

A Tale of Two Objects: Electro-Convulsive Therapy, History, and the Politics of Museum Display

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This essay offers a biography of two Electro-Convulsive Therapy (ECT) machines: the Bini-Cerletti machine used for the very first shock treatments and now housed in the History of Medicine Museum, Rome; and a machine from Adelaide based upon H.M. Birch's original design and used to give the first shock treatments in Australia. In discussing these objects, I take a number of steps. Firstly, a short history of ECT introduces the major debates around the therapy and its history. Secondly, the machines are positioned within this history. Thirdly, the machines' function within the galleries is discussed. Finally, I ask how these objects might be presented in a way that better reflects their history and the history of psychiatry more generally.

Keywords: electro-convulsive therapy, material culture, museums and display, history of psychiatry, technology and innovation

Objects and their Lives

The subjects of this essay are two early Electro-Convulsive Therapy (ECT) machines that are now museum exhibits. In particular, it presents the machines as objects of material culture, revealing significant contours of the cultural domains of psychiatry and museums. It is, therefore, about the people to which these machines were connected, figuratively and literally, and the work that they did as therapeutic devices and now do as exhibits in museums. In effect, it presents a biography of the two objects. The first of the machines is the original. Designed and built by Ugo Cerletti's team (notably Lucio Bini), it is now exhibited in the Museo di Storia della Medicina (History of Medicine Museum) at Sapienza, Rome. It represents the ground zero of ECT and stands both for a significant local innovation and a troubled and controversial history. Displayed in the

museum as part of Sapienza's large history of medicine collection, its presence is made more potent by the fact it was first used in the psychiatry clinic a mere one hundred metres along the road.¹ The second machine represents the rapid diffusion of the therapy, as well as the barriers that existed to its uptake. Displayed in 'Mind: Enter the Labyrinth'—a permanent collection of the Museums Victoria—the machine was constructed by Best Bros., an engineering firm that made electronic instruments and equipment to order. This object was closely modelled upon future president of the Australasian Association of Psychiatrists and noted administrator Hugh McIntyre Birch's prototype and retained many of its belt-and-braces features, with parts cannibalised from other technologies.² Both prototype and its engineered successor were built in Adelaide, South Australia, in early 1941. Originally part of the Victorian psychiatrist's Charles R.D. Brothers' private collection, it was bequeathed to Museums Victoria in the 1980s, where many of its most notable objects were transferred to 'Mind: Enter the Labyrinth' (henceforth Mind Gallery), first opened in 2007.³

In discussing these objects, their provenance, and their representation, a number of steps need to be taken. First, I will provide a general introduction to ECT—its history and practice, and the disputes in which it became embroiled. Second, I will discuss the place these machines have within that history and how they relate to the subsequent development of the therapy. Third, I will attempt to explore how they function within the galleries (including how they are spatially positioned) and the meanings that might be made from these contexts. For ultimately both objects-as-museum-exhibits are only partially complete. Before they were collectors' items or exhibits in museums, they were a point of connection between therapists, nurses, administrators, and patients that embodied specific understandings about the nature of mental illness and its treatment. Now that the electricity has been cut off they are machines with a lesser purpose—shorn of the various agencies that gave them their power and meaning. Consequently, a fourth vista opens up; given this, how might we better display these objects in a way that more effectively links performance to history?

Underlying my analysis will be a particular challenge to the historiography of psychiatry. It often appears as if this history has been written through the lens of anti-psychiatry—the movement, or rather movements, that rejected the medicalisation of mental illness and the treatments that were wrought in psychiatry's name.⁴ As such,

the depiction of the major somatic therapies of the mid-century—malaria fever, lobotomy, insulin-coma, Cardiazol, and electro-shocks—has been routinely critical. In this account, these barbaric methods illustrate the inhumanity of psychiatry, revealing the hubris of the practitioners and their lack of regard for human life. Few have taken the nuanced view of Jack Pressman, who examined how many of these treatments operated as therapies of last resort when all else had failed.⁵ Rather, their existence is portrayed as an indictment of the specialty as a whole and have been used by historians like Andrew Scull as a means of questioning psychiatry's effectiveness today.⁶

ECT is exceptional in that of all the therapies listed above, it is the only one to have survived. Its use has been substantially modified and there are many within the specialty who would agree with Edward Shorter and David Healy that it is the 'penicillin of psychiatry'.⁷ And yet, stigma still surrounds its use, probably as a result of the criticisms that were levelled at the therapy during anti-psychiatry's heyday.⁸ That eighty years after the introduction of ECT uncertainty remains about its therapeutic mechanism, contributes to the notion that it remains dangerous. Many stories have accreted around its use, including a rollcall of creative 'martyrs'—Ernest Hemingway and Sylvia Plath are just two of the most famous artists to have undergone a course of shock treatment. But perhaps the apotheosis of the demonisation of ECT is the shocking of Randall McMurphy in Milos Forman's film version of Kesey's novel *One Flew Over the Cuckoo's Nest*.⁹ Here, crystallised in a few minutes of film, the violence inherent in the therapy was front and centre of stage, as was the fear that ECT was too often deployed as a disciplinary rather than therapeutic tool.¹⁰ The scene is nothing less than a synecdoche for the historical and contemporary applications of the therapy.

These negative associations appear to have influenced the display of the objects at Sapienza and Melbourne. However, I want to offer a more nuanced version of the therapy's history; one that is influenced, in particular, by Pressman's revisionist account of psychosurgery and Jonathan Sadowsky's even-handed analysis of the history of shock treatments in the USA.¹¹ As we will see, a critical analysis grounded in the historiography of these and other historians challenges the way that the objects are displayed and, perhaps, demands their reorientation.

