

# Chance, circumstance and folly

## Richard Berry and the plaster anatomical collection of the Harry Brookes Allen Museum of Anatomy and Pathology

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Promoting public interest in anatomy, a profession notorious in the popular imagination for its mad surgeons and body snatchers, was a relatively simple task in the 19th century. Every week exhibition halls, public museums and sideshows across Europe and America were crowded with people indulging in a little 'rational amusement'.

Ranging from moderate to farcical in anatomical accuracy, these public displays were among the few places where, ideally in separate parties of ladies and gentlemen, the wonders of the human body were visible, through large collections of wax anatomical models. As a colonial outpost in 1861, Melbourne was even the location of a public anatomical museum, two years before the establishment of the University of Melbourne Medical School.<sup>1</sup>

When Melbourne's first professor of medicine, George Britton Halford (1824–1910), arrived at the University in 1863, the collection he brought with him to found the University's first medical museum was of a more educational nature. Models used in medical education presented the body in a clinical context; beyond the occasional presentation of physiological deformity—by which anatomists were as enthralled as the public—the type of anatomical model required for teaching differed in

content and style from those used for public amusement.<sup>2</sup> Students were expected to learn from these materials and despite the sensational aspects of public amusement, the requirements of medical schools created a respectable and profitable market in anatomical model-making.

This tradition of collecting was sustained at the University of Melbourne well into the 20th century, enabling the Harry Brookes Allen Museum of Anatomy and Pathology to amass a large collection of wax, papier-mâché and plaster anatomical models. Dating from the 19th and early 20th centuries, the models are valuable assets to the classroom in illustrating the three-dimensional nature of human anatomy, and may also be valued for their depiction of a history of medicine. Each model displays aesthetics concurrent with movements influential to the development of medicine. For example, one visual theme shared by all the plaster collection is simplicity in design. As the explicitness of popular exhibits was tailored to tantalise a curiosity in the taboo, scientific apparatus in the late 19th century promoted a pared-backed sobriety as the visual ideal of scientific medicine. These values are best exemplified by the plaster anatomical model collection, which has disposed

of unnecessary ornamentation, exotic illustrations and expressive figurines. Unchallenged by what art historian Deanna Petherbridge labels the 'frivolity of art', the new clinical, objective style of model produced for medical institutions 'legitimised notions of "serious" science and powerful medicine', reclaiming the use of anatomical models for medicine.<sup>3</sup>

As the first collector of anatomical specimens and apparatus for the University of Melbourne, Halford's work was hampered by difficulties in funding, lack of staff and geographic isolation. His successor Harry Brookes Allen (1854–1926), after whom the current museum is named, chose to focus on pathological specimens, leaving the anatomical department somewhat neglected. Australian universities were poorly funded in comparison to the prestigious schools of Europe, which had outstanding collections of anatomical paraphernalia. It was not until the appointment of Richard Berry (1867–1962) as its first chair of anatomy, that the flagging fortunes of anatomy at Melbourne were revived.

Richard Berry's tenacity in collecting is well documented.<sup>4</sup> Arriving in Melbourne in 1906 with a large assortment of bones, he oversaw the reconstruction of the anatomy

Doris McKellar, Professor R.J. Berry, first Professor of Anatomy at the University of Melbourne, 1906–1929, c.1915–1918, gelatin silver print, 13.5 x 8.0 cm. UMA/I/1976, University of Melbourne Archives.

department, contributing models and preserved specimens to the museum. He was also influential in the creation of a physical anthropology collection. This collection enabled Berry to combine his expert skills in anatomical examination with the disciplines of anthropology and eugenic theory; founding studies in the 20th century that nonetheless blossomed amongst the unfamiliar Australian landscape with its exotic flora and fauna. The indigenous population particularly intrigued Berry. As naturalists had collected the exotic flora and fauna of the bush,



Richard Berry's contribution to the collections of museums and scientific institutions would literally be counted in heads. He was fond of bushwalking, and the wilds of Tasmania held an abundance of interest, both for this activity and on professional grounds. In the expeditions of one year, he and a colleague were able to 'discover' 42 crania to be distributed to museums in Australia and abroad.<sup>5</sup>

