he was the author of the committee’s report (i.e., Chevreul, 1854).

10.3.1 *Braid and Table-Turning*

Encouraged by the success of Michael Faraday’s de-bunking experiments (Faraday, 1853), Braid advanced his own “dominant idea” concept, operating via Carpenter’s “*ideo-motor principle of action*”, to explain the phenomena associated with the spiritualists’ *sensation du jour* known as “Table Turning” (e.g., Braid, 1853a,b,c,d, and, especially, 1853e).

10.4 *Absence of Participant Volition*

According to Winter (1998), the exceptional value of Carpenter’s stress upon the subject’s involuntariness was that, rather than dismissing “the [table-turning] experimenters of polite society ... as unscrupulous liars and frauds ... [Carpenter’s concept] removed from experimenters’

authority and responsibility the physical movements that supplied the evidence for their claims ... [thus providing] *a means of discrediting people without casting doubts upon their honor*"; thus, "[dealing directly] with a large population of witnesses whose veracity could not be questioned, but whose claims were unacceptable" (p.293, emphasis added).

10.5 Daniel Noble (1810-1885), LSA, MRCS (Edin.), MRCP (Lond.), MD (St. Andrews)

Learning of Carpenter's conceptual innovation, Daniel Noble, a Manchester surgeon, and friend in common of Braid and Carpenter, immediately proposed replacing "*ideo-motor*" with "*ideo-dynamic*"; on the grounds that "*ideo-dynamic*" was "more appropriate" (especially in relation to Carpenter's focus: hypnotism) because it was "applicable to a wider range of phenomena" (Noble, 1853, p.71; also see Noble, 1854). Both Carpenter and Braid immediately agreed.

10.6 The Ideo-Dynamic Principle of Action

Within months, however, Braid was remarking (1853e, p.38) that, although he had originally adopted Carpenter's term, *ideo-motor*, a term "admirably well chosen [to characterise] the single phenomenon which [Carpenter] was describing [in his lecture]" (i.e., "unconscious muscular motion from an idea, in contradistinction to [145] voluntary motion"), he was greatly impressed by Noble's sensible views and, upon further reflection, had concluded that,

[on the grounds that] a dominant idea might arrest as well as excite muscular motion and other functions, it was highly desirable to adopt some terms which might characterise the whole range of phenomena which might arise from dominant ideas in the minds of individuals.

I have now come to the conclusion that the following would be most appropriate for the purpose:

1st, To ideize, would be to induce the state of abstraction or mental concentration favourable for manifesting the power of suggestion, and of predominant ideas.

2d, Ideized would indicate the state or condition of the person when so impressed.

3d, Ideo-dynamic, or ideational phenomena, would indicate the character and intensity of the phenomena to be anticipated, according to the all-absorbing idea with which the mind of the subject was occupied, coupled with the known temperament and susceptibility of the subject.

It must be obvious that these terms would comprehend every conceivable variety of phenomenon, according to the function of the part on which the dominant idea of the subject was concentrated, and the liveliness of his faith.

(James Braid, *Appendix, Hypnotic Therapeutics* [1853e, p.38])

10.7 Dominant Ideas and Suggestion

In his *Hypnotic Therapeutics*, noting the importance of suggesting "a salutary idea of vigour and self-confidence" to a hypnotised patient – "which can be done by audible suggestions addressed to the patient in a confident tone of voice as to what *must* and *shall* be realised by the processes he has been subjected to" – Braid emphasised the influence of "the faith and confidence of the

patient" upon the capacity "of an expectant dominant idea" to either "excite" or "depress" their "natural function" (1853e, p.20): see Fig.11.

11. *Braid and the York Meeting of the Provincial Medical Association*

Having retired from lecturing to the general public, Braid continued to sporadically issue items on various aspects of his theoretical or clinical advances (e.g., Braid 1844/1845, 1848, 1851, 1853f, etc.); however, his most significant 'boundary-work' presentations were made directly to learned societies and scientific institutions, such as:

- 26 March 1851, *The Royal Institution, Manchester*, "Electro-Biological Phenomena Physiologically and Psychologically Considered" (see Braid, 1853e).
- August 1855, *Annual Meeting of the Provincial Medical Association, York*, "On the Nature and Treatment of Certain Forms of Paralysis" (see Braid, 1855a).
- September 1855, *Physiology Section of the British Association for the Advancement of Science, Glasgow*, "The Physiology of Fascination" (see Braid, 1855b).

