

The spatial rhetoric of Gustav Zeiller's popular anatomical museum

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SUMMARY: 1.—Introduction. 2.—From medical commodities to museum objects. 3.—Social concerns. 4.—Endowing artefacts with sensations and emotions. 5.—Curiosity, laughter and erotic titillation. 6.—Conclusions.

ABSTRACT: This article focuses on the public experience of science by studying the exhibition practice of a small popular anatomy museum. The owner, Gustav Zeiller, a little-known German model maker and entrepreneur, opened his private collection in Dresden in 1888 with the aim of providing experts and laymen alike with a scientific education on bodily matters and health care. The spatial configuration of his museum environment turned the wax models into didactic instruments. Relying on the possible connexion between material culture studies and history of the emotions, this article highlights how Zeiller choreographed the encounter between the museum objects and its visitors. I argue that the spatial set up of his museum objects entailed rhetorical choices that did not simply address the social utility of his museum. Moreover, it fulfilled the aim of modifying the emotional disposition of his intended spectatorship. I hope to show that studying the emotional responses toward artefacts can offer a fruitful approach to examine the public experience of medicine.

KEY WORDS: material culture studies, history of emotions, popular anatomical museum, Gustav Zeiller, nineteenth-century Germany.

1. Introduction (*)

In nineteenth-century Europe, the public experience of artificial anatomies was situated in a variety of public sites¹. Bodies modelled in wax, papier-mâché, wood or plaster assisted anatomists and physiologists in honing the visual and tactile skills of medical students. They were translated to other media and became part of systems of visual displays². By the end of the century, wax embryos turned out to be especially suitable for research and publishing³. But anatomical models were not only for the eyes of the medical community: they also amazed the bourgeoisie in museums, fairs, shopping passages, and big tops. The involvement of models in the emergence of a scientific marketplace is a topic, which has recently triggered the attention of scholars of the history of wax modelling⁴.

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1. For a cultural history of plastic anatomy in Germany see: Hahn, Susanne; Ambatielos, Dimitrios, eds. *Wachs, moulagen und modelle: Internationales Kolloquium 26. und 27. Februar 1993*. Dresden: Publikationsreihe «Wissenschaft im Deutschen Hygiene-Museum», Deutsches Hygiene-Museum; 1993; Mühlenbehrend, Sandra. *Surrogate der Natur: Die historische Anatomiesammlung der Kunstakademie*. Dresden & München: Paderborn & Fink; 2007; Schwalbe, Julius. *Zur Geschichte der plastischen Anatomie*. *Deutsche medizinische Wochenschrift*. 1896; 22 (47): 761-762. For a general cultural history see: Schnalke, Thomas. *Diseases in wax: the history of the medical moulage*. Berlin: Quintessence; 1995; De Chadarevian, Soraya; Hopwood, Nick, eds. *Models: the third dimension of science*. Stanford: Stanford University Press; 2004; Panzanelli, Roberta, ed. *Ephemeral bodies: wax sculpture and the human figure*. Los Angeles: Getty Research Institute; 2008; Maerker, Anna. *Model experts: wax anatomies and enlightenment in Florence and Vienna, 1775-1815*. *Social History of Medicine*. 2012; 25 (2): 542-543; Messbarger, Rebecca. *The lady anatomist: the life and work of Anna Morandi Manzolini*. Chicago and London: The University of Chicago Press; 2010; Sappol, Michael. *A traffic of dead bodies: anatomy and embodied social identity in Nineteenth century America*. Princeton: Princeton University Press; 2002; Lemire, Michel. *Artistes et mortels*. Paris: Chabaud; 1990, p. 323-65; Von Schlosser, Julius. *Tote Blicke. Geschichte der Porträtbilderei in Wachs*. Ein Versuch, Thomas Medicus (ed.), Berlin: Akademie Verlag; 1993.
2. Berkowitz, Carin. *Systems of visual display. The making of anatomical knowledge in enlightenment Britain*. *The British Journal for the History of Science*. 2013; 46 (3): 359-387.
3. Hopwood, Nick. *Embryos in wax: models from the Ziegler studio*. Cambridge: Whipple Museum of the History of Science, University of Cambridge, Institute of the History of Medicine, University of Bern; 2002.
4. Zarzoso, Alfons; Pardo Tomás, José. *Fall and rise of the Roca Museum: owners, meanings and audiences of an anatomical collection from Barcelona to Antwerp, 1922-2012*. In: Knoeff, Rina; Zwijnenberg, Rob, eds. *The fate of anatomical collections*, London: Ashgate; 2015, p. 161-176; Schwartz, Vanessa. *Spectacular realities: early mass culture in fin-de-siècle Paris*.

This article focuses on how Gustav Zeiller adapted his models to their specific context of use through the spatial rhetoric of his popular anatomical museum⁵. Zeiller, a very little researched wax modeller, opened his museum in Dresden in 1888 with the aim of providing experts and laymen alike with a scientific education on the topic⁶. The first objective of this paper is to contribute new historical sources about his wax collection —unpublished until now—, which will allow the reconstruction of the public experiences of this lost museum⁷. Secondly, this article will highlight how Gustav Zeiller persuaded his spectatorship about bodily matters and health care through the spatial design and configuration of his museum environment. The way the model-maker choreographed the encounter between museum objects and visitors entailed rhetorical choices addressing the practical utility of his exhibition program, the emotional and affective disposition of his spectatorship, and, finally, the social status of his museum.

To address these questions, the methodological approach of the present article is twofold. First, in both museum studies and art theory, scholars have pointed out the significance of the spatial setting in the production of the spectator's experience⁸. Museum objects never work in isolation.

Berkeley: University of California Press; 1998; Alberti, Samuel. *Morbid curiosities: medical museums in nineteenth-century Britain*. Oxford & New York: Oxford University Press; 2011; Stephens, Elisabeth. *Anatomy as spectacle: public exhibitions of the body from 1700 to the Present*. Liverpool: Liverpool University Press; 2011; Maerker, Anna. *Between profession and performance: display of anatomical models in London, 1831-1832*. *Histoire, médecine et, santé*. 2014; 5: 47-61.

5. To think about rhetoric in relation to other media and forms of expression other than words, I found especially inspiring the investigation on the interplay between rhetoric and visual arts in: Carruthers, Mary, ed. *Rhetoric beyond words: delight and persuasion in the arts of the Middle Ages*. Cambridge: Cambridge University Press; 2013.
6. A brief analysis of Gustav Zeiller's biography and work has been made by: Frenzel, Frank. *Zur Geschichte der Moulagensammlungen in Dresden*. Dresden: Diplomarbeit Medizinische Carl Gustav Carus Akademie Dresden; 1979, p. 79-80.
7. His models seemed to have disappeared throughout the 20th century. However, in 2007 the journalist Heidrun Hannusch found out about the relations of a Finnish panopticon to Dresden, and shortly thereafter the Hygiene Museum Dresden (DHMD) bought some of them back. Currently the museum is restoring the objects and will present them in the exhibition «Blicke, Sensationen, Körper! Ein anatomisches Wachsabinet und die Kunst», which was inaugurated on the 11th October, 2014. At this point I wish to thank the Hygiene Museum Dresden, and especially Sandra Mühlenbehrend, Marion Schneider and Johanna Lang for their help and for showing me the objects during the restoration process.
8. In museum studies see: Dudley, Susan. *Museum materialities. Objects, engagements, interpretations*. London & New York: Routledge; 2010; Stocking, George W. *Objects and others: Essays on museums and material culture*. London: The University of Wisconsin Press;

They acquire meaning by being set up in correlation to other objects, to opening hours, to the visiting norms of the museum's space, and to the various arrangements that shape the senses, affects and emotions of the visitors⁹. In what follows, I will analyse how all these environmental elements of Zeiller's museum worked together to create a public place for the experience of medicine and to make an argument about health care.

