

Multi-Purposing Early Cinema: A Psychological Experiment Involving *Van Bibber's Experiment* (Edison, 1911)

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Thomas Edison's *Van Bibber's Experiment* (1911) is one of many Edison Manufacturing Co. films considered lost. Traces that remain of the film include a short synopsis in Edison's *Kinetogram*, a review in *Moving Picture World*, a photograph in the 1914 *Cyclopedia of Motion Picture Work*, and four seven-frame paper print photographs, which were used to register copyright.¹ Beyond these small clues, this film came and went with relatively little notice or record of its existence.

This might have been the final word on *Van Bibber's Experiment* were it not for a pioneering instance of cinema's use beyond entertainment. Film's educational and instructive purposes were being proposed, implemented, tested, and hotly debated in the early years of the twentieth century, which witnessed the widespread utilisation of moving pictures outside of entertainment venues in classrooms, churches, businesses, and – in the case of *Van Bibber's Experiment* – laboratories. In the March 1916 issue of the *Journal of the American Institute of Criminal Law and Criminology*, American psychologist and, in later years, historian of psychology Edwin G. Boring published a study entitled, "Capacity to Report upon Moving Pictures as Conditioned by Sex and Age. A Contribution to the Psychology of Testimony". His experiment – actually conducted in 1912 while Boring was completing his doctoral studies at Cornell under the supervision of Guy Montrose Whipple – employed a one-minute scene excerpted from Edison's *Van Bibber's Experiment*, which Boring described in detail in his report.² The scene depicted a burglary foiled by an upper-class club member, and was screened to assess the ability of viewers to accurately report what they witnessed. However, Boring's experiment – conducted four years before the publication of Hugo Münsterberg's *The Photoplay: A Psychological Study* (1916) and seven years prior to what has generally been considered "the first psychological research project involving movies", conducted by John B. Watson and Karl Lashley in 1919 – is a study not just of how these subjects responded to witnessing a criminal act, but also, as the title of the published report indicates, of the very act of viewing motion pictures.³

Boring's experiment was almost certainly the first time that a commercial film was used in a psychological experiment. Significantly, it transformed *Van Bibber's Experiment* from an entertainment film into a useful scientific, pedagogical tool. Unlike other films that were being made for specifically educational or scientific reasons (for example, films documenting psychiatric problems, which appeared as early as 1905), *Van Bibber's*

Experiment was repurposed by Boring to study the very nature of spectatorship and memory.⁴ This reorientation of an entertainment film exposes intriguing aspects of the era's scientific experimentation, including its intersection with the development of film form and narrative structure. How else, one can imagine Boring and Whipple pondering, could subjects in a psychological study "witness" a crime other than by way of moving images?⁵

The motion picture, it seems, offered a realist mode with which to tackle any number of social science challenges, though its employment by the scientific community in the pre-1915 era remains relatively untouched by film historians as well as by those working in the history of psychology.⁶ When discussing his studies at Cornell in *A History of Psychology in Autobiography* (published in 1952), Boring mentions the experiment only in passing, despite the fact that his use of film appears to be a – if not *the* – truly pioneering aspect of this study.⁷ Whipple's introduction to his *Manual of Mental and Physical Tests*, first published in 1914, just on the heels of the *Van Bibber's Experiment* study, comments on Boring's conclusions but not, except in passing, on his methodology.⁸ This essay, then, considers Boring's extra-theatrical use of Edison's film in part to restore the importance of Boring's pioneering work to the history of psychology as well as to film history, especially with regard to film's early twentieth-century multi-purpose functionality.

The film

Van Bibber's Experiment is an adaptation of Richard Harding Davis's short story, "Van Bibber's Burglar", first published in December 1890 in the New York *Evening Sun* and subsequently in Davis's collection, *Gallegher and Other Stories* in 1891.⁹ The film depicts a "burglar" (played by Marc McDermott) being released from the State Penitentiary (Figure 1). He returns home to his wife (Mary Fuller) and promises "to begin a new life" by leaving his criminal ways behind him, but struggles to find work. In the meantime, the film introduces us to Van Bibber (Robert Conness, in his third turn at the role in an Edison Co. production) – an upper-class character about whom Davis wrote numerous stories, many of which were adapted into films in the 1910s. At a club, Van Bibber encounters a detective wielding photographs of jewel thief suspects, paving the way for his experiment. Walking home, he spies a suspicious character in the act of burgling. Van Bibber pounces on the man, removes his gun, and recognises his face from the detective's photographs. After forcing him to return the stolen goods, Van Bibber feels sympathy for the unfortunate soul and so embarks upon his experiment: he takes the burglar home with him, clothes him properly, and shows him "his new self in the mirror", which causes "his confidence and his belief in his own manhood" to return. After testing the burglar's resolve, Van Bibber gives him enough money to take his wife out west to start anew. *Moving Picture World* described the "very effective climax" as follows: "The reformed burglar sends Van Bibber a fine picture of himself and wife and child, happy in the free and breezy West and a check, paying back the money Van Bibber had given him".¹⁰