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[In] the **hypnotic** or **nervous sleep** ... the active and concentrated state of mind engendered by the processes for inducing [it] are carried **into** the sleep, and, in many instances, excite the sleeper, without awaking, to speak or exhibit physical manifestations of the suggestions received through words audibly uttered in his hearing, or ideas previously existing in his mind, or excited by sensible impressions made by touches or passes of the operator, which direct the attention of the sleeper **to** different parts, or excite into action certain combinations of muscles, and thereby direct his current of thought.

.....

[There is no doubt that the resources of the hypnotic 'state'] may be rendered available for the relief and cure of various maladies, when skilfully directed and controlled.

By our various modes of suggestion, through influencing the mind by audible language, spoken within the hearing of the patient, or by definite physical impressions, we fix certain ideas, strongly and involuntarily on the mind of the patient, which thereby act as stimulants, or as sedatives, according to the purport of the expectant ideas, and the direction of the current of thought in the mind of the patient, either drawing it to, or withdrawing it from, particular organs or functions; which results are effected in ordinary practice, by prescribing such medicines as experience has proved stimulate or irritate these organs, thereby directly increasing their functions, or which produce the reverse effect, either by direct sedative action on the organs, or by diminishing the heart's action, or by stimulating some distant part, and thereby producing revulsion.

Fig.11. James Braid on 'suggestion', *Hypnotic Therapeutics* (1853e), pp.4, 8.

11.1 Provincial Medical Association Meeting at York (15-16 August 1855)

In August 1855, Braid was scheduled to deliver a paper to the *Provincial Medical Association's* annual meeting at York ("On the Nature and Treatment of Certain Forms of Paralysis") on his clinical application of surgery and hypnotism to the treatment of twenty different "chronic cases of long standing, which may have been preceded by structural lesion, effusion, congestion, or compression, but which morbid conditions have been relieved or removed by treatment and the salutary efforts of nature during a course of years, without a corresponding improvement having taken place in the voluntary power, and which may, therefore, be considered as the result of an impairment of functional power, independently of appreciable organic lesion" (1855a, p.848).

Nine (paralysis) cases were treated by surgery alone, another seven by hypnotism alone; and, as Braid remarked, the remaining four cases were presented as examples of the application of hypnotism in “the relief and cure of disease” (ibid. p.853).

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11.2 *The Association Medical Journal of 14 September 1855*

Unexpectedly, the meeting spent an extended time on pressing administrative matters (in particular, its decision to become the *British Medical Association*), and there was insufficient time left for Braid’s contribution to be delivered. The meeting formally requested its publication; it was published, four weeks later, on 14 September 1855 (i.e., 1855a).

[As it is slightly shorter and centred on a nonmedical topic (i.e., serpents *fascinating* their prey), I’ll make no further reference to Braid’s (‘hypnotically’ very similar) Glasgow contribution (1855b), delivered a month later.]

Braid’s York presentation is a well-polished version of his final theoretical position and his understandings of the efficacious application of hypnotism to therapeutic ends.

[For an extended treatment of related issues, written from a different perspective in order to unpack and explain the insights and discoveries of Émile Coué in relation to hypnotism, hypnotic ‘state’, dominant ideas, and hypnotic suggestion à la Braid, see Yeates (2016b), pp.35-42.]

11.2.1 “*On Hypnotism*” (1860)

Braid sent a (now lost) unpolished hand-written (in English) draft manuscript, dated 7 January 1860 – universally identified today as “*On Hypnotism*” (i.e., Braid 1860b) – to the French surgeon, Azam, three days before his (Braid’s) death on 25 March 1860. There is nothing of any relevance in its jumbled, incoherent content that advances any of the material Braid presented in either of his coherent 1855 articles. The manuscript was translated into German (Preyer, 1881; English version at Braid, 1969/1860) before it disappeared forever (the original English version was never published).