Methodologically this essay relies upon a critical reading of literature regarding the relationship between history, material culture, and museum displays. It is also grounded in the historiography of

somatic therapies in psychiatry. I have been inspired, in particular, by the work of Catharine Coleborne and Dolly MacKinnon, particularly the volume of essays they edited. The attention that Coleborne's work has drawn to the way that material culture functions and the manifold readings that emerge from her wider work on psychiatric objects, has made this essay possible.¹² The analysis of the objects themselves has been based upon direct observation through extensive examinations of both their current museum housings and, in the case of the Bini-Cerletti machine, historically significant sites. The latter involved tracking the carriage of ECT's first patient from Termini Station to the psychiatric clinic, and walking several kilometres from Sapienza to the Testaccio slaughterhouse, now a post-industrial heritage site, attempting to identify the location of the original pig-testing.

Invention and Diffusion

ECT was invented by Ugo Cerletti and his team in late 1930s Rome, during a period of rapid and relentless innovation in psychiatry. New models of mental illness emerged. Some were essentially pessimistic—neo-Mendelian genetics combined with evolutionary theory gave considerable impetus to eugenics as a mode of eliminating mental illness from society.¹³ Freudian theory, while not quite so pessimistic, presented an early version of an evolutionary psychology that saw the neuroses produced by individual failures to adapt.¹⁴ At least Freudianism instituted an era of psychotherapy to mitigate these problems—ostensibly less violent than some of the more radical options on offer.¹⁵ Other aetiological theories were more optimistic, even if the results of therapeutic intervention were often unpleasant. Endocrinology not only suggested that madness was a product of hormone imbalance, it also pointed a way forward for treatment.¹⁶ The discoveries of Alzheimer seemed to suggest that brain diseases might really be the product of identifiable lesions, opening the door to therapies that might, at least, offer symptomatic relief. Amphetamines appeared to promise a revolution in treating a number of disorders, including melancholia.¹⁷ It was also a period when some of psychiatry's most notorious treatments were developed. Julius Wagner-Jauregg had discovered that malaria could mitigate the symptoms of General Paralysis of the Insane; Egas Moniz had pioneered the lobotomy, a treatment that was further refined and amplified by Walter Freeman's transorbital lobotomy; Manfred Sakel had developed insulin-shock in the early 1930s, which used the

newly discovered hormone to deprive the body of blood-sugar thus inducing a coma that sought to still the mind; whilst, Ladislas Meduna had found that inducing artificial epileptic fits in patients diagnosed with schizophrenia, first using camphor and later Cardiazol, could mitigate the worst of their symptoms—a theory that culminated in Cerletti's replacement of chemicals with electricity.¹⁸

It is worth exploring the therapeutic rationale behind shock treatment. Meduna was aware of research that suggested that epilepsy and schizophrenia were antagonistic—in other words, epileptics tended not to suffer from schizophrenia and *vice-versa* (a notion that rapidly became obsolete). This appeared to be confirmed by anatomical-pathological post-mortems on epileptic brains. He reasoned, therefore, that if he could induce artificial epileptic fits into schizophrenics, their symptoms might be mitigated. He settled upon using camphor, but then gravitated towards Cardiazol, which was more effective and less toxic. And whilst the results appeared promising, patients detested the treatment. From first ingestion to fit, the wait was as long as forty minutes. The patient experienced a rising tide of dread. The fits themselves were extremely violent and often resulted in bone fractures. Indeed, it was a violent therapy for all involved—practitioners, nurses, and patients.¹⁹

Cerletti, trained in neurology, accepted the rationale but was dissatisfied with the therapeutic mechanism. It occurred to him, through experiments upon dogs, that a fit could be induced through electric shock. Newly appointed to a professorial position at the psychiatric clinic, Sapienza, he explored the possibility of using electricity rather than Cardiazol. Knowledge transfer between the slaughterhouse and operating theatre was key—Lucio Bini, who was responsible for developing the technology, paid many visits to the Testaccio municipal abattoir to witness the use of electricity for stunning pigs before their slaughter. This allowed the development of the pincer electrodes that were integral to the application of electricity to the patient, as well as a means of calculating safe dosages.

The first treatment occurred on 11 April 1938 and its apparent success led to a rapid diffusion that was catalysed and shaped by Fascism and war.²⁰ Of course, Cardiazol had paved the way—everywhere it had been introduced, it was recognised as a significant addition to the psychiatrist's armamentarium—but the problem of the patient's dreadful anticipation was universal.²¹ Given these factors, it is unsurprising that ECT, which obliterated many of the problems of chemical shock, was welcomed enthusiastically. The medical press

did some of the work, although the importance of Lothar Kalinowski, who had been part of Cerletti's team, should not be underestimated. Kalinowski, originally from Berlin, had fled Nazi Germany for Rome, where he found a place on Cerletti's team and had been present at the first treatment. He forged a particularly close bond with Bini, and when he was forced to leave Rome, he travelled first to France, then the UK, and finally the USA, where he settled. His mission had two aims: to encourage the adoption of ECT; and to market the Arcioni unit, the industrially produced version of the prototype. He was largely successful in achieving his first goal, but the second proved much harder to realise. He failed to obtain patents for the machines in the UK and the USA; in each country, local engineering firms took up the challenge of producing their own, and these often improved upon the original.²²

But there were places beyond Kalinowski's proselytising reach, including Australia. Consequently, the introduction of ECT into Australia provides an interesting case study in the diffusion of psychiatric therapies—not least because its geographical isolation meant that the introduction of novel treatments was largely dependent upon the global medical press and the occasional visit of Australian psychiatrists to European centres to observe and learn new techniques. Reginal Ellery, the bohemian Australian psychiatrist, illustrates this perfectly. Ellery was one of the earliest adopters of malarial therapy, introducing it to Sunbury Asylum in the 1920s. Later, a visit to Europe to observe Sakel and Meduna was directly responsible for the introduction of insulin-coma and Cardiazol shock to Victoria. The rapid diffusion of these treatments to the major mental hospitals created fertile ground for ECT and while Ellery was not responsible for this particular knowledge-practice transfer, he preached enthusiastically on its behalf.²³