The experiment

Edward Garrigues Boring was an engineering major at Cornell when he used elective hours to take his first psychology course with E.B. Titchener in 1905. Following a stint as an engineer with Bethlehem Steel in 1908, Boring taught science and mathematics and then returned to Cornell to earn his Ph.D. in Psychology in 1914 under Titchener's direction. During his course of study, he had four minor subjects and published in each of these areas, including educational psychology with G.M. Whipple, at whose



Fig. 1. The burglar is released from prison in *Van Bibber's Experiment*. Frame from the paper print in the copyright file for *Van Bibber's Experiment*.
 [Courtesy U.S. Dept. of the Interior, National Park Service, Thomas Edison National Historical Park.]

suggestion he “completed a study of the fidelity of report on moving-picture incidents” (the *Van Bibber's Experiment* experiment).¹¹ Whipple had already moved from the psychology to the education department to pursue psychological testing methods by the time of Boring's doctoral work, partly in response to Titchener's advocacy for a purely scientific psychology.¹² Tantalously enough, Boring's experiment was conducted in 1912, the same year that Louis Leon (L.L.) Thurstone – another future preeminent psychologist and recent Cornell graduate in Engineering – began to work as Thomas Edison's assistant prior to attending the University of Chicago to pursue a Ph.D. in Psychology.¹³

Though the “how” of Boring's acquisition of *Van Bibber's Experiment* is unclear, the “why” is less so. As his published study suggests, Boring was not only testing the memory of his human subjects but also – quite deliberately – film's efficacy as a scientific tool. He begins his published report by questioning the value of still pictures or live events to gauge the “reliability of report” (the ability of witnesses to accurately report facts in a deposition situation). Boring proposes that moving pictures are a solution to the “disadvantage of both” of these other forms, offering a greater capacity to represent “human action” than photographs and more “accurate control” than a standard “event-test”.¹⁴ Boring's subjects for the study were forty-four in number, including Ithaca public school children, Cornell undergraduates, five psychology graduate students, and, interestingly enough, two psychology professors, all of whose identities are unknown.¹⁵

The scene screened from *Van Bibber's Experiment* lasted around one minute, beginning with Van Bibber's sighting of the burglar – who “is crouching before the gate with a sack of plunder beside him” (Figure 2). The published report's summary of the scene explains that Van Bibber is “well-dressed, wearing a silk hat and a light overcoat” and that the burglar is “very uncouth with ragged clothes, unkempt hair partly covered by



Fig. 2. Van Bibber (standing) catches the burglar red handed. This image was originally published with the caption, "Scene from Photoplay 'Van Bibber's Experiment'". Courtesy of Thomas A. Edison, Inc. Orange, N.J.", in David Hulfish, *Cyclopedia of Motion Picture Work* (Chicago: American Technical Society, 1914).

a cap, and a face lined and rough". The excerpt included Van Bibber's discovery and disarming of the burglar, a conversation between the two men, the burglar returning the "bag of plunder", and finally Van Bibber's escorting of the burglar, at gunpoint, out of the scene. Boring notes that this scene was "colored blue, in order to produce a moonlight effect, a condition which renders the detail slightly less distinct than it would otherwise be", although he never reflects upon the possibility of the tinting impeding or otherwise influencing his subjects' comprehension or retention of the scene's details.¹⁶

