

Charismatic Technology

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ABSTRACT

To explain the uncanny holding power that some technologies seem to have, this paper presents a theory of *charisma* as attached to technology. It uses the One Laptop per Child project as a case study for exploring the features, benefits, and pitfalls of charisma. It then contextualizes OLPC's charismatic power in the historical arc of other charismatic technologies, highlighting the enduring nature of charisma and the common themes on which the charisma of a century of technological progress rests. In closing, it discusses how scholars and practitioners in human-computer interaction might use the concept of charismatic technology in their own work.

Author Keywords

Charisma, childhood, education, history of technology, ideology, One Laptop per Child, religion, science and technology studies, technological determinism, utopianism.

INTRODUCTION

Scholars have noted the holding power that some technologies seem to have – a power that goes beyond mere form or function to stimulate devotion, yearning, even fanaticism [2,39,44,62]. While Apple products, especially iPhones, are often held up as the most common example of this holding power [11,31,37,40,52,56], it exists in various forms for many technologies, from sports cars to strollers.

This paper describes this holding power as *charisma*. Applying Weber's theory of charismatic authority [68] to objects, it presents a case study of a technology that was highly charismatic to its makers and supporters (and remains so to a devoted core): the One Laptop per Child (OLPC) project's "XO" laptop. With about two and a half million in use globally, OLPC's green-and-white XO remains a focal point for discourses about children, technology, and education, even a decade after its 2005 debut. This analysis explores the roots of the laptop's charisma and the important role that charisma played in OLPC's heady early days. It then reflects on the charismatic elements present in this project in

relation to the charisma of past technologies. This historical perspective highlights the ideological commonalities between all of these charismatic objects. It also suggests that far from being a new phenomenon, charismatic technologies have been captivating their users and admirers for decades, and will likely continue to do so for decades to come. We will see that charismatic technologies help establish and reinforce the ideological underpinnings of the status quo through utopian promises [39] – promises that persist even when the technology does not deliver.

The goal of this paper is to expose the ideological stakes that buttress charismatic technologies. Those who create, study, or work with technology ignore the origins of charisma at their own peril – at the risk of always being blinded by the next best thing, with little concept of the larger cultural context that technology operates within and little hope for long-term change. Recognizing and critically examining charisma can help us understand the effects it can have and then, if we choose, to counter them. However, it is also important to acknowledge that charisma can smooth away uncertainties and help us handle contradictions and obstacles. As such, the purpose of this paper is not to 'prove' charisma 'wrong,' because its rightness or wrongness is beside the point. As we will see, what matters is whether a technology's charisma is still *alive*.

This paper provides a framework for understanding how charisma operates in relation to technologies, how it might be identified, and what is at stake when we are drawn in. It provides tools for identifying charismatic technologies and teasing out the implications of this charisma, from the hardware and software of the object itself to the ensembles, agendas, and trajectories of the globalized organizations around it [18], and back down to the ways that those same groups shift, contest, or perpetuate the object's charisma. This borrows from Actor-Network Theory the idea that nonhuman "actors" have agency in technosocial discourses [33], and from Value-Sensitive Design a normative examination of the ways in which the myriad values influence design and use [19]. This analysis adds to these theories a detailed case study of the role that charismatic authority plays in the design and use of technologies, digging beneath professed values to identify the ideological underpinnings upon which values, and charisma, rest.

METHODS AND SOCIAL-HISTORICAL ORIENTATION

This paper draws on archival research, interviews, and ethnographic observations conducted between 2008 and 2015. This includes an investigation of the forty-year development of the ideas behind One Laptop per Child (OLPC) through a review of the project's mailing lists, wikis, and discussion boards; the publication history of its founders; and interviews with some developers. The author also conducted seven months of fieldwork of an OLPC project in Latin America (see [5,6,53]), but this data is not directly included here. Analysis followed an iterative, inductive approach common in anthropology and cultural studies, combining the themes that emerge ground-up from a thorough understanding of participants' worldviews with a critical interpretation of these themes as 'texts' able to expand or contest broader theoretical questions [10].

This paper contextualizes the patterns noted in OLPC's rhetoric and design within the broader arc of technological development, as told by historians of technology. The combination of historical and contemporary data lends itself to reaching beyond the often bounded scope of qualitative research to answer more long-ranging questions about the trajectory of technological development and use.

THEORIZING CHARISMATIC TECHNOLOGIES

To explain the holding power that OLPC's laptop has had on technologists and others around the world, I develop the idea of a *charismatic technology*. This section defines charisma, outlines the salient features of charismatic technologies, and details the connection between charisma and related concepts from social theory including fetishism, religion, technological determinism, and ideology.

Charisma as a sociological construct was theorized by Max Weber to describe the exceptional, even magical, authority

building out the railroad in the mid-nineteenth century, for

on its presumed existence. Two antennae “ears” on either

The charisma of childhood

The charisma of computers

As an alternative to school, Papert proposes giving each child

laptop designers and children's activities on the ground [5,6].
OLPC aimed to provide access to pedagogical materia

Lessons from the charismatic radio

Of all the charismatic technologies of the past, the one that has the strongest resonances with the charisma of computers, education, and childhood – charismas that OLPC relies on – is the radio. Aside from an increasingly marginalized culture of HAM radio operators, it can be hard to imagine radio in the U.S. (today so often a commercialized audio wasteland of top-40 songs on repeat, with a few public stations limping from one pledge drive to the next) as an intensely charismatic technology. But radio took 1920's America by storm, capturing the country's collective imagination with promises blending technological miracles and manifest destiny. Historian Susan Douglas explains that radio, as envisioned in 1924, "was going to provide culture and education to the masses, eliminate politicians' ability to incite passions in a mob, bring people closer to government proceedings, and produce a national culture that would transcend regional and local jealousies" [16:20]. Commentators described the replacement of telegraph wires with radio waves with psychic metaphors and compared it to magic [16:41].

Many of the amateur enthusiasts and educators who pioneered radio were especially excited by the medium's apparent ability to transcend political and economic controls, enabling virtual communities and informed populism p

all hopes that have been echoed more51401(t)57324()-47.2584(c)(e)10.4989(s)-.24()-47.2584(c)(e)10.40.4989-6.87173(r)(i)5.51477(n)4.5705

Because learning was the central goal of OLPC, examining

What is the alternative to this catch-22 of charismatic education reform? Incremental reforms, what Tyack and Cuban call “tinkering,” are more effective in the long-term, even if they are not charismatic. “It may be fashionable to decry such change as piecemeal and inadequate, but over long periods of time such revision of practice, adapted to local contexts, can substantially improve schools,” they explain. “Tinkering is one way of preserving what is valuable and reworking what is not” [62:5].

CONCLUSION

Through an analysis of One Laptop per Child and a survey of past charismatic technologies, this paper exposes the ideological stakes that underpin charisma – the ability for technologies (or, as originally theorized, people [68]) to evoke feelings of awe, transcendence, and connection to a greater purpose. It shows how the promises that charismatic technologies make are ideologically charged, how they can be identified, and what is at stake when we are drawn in. While it may be easy to discount examples from the past given the perspective and tarnish of time, taking a historical perspective on charismatic technologies show us how conservative charisma actually is – the same kinds of promises have been made over and over, with different

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