The medical press was equally important for encouraging ECT's adoption. In Adelaide, Birch, the superintendent at the Parkside hospital and by the late 1930s the state's superintendent of Mental Institutions, was excited by news of the technique. Learning of ECT, probably through a 1939 *Lancet* article,²⁴ he would not wait to import the technology and instead built his own machine, which became the prototype for production in Adelaide. Parkside was, therefore, the first place to introduce ECT in Australia, using a machine built from the bits and pieces of other technologies—a design that served as a template for the exhibit in the Melbourne Museum.²⁵

Birch gave an explicit account of the process:

at the present time two or three manufacturers in England are providing apparatus for use when convulsive therapy is indicated ... However, inquiries some twelve months ago showed that no apparatus could be obtained in Australia, yet, from the rather meagre technical information given in the various journals, the construction seemed to offer no insuperable difficulty.²⁶

He constructed a machine using scanty reports from the medical press and then had Professor Kerr Grant of the physics department, Adelaide University, ensure the safety of the unit. It was first tested upon rabbits and then introduced into Parkside, although not without concern:

It is confessed at once that the preliminary use on patients was accompanied by much apprehension—not, as with ‘Cardiazol’, on the part of the patient, but on the part of the operator.²⁷

The timing mechanism proved hardest to construct. The length of shock was critical to the therapy’s effectiveness, so the timer had to be accurate. A special transformer was constructed, with the time switch ‘an automatic telephone dial mechanism ... made available by the Postmaster-General’s Department’. Another area of difficulty was ‘measuring the resistance offered by the head’. But this too was overcome. Unlike the Italian version, the electrodes were applied using ‘a strong rubber band’. Working out the right dosage was a process of trial-and-error and was hampered by the inconsistency of the power supply to the theatre where ECT was conducted—apparently, the room was ‘adjacent to a large laundry with multiple motors either in action or starting and stopping’. Birch assured the reader that the power company had promised to rectify the problem, ‘but in the meantime it is found that during the lunch-hour of the laundry we are able to judge the dose with fairly reasonable accuracy’.²⁸

Concerns about patient safety directed the choice of the original subjects for treatment. ‘At first, patients were selected for whom the prognosis was practically hopeless and who had resisted all other forms of treatment’.²⁹ Once the safety of the procedure had been guaranteed, ‘we treated patients who had a better prognosis, but who nevertheless had had a considerable amount of treatment before reaching the mental hospital. Progress, therefore, was somewhat slow’.³⁰ Birch was equivocal about the effectiveness of the therapy for the first group of patients, who showed ‘no appreciable improvement’, although they had survived the treatment without ill effect. It was the second group, however, which showed the benefits: ‘quite a number

of these manifested outstanding improvement, despite the fact that, with one exception, the duration of their mental illness was well over one year'.³¹

Finally, it should be noted that the Birch machine was not the only departure point for ECT in Australia. The University of Melbourne enquired after purchasing one from Adelaide, but those that decided to obtain imported machines from the UK had to endure a long wait and pay a £150 for the privilege.³² Some psychiatrists and their institutions, it would appear, were prepared to follow this path, notwithstanding the supply problems created by a combination of high demand and warfare.

Transforming ECT: From Innovation to Stigmatisation

Our two objects, therefore, represent two connected but separate starting points for ECT. From each of these points, substantial innovations occurred in the application of the therapy over the succeeding years. Technologically there were significant developments in the machines themselves, including higher and better targeted dosages combined with more compact design.³³ Other developments mitigated the violence of the operation: curare and then other muscle relaxants were introduced.³⁴ Soon, patients were routinely sedated before their treatment (Cerletti had not used any form of anaesthetic).³⁵ Experimentation also occurred with the number of treatments given and the voltage passed through the skull. Notoriously this resulted in the introduction of 'regressive' ECT, which gave repeated doses in a short period, often reducing the patient to an infantile state (the rationale here was that patient's depatterned brain could be reconstructed).³⁶ 'Regressive' ECT was deployed in combination with deep sleep therapy by Donald Ewen Cameron in his brutal 'psychic driving' method, which was part-funded by the CIA, who were interested in its brainwashing potential. Furthermore, the target patient altered.³⁷ It became apparent that ECT was particularly effective at dealing with mood disorders, especially deep depression. It was less successful in some types of schizophrenia, although it continued to be used in tandem with other treatments for these diagnoses. Equally, it became embedded in the asylum regime, where its use as a therapy was often hard to disentangle from its disciplinary function—a factor that was emphasised by anti-psychiatrists, who were resolute

opponents of shock treatment.³⁸ And while it proved effective in treating certain classes of disorder, its side-effects, particularly memory loss, were of concern to many;³⁹ the accusation that it might cause brain damage was frequent and intuitively hard to dismiss.⁴⁰ Finally, the deluge of new psychopharmacological products, led by Chlorpromazine and Imipramine and followed by the monoamine oxidase inhibitors and selective serotonin reuptake inhibitors, appeared to crowd out ECT (although its supporters continue to argue that it is more effective and safer for treating ‘endogenous’ depression than drug alternatives).⁴¹

It was probably a combination of these factors, rather than resistance from analysts (Shorter and Healy’s belief),⁴² that led to the stigmatisation of the therapy, which gained momentum in the early 1960s with the anti-psychiatrists and their rejection of somatic treatments leading the way. Its portrayal in wider popular culture added to the disquiet. Kesey’s novel was important, but so too were works like *The Snake Pit* (turned into a film) and Plath’s *Bell Jar*, which implied that often ECT was a highly gendered practice.⁴³ By the 1970s the power of the stigma was such that Thomas Eagleton, the Democratic vice-presidential candidate in the 1972 US election, was forced to retire from the campaign when he admitted to having received the treatment.⁴⁴