The suspect origin and ethical dilemma of Richard Berry's collecting activities are not isolated to one character in University history; rather, those influences that shaped his actions were also responsible for significant directions in early 20th century medicine. Close inspection of the historical anatomical model collection in the Harry Brookes Allen Museum provides a greater understanding of early medical education at Melbourne. The creation of anatomical models was a late manifestation of a shared history of art and medicine. The discussion that follows focuses on three significant examples from the plaster collection, and how the story of their origin and the development of artificial anatomy in medical education mirror the influences on education, experimentation and sometimes folly at the University of Melbourne.

## A European influence

Paris in the 19th century was a city of revolution, art and culture, and coincidentally the capital of anatomical model-making. When European medical schools required artificial anatomy, their academics would descend on the French city to buy, direct from the manufacturers, the world's best and most expensive wax and papier-mâché models. Names such as Deyrolle and Auzoux promised the latest in scientific knowledge and technological advance, producing models of the highest quality. One such academic was Richard Berry, who travelled to Paris in 1896 during his time as a Fellow of the Royal College of Surgeons in Edinburgh:

Paris was then, the home of the biological maker of models, and to Paris I had to go ... Various portions of the Human body were reproduced in wax, papier-mâché, and such like, and were often more realistic as they were built up on the actual bones of some long since dead Parisian.<sup>6</sup>

Conducting the business of modernising his department by day, before descending upon the famous nightlife of Montmartre, this trip

would be but a pleasant memory when Berry finally arrived at the bare and almost bankrupt University of Melbourne in 1906. Over time the anatomy department at the University would certainly not overlook the exquisite and expensive Parisian models, yet without a ready supply of teaching apparatus or money, more economical alternatives would characterise purchases during Berry's tenure. As the prestigious reputations of the Parisian model-makers enabled them to easily dominate the artificial anatomy market, other European companies competed by offering more affordable options. Across the border, German manufacturers aligned themselves closely with universities in a different approach to anatomical model-making. In no other country had the transformation of modern medicine been as rapid or complete as in the German states from 1820 onwards, and with this medical revolution came entrepreneurs, keen to supply the growing medical schools and capitalise on the buoyant positivism for the new ideals of science. Appearing in a secondary role to that of well-known German anatomists, the model-makers traded on fine workmanship and an authorised medical content. One famous union was between Leipzig University and



the model-making company Steger. Producing a range of affordable models for use by medical schools in the latter half of the 19th century, the sculptor Franz Josef Steger had previously collaborated with pathological anatomist Carl Ernst Bock (1809–1874) before continuing his university association with Wilhelm His (1831–1904). Both in research and in public deeds, Wilhelm His was an academic powerhouse. In one notable instance, he used forensic anatomy to locate the whereabouts of composer Johann Sebastian Bach's body, which had been lost amongst the graves in Johannis Cemetery.<sup>7</sup>

Wilhelm His (anatomist) and Franz Josef Steger (sculptor), model of a female, dissected to show organs after the spine has been separated, 1872–1904, plaster of Paris, paint, wooden base, copper plaque. Harry Brookes Allen Museum of Anatomy and Pathology, University of Melbourne.

Appearing in international catalogues and German shops of scientific apparatus, Steger was a name that was well regarded yet lacked the allure of the French companies. Trading on the scientific ideals championed by Wilhelm His and the German university system, Steger's were relatively simple productions compared to other anatomical models. Without the staggering production processes of wax and papier-mâché, costs were kept low, effectively eliminating their desirability to those buyers looking for extravagant showpieces. 'Sensible models for sensible men' could well have been a motto for Steger's plaster production. Following a process of dissection very similar to other anatomical preparations, plaster models, particularly the gypsum (plaster of Paris) casts, could be made rapidly and in multiples. With the skill necessary to hasten the process of accurate cast-making, the most labour intensive element of production—apart from the anatomist's dissection—was the paintwork. As an experienced model-maker it is unlikely that Steger would have been forced to consult often with the anatomist on accurate colour and fine detailing, and once mounted on an appropriately understated stand the model was complete. The professional

Franz Josef Steger, model of thorax and abdomen, date unknown, plaster of Paris, paint, wooden base. Harry Brookes Allen Museum of Anatomy and Pathology, University of Melbourne.



output of the Leipzig workshop, in volume and variety of anatomical models, attests to Steger's skill and ingenuity.

