

Watson's alleged Little Albert scandal: historical breakthrough or new Watson myth?

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Abstract

John B. Watson's legacy is complicated by his reputation for scandal. Recently, Fridlund, Beck, and colleagues accused Watson of a new scandal concerning the 1920 Little Albert study. They argued that Little Albert was a neurologically impaired infant (named Douglas Merritte), and that Watson committed serious ethical breaches in relation to this study. Our paper shows that this alleged scandal is likely unfounded. We introduce a normal infant (Albert Barger) who matches the Little Albert profile better than Douglas Merritte does. In our conclusion, we speculate about how the story of a neurologically impaired Albert illustrates some of the challenges involved in historical revision.

Keywords: John B. Watson, Little Albert, behaviorism.

Resumen

El legado de John B. Watson se complica por el escándalo que le acompaña. Recientemente, Fridlund, Beck y compañeros le acusaron de un nuevo escándalo relacionado con el estudio del pequeño Albert del año 1920. Dichos autores sostienen que Albert era un niño neurológicamente enfermo (llamado Douglas Merritte) y que Watson cometió graves infracciones éticas en su estudio. Nuestro artículo demuestra que probablemente el pretendido escándalo carece de fundamento. Presentamos un niño normal (Albert Barger) que se ajusta mejor al perfil

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del pequeño Albert. En nuestra conclusión, especulamos sobre cómo la historia de un Albert neurológicamente enfermo ilustra algunos de los desafíos envueltos en la revisión histórica.

Palabras clave: Pequeño Albert, conductismo, John B. Watson.

By many accounts, John Broadus Watson (1878-1958) achieved several pinnacles of success in psychology. He founded behaviorism, served as president of the American Psychological Association, edited a prestigious journal, and chaired a top psychology department in the US (Brewer, 1991; Buckley, 1989). Nonetheless, Watson's legacy in psychology has been complicated by his reputation for scandal (see Benjamin, Whitaker, Ramsey, & Zeve, 2007; Buckley, 1994; Dewsbury, 1990).

As described by Dewsbury (1990), Watson's early research on maze learning in rats – in which he removed a rat's eyes, tympanic membranes, olfactory bulbs, and whiskers in order to show that their elimination did not disrupt learning (Watson, 1907) – attracted scathing and sensationalized stories in several media, and the ire of antivivisectionists, the Humane Society and the Anti-Cruelty Society, who accused Watson of inexcusable cruelty to animals. Watson's employer, the University of Chicago, defended him through the uproar, and Watson's career seemed unharmed by the media frenzy.

In the fall of 1908, Watson left the University of Chicago for a professorship at Johns Hopkins University, which offered him a promotion and substantial increase in salary (Brewer, 1991). By 1920, however, Watson had become embroiled in a new scandal when his extramarital affair with a student research assistant (and future wife), Rosalie Rayner, became public (Buckley, 1994). This was considered a serious breach of professional ethics, for which Watson, after refusing to break off the relationship, was forced to resign from the university. Unable to secure a permanent academic position elsewhere, Watson left the academy for a career in advertising and media freelancing (Buckley, 1994). Nevertheless, he continued to mentor students (see Jones, 1974) and to revise his academic books (see Watson, 1924). He also participated in an academic debate about the fundamentals of behavioristic psychology, which was published in an academic journal (see MacDougall, 1929, and Watson, 1929).

Almost a decade after his departure from Johns Hopkins University, chroniclers of early experimental psychology acknowledged Watson's impact on the field (see Boring, 1929). According to Heidebreder (1933), "behaviorism has profoundly affected the folkways and *mores* of American psychology" (p.262). Bregmann (1956) recognized Watson's significance on psychological thought in the first half of the twentieth century as second only to that of Freud. Bregmann announced that

Psychology owes him [Watson] much. His place in the history of our civilization is not inconsiderable and it is secure. Such men are exceedingly rare. We ought to accept them and appreciate them for what they are (p.276).