The 1980s onwards saw a resurgence in ECT’s use and reputation, promoted by psychiatrists like Max Fink, a contemporary proselytiser on behalf of the therapy, and historians like Shorter and his co-collaborator Healy. Often this work has minimised the side-effects, particularly memory loss.⁴⁵ And while the rates of application have never reached the peaks of the 1950s, it is generally perceived to be a beneficial tool in the psychiatric toolkit. Yet it remains hard to shake the stigma; no doubt Forman’s version of *Cuckoo’s Nest*, has been partially responsible for this, although the very idea of passing a strong electric current through the brain is enough to concern many, not least because we still do not understand the therapeutic mechanism.⁴⁶

The Objects: Their Museums, Curators, and Publics

Both machines are significant to their wider collections. As Alessandro Aruta, one of the curators of the History of Medicine Museum in Rome, said: ‘we are proud of it’; although as we will see,

he has an equivocal view of both its use and display.⁴⁷ For Museums Victoria, amongst the many objects that could have been featured, it was the ECT machine that was chosen to represent the psychiatric collections on its website, and it was also selected as one of five objects from the collection to highlight the museum's treasures on the occasion of its 150th anniversary.⁴⁸ The machines appear to have two uses within the narratives of the museums. On the one hand, they serve as Ur-objects—their short lives as therapeutic devices stand for specific moments in psychiatric innovation. On the other, it is clear that the curators believed that the devices could stand for ECT across its entire history. As museum objects, they are expected to reach out from beyond the technological grave and, in a long after-life, open themselves up to being dialogically read by the publics that file past them. Here, there are two related tensions that require critical analysis: between the objects as therapeutic devices and as museum exhibits; and between the intentions of the curators and the readings of the publics.

As prototypes, the lives of these therapeutic objects were short. Neither would have been aware of the history that informs the cultural or medical representation of ECT. Rather, during their short therapeutic lives, they would have heard only revelation and praise. The Bini-Cerletti machine would have acted upon few patients while sensing the tide of optimism that it had produced in the local and international press. Much the same is true of the Birch machine, albeit in the local context of Australia. Indeed, some of the early accounts of electroshock's success were quasi-religious—the incurable cured and the dumb made to speak:

Sydney, Thursday—A woman who had spent 17 years in Callan Park Mental Hospital left the institution yesterday. She was restored to sanity by use of electric shock therapy treatment.⁴⁹

'I think we are going to win this war'. Just a few simple words, but recently they staggd [*sic*] Dr A.T. Edwards Superintendent of Callan Park Asylum because they were uttered by a 48-year-old patient who, due to a mental disorder, had been dumb for 30 years. This amazing transformation had been brought about after the man had been 'shocked'—into unconsciousness thrice by a newly imported electric convulsant therapy machine, which is expected to effect many cures of the mentally afflicted ere long.⁵⁰

Their careers in therapy ended almost as soon as they began. As a

prototype, the Bini-Cerletti machine evolved into a commodity produced and marketed by the Arcioni. The Birch machine was, for a short while, representative of Adelaide's ECT cottage industry, and became redundant as imported versions swamped the market. Their lives doing what they were originally intended to do were short and circumscribed. But they had new work: to represent in museums the history of the therapy they did so much to develop. As a result of this, they became caught up in the politics and ethics of display. Aruta, in a short reflection on the Bini-Cerletti machine was at pains to emphasise this point (albeit in a footnote):

The Bini-Cerletti electro-shock apparatus is one of the best examples of a museum object understood as *semioforo*, that is a vehicle of meanings, histories, scientific controversies, but, even before, of doubts and emotions.⁵¹

The Sapienza curators believed that the machine would elicit specific emotional responses, in fact 'more than other' objects in the museum. Ethically it was problematic, because they were unsure whether they could or should 'convey to visitors the anxiety and pain of the patients who once submitted to the device', while they were also aware that the feelings of those visitors were shaped by 'different loads of historical and contemporary baggage'. It was for this reason they described the exhibit as something of a 'golden [i.e., poisoned] chalice': 'how', they asked, 'can such an object be represented in an historically honest way?'⁵²

These different but inter-locking problems probably determined the anodyne labelling of the machine itself:

ECT develops out of studies and on the physiopathology of epilepsy and experimental epilepsy. After a long series of experiments on animals, U. Cerletti (1877–1963) tries out ECT in 1938 on a patient brought to his department in an apparent confusional state. The subsequent use of ECT in clinics demonstrates the effectiveness of Cerletti's technique in the treatment of depression and manic-depressive disorders.⁵³

The plaque and the machine are displayed alongside video images that illustrate the development of the treatment, particularly animal testing in the laboratory and at Testaccio, a move that appears designed to recognise both the human and non-human victims of ECT.

But ultimately, Aruta's answer to his ethical question is somewhat surprising. Having described the problems with the exhibit, he delved

into the hidden history of ECT, alluding to the Fascist social context that provided a stage for its innovation, before discussing Cerletti's own speculation about the therapeutic mechanism that underlay the success of ECT: the acroagonine hypothesis. Cerletti thought he had identified a new hormonal or humoral substance that was produced in the brains of electroshocked pigs. He therefore assumed that this putative substance, allegedly produced as a physiological reaction to the shock treatment, mitigated the symptoms of schizophrenia. It was highly speculative, remained completely unproven and as a research programme went absolutely nowhere. This history led Aruta to conclude that museum objects hid more than they disclosed: 'Like all artefacts in museums, ... the Bini-Cerletti electro-shock apparatus conceals a great deal of history. It "talks", but in languages not always easy, or simultaneously, to convey to visitors'.⁵⁴

Much the same could be said about the Birch machine's museum career. As part of the museum's Mind Gallery, it was placed alongside a newer Siemen's unit, used in Sunbury Hospital during the 1960s. ECT was incorporated into the section of the gallery that dealt with disorders of feeling, which rides roughshod over its early career as a specific treatment for Schizophrenia and its continued use in a variety of non-mood-related disorders. This illustrates one of the major issues with the gallery as a whole: often the objects do not fully speak to the section in which they have been placed. Thus, the ECT exhibit sits uncomfortably between a set of Convict Love tokens, which, we must suppose, represents normal feeling, and the discovery of lithium.⁵⁵ In many respects, it would have been better placed in the 'cognitive deficit' area of the gallery, where forms of psychosurgery and the history of psychopharmacology were displayed. Here, many of the treatments related to depression. For example, a cabinet contains a set of past and present psychopharmacological products, many of which were used to treat melancholia, depression, and anxiety; while one might conclude the picture of clothing worn in asylums by female patients, complete with a touchy-feely pad, was at best contingent to the area of cognitive deficit. One reading that suggests itself is that the Australian provenance of the Birch machine determined its placement next to Melbourne's crowning glory: John Cade's discovery of Lithium for the treatment of manic depression.