Second, as we will see, the emotional and affective responses of the intended audience played an important part in Zeiller's exhibition design. In order to further explore the role of spatial design in shaping the visitor's experiences and sensations, this paper draws on the possible connexions between history of the emotions and material culture studies. An increasing interest in the cultural history of emotions can be observed in the humanities and social science domains in the last few decades¹⁰. Inspired in Lucien Febvre's history of sensibilities¹¹ and Johan Huizinga's cultural history¹², the study of affects, sensibilities or emotions¹³ has brought together scholars belonging to a variety of disciplines, such as anthropology, philology, psychology, literature, art theory or, of course, history, to revise the political,

1985; Alberti, Sam. The museum affect: visiting collections of anatomy and natural history. In: Fyfe, Aileen; Lightman, Bernard, eds. *Science in the marketplace: nineteenth-century sites and experiences*. Chicago: Chicago University Press; 2007. In art theory see: Reiss, Julie. *From margins to the centre. The spaces of installation art*. Cambridge & London: The MIT Press; 1999; Staniszewski, Mary Anne. *The power of display. A history of exhibition installations at the Museum of Modern Art*. Cambridge & London: The MIT Press; 2001; Larrañaga, Josu. *Instalaciones*. Hondarríbia: Nerea; 2001.

9. Alberti, n. 8; Geoghegan, Hilary; Hess, Alison. *Object-Love at the Science Museum: cultural geographies of museum storerooms*. *Cultural Geographies*. 2014; 1-21.
10. Burke, Peter. *Is There a Cultural History of the Emotions?* In: Gouk, Penelope; Hills, Helen, eds. *Representing emotions: new connections in the histories of art, music and medicine*. Aldershot: Ashgate; 2005, p. 35-48.
11. Febvre, Lucien. *Sensibility and history: how to reconstitute the emotional life of the past*. In: Burke, Peter, ed. *A new kind of history: From the writings of Febvre*. New York: Harper & Row; 1973, p. 12-26.
12. Huizinga, Johan. *El otoño de la Edad Media*. Madrid: Alianza Editorial; 1996.
13. Peter Burke has remarked that one of the remaining problems of the history of emotions is the lack of agreement on the definition of its subject. Several researchers have proposed different terms such as affect, emotions or even sensibilities. Burke, n. 10. For the debate on affect and emotions see: Labanyi, Jo. *Doing things: emotions, affect, and materiality*. *Journal of Spanish Cultural Studies*. 2010; 11 (3); 223-233. For sensibilities see: Wickberg, Daniel. *What is the history of sensibilities? On cultural histories, old and new*. *American Historical Review*. 2007; 112 (3): 661-684.

historical and social aspects of the emotional life of the past¹⁴. While the history of emotions is a recently born field of study, deeply multidisciplinary in its evidence base and methodological approach, material culture has been under the scrutiny of academic research since 1880¹⁵. Only very recently have material culture studies paid attention to the relation between material culture and emotions¹⁶. Research as diverse as shopping practices and their relation to the establishment of interpersonal bounds, or grief in contemporary London, has made the first attempts to study how material culture plays a central role in the ways we determine and understand our emotions¹⁷. The present analysis proposes to move beyond the tradition that considers objects as secondary sources for the study of the past and, on the contrary, aims to understand artefacts as primary sources that allow us to reconstruct their user's experiences, convictions and expectations¹⁸. In particular, I hope to show that studying the emotional responses toward artefacts can offer a fruitful approach to examine the public experience of medicine.

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14. For an important approach to the historiography of emotions and their political implications see: Reddy, William. *The navigation of feeling: A framework for the history of emotions*. Cambridge: Cambridge University Press; 2001.
 15. On the history of the emotions see: Frevert, Ute. *Emotions in history: lost and found*. Budapest: CEU; 2011; Dixon, Thomas. *From passions to emotions. The creation of a secular psychological category*. New York: Cambridge University Press, 2003; Bound Alberti, Fay. *Matters of the heart. History, medicine, and emotion*. New York: Oxford University Press; 2010; Moscoso, Javier. *Pain: A cultural history*. Basingstoke: Palgrave Macmillan; 2012. For the material culture turn see: Hicks, Dan. *The material-cultural turn*. In: Hicks, Dan; Beaudry, Mary C. eds. *The Oxford handbook of material culture*. Oxford: Oxford University Press; 2010.
 16. Zaragoza Bernal, Juan Manuel. *Historia de las emociones: una corriente historiográfica en expansión*. *Asclepio*. 2013; 65 (1): e012, doi: <http://dx.doi.org/10.3989/asclepio.2013.12>; Zarza Arenal, Clara. *The emotional lives of objects*. *Proceedings of the Congress Mastering the Emotions: Control, contagion and chaos, 1800 to the present day*. Queen Mary University of London, 16-17 June 2011.
 17. For an analysis of the intersection between emotions and material culture see: Miller, Daniel. *A theory of shopping*. Cambridge: Polity Press; 1998. Miller, Daniel, ed. *Materiality*. Durham: Duke University Press & Cambridge: Polity Press; 2005; Miller, Daniel; Parrott, Fiona. *Loss and material culture in South London*. *Journal of the Royal Anthropological Institute*. 2009; 15 (2): 502-519; Norman, Donald A. *emotional design*. New York: Basic Books; 2004; Moran, Anna; O'Brien, Sorcha, eds. *Love objects: emotion, design and material culture*. London: Bloomsbury; 2014.
 18. Miller, Daniel. *Material culture and mass consumption*. Oxford: Blackwell; 1987.

2. From medical commodities to museum objects

In 1888, a popular anatomical museum opened its doors to Dresden's general public. The Museum for Anthropology and Healthy Anatomy was located on Herzogingasse Street, on the second floor of number 3 – right in the heart of Dresden¹⁹. It was not history that was on display, but brains, inner ears and dissected wombs made from wax, a malleable and transparent material that allowed an accurate depiction of the finest textures of the skin. In exchange for a daily entrance fee of 50 cents (one mark on Thursdays), experts, laymen, and men and women of the bourgeoisie could gather around these medical curiosities²⁰. The owner of this small museum was Gustav Zeiller.

Zeiller was born on the 17th of July 1826, the younger of two sons of a merchant in Ehingen²¹. His elder brother Paul (1820-1893) was employed by the State and worked as a wax modeller in the production of medical artefacts for the University of Medicine in Munich²². It seems likely that his brother Paul and his sister-in-law Fanny sparked Zeiller's interest for the profession, which he practiced from 1847 onwards²³.

As many model makers in the second half of the nineteenth century, Gustav Zeiller used networking to make his living²⁴. For a start, he looked for connections to well-known scientists. His wax models became known to renowned German anatomists and physiologists of his time: on several occasions, his work was recommended by Johannes Müller, Friedrich Theodor von Frerichs, Emil Du Bois-Reymond, Carl Bogislaus Reichert and Alexander von Humboldt²⁵. Furthermore, he exhibited his models at the Industrial

19. Zeiller, Gustav. Letter to Dresden's authorities, 18 Dec 1872. Gewerbeakte, Stadtarchiv Dresden. without signature.

20. Zeiller, n. 19.

21. Frenzel, n. 6, p. 79-80.

22. For more information about Paul's collaboration see: Hopwood, Nick. Artist versus anatomist. *Models against dissection: Paul Zeiller of Munich and the Revolution of 1848*. *Medical History*. 2007; 51: 279-308.