Boring borrowed a hand cranked "kinematograph" from Cornell's Department of Physics and projected the film from just behind the subjects, who were instructed as follows: "Sit in this chair and watch the wall over there. I am going to show you a picture upon the wall. I want you to watch it with your best attention. Be sure to watch it carefully all the time".¹⁷ Following the screening, each subject gave an oral report of everything they remembered, swore to their degree of confidence in the veracity of their statements, and answered a twenty-six question questionnaire. The questions, with correct answers in parentheses, were published in the report, ranging from "Where did the man get the revolver with which he controlled the burglar? (From the ground; indirectly he got it from the burglar)" to "What sort of a neck-tie did the man wear? (White)" and "How long did it take to show the picture? (About one minute)".¹⁸

The questionnaire is a fascinating document. While Boring did not publish the subjects' answers, the questions provide a compendium of details from the lost scene as well as insight into the methodology of a psychological experiment of the period. Most of the questions are open; but some are implicative, offering a misleading possibility as in

“Did the burglar resist when the man grabbed him by the throat? (The man did not take the burglar by the throat)”. Since the spectators were unaware that they would be tested on the details of the screening (note that they were not alerted to anything beyond the fact that they should pay close attention to the images), they were in essence being drilled on both memory and, perhaps even more so, on their individual attention to detail. Much of this detail was fairly microscopic in nature and would certainly not have been the type of information retained by an ordinary spectator of a motion picture, who would presumably have been focused on the characters and story. Perhaps this is the reason that the scene Boring selected was also not filled with much in the way of dramatic action – in essence it depicts an encounter, a conversation, albeit one involving a criminal (note also that the “questionary” uses the terms “man” and “burglar”, linguistically assigning roles to the characters). Furthermore, the very act of excerpting robbed the test subjects of what, to the viewer of the whole, would have been essential narrative context: of potential identification with Van Bibber, sympathy for the down-trodden burglar, and satisfaction with the film’s happy ending when the burglar attains a new life for himself and his family.

Although the results of Boring’s study are not my focus here, especially given the experiment’s many variables and acknowledged flaws (for example, “The men included more graduate and fewer under-graduate students than did the women”), it is worth noting that Boring concludes that “there is considerable presumption of a difference in excellence of report between men and women in favour of the former; that no such sex-difference is apparent in childhood; and that the reports of adults are more adequate and accurate than those of children”.¹⁹ Given the many permutations of data that Boring assesses to arrive at this conclusion, there is one especially noteworthy omission in the published report: despite the ambitions articulated at the beginning of the publication with regard to the superiority of moving pictures as experimental stimuli, Boring makes no comment about this methodology – or of its potential influence on the experiment’s outcome – in his conclusion or summary beyond the rather pat, if prominent, “summary statement #1”, which reads: “The moving picture presents a satisfactory and an easily and accurately controlled form of event-test”.²⁰ This matter-of-factness is curious, especially given the titling of Boring’s report and his framing of the experiment in terms of the method’s novelty. Boring’s ultimate downplaying of the role of the motion picture as stimulus may be symptomatic of any number of things. Despite his reticence, Boring’s use of film clearly deserves comment, especially given its implied assumptions about film spectatorship as well as scientific methodology. Taken out of its context, the scene is not meant to invoke a larger narrative for the spectator-subjects, but rather to be replete with reportable temporal, spatial, and even sartorial details. The assumption here, then, is that film viewing habits reflect observational habits of daily life, and vice versa. This purports to be a study of witnesses’ abilities to report in a deposition-like scenario, but is more accurately a study of spectators’ ability to remember details from a moving picture scene.

Boring clearly perceived this film fragment as a convenient container of information, and the experiment thus amounts to a kind of viewing retention examination. Because film was used as a vehicle for this information there lurks an underlying assumption that it is closer to the experience of real-life witnessing than other available options. However unintentionally, the experiment anticipates several decades of theories about cinematic realism and the spectator’s relationship to moving images. In its presumed faith in the correspondence between real life and cinematic witnessing, Boring’s test suggests an early subscription to a line of thinking that André Bazin and Siegfried Kracauer would surely have appreciated: that film is an especially fit vehicle for preserving reality. Furthermore, the test relies upon – presumes, in fact – the notion

of a wholly immersed viewing subject, even as it fails to acknowledge that such immersion is, even at this relatively early moment in film history, facilitated by a narrative context that is here dismantled. “Correct” responses, Boring suggests, are a product of “watching with (one’s) best attention”. Boring, however, seems unbothered by the possibility that there might be another mode of viewing that might bypass details like preferred neckwear, especially when belonging to the character who is *not* the criminal. Had his subjects viewed the film *as a film*, surely other factors – emotional, identificatory, and so on – would have played a role in their responses, a variable curtailed by the very act of excerpting.