The main problem with orthodox anatomical models was their inexact detail. Although fine paintwork could create an effect similar to human organs, it could not replicate their texture. Nor were those model-makers truthful in their representations of the human bodies as imperfect messes. By contrast, in taking a corpse, freezing it, then slicing the torso precisely down the centre, Wilhelm His enabled Franz Steger to make a precise cast, illustrating the natural placement of organs, muscles and bones. Even the nature of organs, whether they were solid or cavity, such as the heart and stomach, was visible. The hyper-realism of Steger's frozen cast models, produced in an age where photography and other means of reproduction and replication were inexact, is a true credit to his skill as a craftsman. Science had overcome the vagaries of artistic interpretation, and it was through the anatomist's preparation, not an artist's impression, that Steger models presented the human body to generations of students in rational scientific terms.

The University of Melbourne purchased eight His-Steger models.

Fortunately its collection of plaster models, unlike those of the universities of Leipzig and other German cities, remained intact after the catastrophes of war in the 20th century. Including examples of both free-form sculpture and direct casts, the Steger collection exemplifies the union between anatomical model-makers and universities that existed in the late 19th century. This was a period when anatomical manufacturers subdued any creative flourishes in favour of science, famous men, and new techniques, all in their quest for accurate representation.

### **An Australian model**

Richard Berry's arrival in Australia in 1906 was an inauspicious event. On board the *Orient* docked at Port Melbourne, two Melbourne graduates with an interest in anatomy greeted him. Compared to congratulatory dinners he had received upon his appointment in Edinburgh, their curious questioning on whether he might lift anatomy 'out of the bog, in which', according to their accounts, 'it had too long wallowed' raised immediate suspicion.<sup>8</sup> It was February and amidst the 40 degree swelter Berry was soon able to absorb the shortcomings of the University of Melbourne: 'Notwithstanding ... I determined to go and see for myself if

the anatomy department was as bad as was depicted to me. It was worse. It contained literally nothing, not even a skeleton, though later I discovered quite a lot in the cupboard.'<sup>9</sup>

Finding the grounds similarly to his distaste, the new professor was left to ponder the wisdom of his immigration. With his career centred exclusively on Europe, Berry had flourished within an environment of progressive scientific medicine. Trips to Paris and Germany were regular features of his research, and adjusting to the difficulties of colonial academia brought out the more astringent aspects of Berry's personality. Regarded as an excellent teacher, he was nonetheless a stern character with a biting sense of humour.

From the Royal Colleges of Edinburgh to an anatomy department adorned only with the peculiar brownish marks of a student 'meat fight', Richard Berry's initial culture shock would transform into forceful determination to revive the study of anatomy at the University of Melbourne.<sup>10</sup> Within a month of his appointment a report on the material requirements of anatomy was submitted to the Council of the University and the Finance Committee.<sup>11</sup> To teach anatomy without visual aids was a challenge, and nearly impossible for students to

Richard Berry, *Male, age 2 years, 7 months*, model of an infant's torso, 1906–1929, plaster of Paris, paint, wooden base, height: 42.0 cm. Harry Brookes Allen Museum of Anatomy and Pathology, University of Melbourne.

follow. From his own student days, Berry recalled skipping uninformative lectures, resorting in a panicked rush at exam time to anatomical books. 'That a student would always follow the man who could give him what he sought—good teaching,' was a conviction surely frustrated by the slow processes of bureaucracy hindering the refurbishment of the department.<sup>12</sup>

Berry coped remarkably well in these first years and was slowly granted funds to renovate the department. His career at the University of Melbourne progressed to becoming Dean of Faculty, where he was extremely influential in guiding the direction of medical education and ultimately became responsible for expanding the collection of artificial anatomy. He was even able to contribute to the model collection with one model that, although misshapen and poorly finished, is extremely precious to the story of anatomy at Melbourne. The model, *Male, age 2 years, 7 months*—*R.J.A. Berry* is the only complete plaster anatomical model in the collection that was made at the University.