23. Zeiller, n. 19.

24. For marketing and designing strategies of model-makers to create trust in their models as medical technologies in the 19th century see: Maerker, Anna. *Anatomizing the trade: designing and marketing anatomical models as medical technologies, ca 1700-1900*. *Technology and Culture*. 2013; 54 (3): 531-562.

25. Gustav Zeiller: letter to the King, 13 of July 1859. Geheimes Staatsarchiv Preussischer Kulturbesitz, I. HA, Rep. 76, Kultusministerium, Va. Sekt. 4, Tit. XIV, Nr. 6. Bd. 1.

Exhibition in Munich in 1854 and the Global Exhibition in Vienna in 1873, where they received a very favourable review in the press²⁶. And of course he established ties to medical institutions. Between 1853 and 1871 he lived in Breslau, where he started to work as an anatomical modeller for the medical faculty²⁷. Since the foundation of the Institute of Physiology by the Czech physiologist Jan Evangelista Purkyne in 1839, this medical institution had played a central role in both the modernization of anatomy sciences and in pedagogical reform²⁸. Every morning between 8 and 12 o'clock, Zeiller prepared waxes for the Anatomy and Physiology Institutes in response to teaching and research requirements²⁹. The teaching aids, produced under academic supervision, served as a basis for the production of copies for Zeiller's own personal use³⁰. As his contract at Breslau's University was only part-time, he had sufficient time left to elaborate his own copies.

Zeiller was also a businessman. He worked as a distributor of wax models, selling them to anatomical museums all over the world. He claimed to have sold his models to countries as far as Austria, England and Russia³¹. Some of Zeiller's customers can be confirmed: individuals such as the Castan brothers, owners of a well-known popular anatomical museum in Berlin and the Präuscher's museum in Vienna, were among his clientele³². But one of Gustav Zeiller's life-long ambitions was to create his own museum, which he accomplished years later in Dresden. Unsold copies served the model-maker as a basis on which to build up his private collection as he settled in Saxony's capital.

This marked the moment when Zeiller's medical commodities turned into museum objects. Turning objects into a museum exhibit involves a process of adaptation, in which the artefact is plucked from its previous context

26. Von Hermanm, Franz. Bericht der Beurteilungskommission bei der allgemeinen deutschen Industrieausstellung zu München 1854. München: unknown publisher; 1855, p. 88-90.

27. Zeiller, n. 19.

28. Coleman, William. Prussian pedagogy: Purkyne at Breslau, 1823-1839. In: Coleman, William; Holmes, Frederic, eds. The investigative enterprise. Experimental physiology in the 19th century-medicine. Berkeley: University of California Press; 1988, p. 15-64.

29. University Record (without a name), 31 May 1854. Geheimes Staatsarchiv Preussischer Kulturbesitz, I. HA, Rep. 76, Kultusministerium, Va. Sekt. 4, Tit. XIV, Nr. 6. Bd. 1.

30. Zeiller, Gustav. Catalog des anthropologischen Museums für gesunde Anatomie und Völkerkunde, Ausstellungskatalog. Dresden: unknown publisher; 1888, p. 9.

31. Zeiller, n. 19.

32. Frenzel, n. 6, p. 30.

and placed within the museum³³, where it engages with the environmental elements of its new found setting. In the context of exhibition catalogues, flyers, and adverts, these objects acquire the function of acting upon the viewer by engaging him or her with a set of responses. In what follows I will describe Zeiller's spatial strategies or rhetoric to adapt his waxes to his museum place. The model-maker and entrepreneur used a wide range of approaches to create an engaging place for the public to experience his wax models.

3. Social concerns

The first strategy Zeiller used to shape the encounter between museum visitors and wax models consisted in appealing to the social concerns of his intended audience³⁴. The museum's advertisement announced the show as a «lyceum of anatomy», a place where people interested in anatomy and in optimizing their health conditions could study the human body. Zeiller attracted his spectators with the promise of turning them into well-informed persons about the topic. His education program was conducted through the display of scientific artefacts in wax that provided a general overview of the body and the mind of the human being³⁵. This ambitious undertaking was developed into two thematic sections, each of which was located in a separate showroom³⁶.

In the first, Zeiller displayed a European map and ethnological busts in wax, each of which portrayed people of different nations. Here, Hindus, Japanese and Camerouns as well as mestizos stood out for their strangeness and their exotic provenance. This group of artefacts shared similarities with the ethnographical shows, or *Völkerschauen*, which were performed in museums and fairs in Germany at the time³⁷. On occasion, *Völkerschauen*

33. Pointon, Marcia. Dealer in magic: James Cox's Jewellery Museum and the economics of luxurious spectacle in the late-eighteenth-century London. *History of Political Economy*. 1999; 31 (Supplement): 423-451.

34. Anna Maerker has remarked on the attendance to social and political concerns as a marketing strategy to create trust in medical technology. Maerker, n. 24.

35. Zeiller, n. 30, p. 1.

36. Zeiller, n. 19.

37. As historian Andrew Zimmermann has pointed out, ethnographical spectacles and freak shows fulfilled the double purpose of entertaining the general public whilst simultaneously providing

not only displayed portraits made out of wax to the general audience, but also real people. In the context of this kind of exhibition practice, Eskimos or Hindus became «visual objects» indicating cultural otherness, which from the European (and the North American) perspective was perceived as inferior. This kind of display practices should of course be understood as a gesture of power and of colonial expansion³⁸. The wax portraits Zeiller enlisted in his anatomical show mirrored the *Völkerschauen* and the academic debates on the topic. The model-maker classified his figures into «natural or savage people» and «cultural people» in order to highlight the different stages of their historical development³⁹. This difference corresponded with the perspective of anthropological and ethnographical sciences as put forward in academic circles of the time.

Whilst the first showroom depicted different «natural» and «cultural norms», the second turned the body inside out. This exhibition area must have been much more important to the museum's owner, as it displayed a greater number of objects and the passage dedicated to it in the exhibition catalogue was much more extensive⁴⁰. This section showed several brains, the viscera, a blood circuit, an inner ear, a larynx, a feminine heart, a male *ecorchée* removable in 30 parts, the development of a chicken from its first day of conception to maturity, and an anatomical Venus, who exposed her womb in the ninth month of pregnancy. The models of this section were dissected, allowing the spectator to see under the human skin and invite a closer study of a particular aspect of the human body.

Alongside his museum objects, textual media played an important role in public education⁴¹. The visitor's museum experience was conditioned by both the visual inspection of the waxes and by the reading of an exhibition catalogue, which was available to all museumgoers. The catalogue guided the spectator's gaze and framed the interpretative possibilities of the exhibits.

professional researchers with objects of study. Zimmermann, Andrew. *Anthropology and antihumanism in imperial Germany*. Chicago and London: University of Chicago Press; 2001; Bogan, Robert. *Freak shows: presenting human oddities for amusement and profit*. Chicago: University of Chicago Press; 1988; Oettermann, Stephan. *Fremde. Der. Die. Das. Völkerschauen und ihre Vorläufer*. In: Kosok, Lisa; Jamin, Mathilde, eds. *Viel Vergnügen. Öffentlich Lustbarkeiten im Ruhrgebiet der Jahrhundertwende*. Essen: Ausstellungskatalog Ruhrlandmuseum Essen; 1992, p. 36-56.