At the same time, the main plaque explaining ECT, its application, and its relationship to the other shock therapies, indicated the weight of history that the Birch machine was made to carry and is deeply illustrative of the tensions outlined above:

After the 1950s there was public anxiety about the possible misuse of ECT. Despite its controversial history, it is still administered, with consent, to people with severe depression who do not respond to medication. Its mechanism of action is unknown.

This discomfort was further compounded by the labelling of the units themselves:

Shock therapy units

Electroconvulsive (shock) therapy was used for the treatment of many mental illnesses. Two electrodes were placed on the scalp and an electric current was passed between them for half a second, producing a short seizure similar to those experienced by epileptics.

Despite its controversial history, it is still administered, with consent, to people with severe depression who do not respond to medication.

We are informed that the treatment was controversial and that it elicited considerable popular unease. What, however, do we make of the matter of consent; that today ‘it is still administered, with consent’? This is highly ambiguous. On the one hand, we might infer from ‘still’ that the therapy was *always* administered with consent. But the clause ‘with consent’ dangles uncomfortably, implying that there was a time when the therapy was used *without* consent, which might well go some way to explaining ‘its controversial history’. The similarities with Aruta’s concerns are striking. One might plausibly suggest that, in all probability, the curators at Sapienza and Melbourne expected visitors to view the machines through the lens of the shocking of McMurphy.

There are, however, added layers of complexity that emerge from the display of the Birch machine, which worked both for and against the dominant narrative strategies of the Mind Gallery. Nurin Veis, the curator in charge of developing the display, has a specific view of how a health-related museum exhibit should function:

Historically, the main purpose of medical collection displays in public museums is to tell public health stories of science and medicine, with the aim of informing the visitor about ways to improve their health and well-being.⁵⁶

The gallery embodies this perfectly. The narrative is underwritten by a set of ideas that celebrate the emergence of neuroscience: that mind is reducible to brain; that neuroscience holds the key to understanding normal and pathological brain functioning; that we

have reached a state where major psychiatric conditions (depression, anxiety, schizophrenia), can be effectively dealt with using therapies discovered by medical science; and that there should be no stigma attached to mental illness (and, therefore, if you are troubled by your mind you should not hesitate to seek help). Undoubtedly this is a manifesto with which most, if not all, would agree.

The question then arises as to the place of history in the overarching governmental narrative of the gallery. Veis clearly thought there was an important place for history. The plinth that opens the museum and the display of objects labelled ‘Past’, make it clear that the narrative is grounded in a Whig interpretation of history. In other words, the history generally functions in one of two ways. Either it is a stepping stone to the present day (and, therefore, an indicator of an unbroken chain of progress) or it illustrates the bad old days (the brutal and uncaring skeletons in psychiatry’s closet; quite literally so in the case of the ‘isolation cupboard’).⁵⁷ The objects, then, serve not only a didactic purpose, they do so by using affect to recruit the viewer to the gallery’s narrative (and the gallery is big on using affect for this purpose—dark light, film, sound, and touch are all deployed to elicit emotion). In these regards, it would have been far more convenient if the Birch machine could have represented a past that had completely disappeared, rather than one that persists in the present day. Instead, it sits uncomfortably positioned within a set of binaries: past and present; discipline or cure; good or bad.

On Objects and their Display: Reconceptualising the Birch Machine

The politics of display in museums is a complex matter and one that has, in recent years, received much attention.⁵⁸ In terms of our two museums, Sapienza uses a more traditional approach to the display of its collection, which, at least, is historically transparent. Here the objects are often placed sequentially, within specific chronologies, organised according to importance, placed in relation to one another. It is not unlike the natural history museums of the nineteenth century, whether they were arranged according to Linnaean or Darwinian principles. Ideologically, it shows its roots as a museum that grew out of the medical collections of the university itself.

The Mind Gallery is a different beast, designed to serve many publics. In particular, it seeks to engage with a wide range of groups, from the casual tourist through to the high school Victorian Certificate

of Education student. At the same time, its explicit public health function determines the way in which the gallery engages its visitors. Trying to construct a unified narrative appealing to these different domains was always going to be a difficult task and, as the positioning of the Birch machine demonstrates, one that is, on occasion, only partially successful. Furthermore, making the historical objects serve a public health function automatically constrains the history within a Whig straitjacket.

But there is one thing the machines have in common which deepens our understanding of the problematics of display. While they have been brought into relation with the other objects in the physical and discursive spaces of the museums, they lack something specific. In their first life, they were machines that created cyborgs, brought about by a specific set of social and therapeutic relations: the suffering patient; the orderlies that wheeled the trolleys into theatres; the nurses that restrained or comforted the patients; the anaesthetists that administered the muscle relaxants and the anaesthetics; the registrars that directed the shocks; and the psychiatrists who oversaw each performance. To live, these machines required bodies. How do you represent this within the context of a museum where, at best, physical engagement with the objects is circumscribed? Perhaps, in the case of the Bini-Cerletti machine, you recount the story of Enrico X, the first electro-shock patient, whose Lazarus-like recovery after an intense course of treatment allowed him to return to his native Milan and the arms of his loving wife (before relapsing a short while later).⁵⁹ Or, perhaps, you recover other stories of early patients and their experiences. At the same time, one should be able to transcend the demonisation of the practice and the narrative of the pain it caused, recognising, as well, the tangible excitement surrounding an innovation that, for a while, promised the mitigation of some of psychiatry's most intractable illnesses. Ultimately, one ought to do better than shrug and say that objects hide more than they can reveal.