Compiling a collection of expensive overseas models, it was natural for Berry to utilise the resources available to experiment in



creating his own models. Understandably, Berry's effort is the least technically accomplished example in the collection. It neglects the association of over 400 years between art and medicine in the creation of anatomical models. Another notable difference is the subject Berry chose. Anatomical representations of children are less common than of adults, and most often deliberately stylised. Portraying a two-year-old child in the manner Berry chose is almost unheard of. The child's torso, removed of skin, arms,

legs and head, is barely recognisable to untrained eyes, following a style of sanitised anatomical representation popular from the early 19th century through to today. Intended to separate serious, supposedly impartial medicine from human emotion, the model almost succeeds in presenting a purely objective vision of a human body. Its flaw in this regard however is its pitiful size. Only 30 centimetres in height, it reveals the human reality of anatomical study.

Until recently, histories surrounding the dissection of human bodies at the University of Melbourne have skimmed across the topic of procurement. From discussing the tight government constraints regulating the flow of dead bodies into the medical school, to the almost farcical theft of human tissue by George Halford, there has been little success in overriding the sense of technical procurement and gallows humour dominating discussions on human dissection.<sup>13</sup> Most commonly the lack of bodies to dissect has been the feature of early stories from the anatomy department, and only in Ross Jones' *Humanity's mirror*, the most recent and thorough work discussing the study of anatomy at the University of Melbourne, has a sense of humanity been restored to cadavers and medical specimens. Balancing the

quarrels of academics and medical school administration, Jones introduces the character of James Halferty, a man whose body became the first recorded subject of a student dissection. Over a century after his body involuntarily became the property of science, restoring to James Halferty his name is a small but significant gesture that penetrates the veil of scientific anonymity,<sup>14</sup> a veil that, although imposed to protect both the identity of the subject and the sensibility of the anatomist, encouraged the view of the dead body as a commodity.

It is with regret that I am unable to restore a name to the child who died aged two years and seven months. When the humanity of cadavers and specimens is easily overlooked by the medical profession it is perhaps a continuing injustice that a model directly cast from the body of a child should continue to be exhibited bearing only the name of Richard Berry.<sup>15</sup> To which family this little person belonged, where they lived, and how the child died, are unknown. The likelihood is that they were from the bottom of society, perhaps forced by circumstance to give their child to an institution.

Although I cannot name this child, there is an epilogue—though sad and unsettling—to conclude the

story of the model *Male, age 2 years, 7 months*. By the early 20th century the University of Melbourne and other institutions had become selective about the types of cadavers their anatomists and students dissected. These were usually the poor, criminal, or institutionalised. Unfortunately for Richard Berry's family, death did not discriminate between social classes. In mid-March 1908 an outbreak of gastro-enteritis swept through Parkville and Carlton, killing many children, including eight-month-old Richard Brighthouse Berry. His illness, like those of the other children, was short, and he was buried the next day.<sup>16</sup>

It is extraordinary to witness the separation between a person's personal and professional lives carried to such an extreme that a man—a father—could accept the body of another parent's child to dissect in order to create a model. Objectively, *Male, age 2 years, 7 months* is an important object in the Harry Brookes Allen Museum of Anatomy and Pathology as evidence of experimentation in techniques of model-making within the University. Yet the model also serves as a powerful symbol of those individuals who, sometimes willingly, sometimes unknowingly, contributed their bodies to medical education in Victoria.