38. Te Heesen, Anke. *Theorien des Museums zur Einführung*. Hamburg: Junius; 2012, p. 81.

39. Zeiller, n. 30, p. 2.

40. Zeiller, n. 30.

41. We cannot yet confirm any form of labels attached to the museum objects at this stage.

The text conducted the spectator's attention towards health care in an introduction of seven pages —unusually long for German popular anatomy museums. The writing style of the foreword was not simply descriptive. The text addressed the visitors in an advising and guiding tenor, sometimes even with actual warnings. Visitors learned that each piece and body fragment was not working in isolation, but in connection with one another, contributing to the wellbeing of the body as a whole. Laws and norms governed this body system, in accordance with a natural order. Inappropriate lifestyles, excessive stimuli, improper food and drink, or the outburst of vehement passions affected the wellbeing of the body and led to the confusion of the senses, and ultimately to suicide and death. Zeiller's museum visit proposed a bodily-sentimental balance, offering moderation as the key to improving the spectator's quality of life. The models visually described the anatomy of the body, while the exhibition catalogue and adverts appealed to the visitor's civic responsibility to police their own body and behaviour. His education program combined a description of anatomy with a prescription of norms of human interaction.

Zeiller reinforced his model's suitability for this educational mission by highlighting their practical values. He stated that his museum offered knowledge «of great utility about lifestyles, hygiene and health»⁴². The model-maker did not organize his museum objects through the lenses of an historical perspective. Instead, his collection focused on current themes and social concerns of his intended audience. Especially in Dresden, social reformers discussed the impact that industrialization had on public health⁴³. The development of an adequate education programme soon became a means of preventing devastating health problems. Alongside handbooks, flyers, and courses, social reformers also advocated public exhibitions as means to educate the population. From the 1870s onwards, public displays focused on a variety of topics that addressed quotidian health problems at work or at home. The public's instruction on bodily matters included

42. Zeiller, n. 19.

43. By the end of the 19th century, Dresden became known as the «City of Hygiene» due to their social reforms to improve citizen's housing conditions, water conduits, new markets, etc. Vogel, Klaus, ed. *Das Deutsche Hygiene-Museum Dresden, 1911-1990, Eine Veröffentlichung des Deutschen Hygiene-Museums Dresden*. Dresden: Michael Sandstein; 2003, p. 15.

presentations of industrial products, which were also for sale, and health recommendations for workers, husbands, mothers, or infants⁴⁴.

With his program, Zeiller placed his museum under the umbrella of public health education, thereby sharing common features with *social museums* and hygiene exhibitions that proliferated in the German museum landscape of the time⁴⁵. Zeiller's pedagogical ambition aspired to more than simply creating social impact among individuals. In his flyer, Zeiller advertised his museum by stating that: «Knowing yourself is the primordial objective to achieve self-control for the good of yourself and for your fellow-men»⁴⁶. His vision, shared by contemporaries, proposed that inappropriate body care was not only affecting the wellbeing of individuals, but the health of the family, and of the State⁴⁷. Zeiller's museum experience claimed to

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44. The Internationale Ausstellung für Hygiene und Rettungswesen (International Exhibition for Hygiene and Rescue) at Brussels in 1876 was one of the earliest examples, which was soon followed by the Allgemeine Deutsche Ausstellung für Hygiene und Rettungswesen in 1883 at Berlin and by the Hygiene Museum at Berlin, which inaugurated in 1886. For an overview on hygiene exhibitions and social museums see: Poser, Stefan. *Museum der Gefahren. Die gesellschaftliche Bedeutung der Sicherheitstechnik. Das Beispiel der Hygiene Ausstellungen und Museen für Arbeitsschutz in Wien, Berlin, Dresden um die Jahrhundertwende*. Münster, New York, München, Berlin: Waxmann; 1998. For an historical contextualization of these specialised exhibitions in relation to the museum landscape see: Te Heesen, n. 38, p. 89-115. For a definition of the concept of social museum, see: Hartung, Olaf. *Kleine deutsche Museumsgeschichte: von der Aufklärung bis zum frühen 20. Jahrhundert*. Köln, Weimar, Wien, Böhlau; 2010. For an analysis of display strategies of hygiene exhibitions see: Brecht, Christine; Nikolow, Sybilla. *Displaying the invisible: Volkskrankheiten on exhibition in Imperial Germany*. *Studies in History and Philosophy of Biology and Biomedical Science*. 2000; 31 (4): 511-530; Schrön, Johanna. *Ein grosses, lebendiges Lehrbuch der Hygiene — Die International Hygiene-Ausstellung in Dresden 1911* —. In: Kretschmann, Carsten. *Wissenspopularisierung: Konzepte der Wissensverbreitung im Wandel*. Berlin: Akademie-Verlag; 2003, p. 309-321.
45. Sarasin, Philippe. *Reizbare Maschinen: eine Geschichte des Körpers 1765-1914*. Frankfurt am Main: Suhrkamp; 2001. For an analysis of the role of museums as public health education see also: Brown, Julie K. *Health and medicine on display: international expositions in the United States, 1876-1904*. Cambridge: the MIT Press; 2009; Kao, Deborah Martin; Lamunière, Michelle, eds. *Instituting reform: the Social Museum of Harvard University, 1903-1931*. Cambridge: Harvard Art Museums & New Haven, Yale University Press; 2012.
46. «Erkenne dich selbst ist die Hauptvorderniss zur Selbstbeherrschung zum eigenen und zum Wohle seiner Mitmenschen». Personal translation. Zeiller, n. 30. p. 7
47. The historian Michael Sappol has argued that popular anatomical museums such as Spitzer's in Paris and Kahn's in London could possibly claim to have a place in bourgeoisie self-making. Sappol, n. 1, p. 294.

transform his audience into good citizens through a rational comprehension of their bodies⁴⁸.

4. Endowing artefacts with sensations and emotions

Setting up a public museum for health education spurred the model-maker towards practical questions of the emotional design of his exhibits. The efficacy of Zeiller's education program depended not only on the content, but on its ability to bind his museum to the everyday life of his potential audience. In addition, the model-maker put particular care into shaping the emotional and affective disposition of his spectatorship. As we will see, it seemed particularly central to him to offer his spectators an agreeable experience of anatomy and health. Presenting natural phenomena in a graphic and vivid fashion was discussed broadly among populizers and social reformers to transmit complex information of anatomy and health to the wider population. As the historian Andreas Daum has argued, in Germany many of them found a foothold in Alexander von Humboldt's works.

Humboldt —a traveller, scientist, historian and anthropologist, and the author of *Views of Nature* (1808) and *Cosmos* (1845-1862)— inspired generations of social reformers and populizers in Germany⁴⁹. In *Cosmos*, a best seller during the mid-nineteenth century, Humboldt aimed to review the totality of geographic knowledge of his time. He argued that using a «vivid descriptive style» to represent scientific knowledge fulfilled the aim of testifying to the beauty of nature, which he believed to be a property of natural order⁵⁰. The combination of scientific purpose and aesthetic values

48. In Tony Bennett's words, 19th century museums and public exhibitions were places where observation and the exercise of power were situated. Drawing on Michael Foucault's perspective of power and knowledge, Bennett argues convincingly how the museum became a technology of guiding and controlling the spectator's perception. In our case, we might understand Zeiller's education program as an instrument to shape the perceptions of and relations of his visitors to their own bodies. And as a place that advertised the surveillance of bodily matters as a key issue for a healthy state. Bennett, Tony. *The birth of the museum. History, theory, politics*. London: Routledge; 1995.

49. Daum, Andreas. *Wissenschaftspopularisierung im 19. Jahrhundert. Bürgerliche Kultur, naturwissenschaftliche Bildung und die deutsche Öffentlichkeit 1848-1914*. München: Oldenburg; 1998.