Despite such recognition, following Watson's death, rumors of other scandals surfaced, which had the potential to alter psychologists' views of his legacy. For example, James McConnell, in his 1974 introductory psychology textbook, claimed Watson had been secretly conducting unsanctioned sex research that involved physiological recordings of his sexual activity with Rayner, and that this was the real, but unpublicized, reason for his dismissal from the university. Needless to say, this alleged scandal reflected poorly on Watson's character and judgement (though, on a positive note, it made him appear to be a pioneer in the field of sex research). According to Benjamin et al. (2007) the source for McConnell's story was personal communication from earlier psychologists who had heard rumors of such research. McConnell believed these rumors to be true because clandestine sex research seemed a more plausible explanation for Watson's dismissal than a simple affair. Benjamin et al. provided historical evidence to refute this reasoning, suggesting that it represented presentist thinking misapplied to a past event. Nevertheless, despite its lack of proof, other textbook authors cited McConnell's sex story for up to a decade. In conclusion, Benjamin et al. offered a cautionary note:

We have provided this detailed analysis of the Watson "sex studies" not only in an effort to bring closure to the debate over the validity of the allegations but also to remind psychologists that standards of evidence exist in historical scholarship as they do in the scholarship of behavioral science. Given the standards of evidence in history, the Watson sex research should never have made it into print, certainly not into the journals and textbooks that define the scholarship of the field. (Benjamin et al., 2007, p. 138).

Against this backdrop, we now consider the recent revelation of another alleged Watson scandal that has the potential to rewrite his legacy. This one involves a reinterpretation of the classic Little Albert study in which an 11 month-old-infant (called Albert B.) was conditioned to fear a white rat by associating it with the sound of a loud, startling noise (Watson & Rayner, 1920). Watson and Rayner never disclosed Albert B.'s identity, which, as discussed by Harris (1979), led to growing speculation over the years about what became of him when he grew up. Finally, in 2009, the mystery of Albert's identity appeared to have been solved when Beck, Levinson, and Irons claimed that he was likely an infant by the name of Douglas Merritte, who, following the experiment, developed hydrocephalus and died from it at age 6. Then, in 2012, Fridlund, Beck, Goldie and Irons reported newly discovered evidence indicating that Douglas Merritte had been neurologically impaired almost from birth. Moreover, con-

sistent with this medical condition, they had discovered previously overlooked signs of neurological impairment in the film images of Little Albert (Watson, 1923), thereby providing further proof that Douglas Merritte was Little Albert. They further proposed that Watson knowingly experimented upon Douglas (Albert) despite knowing of his medical condition, and then fraudulently described him in his various descriptions of the experiment as a healthy and well developed child.

Not surprisingly, the Fridlund et al. (2012) paper garnered a good deal of attention, having appeared in a well-respected peer reviewed journal (*History of Psychology*). It was also featured in the APAs widely circulated publication, *Monitor on Psychology*, in which Fridlund explained,

the evidence so clearly supports Watson's cognizance of Albert's condition, the conclusion that he intentionally misrepresented it is nearly inescapable... Yet in testing a neurologically impaired child, Watson may simply have embodied the mentality of researchers of the time... the Little Albert study has always led us to consider basic issues of experimental ethics. But now it forces us to confront deeper, more disturbing issues like the medical misogyny, the protection of the disabled and the likelihood of scientific fraud" (DeAngelis, 2012, p. 12).

Other news outlets followed suit. The *Chronicle of Higher Education* ran a feature story announcing that "If Fridlund is right, the story of Little Albert will become even sadder and the legacy of Watson significantly more tattered" (Bartlett, 2012). The *Huffington Post* reported, "Now, in a splendid example of first-class historical investigation, the authors of 'Little Albert: A Neurologically Impaired Child' have exposed Watson's study as fraudulent and as even more unethical than it appeared on its face" (Breggin, 2012). Notwithstanding the media's fresh appraisal of Watson, we believe it is premature for psychologists to rewrite Watson's legacy in this way.

In the past year we uncovered new evidence that in our opinion casts significant doubt on the Fridlund et al. account of the Albert study. We located another infant (Albert Barger) who appears to match the historical record of Little Albert far better than Douglas Merritte does. We also re-examined Fridlund et al.'s evidence for Little Albert's alleged neurological impairment, and found that it overlooked critical disconfirmatory evidence. In the next section, we introduce Albert Barger and provide a brief overview of the evidence for him versus Douglas Merritte as the real Little Albert.