Dieses manuscript wurde später Herrn Dr. George M. Beard in New-York von einem Verwandten Azams zugestellt, von Hrn. Beard in August 1880 mir anvertraut.

Der Sohn, Dr. James Braid, erkannte sogleich die Handschrift seines Vaters, als ich ihm das Schriftstück vorlegte.

[This manuscript, which was recently given to [the eminent neurologist] Dr. George M. Beard in New York by a relative of Azam’s, was entrusted to me by Dr. Beard in August 1880. Dr. James Braid, Braid’s son, immediately recognised his father’s handwriting when I showed him the document.]

(William Thierry Preyer’s *Preliminary Remarks* [1881, pp.61-62, my translation])

The bi-lingual Preyer carefully checked the German translation against Braid's English original, and attested to its accuracy, asserting that nothing had been added to or omitted from Braid's original (Preyer, 1881, p.62).

[Preyer's German version was later translated into French (Braid, 1883, pp.224-262; English version at Robertson, 2009: note that Robertson has Belpeau, rather than Velpeau (p.159), having mistakenly read the V (ⱶ) in the fraktur script of Preyer's (German) preliminary remarks as a B (ⱶ).]

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12. Problems and Issues with the Term 'Hypnotism'

Braid (1855a, pp.851-852), summarises the history of his hypnotic enterprise, describing his research, observations, theoretical development, and his discovery of the ever-wider applications of hypnotism and hypnotic suggestion. In the process, he identifies concerns arising from unanticipated confusions embedded within his original *neuro-hypnotism*-centred terminology which only became salient (and describable) by his recent adoption of Noble's productive (*ideo-dynamic*) top-down concept.

12.1 'Hypnotism'

Before proceeding, it is important to recall that, at the very outset, Braid had a single goal: the refutation of Lafontaine's claims of 'magnetic' agency. With his *experimentum crucis*, Braid not only successfully de-bunked Lafontaine's claim of 'magnetic' agency, but also discovered an induction method that could induce an analogous condition. Given that the *most obvious feature* of a subject's post-induction condition was their '*somnolence*'; and, if the intention of Braid's adoption of the term *neuro-hypnotism* can be understood as something like '*the special somnolence DUE TO exhaustion of the optical nerves, rather than due to any other cause*' (NB: not '*somnolence of the nervous system*'), Braid's initial terminological choices were useful, distinctive, and rational.

12.2 First Issue: THE 'Hypnotic State'

Braid identifies the misleading nature of his initial choice to designate a subject's post-induction "condition" as "*THE hypnotic state*", when his subsequent experience had clearly demonstrated that "in fact, hypnotism comprises, not one state, but rather a series of stages or conditions, varying in every conceivable degree, from the slightest reverie, with high exaltation of the function called into action, on the one hand, to intense nervous coma, with entire abolition of consciousness and voluntary power, on the other; whilst, from the latter condition, by very simple but appropriate means, the patient is capable of being speedily partially restored, or entirely roused to the waking condition" (1855a, p.852).

12.3 *Second Issue: 'Hypnotism' implies 'Oblivion'*

Braid identifies a problem that all hypnotherapists encounter: that of a 'post-hypnotic' subject refusing to believe they have been hypnotised because they can remember everything that took place in the hypnotherapeutic interaction. Braid observes that, because "perhaps not more than one in ten ... of those who may be relieved and cured by hypnotic processes of diseases which resist ordinary medical treatment ... [ever] passes into the state of unconscious sleep during the processes they are subjected to ... the name hypnotism ... is apt to confuse them, and lead them to suspect that they cannot be benefited by processes which fail to produce the most characteristic and obvious indication which the name imports" (ibid.).

12.4 *Third Issue: Reversible 'Oblivion'*

In consequence of the preceding, Braid recommends restricting the use of the term *hypnotism* to those ("one in ten") cases that exhibit the "oblivious sleep" of "double [149] consciousness" – viz., "those cases alone in which, by certain artificial contrivances, oblivious sleep takes place, in which the patient has no remembrance, on awaking, of what occurred during the sleep, but of which he shall have the most perfect recollection on passing into a similar stage of hypnotism thereafter" (ibid.).