50. For Alexander von Humboldt's aesthetic notion see: Robert, Jörg. *Weltgemälde und Totalansicht. Ästhetische Naturerkenntnis und Poetik der Landschaft bei Schiller und Alexander von Humboldt*.

was appropriate, «because it fuels the imagination and because it enriches life through the dissemination of knowledge»⁵¹.

In all likelihood, Gustav Zeiller was highly familiar with Humboldt's style of dissemination, as both knew each other quite well. The geographer had esteemed the didactic utility of Zeiller's models as outstanding, due to the vividness of their depictive style⁵². Moreover, Humboldt had recommended Zeiller's models on several occasions. Due to Humboldt's help, Zeiller had received financial support from the King⁵³. Furthermore, Humboldt tried his best to convince the director of the Anatomy and Physiology Institute to provide Zeiller with state employment⁵⁴. The model-maker translated the Humboldt recipe to his museum by combining textual and visual rhetoric. In his adverts and exhibition catalogue, Zeiller constantly appealed to the artistic quality of his wax works. This was not an exceptional case. Among curators of popular anatomical shows, such appeals were a common strategy to enhance the artistic design of the artefact. In addition, Zeiller's exhibits showed the anatomical structure by means of realistic sculptures, whose external appearance was received as a highly detailed preparation for the anatomical structure of the body's inside⁵⁵. The anatomized figures displayed expressive faces, and their poses recreated classical masterpieces [figure 1]. These material properties addressed the visitor's aesthetic taste and aimed at transforming anatomy education into a pleasant experience for the public at large.

In: Feger, Hans; Brittmacher, Hans Richard, eds. *Die Realität der Idealisten: Friedrich Schiller - Wilhelm von Humboldt - Alexander von Humboldt*. Köln, Weimar, Wien: Böhlau; 2008, p. 35-53.

51. Humboldt, Alexander von. *Ansichten der Natur mit wissenschaftlichen Erläuterungen*. Tübingen: J.G. Cotta'sche Buchhandlung; 1808, p. v-vi.
52. The Humboldt biographer Hanno Beck has published an almost forgotten letter directed to Reichert, which provides an insight into Humboldt's perception of one of Zeiller's wax models. Alexander von Humboldt, letter published in Beck, Hanno. *Zur Lebensgeschichte Alexander von Humboldts: ein Brief Humboldts an Karl Bogislaus Reichert*. *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*. 1957, 41 (67): here p. 67. For a deeper analysis of Humboldt's aesthetic perception of Zeiller's brain model see: Fakiner, Nike. *Gesamteindruck in wax: Alexander von Humboldt and Gustav Zeiller's anatomical models*. *Histoire, médecine et santé*. 2014; 5: 33-47.
53. Zeiller, n. 19.
54. Alexander von Humboldt, letter to Reichert, n. 52.
55. For aesthetic properties of anatomical models see: Berkowitz, Carin. *The beauty of anatomy: visual displays and surgical education in early nineteenth century London*. *Bulletin of the History of Medicine*. 2011; 85 (2): 248-278; Messbarger, Rebecca. *Waxing poetic: Anna Morandi Manzolini anatomical sculptures*. *Configurations*. 2001; 9 (1): 65-97.

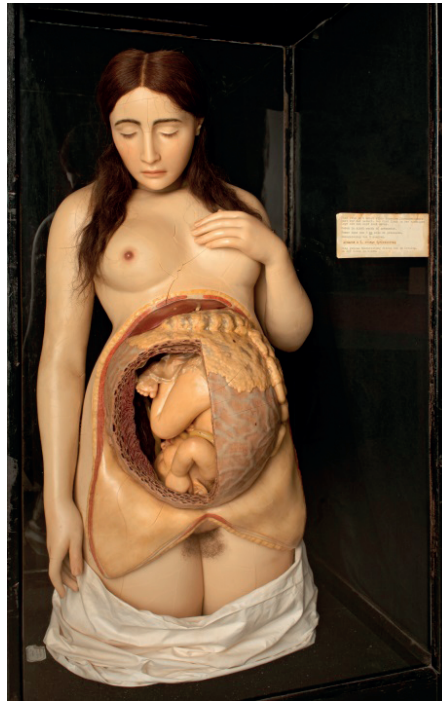


Figure 1. Gustav Zeiller, «A freestanding body in the ninth month of pregnancy», ca. 1888. Hygiene Museum, Dresden. Photo: David Brandt, Stiftung Dt. Hygienemuseum

However, some of Zeiller's museum objects turned out to be particularly difficult to fit in with Humboldt's recipe. This was the case of waxes depicting the viscera. His museum object number two displayed the spinal cord, the oesophagus, the spleen, the stomach, the colon, and the small intestines with the aim of informing his visitors about healthy drinking habits. In his exhibition catalogue, he mentioned his concerns about the possible repulsive responses among his visitors⁵⁶. For an untrained eye during the

56. For an analysis of the impact of modernization on customs and practices surrounding the dead body in Sweden in the late nineteenth and early twentieth centuries see: Åhrén, Eva. *Death, modernity and the body: Sweden 1870-1940*. Rochester: Rochester University Press; 2009.

mid-nineteenth century, seeing entrails was anything but delightful⁵⁷. Disclosing the unsealed world of the interior of the body to a public not acquainted with anatomy could very likely evoke emotional responses of rejection and disgust⁵⁸. But disgust was an emotional response related to negative cultural standards. More precisely, this sensation played a significant part as *antagonist* in the promotion of modern taste, as the cultural historian Winnfried Menninghaus has argued. Images of the body's insides constituted a serious threat to the cultural concept of bodily integrity as promoted by the neoclassical ideal of beauty. In his reflection on classical sculptures, the German art historian Johann Joachim Winckelmann promoted an aesthetic body canon based on the integrity of its physical limits, not permitting any opening towards its interior, nor dissection, and certainly no viscera. In addition, the repulsive response evoked by representations of intestines, bodily fluids, or tumours, received a negative evaluation by neoclassical standards. As such, masterpieces stood out for depicting a skin that covered the body's interior gently and smoothly and veiling all kinds of body openings⁵⁹. The neoclassical norm was related to extremely styled body images, and catered to a prototype of «health» and to a «happy generation, trained by exercises and body gymnastics»⁶⁰. The negative character of disgust as a rule breaker of aesthetic norm continued throughout the nineteenth century. In 1853, the German philosopher and art critic, Karl Rosenkranz, reflected broadly on the cultural role of disgust, and came to consider repugnance as a response of rejection towards immoral behaviour and unhygienic substances or actions⁶¹.

The negative cultural reputation linked to repulsive sensations and representations of viscera made the public display of anatomical models, which depicted isolated entrails, particularly tricky. Zeiller shared his concern about the possible emotional responses of potential visitors with his

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57. Åhrén has discussed the general repulsion toward the opening of the dead body as a multi-layered social and cultural response, including religious elements, the association between dissection and punishment, or cultural values that related the dissected body with the grotesque. Åhrén, n. 56.
 58. For more information about the history of disgust see Menninghaus, Winfried. *Ekel. Theorie und Geschichte einer starken Empfindung*. Frankfurt am Main: Suhrkamp; 2002.
 59. Winkelmann, Johann Joachim. *Gedanken über die Nachahmung der griechischen Werke in der Malerei und Bildhauerkunst*. Stuttgart: Reclam [1755] 1969, p. 11.
 60. Winkelmann, n. 59, p. 7.
 61. Rosenkranz, Karl. *Ästhetik des Hässlichen*. Stuttgart: Reclam [1853] 2007.

contemporaries. From panopticon owners to renowned scientists, the worry of offending cultural sensibilities by displaying intestines to their audience was commonplace by the end of the nineteenth-century. The Castan brothers, owners of a large anatomy show-business in Berlin, wished to avoid repulsive sensations and «keep the aesthetic form» in order to «cultivate the interest of anatomy education among all social strata»⁶². In 1899, in his inauguration speech for the Pathological Museum Charité, the German pathologist and social reformer Rudolf Virchow claimed:

«We can't invite our general public to attend anatomical operations in the morgue. But we have an alternative for it, because we summarize our findings and we present them in a clear and non-repulsive fashion to the totality of humanity»⁶³.