And what of the Birch machine? Birch's published work failed to identify individual cases and so we are unable to reconstruct the suffering, treatment, and outcomes of those who were shocked in its first short career. At the same time, as the quotes above illustrate, the same excitement surrounded the early application of ECT in Australia as it did in Europe. But to fully comprehend the challenge faced by psychiatry during this period, thus producing a more nuanced account of ECT's history, we can start with an aesthetic comparison between the Birch machine and its quirky design and the sleek modernity

embodied by the Bini-Cerletti machine.

A comparison of the Italian design with the make-do-and-mend of its Adelaide impersonator opens up a story of desperation and ingenuity. There was the desperation to heal the sick, to cure them of intractable conditions that were often a sentence of life incarceration within a mental hospital. The war and the high demand for such a promising therapy made the technology hard to come by. Ordering from overseas was lengthy and problematic: ‘difficulty now is getting the machines’, as one report noted, ‘Broughton Hall Clinic (Sydney), for instance has had two on order for a long time, but owing to war conditions, delivery is held up’.⁶⁰ And Birch, in his healing mission, could not wait. He was impelled to build his own. Isolation created by war and the tyranny of distance met local ingenuity; telephone dials met carved wooden boxes and homemade circuits—all to bring the catatonic back to life. It was noted at the time that this was a very Australian story. As one contemporary newspaper report said of Birch’s efforts, the ‘result is a triumph for Australian ingenuity and self-reliance’.⁶¹ Perhaps the museum should have been a little less coy in its telling.

The tale of two objects, therefore, demands a different approach to the display of psychiatric objects. We cannot simply shrug our shoulders and say objects hide more than they disclose. Surely part of the task of the curator is to allow complex meanings to arise from visitor encounters with the objects on display. It is possible, in the context of Sapienza, that the strength of the Italian anti-psychiatric tradition conditioned the historical contextualisation of the therapy and it might, therefore, be unsurprising that Aruta placed so much emphasis upon the coercion and pain that are integral to the story of ECT.⁶² But in Melbourne a different tradition has shaped the politics of display. Here, the history of psychiatry becomes an adjunct to a story that is focused upon the alleged perfection of today’s understanding of the mind-brain and the treatments used when it goes wrong. Amongst other things, this progressive narrative functions to emphasise how we have become more enlightened and, therefore, more humane. Neither of these positions does justice to the complexity of either psychiatry’s or neuroscience’s development. Caught in the moment of the gallery’s opening, they do not adequately capture the nuanced biocultural position that is emerging at the heart of contemporary neuroscience.⁶³ But more importantly, there is a failure to address how many of the therapies—both historical and contemporary—displayed in the gallery are speculations founded upon suspect aetiologies;

an accusation that might be levelled at contemporary as well as historical therapies.⁶⁴ This, in itself, demonstrates the historical, philosophical, and ethical complexities at the heart of ECT; the continued existence of the therapy might, perhaps, encourage us to reinterpret the development of psychiatric therapies through the lens of pragmatism that perceives results as being more important than underlying (scientific) rationale. This destabilisation of the old heroic narrative that remains at the heart of the identity of both science and medicine, makes for a wicked challenge to the way historical objects are displayed, particularly when the laudable aim of the gallery is to promote public mental health. It is a challenge that is exacerbated by the continuing existence of a stigmatised and representationally overdetermined therapy that has not had the good grace to go gently into the dark night.

- 1 For the museum's image of the display of the Bini-Cerletti machine, <https://web.uniroma1.it/museostoriamedicina/archiviogallerie/galleria-fotografica/#/17> (accessed 15 November 2020).
- 2 For an image of the ECT machine on display in the Mind Gallery and a discussion of the provenance of the machine, see Nurin Veis, 'Psychiatric Services Collection in Museums Victoria Collections', <https://collections.museumvictoria.com.au/articles/1587>, 2004 (accessed 6 November 2019).
- 3 For a detailed description of the Brothers's collection see, Catharine Coleborne, 'Exhibiting "Madness": Material Culture and the Asylum', *Health and History* 3, no. 2 (2001): 104–17; it should be noted that the machine is part of a much larger collection (See *Ibid.*, which gives access to many of the items in storage), much of which is in storage but visible on Museums Victoria's website, and has been specially selected. The Gallery has changed over the years, with objects being moved in and out, but the Birch machine has remained in the display since the Gallery's opening.
- 4 The following works give a clear understanding of the complexities of anti-psychiatry: Liam Clarke, *The Time of the Therapeutic Communities: People, Places and Events* (London: Jessica Kingsley Publishers, 2003); Nick Crossley, *Contesting Psychiatry: Social Movements in Mental Health* (London: Routledge, 2006); D.B. Double, ed., *Critical Psychiatry: The Limits of Madness* (Houndmills, Basingstoke: Palgrave Macmillan, 2006); Michael E. Staub, *Madness Is Civilization: When The Diagnosis Was Social, 1948–1980* (Chicago: University of Chicago Press, 2011); Oisín Wall, *The British Anti-Psychiatrists: From Institutional Psychiatry to the Counter-Culture, 1960–1971* (New York, NY: Routledge, 2017). For an argument exploring how anti-psychiatry has impacted upon the historiography of psychiatry, see Volker Hess and Benoit Majerus, 'Writing the History of Psychiatry in the 20th Century', *History of Psychiatry* 22, no. 2 (June 2011): 139–45. Jonathan Sadowsky notes the impact of anti-psychiatry on writing history in *Electroconvulsive Therapy in America: The Anatomy of a Medical Controversy* (New York: Routledge, 2016), 18 (fn. 43).
- 5 Jack D. Pressman, *Last Resort: Psychosurgery and the Limits of Medicine* (Cambridge, U.K. ; Cambridge University Press, 1998).
- 6 Scull consistently has demonstrated his belief in the dangers of psychiatry and its approach to treating mental illness. See in particular, the final chapter of Andrew Scull, *Madhouse: A Tragic Tale of Megalomania and Modern Medicine* (London: Yale University Press, 2005); however, it is a view that is apparent in the argument of, *Madness in Civilization: A Cultural History of Insanity, from the Bible to Freud, from the Madhouse to Modern Medicine* (Princeton, N.J.:

- Princeton University Press, 2015).
- 7 Max Fink was at pains to emphasise that the therapy was not like penicillin, *Electroshock: Restoring the Mind* (New York: Oxford University Press, 1999), 19; this did not stop Edward Shorter and David Healy answering the question of their chapter title, ‘The Penicillin of Psychiatry?’, with a guarded ‘yes’, in their *Shock Therapy: A History of Electroconvulsive Treatment in Mental Illness* (New Brunswick, N.J.: Rutgers University Press, 2007), 3.
 - 8 Rafael Euba and Monica Crugel, ‘The Depiction of Electroconvulsive Therapy in the British Press’, *The Journal of ECT* 25, no. 4 (2009): 265–69.
 - 9 See, for example, Joanna Dowman, Abdul Patel, and Karim Rajput, ‘Electroconvulsive Therapy: Attitudes and Misconceptions’, *The Journal of ECT* 21, no. 2 (2005): 84–7; Doug Weir, ‘The Media’s Damaging Impact on Public Perception of Electroconvulsive Therapy’, *Healthy Debate*, 2013, <https://healthydebate.ca/opinions/the-medias-damaging-impact-on-public-perception-of-electroconvulsive-therapy> (accessed 7 November 2019); Sadowsky perceptively notes in *Electroconvulsive Therapy in America*, 115, that McMurphy seemed revitalised by his shock therapy.
 - 10 Milos Forman et al., *One Flew Over the Cuckoo’s Nest* (Fantasy Films, 1975).
 - 11 Pressman, *Last Resort*; Sadowsky, *Electroconvulsive Therapy in America*.
 - 12 See, for example, Coleborne, ‘Exhibiting “Madness”’; Catharine Coleborne, ‘Remembering Psychiatry’s Past: The Psychiatric Collection and Its Display at Porirua Hospital Museum, New Zealand’, *Journal of Material Culture* 8, no. 1 (2003): 97–118; Catharine Coleborne, ‘Collecting Psychiatry’s Past: Collectors and their Collections of Psychiatric Objects in Western Histories’, in *Exhibiting Madness in Museums: Remembering Psychiatry through Collections and Display*, edited by Catharine Coleborne and Dolly MacKinnon, Routledge Research in Museum Studies 4 (New York: Routledge, 2011), 14–29; Dolly MacKinnon and Catharine Coleborne, ‘Seeing and Not Seeing Psychiatry’, in *Exhibiting Madness in Museums: Remembering Psychiatry through Collections and Display*, edited by Catharine Coleborne and Dolly MacKinnon, Routledge Research in Museum Studies 4 (New York: Routledge, 2011), 3–13.
 - 13 Although it is important to note the distinction made by Mathew Thomson between the mentally disabled and the mentally ill and the fact that psychiatry was often contingent to the process of implementing eugenics in relation to mental disability. See Mathew Thomson, ‘Disability, Psychiatry, and Eugenics’, in *The Oxford Handbook of the History of Eugenics*, edited by Alison Bashford and Philippa Levine (Oxford: Oxford University Press, 2010), 116–33.
 - 14 Katja Guenther, *Localization and Its Discontents: A Genealogy of Psychoanalysis and the Neuro Disciplines* (Chicago: University of Chicago Press, 2015), 68–95.
 - 15 Although see Roy Porter, *A Social History of Madness: Stories of the Insane* (London: Weidenfeld & Nicholson, 1987), 210–30, for the dangers of psychoanalysis.
 - 16 Edward Shorter and Max Fink, *Endocrine Psychiatry: Solving the Riddle of Melancholia* (Oxford: Oxford University Press, 2010).
 - 17 Nicolas Rasmussen, ‘Making the First Anti-Depressant: Amphetamine in American Medicine, 1929–1950’, *Journal of the History of Medicine and Allied Sciences* 61, no. 3 (1 July 2006): 288–323; Nicolas Rasmussen, *On Speed: The Many Lives of Amphetamine* (New York: New York University Press, 2008).
 - 18 Jonathan Sadowsky, ‘Somatic Therapies’, in *The Routledge History of Madness and Mental Health*, edited by Greg Eghigian and Taylor & Francis (Abingdon: Routledge, Taylor & Francis Group, 2017), 350–62.
 - 19 Shorter and Healy, 21–30.
 - 20 Fascism did not appear to play a part in Cerletti’s research programme although Sadowsky notes that the Fascist context is often used by critics of ECT. See Sadowsky, *Electroconvulsive Therapy*, 33–4.
 - 21 Shorter and Healy, 37–41.
 - 22 Lara Rzesnitzek, ‘“A Berlin Psychiatrist with an American Passport”: Lothar Kalinowsky, Electroconvulsive Therapy and International Exchange in the Mid-Twentieth Century’, *History of Psychiatry* 26, no. 4 (2015): 433–51.
 - 23 Robert M. Kaplan, ‘Psychiatric Tourists in Pre-War Europe: The Visits of Reg Ellery and Aubrey Lewis’, *International Journal of Humanities Social Sciences and Education* 2, no.