12.5 *Fourth Issue: Beyond 'Double Consciousness'*

It is important to note that, whilst Braid reports at some length in both his York and Glasgow articles (1855a, and 1885b) on hypnotism's therapeutic efficacy, he makes no mention at all of any of its separate anaesthetic applications.

Consequently, in those articles, when he speaks of "[using] the term *hypnotic coma* [to] denote that still deeper stage of the sleep in which the patient seems to be quite unconscious at the time of all external impressions, and devoid of voluntary power, and in whom no ideas of what had been said or done by others during said state of hypnotic coma can be remembered by the patient on awaking, or at any stage of subsequent hypnotic operations", he is speaking of the 'amnesia' that is an unintended and unsought consequence of what we might call 'standard' hypnotisation – in contrast to an intended and deliberately suggested post-hypnotic amnesia, or, even, the application of the so-called "hypnotic seal" to a hypnotised subject (e.g., Teitelbaum, 1965, pp.102-110).

12.6 *Fifth Issue: Implies Operator's 'Action at a Distance'*

In the manner in which they were expressed, Braid's earliest representations of the "*Neuro-Hypnotic state*" in, say, *Neurypnology* (1843), are classic cases of equivocation due to lexical ambiguity. He speaks of:

- (a) “*neuro-hypnotism*”, or “nervous sleep”, as “a peculiar condition of the nervous system, into which it can be **THROWN** by artificial contrivance” (ibid.p.12, emphasis added), and
- (b) a “*neuro-hypnotized*” individual as “one who has been **PUT** into the state of nervous sleep” (ibid., p.13, emphasis added).

From one perspective, and given that Braid was speaking of a knee-jerk kind of involuntary bio-physiological reflex that was “[artificially] induced by a fixed and abstracted attention of the [subject’s] mental and visual eye, on one object, not of an exciting nature” (ibid., p.12) Braid’s use of “**THROWN**” and “**PUT**”, with their shared implications of subject non-volition was correct – i.e., in the sense that the subject’s reflex-induced transfer from *condition*₁ to that of *condition*₂ was as sudden, uninhibited, and complete as the extension of one’s leg due to the knee-jerk reflex being activated.

However, from the non-specialised perspective of the average English speaker, it seems obvious that a thing that’s been “**THROWN**” somewhere must have been propelled there by someone, and that a thing that’s been “**PUT**” somewhere must have been placed there by somebody. Recognising the unintended confusion generated by this misinterpretation, Braid emphasises that his own experimentation had proved that, “[without] depending on any [external] influence ... proceeding from the body **[150]** of some other person”, and entirely due to “[a] *subjective* [viz., “of the subject”, not “the opposite of objective”], or ... personal influence existing within the patient’s own body” his patients could (*per medium* of Braid’s induction process) “*throw themselves*” into the hypnotic state “by their own unaided efforts” (1855a, p.851).

I maintain that the [hypnotic] operator does not communicate any surcharge of a magnetic, odyllic, electric, or vital fluid or force, from his own body to that of the patient, as the real and efficient cause of the phenomena which follow, in altering or modifying physical action, or curing disease; but I hold that [the operator] acts merely as the engineer, by various modes, exciting, controlling, and directing the *vital forces within the patient's own body*, according to the laws which regulate the reciprocal action of mind and matter upon each other, in the present state of our existence.

(James Braid [1855a], p.852)

12.7 Sixth Issue: Implies Imposition of Operator's 'Will'

Braid has this to say, from his entire fourteen years’ experience, in relation to the operator’s supposed powers to impose their will upon their subjects (as Lafontaine maintained), regardless of whether “near at hand or at a distance”:

I have never found any influence whatever to be exerted over the patient by my *silent willing*; but they seemed very quick to catch suggestions from the manners, looks, tones of voice, or physical manipulations of the operator; and to become affected according to the purport of what they *inferred* to be the *will* and *intention* of the operator, and that even when he might be *willing* the *very reverse*.

In short, my experience went to prove that the real efficient agency of all the different processes was merely as aids to assist the patient to induce in himself a state of mental abstraction or fixity of attention, in which the powers of his mind should be so absorbed by a fixed idea or given train of thought as, for the nonce, to render him dead or indifferent to all other considerations and influences which did not harmonise with the dominant idea in his (the patient's) mind at the time.