He understood that his commitment as curator of medical artefacts to the general public was to present a target-oriented display design. To achieve this objective, he arranged his museum objects and the spatial design of the museum in accordance with the cultural sensibilities of his potential audience.

So did Zeiller. Disseminating specialized contents required an adaptation of the museum objects. The model-maker used rhetorical tactics to arrange possible emotional responses in his visitors. For his wax model number two, he chose to alter their natural-like tone:

«I have decreased this representation and modelled the figure in a homogenous red colour, because the natural-like colour of skin and viscera may arouse a repulsive impression in the visitor»⁶⁴.

This explanation shows a link between emotional responses, cognitive values and aesthetic strategies. In this case, the use of colour and the reduction of the model's size show the curator's concern of presenting the internal structure of the human body in a light that prevents aversion and other similar emotions from surfacing. The aesthetic strategy operated as a «disgust protector» in order to allow spectators to attend to bodily

62. Castan. Führer durch Castan's Panoptikum. Frankfurt am Main: Kaiserstrasse 67-69 & Frankfurt am Main: Druck Jac. Meyer; ca. 1905, p 48.

63. Virchow, Rudolf. Eröffnungsreden zur Eröffnung des pathologischen Museums der königlichen Friedrich-Wilhelm Universität zu Berlin am 27. Juni, Mittags 1 Uhr. In: Matyssek, Angela. Rudolf Virchow. Das Pathologische Museum. Darmstadt: Steinkopf; 2002, p. 111. Personal translation.

64. Zeiller, n. 30, p. 8

matters. In doing so, Zeiller made his viscera model fit with the aesthetic expectations of his audience to ensure an agreeable experience of anatomy. Designing an attractive museum visit therefore required knowledge about the cultural sensibilities of the audience and anticipating possible responses of the visitors. Zeiller integrated such aesthetic values later in his enterprise to transform distasteful viscera into beautiful waxes.

As the historian Wolfgang Brückner has argued, public education campaigns in nineteenth-century Germany appealed to the audience's aesthetic taste to implement new forms of perception of natural order and also of obedience towards prescribed norms of social interaction⁶⁵. Their public campaigns tutored the German bourgeoisie with norms of daily behaviour through the perception of beauty. In a similar way, Zeiller's museum combined the appeal to the visitor's aesthetic perception with the education of appropriate behaviour. While the exhibition text described the negative consequences of inappropriate body care, the waxes staged the normative behaviour in a beautiful fashion in order to persuade the spectators to imitate what they saw in the museum later in their daily lives. Combining health education with delightful viewing possibly fulfilled the aim of increasing the impact and the persuasive power of his education program among his audience.

5. Curiosity, laughter and erotic titillation

Conferring his museum objects with feelings and impressions was a significant strategy for Zeiller in shaping the visitor's comprehension of anatomy. However, disgust was not the only discriminated sensation in the affective design of his museum experience. Other responses seemed to be unsuitable for pedagogical purposes due to their doubtful relation to the incipient world of spectacle. Education and entertainment, cognitive and spectacular values, remained contested throughout the nineteenth century in the shaping of the experience of public health and anatomy.

65. Brückner, Wolfgang. Schön und gut. Ästhetische Wahrnehmung als moralische Norm oder Volksaufklärung durch gebildeten Geschmack. In: Volkskunde als historische Kulturwissenschaft. 1. Kultur und Volk: Begriffe, Probleme, Ideengeschichte. Würzburg: Institut für Deutsche Philologie, Volkskundliche Abteilung; 2000, p. 361-387.

Combining learning with pleasurable viewing or reading was considered «reader-friendly» and «target-oriented» and should effortlessly transmit specialized but often complex and abstract information. A visit to the Pathological Museum Charité in Berlin, which had opened its doors to the general public in 1899, was an example of pleasurable viewing. Rudolf Virchow had designed a museum experience where a certain amount of amusement and education were neatly combined. The building's amazing architecture and its output of the lightening, cultivated a convivial environment of contemplation among the visitors. In addition, Virchow's guide to the collection's objects was a jovial combination of explanations and jokes⁶⁶. Zeiller's museum space was far less remarkable. But he found other ways to engage his audience, through vivid contemplation and astonishment. He pursued selling his display project as an attractive engagement. The exhibition catalogue introduced his spectators to «the unknown parts of the body» and «the enigmas of the brain»⁶⁷. By emphasizing the mysterious nature of the anatomized body and tickling the spectator's interest with extraordinary experiences, it fulfilled the double function of drawing attention and turning public health education into a surprising journey of discoveries through the body's depths.

However, although the vivid and pleasurable contemplation was discussed as an added value to pedagogical aims, the very same value could be the object of stern criticism that considered popularization opposed to scientific inquiry when the display came too close to folk festivals, panopticons and fairs. Critical voices alerted of the dangers of trivialization for public education programs. «Accumulating curiosities» or «snatching at rarities» was more unconstructive than convenient⁶⁸. Social reformers, who took themselves seriously, preferred display designs and text styles that differed from what they called shallow entertainment or bare amusement. The dividing line between both ends was slippery and remained contested throughout the nineteenth century.

Zeiller addressed this ongoing debate about the advantages or pitfalls of vivid contemplation for public health education through his spatial rhetoric. By carefully arranging his display objects, he aimed to shape his audience's

66. Hagner, Michael. Monstrositäten in gelehrten Räumen. In: Polzin, Alexander; Gilman, Sander, eds. *Abgetrieben*. Göttingen: Wallstein; 1997, p. 11-30 (29-30).

67. Zeiller, n. 30, p. 17.

68. Daum, n. 49, p. 225.

experience of anatomy in a vivid fashion without turning his objects into joke pieces. Unlike the museum experience of German panopticons of the time, full of fits of laughter, erotic titillation or delightful shivering, Zeiller pursued a different tenor. Therefore, wax representations of mass murderers, a recreation of a Harem, joke pieces such as a Siren or a «Gorilla abducting a farmer's daughter», or a recreation of the *Nightmare*, an artwork by the well-known Romantic painter Johann Heinrich Füssli (1741-1825) were not part of his show [figures 2-5]. Zeiller remained cautious in regards to the intense sensations sold at the panopticon and fairs at the time⁶⁹.

Zu Sinterwalde in der Hospitalstr. neben dem Krankenhaus
 ist von Sonnabend bis incl. Dienstag
R. Schulze's grosses naturhistorisches
Museum und Panoptikum

für das geehrte Publikum geöffnet. Daselbst enthält die berühmtesten Persönlichkeiten der alten und neuen Zeit, sowie Darstellungen der neuesten Weltbegebenheiten. — Besonders hervorzuheben sind: Die Nivenbrant. Die Anbetung der heil. Familie im Stalle zu Bethlehern. Se. Majestät Wilhelm II. Reichstanzler Graf von Caprivi. General-Feldmarschall Graf v. Moltke. Geheimrat Rob. Koch etc. — Ganz neu: **Parade-Aufstellung des Präsidenten Faure in Frankreich.**

Specielle Abteilung: **Grossartige Sammlung seltener Land- und Seethiere, Pflanzen und Mineralien in hundert Präparaten.**

Ein Brüllaffe von der Insel Borneo (derselbe ist $\frac{1}{4}$ Meter hoch), sowie Gruppen exotisch-tropischer Vögel, Niesenpfecht, Papagei, Gruppen Kolibris, Schlangen, Schwärme mit ehbarem Nette, eine Kollektion See-tiere, Krebse, Tintenfische, Haihäute etc., unter diesen Tieren befinden sich 300jährige Niesen-Kratodie und Niesen-Eisbecken.

