



Learning about dentistry: enacting problems at the Wellcome Collection exhibition 'Teeth'

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Abstract We review how the Wellcome Collection exhibition 'Teeth' enacts meanings from an educational anthropology and Science and Technology Studies perspective. The exhibition tells the history of dental science. It starts with accounts of the painful procedures and social inequalities of early oral healthcare. As it moves towards the present day it shows improved scientific knowledge, tools and public health promotion, and closes with current sophisticated technologies and practices. However it underrepresents contemporary social inequalities. We conclude that science communication exhibition curators should strive to represent the problems of today as well as those of the past.

Keywords Health communication; Public understanding of science and technology; Science centres and museums

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'Teeth' is a four-month exhibition telling a history of dentistry at the Wellcome Collection building in central London (17/5/18–16/9/18). Inspired by the book 'The Smile Stealers' by Barnett [2017], the curators have assembled over 150 objects to, as the guide sheet explains, tell 'the tale of our pursuit of a pain-free mouth and the perfect smile' [Wellcome Collection, 2018]. Our focus is not the book, but instead to review the exhibition from our perspectives in educational anthropology and Science and Technology Studies. We analyse the content, articulate how the exhibition invited public attendees such as ourselves to understand the discipline and practice of dentistry, and assess what symbolic work this enacts in presenting the relationship between science and society. We close with some reflections on the implications of this for science communication practice.

To its credit, 'Teeth' carries a narrative arc that sets the development of dentistry in the context of social change and social problems. It leads the attendee on a process of sense-making through engaging with the objects exhibited, their associated text, and the introductory blurbs written on the wall as you pass into each sub-section of the exhibition. In simple terms, the narrative seeks to lead the visitor through a

story from the horrors of medieval tooth work to the socio-technical achievements of today. The nuance of these early horrors is well captured in one of the very first exhibits you see, two human skulls belonging to women who died in the 1830s/40s. Under the title 'dental health of the rich and poor', one skull contains teeth with extraordinarily evident rotting and plaque build-up, while the other, of a richer woman, shows healthier (but still far from pristine) looking teeth, including some held in by platinum wire, described as 'Waterloo' teeth (which we later find out means human teeth taken for transplant from the dead of battle). Other horrors include the stringent wooden chair of the barber-surgeon who engaged in anaesthetic-free tooth pulling, or for the even poorer, the blacksmith doing the same job on agonised patients.

This is juxtaposed to the work of the first dentist, Frenchman Pierre Fauchard, who sold expensive treatments to the wealthy, and in 1728 published a scientific manifesto detailing the new discipline. His vision was future-looking, focused upon health and aesthetics, targeted the elite, and became progressively codified in new tools and texts. We are then shown oral items from the rich and powerful: Napoleon's toothbrush, George Washington's dentures, and a painting of Queen Victoria that challenged portraiture convention by smiling with open mouth to show her expensively treated teeth. In this part of the exhibition we were being told loud and clear that the problem of early oral health was both that it was painful and unsafe, and that it was riddled with social inequality. As a preserve of the rich, dental science at this time served to widen this gap, not narrow it.

The exhibition then led us through the industrial revolution and the mass-production of toothbrushes, drugs, and dental drills, more sophisticated looking dental chairs, increasingly codified dentist education, and adverts from entrepreneurial dentists encouraging potential clientele to take up their services, especially those in the prosperous middle-classes.

At this point the curation takes a turn following World War 2 and the advent of the National Health Service, which is described as a 'step-change in access to dental care in the UK'. Here the exhibition focuses upon a set of public health messages from the last century, including 'our friend the dentist' from 1926. Yet what is noticeable is that the problem of 20th century oral health becomes reframed as one of youth, and particularly of the undisciplined child who needs training to properly take care of their teeth. We are shown a poster titled 'shocking isn't it?' about children's sugar intake, a set of children's letters to the tooth fairy, and a 1960s poster declaring '4 tons of children's teeth extracted every year', with accompanying text noting today in the U.K. this is still around one ton, which is the 'number one reason for child hospital admissions'. Also in this latter stage of the exhibition, we are shown a 2017 'dental treatment station', a beautifully designed hi-tech dentistry seat with digital scanning and mapping of teeth and gums allowing bespoke crowns and the planning of tricky implants. Next to this we have a video of a dentist who specialises in managing dental anxiety, as nervous patients are shown receiving high-quality care. A second video details a woman's happiness at surgery to correct a cleft lip and palate. These accomplishments of today are enacted with pride.

The narrative arc here reaches its conclusion, as attendees are invited to be impressed by the caring and scientifically sophisticated form of contemporary

dentistry, and be thankful we are free of the horrors of earlier modes of tooth care. Or at least, that's how the narrative arc may seem by following the exhibited objects. For while the curation affords this sense of resolution of yesterday's problems — save for naughty children too keen on sweets to fulfil their role as self-monitoring healthy individuals — there is in the accompanying text one line that unravels the narrative. In a sub-section introductory blurb called 'a sense of self', we are told 'poverty is still the major factor affecting our dental health'. The social inequality of earlier times remains. Yet this key comment on the science and the social of contemporary dentistry is not instantiated in any exhibited object. The items displayed present a tale of socio-technological success: a codified knowledge-base and social system in harmony. There are no rich and poor skulls of recent times, only scientifically advanced tools and techniques for healthy mouths.

Exhibitions enact. They are performative sites that render human-object-knowledge relations and their histories knowable through textual and material narratives. 'Teeth' frames the socio-technical development of oral healthcare science in a way that engages and genuinely informs those that attend. But perhaps by resolving the earlier theme of social inequality through deploying a techno-romanticism of the success of contemporary techniques and social practice, the exhibition fails to drive home the challenges of dentistry in the U.K. today. While it helps us make sense of how dental science came into being, it also gives us a sense that perhaps things are better than they really are.

There are implications here for other museum curators engaged in communicating scientific advance through historical or chronological exhibitions. As we note, the Wellcome Collection should be credited for embedding the narrative within the context of social change and social problems. There is clear value in making explicit the multiple ways that scientific practices, and the societies in which they are developed, mutually shape and inform each other over time. Moreover, tying this to social justice issues around poverty and inequality is important work in giving exhibition attendees a sense of the political culture that is entangled with any scientific development. However curators should look closely at what social problems are represented, and how that representation shifts across the chronology of the exhibition. Our central criticism of 'Teeth' is that, in terms of the objects displayed, the early focus on social inequality simply slipped from the narrative, as if it had been solved. While we know nothing of the intentions of the curators, it could be imagined that the desire for the closing stages of 'Teeth' was to represent the best of oral healthcare today, and to convey an enthusiasm for the achievements of dental science over recent history. But in this celebration of current accomplishments, the contemporary social problems were underplayed. There are sure to be many ways this could have been addressed, perhaps with data from the Adult Dental Health Survey on disparities by income, or the inclusion of adverts from one of the UKs many foodbanks for toothbrush and toothpaste donations. However, no such exhibit was included.

Exhibitions such as 'Teeth' enact particular constellations of science-society relations that inform public imaginations. But with this comes a burden to ensure social problems are presented accurately and responsibly, and that — in the context of science communication — that the enthusiasm for the latest developments does not override the latest social issues. Communicating about scientific advance in its social context is an admirable practice. But it is vital that curators remain attentive to

the social problems of the future, and not just those of the past. By not instantiating this in objects, 'Teeth' gives us just a little less to chew on than it should.

References

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