As a very strong corroboration of the correctness of this view of the subject, I may state the fact that, from the difficulty of fixing the attention of idiots [viz., those with a profound intellectual disability], all my attempts to hypnotise them have been unsuccessful, notwithstanding I have made many persevering efforts to do so.

(James Braid [1855a], p.852)

12.8 Seventh Issue: Inappropriate Super-Ordinate Term

As discussed earlier (Yeates, 2018b, pp.44-45) once Braid became fully aware of the impact of the work of the "hypnologist" Henry Gardner, he abandoned his initial generic, super-ordinate term, *hypnology* (i.e., *neuro-hypnology*, derived from the central term, *neuro-hypnotism*) and, in its absence, tended to use "hypnotism" in an additional and ambiguous way.

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Given his mature understanding of the *somatopsychic* and *psychosomatic* processes identified c.1810 by Thomas Brown that operated within (otherwise 'normal') individuals, Braid realised that, when viewed with the highest level of abstraction, his enterprise involved a domain that enclosed an extremely diverse aggregate of phenomena; and, from this, he concluded, "[nothing] could be more appropriate than [to employ] *psycho-physiology* ... as a *generic term*, which shall comprise the whole of these phenomena which result from the reciprocal actions of mind and matter upon each other" (1855a, p.852).

12.9 Eighth Issue: Identifies the 'State', but not its Function

From his studies with Thomas Brown, Braid was well aware of the effects of "dominant ideas" and, from his sixteen-years' experience, he was also well aware that hypnotism amplified their effectiveness.

I feel satisfied that the mental and physical phenomena which flow from [my hypno-therapeutic interventions] result entirely from the mental impressions or dominant ideas ... [regardless of] whether these dominant expectant ideas existed in the minds or the subjects previously, or were suggested to them after falling into the impressible condition by audible suggestions or [by] sensible impressions ... excited thereby in the minds of the patients changing or modifying the previously existing physical action, and the peculiar physical action thus superinduced, reacting on the mind.

(James Braid [1855a], p.852)

Several years ago, Dr. W.B. Carpenter introduced the term **ideo-motor** to characterise the reflex or automatic muscular motions which arise merely from ideas in the mind associated with movement, without any conscious effort of volition.

In 1853, in referring to this term, Dr. Noble remarked, "**Ideodynamic** would probably constitute a phraseology more appropriate, as applicable to a wider range of phenomena".

In this opinion I quite concurred, because I was well aware that an idea could **arrest** as well as **excite** muscular motion automatically.

Not only so, but my researches had moreover proved beyond all reasonable doubt that dominant expectant ideas could modify and control **every** other function of the human body, as well as muscular motion.

I therefore adopted the term **monoideo-dynamics**, because it seemed to me the most comprehensive and characteristic term which I could devise for indicating the true relations which subsist between the mental and dynamic changes and reactions which take place in **every** function of the body.

Fig.12. Braid's adoption of "*monoideo-dynamics*" (Braid, 1855a, footnote, p.852).

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In addition to his aforementioned failure with "idiots", due to their incapacity to concentrate, Braid also reported failures with mentally distracted otherwise 'normal' people, such as the case of one of his excellent subjects ("*sehr empfindliche Patientin*") who was completely unresponsive ("*völlig unempfindlich*") to hypnotising stimuli ("*hypnotisirende Einstuffe*") whilst in the delirium of a fever (Preyer, 1881, p.72).

As a consequence, Braid advocated replacing *hypnotism* with the far more appropriate term, *monoideism* – derived from Noble's work (see Fig.12) – to denote "the condition resulting from the mind being possessed by a dominant idea" (ibid.).

[N.B. the errors of Erickson, et al. (1961, p.6), "*monoeidism*", and Elman (1964, p.119), "*monodeism*", proliferate throughout the derivative literature.]

13. Braid's Final Theoretical Position

Braid's last coherent 'boundary-work' contribution, delivered in both his "York" (1855a) and "Glasgow" (1855b) presentations (and unaltered in the manuscript (1860b) he sent to Azam), clearly described his final theoretical position on a number of matters, and explained his new, distinctive terminology.