Neu! Der schwarze Tod oder die Pest in Bombay. Die Hungersnot in Indien. **Der Burenkrieg, die neuesten blutigen Wirren in China. Der Boxer-Aufstand. Neu! Der Mörder des Königs von Italien, Angelo Bresci,** lebensgroß zu sehen.

Interessant! Sehenswert!
Sirene, das lebende Meerweib!
 Diese außerordentliche Merkwürdigkeit ist durch ein optisch-physikalisches Experiment dargestellt, 2 Meter lang, und wird die geehrten Besucher durch ihre merkwürdige, aber schöne Erscheinung in Erstaunen setzen. Derselbe sieht man in einem großen mit Wasser gefüllten Bassin frei umhergeschwimmen.

Die größte Schlange der Welt lebend zu sehen.
Entree für Erwachsene 15 Pfg., Kinder 10 Pfg.
 Um zahlreichem Besuch bittet **der Besitzer.**



Figure 2. Advert of R. Schulze's panopticon, ca. 1900. Reproduced from: Nagel, Stefan. Panoptikum, curiosita. In: Schaubuden: Geschichte und Erscheinungsformen URL: <http://www.schaubuden.de/>

Figure 3. «Gorilla abducting a farmer's daughter», life-sized wax models, Panopticon Munich, ca. 1900. Reproduced from: Nagel, Stefan. Panoptikum, curiosita. In: Schaubuden: Geschichte und Erscheinungsformen, URL: <http://www.schaubuden.de/>

69. In doing so, his museum design was similar to the museum of his elder brother Paul, who also curated a popular museum in Munich. Hopwood, n. 22.



Figure 4. «The nightmare», life size wax model, Munich Panopticon, ca 1900. Reproduced from: Nagel, Stefan. Panoptikum, curiosita. In: Schaubuden: Geschichte und Erscheinungsformen. <http://www.schaubuden.de/>



Figure 5. Postcard, Castans Panopticum, 1901. Reproduced from: Nagel, Stefan. Panoptikum, curiosita. In: Schaubuden: Geschichte und Erscheinungsformen. <http://www.schaubuden.de/>

Designing emotions into his museum objects to increase their suitability for public health education implied an eager willingness to engage in careful discrimination. Zeiller remained especially cautious not to combine curiosity with what his contemporaries called «visual pleasures». The tension between education and entertainment became particularly visible when wax

models depicting syphilis were placed on public display. In the 1880s the medical community had discovered that syphilis was genetically inherited and did not miss out on the opportunity to promise a cure⁷⁰. Even though the sociocultural relevance of this disease led to its representation⁷¹, the public display of venereal diseases was very much contested in Germany before the First International Hygiene Exhibition in Dresden in 1911⁷².

In other European cities, the related displays of anatomy and hygiene were also problematic around 1900, due to the perceived tension between scientific education and pornographic titillation⁷³. Towards the end of the nineteenth century, in the context of German panopticons and fairs, syphilis was displayed in so-called «Extra Cabinets» or «Secret Cabinets». The «Extra Cabinet» usually referred to separate showrooms with admittance restrictions⁷⁴. Sometimes, the visit was only allowed in daylight and for adults; on other occasions, women were completely forbidden admittance⁷⁵. The division of the exhibition space into a general and a restricted area indicated the uneasy atmosphere that surrounded those materials, which the public opinion considered to be sexually explicit. Such artefacts depicted isolated genitals affected by the disease. The accompanying placards stressed the dramatic deformation of the body in relation to the lack of abstinence and for living out pleasures or prostitution. As it has pointed out, around 1900 the body image of venereal diseases served as an emblem of temptation and of danger⁷⁶.

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70. Sauerteig, Lutz. *Krankheit, Sexualität, Gesellschaft*. Stuttgart: Steiner; 1999.
71. For the impact of the social relevance of syphilis in representations see: Schonlau, Anja. *Syphilis in der Literatur: über Ästhetik, Moral, Genie und Medizin (1880-2000)*. Würzburg: Königshausen und Neumann; 2005.
72. For an analysis of emotional responses of syphilis on display at the First International Hygiene Exhibition in Dresden in 1911 see: Sauerteig, Lutz. *Lust und Abschreckung. Moulagen in der Geschlechtskrankheitenauflklärung. Medizin, Gesellschaft und Geschichte*. 1992; 11 (S): 89-105.
73. Åhrén, n. 56, p. 71-72.
74. Oettermann, n. 37, p. 36-56; Oettermann, Stephan. *Alles-Schau. Wachsfigurenkabinette und Panoptiken*. In: Kosok; Jamin, n. 37, p. 294-302.
75. Kisch, Egon Erwin. *Der rasende Reporter*. In: Uhse, Udo; Kisch, Gisela, eds. *Gesammelte Werke in Einzelausgaben*. Berlin and Weimar: Aufbau-Verlag; 1978, p. 170-174; Py, Christiane; Vidart, Cécile. *Die anatomischen Museen auf den Jahrmärkten*. *Freibeuter*. 1986; 27: 66-77. For american popular anatomical museums. *Sappol*, n. 1.
76. Lindner, Ulrike; Sauerteig, Lutz. *Gefährliche Körper: Geschlechtskrankheiten, Moral und Volksaufklärung um 1900*. In: Gerchow, Jan; Belting, Hans, eds. *Ebenbilder. Kopien von Körpern, Modelle des Menschen*. Ostfildern-Ruit: Hatje Cantz; 2001.

However, «extra cabinets» addressed not only the public's interest for sexual education and health prevention, but also the audience's demand for visual pleasure. Offering a safe place to gaze upon the stigmas of extramarital lust was at one and the same time the special attraction of popular anatomical shows. The confluence of curiosity and visual pleasure is staged in this postcard of a fairground in 1903 (figure 6). The illustration shows the various performances of clowns, acrobats, and jugglers. But in a circle in the upper right-hand corner, the picture shows a feminine bust. The figure has removed her dress, unveiling her intimate body parts to the spectator, while she holds a disproportionate key in her hands. The postcard's title announces: «Greetings from the Extra Cabinet! Everything available, only refreshments are missing!». An «Extra Cabinet» proved convenient for merchandizing. Museum owners exploited the seductive appeal of the secret objects for their show business, as they attracted fair strollers with the promise of erotic titillation. The press reflected on the double morality of these popular shows, accusing them of camouflaging mere visual pleasures