## Serious science and the frivolity of art

Collections amassed by institutions illustrate ideals of modernity, specialisation and a professional approach to the field of medicine. Yet even among university collections are anatomical items that have come to symbolise the trial and error of scientific progress. The most visually striking models of the plaster anatomical collection are the three heads made by Casciani and Son of Dublin. Modelled from cranial dissections conducted by anatomist Daniel John Cunningham (1850–1909), the plaster casts are unusual for their reproduction of the exact facial features of the cadavers. Most models from this period aim to give a dignified face to the human condition, whereas the Casciani trio displays an intriguing combination of technical accuracy and ghoulish realism. In one particularly frightening example, a partially dissected brain appears as secondary to the weathered face and blank eyes of a man whose mouth hangs ajar in stupor. Cunningham was an anatomist interested in physical anthropology, and like other medical men of the period, was influenced by research and ideas that would spawn the development of eugenic theory.



Daniel John Cunningham (anatomist) and Casciani and Son (model-maker), model of the head of an elderly man, brain exposed on one side, 1883–1903, plaster of Paris, paint, height: 26.0 cm. Harry Brookes Allen Museum of Anatomy and Pathology, University of Melbourne.

Fuelled by increased interest in uncovering scientific explanations for social questions, eugenics would apply evolutionary theory as an explanation for society's ills. Perhaps the Casciani model was used to illustrate mental illness to medical students at the University of Melbourne. After all, a theory based on a physical correlation between skull size and intelligence propelled Richard Berry's career beyond the teaching of anatomy, to include physical anthropology and mental studies of criminals and children. Through his studies of 'mental deficient', the kinder moniker then given to those who were intellectually disabled or psychiatrically ill, Berry established himself as an expert in the field, gaining appointments as consulting psychiatrist at the Melbourne and children's hospitals. Although from today's perspective it appears absurd that an anatomist experienced principally in examining the physical remnants of the dead could be the reigning authority on psychiatric medicine, at the time this application of science provided a convenient answer. If crime, stupidity and general degeneracy were genetic, little introspection, or understanding of societal misdeed, were required.

Berry's success in promoting these theories led to a series of public

lectures undertaken in the interwar years. Concerned by the 'menace' society faced from the 'uncontrolled activities of the feeble minded', Berry delighted in his reputation as a prominent anatomist and toured regional Victoria.<sup>17</sup> Given a little freedom from the usually staid topics of anatomical detail, the evocative language in which Berry described his ventures into the asylum and penitentiary was probably illustrated by equally dramatic visual aids. Is it possible that in a public hall crowded with mothers clutching babies, concerned citizens and bored teenagers, the topic of public health was sensationalised by the unveiling of an anatomical model both frightening and very real?

With such an image in mind, across the oceans, Casciani's series of models had been put to use in a decidedly different approach. While eugenic theory was the predominant influence on early 20th century treatment of disability and impairment in Melbourne, the study of psychology had gained increased momentum in the late 19th century, establishing itself as a legitimate field of inquiry. During the 1893 World's Fair in Chicago, Harvard University would publish a detailed inventory of models and equipment used within its psychological laboratory. The

anatomical model series made by Casciani and Cunningham are included, and are visible in an accompanying laboratory photograph as students conduct an experiment.<sup>18</sup>

It is somewhat surprising to find models of the same series in both a psychological laboratory and the contemporary collection of the University of Melbourne. Berry was not isolated amongst his peers in regarding psychology with scepticism and considered the theories of Freud to be conceited, exclaiming that the famous psychologist 'had done more to hide the truth than any other man living'. The Melbourne Medical School would remain, under the professor's guidance, firmly focussed on a hereditary approach to explaining mental illness.<sup>19</sup>

Anatomical models can be used to support arguments for either eugenic or psychological theory. Within this history they have come to embody opposing schools of thought in late 19th to early 20th century medicine, and only through historical perspective can we appreciate the failing of one so completely. From terra firma Richard Berry's collecting and work in eugenics are grossly disrespectful to the people whose bodies became subjects of this pseudoscience. Yet amongst his University of Melbourne and

international contemporaries Berry's work was consistent with mainstream science. It was also a research approach consistent with the preceding history of anatomy; like the early anatomist trawling cemeteries for fresh bodies, it quite simply failed the society it sought to heal.