13.1 Psycho-Physiology

Certain states of our bodily organs are directly followed by certain states or affections of our mind; certain states or affections of our mind are directly followed by certain states of our bodily organs.

(Brown [1851], §.XVII, p.106)

Consistent with the c.1810 views of his Edinburgh teacher, Thomas Brown, and confirmed by his own extended experiences of the positive and negative influences of the *somatopsychic* and *psychosomatic* processes—both as causative factors in 'health' and 'disease', and as psycho-biological avenues through which both 'curative efforts' and 'pathological forces' could operate—Braid proposed the creation of an entirely new domain of natural philosophy (and, from this perspective, also a new focus for medicine), denoted *psycho-physiology*, of which *hypnotism* was an important sector.

13.2 "Dominant Ideas"

Consistent with Thomas Brown's views on the force of "dominant ideas", and how a "suggestive idea", once "dominant", became a "suggesting idea", and how this "suggesting idea", *per medium* of a "suggestive principle", became a "suggested idea", and how this dominant, "suggested idea" produced specific, biochemical, physiological, behavioural, motor, emotional, cognitive, intellectual, sensory, experiential and/or social changes, Braid attributed these effects to a new, *top-down* concept (adapted from that of Noble): a *monoideo-dynamic principle of action*—from which he also designated the consequent changes as being instances of *monoideo-dynamic change*.

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13.3 Monoideism

In order to sidestep the difficulties generated by the 'causative' designation *hypnotism* (i.e., a condition consequent upon the exhaustion of the nerves), with its embedded implications of 'somnia', especially in relation to the situation where completely 'hypnotised' subjects (the completeness of their 'hypnotisation' having been objectively demonstrated by the degree of their responses to the suggestions delivered) refusing to believe that they were "'hypnotised' at all, because they were 'awake' the whole time, Braid adopted the new 'functional' designation of *monoideism* (i.e., a mind possessed by a dominant idea) for the condition (see Fig.13).

It is also highly significant that Braid's mature "*monoideism*" position stresses the naturalness of an individual subject's mind being possessed of a single idea – and that situation being the consequence of innumerable mental arrangements – in contrast to his earlier representation of "*hypnotism*" as "a peculiar condition of the nervous system, into which it can be thrown by artificial contrivance" (*Neurypnology*, 1843, p.12), i.e., "*the hypnotic state*".