ALBERT BARGER, DOUGLAS MERRITTE, AND LITTLE ALBERT

Watson and Rayner (1920) reported that Little Albert's mother worked as a wet nurse in the Harriet Lane Home for Invalid Children, a pediatric hospital attached to

Johns Hopkins Hospital. In their search for Little Albert, Beck and Levinson examined the 1920 U.S. census record of staff members living in the hospital around the time of the experiment (Beck et al., 2009). The record listed three women who worked as “foster mothers,” a term which Levinson realized could include wet nurses. One of these was Arvilla Merritte, whose son, Douglas, Beck et al. eventually came to believe was Little Albert. Also of interest, however, was a 16-year-old foster mother by the name of Pearl Barger, but no evidence could be found that she had had a baby with her during her time in the hospital. We followed up on this lead, however, and with the assistance of a professional genealogist (the third author of this paper), were able to determine that Pearl did indeed have a baby with her during her residence in the hospital (Barger Medical File [BMF]). As outlined below, this child appears to be a stronger candidate for Little Albert than Douglas Merritte is.

Little Albert's name is the first major point of comparison. Watson and Rayner (1920) called the baby who participated in their experiment “Albert B.,” which is important in that Watson is believed to have typically used real names or initials when writing about the infants he worked with. For this reason, Beck et al. (2009) acknowledged that a major difficulty in the case for Douglas Merritte as Little Albert is his name, and speculated why, if Douglas was Albert, Watson might have used a pseudonym in this one instance. No such speculation, however, is needed in the case for Pearl Barger's son. Although his given names were William Albert, he was, according to his niece (Dorothy Parthree, personal communication), typically called Albert throughout his life. Most importantly, his medical file lists his name as Albert Barger (BMF, April 17, 1919), which matches the name, Albert B., given by Watson and Rayner.

The second major point of comparison concerns Little Albert's age at the time of the experiment. Both Douglas Merritte and Albert Barger were the correct age to have been Little Albert – 8 months 26 days of age – at the time of the initial session, which Beck et al. (2009) estimated probably took place in early December, 1919. A more interesting comparison, however, concerns Little Albert's age when the experiment ended. Watson and Rayner (1920) reported that the final session took place when Little Albert was 12 months 21 days old, and that his mother removed him from the hospital that same day. In precise accordance with this, Albert Barger's medical file indicates that he was discharged from the hospital at 12 months 21 days of age (BMF, March 31, 1920). By comparison, Douglas Merritte's medical file indicates that he was discharged from the hospital almost a week earlier, at 12 months 15 days of age (Merritte Medical File [MMF], March 24, 1920).¹ Although it is possible that Doug-

1. Gary Irons, Douglas Merritte's next of kin, provided a letter to the Johns Hopkins Hospital Privacy Board granting permission for the senior author to view and take notes from Douglas's medical file. In accordance with Mr. Irons' request, we hereby acknowledge that his granting us access to

las's mother brought him back to the hospital for the final session of the experiment, this early discharge date, which Fridlund et al. appear to have overlooked, is a major inconsistency with the historical record for Little Albert.

A third point of comparison concerns Little Albert's reported weight at around the time of the initial baseline session. Watson and Rayner (1920) reported that he weighed 21 pounds at 9 months of age, which would be at the 75th percentile on modern growth charts (World Health Organization, 2006). In comparison to this, Albert Barger's medical file indicates that he weighed 22 pounds 6 ounces at 9 months of age (BMF, December 10, 1919), which is at the 80th percentile on modern charts. Albert Barger weighed 21 pounds 15 ounces when he was 8 months 26 days, the precise age that Little Albert was when Watson and Rayner started the study (BMF, December 6, 1919). Although slightly heavier than the weight reported for Little Albert, it is arguably within the range of what might have been an approximate weight of 21 pounds reported by his mother or an attendant a few days earlier at the time of the baseline session. By contrast, Douglas Merritte weighed only 14 pounds 14 ounces at 9 months of age, which is in the bottom 1% on modern growth charts. Such an extremely low body weight stands in sharp contrast to the reported weight for Little Albert. It also stands in sharp contrast to Little Albert's appearance in the film, which even Fridlund et al. described as "chubby" and "obese." In sum, Albert Barger's weight is very much consistent with Little Albert's appearance in the film, while Douglas Merritte's weight is not.

