International Journal of Communication 8 (2014), Feature 2509–2512 1932–8036/2014FEA0002

IJoC Media, Hot and Cold

Anal Probes and Overheated Media: The Physiological Roots of Contemporary Media Research

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The mid-to-late-19th-century Italian scientist Angelo Mosso took an autobiographical approach to physiology, employing a range of instruments to measure his own bodily changes. In one especially personal example, Mosso reported that "his own thermometer-measured rectal temperature changed with his spontaneously evoked emotion" (Dror, 1998, p. 173). As invasive as this approach might sound, it is indicative of a central trajectory within the transition from 19th- to 20th-century social science, with important implications for the history of media studies. Mosso was situated between traditions of spiritualism—which saw self-reflection as an essential component of understanding—and an increasingly scientific psychology that used presumably objective technologies to extend, and in many cases critique, this personal approach. Mosso's position between these two traditions likely explains his relative comfort utilizing scientific technologies on himself.

Early media and communication research arose at a similar moment, and the precise nature of Mosso's transitional climate had especially strong implications for the study of media (Malin, 2014). Like Mosso, 19th-century psychologists—who would become some of the first media researchers—had made heavy use of introspection, both reflecting on their own psychological states and having their research subjects do the same. As the kind of recording technologies that Mosso used to measure his own physiology became more prevalent, social researchers increasingly saw introspective accounts as problematic. Technologies of physiological measurement were given more and more authority over the body until introspective accounts came to be seen as completely untrustworthy. Whereas people were likely to misunderstand their bodily processes, researchers believed that physiological measurements bypassed a person's distorted perceptions and got to an inner truth of the body.

If for Mosso his rectal temperature provided a data point that helped him reflect on his emotional states, for these later researchers that temperature was the emotional state itself. The idea that emotions were bodily temperatures being drawn out by technologies was especially persuasive for early researchers on media technologies. The film, radio, and phonograph records of this period were celebrated for their abilities to provide scientific data on people's emotions even as they were denigrated for their impact on the wider public (Malin, 2009). Christian Ruckmick, who contributed one important monograph to the Payne Fund Motion Picture Studies, praised the emotion-reading power of the psychogalvanometer, which was essentially a lie detector that measured a variety of physiological changes and then recorded them on film. At the same time, Ruckmick argued that films themselves produced a "profound mental and

physiological effects of an emotional order," resulting in "unnatural sophistication and premature bodily stimulation" (Dysinger & Ruckmick, 1933, p. 119).

Ruckmick's research, like that of psychology more generally, was influenced by a broader concern about overstimulation that increasingly saw the emotional pressure of modern life—and emotion itself—as dangerous to the public. Walter Lippmann's (1922, 1925) worries about "disenchanted man" were premised on the idea that information overload had created a world of overheated citizens who were too exhausted to participate in public life. Whereas earlier 20th-century psychologist Hugo Münsterberg (1916) had celebrated the new emotional stimulations of the movies, Ruckmick and his peers saw the emotions of the new media age as dangerous to both audiences and psychology itself. The use of emotion-measuring technologies in the laboratory was an attempt to bypass psychologists' own emotions, which were seen as antithetical to a truly objective social science. Measuring a subject's emotions through various technological means, these researchers presumed, allowed psychology to free itself from the messiness of emotional connection and intimacy. For Ruckmick, the psychogalvanometer engaged deeply with people's emotions so that he didn't have to, leaving him to observe the emotions of the new technological age from an appropriate—though equally technologized—distance.

To the extent that media technologies have continued to be seen as especially emotionally stimulating, their paradoxical effects—as overheating the public and cooling down the media researcher—have maintained a prominent place in the history of media studies. Even so reflective a thinker about technology as Marshall McLuhan could fall prey to this implicit thread of physiological reduction. That such distinctions between hot and cool media and oral and literate culture are premised on an unexamined concern for the emotional power of advancing technologies becomes clear when looking at the larger corpus of McLuhan's work, especially as articulated in the posthumously published *Laws of Media* (McLuhan & McLuhan, 1988). Here, the distinction between oral and literate culture becomes especially physiological, as McLuhan and his son Eric drew on recent brain scan research to show how the oral culture of the ear—which they favored—affects the brain more positively than the literate culture of the eye. Ironically given their professed goal of understanding media technology, however, they failed to consider the implications of a technology central to their claims: the brain scan itself. As did Christian Ruckmick, they treated this research technology as an objective observer charting the impact of the technological march forward.

Today, when digital technologies such as the MRI are regularly employed to understand the emotional impact of such digital technologies as the Internet, it remains important to be mindful of this persistent thread of anxiety about the emotional stimulation of new technologies. Claims about how digital technology is making us smarter (Johnson, 2006) or dumber (Carr, 2011) need to be read against the longer history of seeing the primary impact of new technologies as the heating up of people's physiological processes. The connections between Mosso's anal probe, Ruckmick's psychogalvanometer, McLuhan's brain scan, and the digital images of the MRI are not so faint as they might first appear. Each approach assumes the fundamentally physiological nature of emotional effects and the unique access of technologies to those emotional processes. However, something important was lost in moving forward from Mosso's research, which assumed a radical self-reflexivity at odds with these later studies. Despite being the product of the laboratory technologies he employed, the temperatures Mosso measured were

still deeply personal and firmly located within his own bodily experience. For Ruckmick and later media researchers, the bodily heat of emotion was increasingly seen to come from without—generated, it seemed, by the distant power of an impersonal, technologized, mass culture. Alongside this imagined mass culture, these researchers lost sight of their own personal position within the technologies and emotions they explored—overlooking how the psychogalvanometer or brain scan were implicated in the same cultural resonances they attributed to the technologies that were the targets of their analysis. In order to avoid perpetuating these same physiologically reductive views, contemporary media research will be well served by recovering elements of Mosso's radical self-reflexivity, however difficult and uncomfortable that may be.

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