Was it by 'chance and circumstance' that Berry's career took the path of a mental specialist? Berry himself described it as a 'leap over the ages' from his early years at the University of Melbourne.<sup>20</sup> For it was in these first few years, which he stated in his memoirs were the best of his years at Melbourne, that he achieved the most for the Department of Anatomy. From the mysterious brown stains of the dissecting room, to the construction of an entirely new building to accommodate rising enrolments, the study of anatomy was revived and refreshed under Richard Berry's guidance. The new building, jokingly named 'Berry's Folly' for its enormous size, was one example of his farsightedness; another was his investment in anatomical models. For beyond their use in general teaching, the plaster models are valuable remnants of a history of medicine interacting with art, science, the public, and education.

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#### Notes

- 1 Mimi Colligan, 'Anatomical wax museums in Melbourne 1861 to 1867', *Australian Cultural History*, no. 13, 1994, p. 52.
- 2 Michael Sappol, *A traffic of dead bodies: Anatomy and embodied social identity in nineteenth-century America*, Princeton: Princeton University Press, 2002, pp. 276, 303–304.
- 3 Deanna Petherbridge, 'Art and anatomy: The meeting of text and image', in Deanna Petherbridge and Ludmilla Jordanova (eds), *The quick and the dead: Artists and anatomy*, Berkeley: University of California Press; Hayward Gallery, 1997, p. 96.
- 4 See for example a list of skulls acquired by Berry and others in R.J.A. Berry, A.W.D. Robertson and L.W.G. Büchner, 'The craniometry of the Tasmanian Aboriginal', *Journal of the Royal Anthropological Institute of Great Britain and Ireland*, vol. 44, January–June 1914, pp. 122–126.
- 5 Berry, Robertson and Büchner, 'The craniometry of the Tasmanian Aboriginal', p. 122.
- 6 R.J.A. Berry, 'Chance and circumstance', photocopy of unpublished typescript autobiography, c.1954, p. 75. Papers of Leonard J.T. Murphy, UMA 91/114, University of Melbourne Archives.

- 7 George B. Stauffer, 'Beyond Bach the monument, who was Bach the man?', *New York Times*, 2 April 2000, section 2, p. 1.
- 8 Berry, 'Chance and circumstance', pp. 109–110.
- 9 Berry, 'Chance and circumstance', pp. 109–110.
- 10 Berry, 'Chance and circumstance', p. 110.
- 11 Council of the University of Melbourne, Requirement of the Department of Anatomy, meeting no. 1, 5 February 1906, and Finance Committee Minutes, 4. Anatomy Department, meeting no. 3, 2 April 1906. University of Melbourne Archives.
- 12 Berry, 'Chance and circumstance', p. 33.
- 13 For an account of Halford's theft see Richard Selleck, *The Shop: The University of Melbourne 1850–1939*, Carlton: Melbourne University Press, 2003, pp. 105–106.
- 14 Ross L. Jones, *Humanity's mirror: 150 years of anatomy in Melbourne*, South Yarra: Haddington Press, 2007, pp. 95–96.
- 15 See Ruth Richardson, *Death, dissection and the destitute*, 2nd edition, Chicago: University of Chicago Press, 2000.
- 16 Berry, Richard Brighouse. Death Certificate no. 1164, Third Schedule, Deaths in the District of Carlton 1908. Registry of Births Deaths and Marriages, Department of Justice Victoria.
- 17 Berry, 'Chance and circumstance', p. 145.
- 18 *Interior of a laboratory room (chain reaction experiment)*, illustration in [Hugo Münsterberg], *Psychological Laboratory of Harvard University*, Cambridge, Mass.: The University, 1893, published online at <http://psychclassics.yorku.ca/Munster/Lab>.
- 19 Ann Westmore, 'Berry, Richard James Arthur ('Dicky') (1867–1962)', *History of medicine, dentistry and health sciences: Biographical entry*, Centre for the Study of Health and Society, University of Melbourne, 2003, <http://www.jnmhugateways.unimelb.edu.au/umfm/biogs/FM00008b.htm>, accessed 22 February 2006.
- 20 Berry, 'Chance and circumstance', pp. 114, 126–127.