- 11 (2015): 78–87.
- 24 G.W.T.H. Fleming, F.L. Golla, and W. Grey Walter, 'Electric-Convulsion Therapy of Schizophrenia', *The Lancet* 2, no. 6070 (1939): 1353–5.
- 25 Philip B. Mitchell and Ayse Sengoz, 'The Early History of Convulsive Therapies in Australia', *Medical Journal of Australia* 163, no. 11–12 (1995): 624–7.
- 26 H.M. Birch, 'Electrical Convulsive Therapy', *Medical Journal of Australia* 1, no. 25 (1942): 675–77, 675.
- 27 *Ibid.*, 675.
- 28 *Ibid.*, 677.
- 29 *Ibid.*
- 30 *Ibid.*
- 31 *Ibid.*
- 32 For reference to the Melbourne University order, see 'S.A.-Made Plant Being Used for Mental Disorders', *News*, 25 February 1942, 7; for the cost of an imported machine, see 'Hospital May Give Shock Therapy', *Newcastle Sun*, 24 November 1943.
- 33 Richard D. Weiner, 'The First ECT Devices', *Convulsive Therapy* 4, no. 1 (1988): 51–60.
- 34 Sadowsky, *Electroconvulsive Therapy*, 50.
- 35 Shorter and Healy, *Shock Therapy*, 131.
- 36 *Ibid.*, 136–41.
- 37 All of the major histories of ECT deal with this episode; for more detailed background on brainwashing and its relationship to psychiatry see Matthew W. Dunne, *A Cold War State of Mind: Brainwashing and Postwar American Society* (Massachusetts: University of Massachusetts Press, 2013) and Alison Winter, *Memory: Fragments of a Modern History* (Chicago: University of Chicago Press, 2012), 125–56.
- 38 Sadowsky, *Electroconvulsive Therapy*, 107–23.
- 39 Laura Hirshbein, 'Historical Essay: Electroconvulsive Therapy, Memory, and Self in America', *Journal of the History of the Neurosciences* 21, no. 2 (2012): 147–69.
- 40 Shorter and Healy, 131–5; Sadowsky, 132.
- 41 On the safety of drugs versus ECT see David Healy, *The Creation of Psychopharmacology* (Cambridge, MA: Harvard University Press, 2001), 42, a claim that is reiterated in many places in Shorter and Healy.
- 42 Shorter and Healy, *Shock Therapy*, 83–102.
- 43 Timothy W. Kneeland and Carol A.B. Warren, *Pushbutton Psychiatry: A History of Electroshock in America* (Westport, CT: Praeger, 2002), 58–64; Elaine Showalter, *The Female Malady: Women, Madness and English Culture 1830–1980* (London: Virago, 1987), 195–219.
- 44 Sadowsky, *Electroconvulsive Therapy*, 118.
- 45 *Ibid.*, 124–52.
- 46 The impacts of *Cuckoo's Nest* were documented relatively early on in George Domino, 'Impact of the Film, "One Flew Over the Cuckoo's Nest," on Attitudes to Mental Illness', *Psychological Reports* 53, no. 1 (1983): 179–82.
- 47 Alessandro Aruta, 'Shocking Waves at the Museum: The Bini–Cerletti Electro-Shock Apparatus', *Medical History* 55, no. 3 (2011): 407–12, 407.
- 48 Veis, 'Psychiatric Services Collection', <https://collections.museumvictoria.com.au/articles/1587> (accessed 15 November 2020).
- 49 'Electric Shock Treatment Restored Sanity', *Newcastle Morning Herald and Miners' Advocate*, 23 April 1943.
- 50 This was reported in many newspapers across Australia, including 'Speech Restored', *The Age* (Melbourne), 10 August 1943, 3; 'Dumb 20 Years, Now Speaks', *Newcastle Morning Herald and Miners' Advocate*, 10 August 1943, 1; 'Not So Dumb Now', *Northern Star* (Lismore), 10 August 1943, 5; 'Shocks Cure Dumb Man', *Telegraph* (Brisbane), 10 August 1943, 3; 'Speech Restored', *Daily Advertiser* (Wagga Wagga), 10 August 1943, 1.
- 51 Aruta, 'Shocking Waves at the Museum', 407.
- 52 *Ibid.*, 407
- 53 *Ibid.*, 408 (on the photograph).
- 54 *Ibid.*, 412.
- 55 These were coins inscribed with images and messages for loved ones who were transported

- as convicts to Australia.
- 56 Nurin Veis, 'The Ethics of Exhibiting Psychiatric Materials', in *Exhibiting Madness in Museums: Remembering Psychiatry through Collections and Display*, edited by Catharine Coleborne and Dolly MacKinnon, Routledge Research in Museum Studies 4 (New York: Routledge, 2011), 48–61, 49.
 - 57 Museums Victoria Collections <https://collections.museumvictoria.com.au/items/256738> (accessed 7 November 2019).
 - 58 Coleborne and MacKinnon, *Exhibiting Madness*. There is a large literature in this area of which the works of Tony Bennett and Sharon MacDonal are exemplary, for example: Tony Bennett, *Museums, Power, Knowledge: Selected Essays* (Abingdon, Oxon: Routledge, 2018); Sharon Macdonald, ed., *The Politics of Display: Museums, Science, Culture* (London; New York: Routledge, 1998).
 - 59 Healy and Shorter, *Shock Therapy*, 43.
 - 60 'Electric Shocks for the Insane', *Smith's Weekly*, 7 March 1942.
 - 61 H.C. McKay, 'Fits - Shocked Out', *Smith's Weekly*, 11 July 1942, 19.
 - 62 For Italian anti-psychiatry and its impact see John Foot, *The Man Who Closed the Asylums: Franco Basaglia and the Revolution in Mental Health Care* (Verso Books, 2015).
 - 63 See for example, Eric C. Shattuck, 'A Biocultural Approach to Psychiatric Illnesses', *Psychopharmacology* 236, no. 10 (2019): 2923–36.
 - 64 Contemporarily, I am thinking of the various theories predicated upon neurotransmitters, particularly the serotonin theory of depression, which remains controversial.



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Title:

A Tale of Two Objects: Electro-Convulsive Therapy, History, and the Politics of Museum Display

Date:

2020

Citation:

Bradley, J. (2020). A Tale of Two Objects: Electro-Convulsive Therapy, History, and the Politics of Museum Display. *Health and History*, 22 (2), pp.26-45.

<https://doi.org/10.5401/healthhist.22.2.0026>.

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