Still, Boring’s choice of films – perhaps even of this particular scene from this film – is curious: he does not select a scene depicting a crime in progress, but rather what happens after a crime has been committed. The fact that this scene was chosen – rather than one depicting, say, a family quarrel or people shopping – seems a deliberate selection in which is implicit the belief that the images reflect something worth deposing a witness about. Additionally, surely the more methodologically sound approach would have been to show the entire film and then to ask about details selected from the larger narrative whole. Instead, participants were primed to focus attentively on the one scene they were tested upon, an experience that deviates both from real-world observation as well as from moviegoing behaviour.

Some conclusions

Film’s use in the laboratory offers us just one instance of its dynamic existence beyond conventional exhibition sites and entertainment purposes. The fragmenting of *Van Bibber’s Experiment* into an especially useful one-minute scene and its reduction, in the experiment, to a series of potentially memorable details (actions, attire, duration, props) forces us to rethink film’s purposefulness and functionality in an era replete with such non-theatrical uses. Where *Moving Picture World’s* review applauded *Van Bibber’s Experiment* – despite disparaging Davis’s skills as an author – for its “real Americanism, the noble sentiment, which in this newer and fresher world of ours, freer from the taint of caste and social prejudice, holds out a larger hope to erring or oppressed humanity”, Boring’s experiment stripped the film of its redemptive message and narrative integrity, borrowing only actions surrounding the criminal act that, the same review observed, was “not supposed to occur in moving pictures, however largely ... [burglars] may figure in the daily press”. Noting that audiences easily understood the plot and literally applauded the burglar’s new lease of life at the film’s end, the review held up *Van Bibber’s Experiment* as the kind of film that “moving picture audiences everywhere are hungry for”.²¹

In one context then, *Van Bibber’s Experiment* can be considered a noteworthy example of uplifting narrative cinema, a well-made, socially redemptive story that was deemed particularly satisfying for American audiences. It was also part of a wave of literary adaptations by well-known contemporary authors (Edison’s *Kinetogram* touted this in the film’s publicity), in this case constructed around a recurring character in almost serial form. But *Van Bibber’s Experiment* was also successful in part, as *Moving Picture World* pointed out, because the film “follows a very clever conception of the film maker, which he did not find in the story and which is entirely his own”.²² In fact, comparison between the short story and the film suggests many transformations and inventions which, the review claimed, facilitated the film’s success.

In another context, the film functioned as a differently malleable text, valued for the ease with which it could be taken apart and removed from its originally intended context, presented not as entertainment but as stimulus. Boring’s disregard for the film

as a finite product, his use of it as a means of conveying reportable information to a group of subjects, offers an opportunity to rethink film's multi-purpose functionality in the 1910s. Given its originality, perhaps what is most intriguing about Boring's experiment is that it did not appear to set any methodological trends and has so completely disappeared from the history of psychological experimentation. The lack of contemporary and even retrospective commentary on the moving picture aspect of this experiment suggests that this was only a novel – and not a particularly effective – methodology.

But let us not forget that *Van Bibber's Experiment* also depicts a social experiment, and a successful one at that. The New York club man – now making his third appearance in an Edison production – enacts his experiment because he recognises the burglar from a *photograph*, not a motion picture, that he has been shown earlier in the evening. This, then, is a story about detection, which is what Boring's experiment was in some ways testing, and it revolves around a character with whom audience members – though perhaps not test subjects – were clearly meant to identify. Of course, Boring's subjects would not, presumably, have known about these aspects of the film they were watching (although one wonders if any of them might have seen a previous or even this Van Bibber film, all of which starred Conness in the leading role, and what that recognition might have done to the nature of their responses). Edison's film thus provides a simplified model within itself for a successful version of Boring's experiment – one with implications involving class and gender that would, in fact, end up figuring prominently in psychological research on the subject of witnessing to the present day.