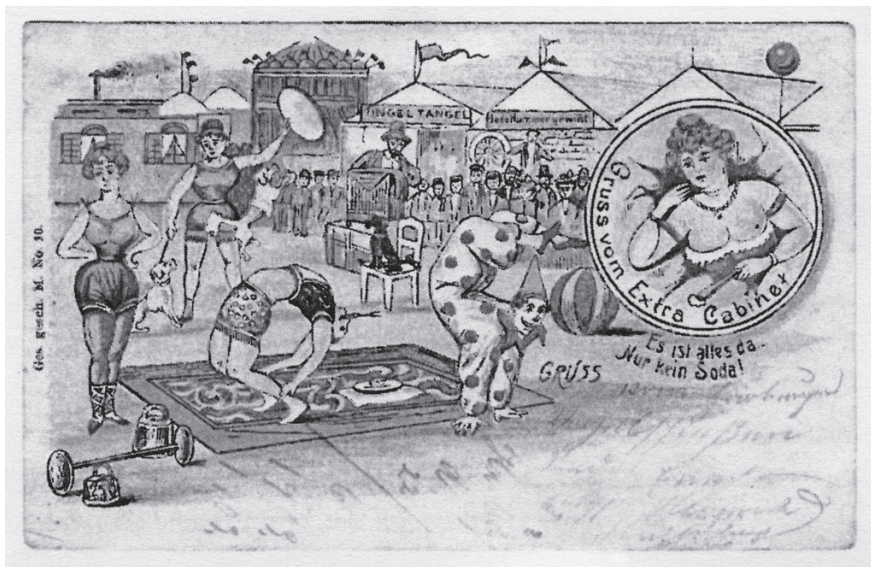


Figure 6. Postcard Greetings from the Extra Cabinet!, undated. Reproduced from Szavo, Sacha. Rausch und Rummel: Attraktionen auf Jahrmärkten und in Vergnügungsparks; eine soziologische Kulturgeschichte. Bielefeld: Transcript; 2006, p. 100.

as objects of scientific entertainment and curiosities⁷⁷. Occasionally, the authorities even proceeded to shut down popular anatomical shows under the allegation of offending the moral sentiments of good citizens⁷⁸. In 1873, Kahn's anatomical Museum pleaded guilty to offences in London under the British Obscene Publications Act in 1857, and in Germany the Baden panopticon was processed under the criminal code in 1872, which mirrored the authority's drive to classify and differentiate between decent and indecent materials⁷⁹.

A revision of who should see what and under what conditions constituted a central issue for health education and the politics of display. Public health educators, who took themselves seriously, remained especially cautious of making representations of syphilis accessible to the lay audience. Firmly convinced of the potential that his museum project might have in terms of education, Virchow was aware that a well-organized exhibition setting was related to the diversity of the audience and the different public interests. During his opening speech at the Charité Museum, he praised the collection's accessibility for the general public as an outstanding achievement. But his museum offered an important feature: Virchow did not hesitate to arrange the exhibition site into a divided space. One exhibition place was open for everyone, the other exhibition space that pictured pieces—which in his opinion could harm the moral sentiments of the general public—remained restricted for laymen and laywomen. Wax models depicting syphilis were part of the latter, which remained open only for professionals of medicine. In his opinion, syphilis was not «apt for public demonstration»⁸⁰.

Through the spatial arrangements of his own museum, Gustav Zeiller contested the erotic titillation practiced at the fairgrounds. This strategy has also been observed in other wax museums and anatomical collections in Europe⁸¹. The letter he wrote to Dresden's authority before the opening

77. *Norddeutsche Allgemeine Zeitung*, Nr. 582; 9 Dec 1888. Quoted in Oettermann, n. 74, p. 46.

78. Bates, Alain W. *Indecent and demoralising representations: public anatomy museums in mid Victorian England*. *Medical History*. 2008; 52 (1): 1-22.

79. *Ethnographical Exhibitions, Baden*, 3 January 1879. *Generallandarchiv Karlsruhe*, Abt. 357/1973/51, N 2001. For more information about this criminal act, see: Stark, Gary. *Pornography, society, and the law in Imperial Germany*. *Central European History*. 1981; 14 (3): 200-229 (205).

80. Virchow, n. 63, p. 111. Personal translation.

81. French waxwork exhibitions, such as Philippe Curtius, focused on pathological anatomy by exploiting the popular interest in science and the perceived prurience of pathological exhibits. However, this kind of wax exhibitions had not been opened for long in Paris. They had become related with an unsophisticated audience and low cultural values or charlatans.

of his museum in the town offers an insight into his curatorial choices. The text is composed in a self-justifying tone, a common strategy of model-makers to anticipate possible critiques, as Michael Sappol has remarked⁸². Furthermore, the letter includes a description of the list of objects on display in his museum. But the number of elements left out was even more extensive. Zeiller even highlighted their absence as a plus value. He clarified that he did not model nor expose any object that showed isolated genitals or any dermatological disease. Furthermore, he highlighted the absence of a «Secret Cabinet» in his museum as a distinguishing feature of his enterprise⁸³. And finally, he made clear that his museum did not possess any restrictive access policies based on gender, and that his collection was only to be visited in daylight. In an advert for his museum, Zeiller claimed that «the exposition at the anatomical museum doesn't pursue satisfying vague visual pleasures or filthy sexual appetites (...)»⁸⁴. Through a variety of curatorial choices spanning accessibility for women, opening hours, and the exclusion of specific icons, his museum objects went through a process of emotional design. Curiosity was a welcomed response, with which Zeiller endeavoured to engage his visitors. However, in order to become a museum as well as a pedagogical instrument befitting of public health education, he was eager to withhold all those elements that could possibly present his visitors with immoral sentiments.

6. Conclusions

The examination of Zeiller's rhetorical choices in his display practices leaves us with some final remarks. As I have argued, the efficacy of Zeiller's education program was achieved by a spatial design of the material museum environment. His models became persuasive instruments for health education by being set up in correlation to certain objects and in disconnection to

In contrast, the Grevin museum's owners excluded anatomy and hygiene-related icons to keep from being associated with allegedly pornographic wax museums. Schwartz, n. 1. A similar strategy was used in the Swedish panopticon in Stockholm. Åhrén, n. 56, p. 72.

82. Sappol, n. 1.

83. Zeiller, n. 19.

84. «Die Ausstellung der anatomischen Sammlung verfolgt nicht den Zweck, müßige Schaulust oder schmutzige Begierden zu befriedigen». Zeiller, Gustav. Führer durch die anatomische Ausstellung. Dresden; undated. Personal translation.

others, to adverts and textual media, and finally to opening hours and access policies. All these elements worked together to choreograph the (physical) encounter between visitors and models, but also to enhance an argument. The museum experience aimed at guiding the visitors towards an ideal state of conduct, based on the virtues of moderation and a bodily-sentimental balance through rational and scientific comprehension of their bodies.

As we have seen, to enhance the impact of his museum, Zeiller used three strategies. First, he stressed the practical usefulness of the topic of his education program. By mentioning possible problems at home or at work, Zeiller tried to set his museum program close to the social reality of his visitors. The proximity to spectators' everyday lives facilitated their identification with what they saw on display. Second, his models depicted the healthy body in an aesthetic and artistic fashion in order to evoke an agreeable and delightful response and engage his visitors in active collaboration. The aim of a museum visit was not simply to turn the audience into well-informed individuals. Rather, the museum experience ought to persuade them to modify their behaviour in their daily lives afterwards; that is, to grant them agency. Finally, Zeiller endowed his artefacts with emotions in order to strengthen the status of his museum. This part of emotional design focused on discriminating visitor reactions such as laughter, erotic titillation or visual pleasure too closely related to popular spectacle in order to ensure the authority, prestige, and positive public image of his medical collection. Thus, we can conclude that the use of medical artefacts for public health education seemed to be unconvincing by itself. It seemed insufficient to show the devastating consequences of bad drinking habits, or to legitimize such a position as a scientific argument. Perhaps most important, the dissemination of anatomical facts went hand in hand with a careful «affective manufacturing» of Zeiller's didactic instruments to increase the impact of his education program.

«In memory of a mocha coffee with a panoramic view
at the Pregasina, Lago di Garda».

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