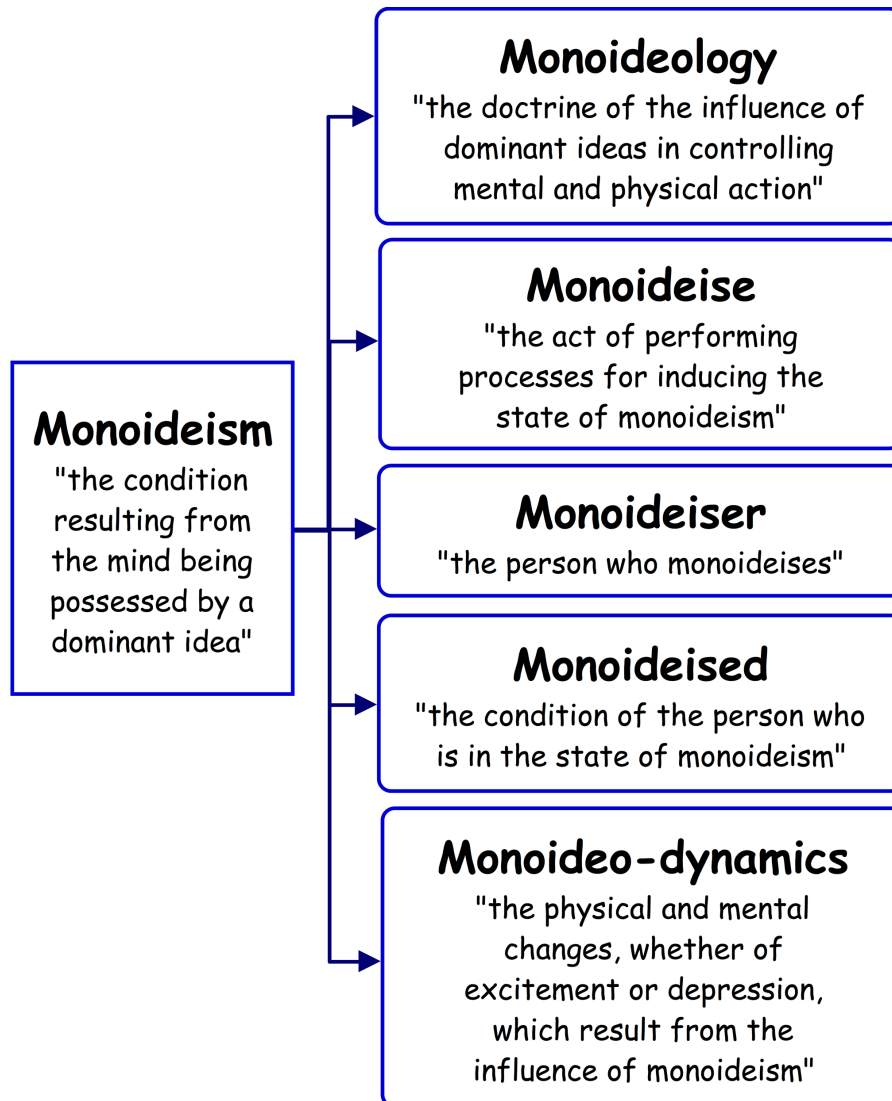


Fig.13. Braid's *monoideodynamic terminology* (adapted from Braid, 1855a, p.852).

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13.4 Awareness and Amnesia

Having identified the condition produced by a "*monoideisation*" process as "*monoideism*" – thereby, sidestepping the problem of claiming to have successfully performed an act of "*hypnotisation*" in the absence of 'somnia', the apparent defining condition of "*hypnotism*" – Braid identifies three distinctly separate manifestations of "*monoideism*" displayed by successfully "*monoideised*" individuals (i.e., with the 'success' being objectively indicated by their appropriate responsiveness to suggestion):

- (a) Full awareness of the entire hypnotic interaction—“*monoideism*”.
- (b) No awareness of the interaction; but, upon re-hypnotisation, full awareness of the entire previous hypnotic interaction (i.e., “double consciousness”)—“*hypnotism*”.
- (c) No awareness of the interaction; and, upon re-hypnotisation, still no awareness—“*hypnotic coma*”.

14. *After York and Glasgow*

Following the publication of his York and Glasgow presentations, Braid concentrated most of his attention on his private practice— and continued to do so until his sudden death on 25 March 1860.

[Continued in Part VI]

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Royal Melbourne Institute of Technology (RMIT). A Fellow and Life Member of the Australian Society of Clinical Hypnotherapy (ASCH), and the Australian Hypnotherapists' Association (AHA), currently Editorial Assistant at the *Australasian Journal of Philosophy*, and an Adjunct Assistant Lecturer in the School of Humanities and Languages at the University of New South Wales, Lindsay has been variously involved with hypnotism, hypnotherapy, and the training of clinical hypnotherapists for more than fifty-five years.

Following the award of MA for his interdisciplinary cognitive science studies in 2002, and a Graduate Diploma in Arts for his research into the mechanism of thought experiments in 2004, Lindsay was awarded a scholarship to undertake extensive post-graduate research into the events surrounding James Braid's discovery of hypnotism in Manchester in 1841. His acclaimed, groundbreaking doctoral dissertation, *James Braid: Surgeon, Gentleman Scientist, and Hypnotist*, was accepted by the examiners without correction. He was awarded a PhD in 2013.

Driven by a life-long interest in scientific hypnotism and suggestion—in particular, the nature, form, and content of efficacious hypnotic suggestion—Lindsay's professional career reflects his view that a major obligation of any scholar is not only to actively engage in the prolonged studies demanded for both knowledge creation, and the distillation and the refinement of the knowledge so created, but also, to diffuse and disseminate that knowledge. Lindsay's on-going studies, the refinement of his personal understandings, and the non-commercial sharing of his research, form a significant part of that long-term endeavour.

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