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Notes

1. "Van Bibber's Experiment", *Kinetogram* 4 (15 June 1911): 3–5; "Van Bibber's Experiment", *Moving Picture World* (1 July 1911): 1492; David Hulfish, *Cyclopedia of Motion Picture Work* (Chicago: American Technical Society, 1914), 68. The paper print photos survive in the Edison legal files at the Edison National Historic Site.
2. Whipple both "suggested and supervised" Boring's research plan. Edwin G. Boring, "Capacity to Report Upon Moving Pictures as Conditioned by Sex and Age: A Contribution to the Psychology of Testimony", *Journal of the American Institute of Criminal Law and Criminology* 6 (March 1916): 820.
3. Leslie Y. Rabkin, *The Celluloid Couch* (Lanham, MD: Scarecrow Press, 1998), 4–5. See also Benjamin Harris, "The Role of Film in John B. Watson's Developmental Research Program", *Contributions to a History of Developmental Psychology* (New York: Mouton Publishers, 1985), 359–366. For more on Münsterberg, the films he worked on for the Paramount Pictographs series (which are not extant), and experimental psychology see Scott Curtis's "'Like a Hailstorm on the Nerves of Modern Man': Cinema, Legibility, and the Body in Germany, 1895–1914" (Ph. D. dissertation, University of Iowa, 1996).
4. On earlier examples of film's use in documenting psychiatric conditions, see Rabkin, *The Celluloid Couch*, 3.
5. As recently as 2006, a study was published that used a film (produced explicitly for the experiment) to study the relationship between stress and memory: "Films come very close to mimicking verbal and visual stimuli as they naturally occur during an experience and for this reason have been used extensively in eyewitness memory and false memory research". Victoria Beckner, David Tucker,

- Yvon Delville, and David Mohr, “Stress Facilitates Consolidation of Verbal Memory for a Film But Does Not Affect Retrieval”, *Behavioral Neuroscience* 120.3 (2006): 519.
6. Films do, in fact, have a long history as tools in psychological experiments, especially those involving memory. I have, however, found only two psychological studies that engage with Boring’s early film use, which did not set an immediate methodological trend. One claims that “The use of cinematic material to probe memory can be traced to the early days of cinema (Boring 1916), but did not catch on, a few exceptions notwithstanding”. Orit Furman, Nimrod Dorfman, Uri Hasson, et al., “They Saw a Movie: Long-Term Memory for an Extended Audiovisual Narrative”, *Learning & Memory* 14 (2007): 457. The other reference is reported in a series of articles by Herbert S. Conrad and Harold E. Jones, “Psychological Studies of Motion Pictures”, published in *Parent Teacher, University of California Publications in Psychology*, and *The Journal of Social Psychology* between 1928 and 1931.
 7. “Edwin Garrigues Boring”, in Edwin G. Boring et al. (eds), *A History of Psychology in Autobiography*, vol. 4. (Worcester, MA: Clark University Press, 1952), 33.
 8. G.M. Whipple, *Manual of Mental and Physical Tests* (Baltimore, MD: Warwick & York, 1921 [1914]), 32–34.
 9. Henry Cole Quinby (ed.), *Richard Harding Davis: A Bibliography* (New York: E.B. Dutton & Co., 1924), 216.
 10. This and all other quotes in this paragraph are from “Van Bibber’s Experiment”, *Moving Picture World* (1 July 1911): 1492.
 11. “Edwin Garrigues Boring”, 31–33.
 12. Whipple is also the author of the two-volume *Manual of Mental and Physical Tests* (Baltimore, MD: Warwick and York, 1910). See Frank S. Freeman, “A Note on E.B. Titchener and G.M. Whipple”, *Journal of the History of the Behavioral Science* 20 (April 1984): 178.
 13. “L.L. Thurstone”, in Boring, et al. (eds), *A History of Psychology in Autobiography*, vol. 4, 297–300. Thurstone would go on to write about educational uses of motion pictures and was involved in the 1930s Payne Fund studies of motion picture influence on high school students. For more on Boring’s relationship to and influence on the field of psychology – especially on positivist psychology – see John J. Cerullo, “E.G. Boring: Reflections on a Discipline Builder”, *American Journal of Psychology* 101 (Winter 1988): 561–575. Unfortunately, Harvard University’s collection of Boring’s papers dates back only to 1919; materials documenting his early years are uncollected.
 14. Boring, “Capacity to Report”, 820.
 15. *Ibid.*, 821.
 16. *Ibid.*
 17. *Ibid.*, 822.
 18. *Ibid.*, 823.
 19. *Ibid.*, 833.
 20. *Ibid.*
 21. “Van Bibber’s Experiment”, *Moving Picture World* (1 July, 1911): 1492.
 22. *Ibid.*