Related to body weight, a fourth point of comparison concerns Watson and Rayner's (1920) claim that Little Albert was a healthy and well developed child. The medical records for Albert Barger generally match this description, although he did occasionally suffer from some common childhood illnesses such as diarrhea (BMF, October 3, 1919) and measles (BMF, January 24, 1920) during his time in the hospital. By contrast, as previously noted, Douglas Merritte suffered from hydrocephalus and neurological impairment during his time in the hospital. On the surface, Douglas's medical condition appears to refute the possibility that he was Little Albert. Fridlund et al. (2012), however, examined the film of Little Albert (Watson, 1923) and claimed to have observed numerous deficits that they believed are consistent with neurological impairment resulting from hydrocephalus. If true, these deficits constitute strong evidence that Douglas Merritte was indeed Little Albert. Our own analysis of the film, however, suggests otherwise.

the file does not mean that he either concurs or disagrees with any statements or conclusions we make in publications utilizing this information. All information from Albert Barger's medical file, as well as personal information about him, that has been included in this article has been approved for publication by his niece and heir, Dorothy Parthree.

For example, Fridlund et al. (2012) claimed that Little Albert shows deficits in grasping ability, such as in his use of a primitive “scooping” grasp when handling large play-blocks instead of a more advanced pincer (thumb and forefinger) grasp. They failed to mention, however, that Little Albert in fact uses a variety of grasps in the film – as is normal for infants of that age (Butterworth, Verweij, & Hopkins, 1997) – which includes a well-coordinated pincer grasp when picking up a small marble (see Figure 1). Fridlund et al. also claimed that Little Albert shows no evidence of *social referencing*, which is the tendency for infants to look toward caretakers when confronted with novelty (Campos & Stenberg, 1981). In particular, he fails to make eye contact with either Rayner or Watson during the baseline session when presented with animals and objects that he had never before seen. However, the film reveals that he does sometimes look towards Watson and Rayner, with some images strongly suggestive of mutual gaze between Watson and Albert (see Figure 2). Fridlund et al. also failed to consider that the film sequences are comprised of a series of very short clips, averaging only 6 seconds in length, which were probably selected to illustrate Albert’s reactions to the stimuli he was being shown, since that was the stated purpose of the study. If so, the film in no way provides a representative sample of Albert’s social behavior and his behavior would naturally seem lacking in social interaction and awareness.

We found similar difficulties with Fridlund et al.’s (2012) other evidence for neurological impairment, including alleged deficits in language development, reactivity to fearful stimuli, visual ability, etc. To this must be added the questionable assumption that one can reliably assess such deficits in a 5 minute, silent film. Of direct relevance to this, Werner et al. (2000) reported that a pediatrician with expertise in developmental disorders misdiagnosed 8 of 15 normal children as having autism based on a film of them taken at 8 to 10 months of age (approximately the same age as Little Albert in the film clips of the initial session). Moreover, the tendency for false positive diagnoses of impairment in infants and young children is an enduring problem (see Valentine, 1965; Werner, Dawson, Osterling & Dinno, 2000). Thus, in our opinion, Fridlund et al.’s film analysis provides little or no substantive evidence that Little Albert was anything other than the well-developed, if highly phlegmatic, infant that Watson and Rayner (1920) described him to be. As such, Douglas’s medical condition strongly suggests that Douglas was not Little Albert.

As shown, Albert Barger appears to be a strong candidate for having been Little Albert. Nevertheless, there remain some inconsistencies. For example, a few years following the experiment, Watson (1925) reported that Little Albert was adopted soon after leaving the hospital, whereas Albert Barger (like Douglas Merritte) grew up with his mother. It is, of course, possible that Watson was mistaken about the adoption or that Albert was “informally adopted” for a period of time by family or friends and then later returned to his mother; nevertheless, the existence of such inconsistencies

means that the evidence for Albert Barger as Little Albert is not conclusive. See Powell, Digdon, Harris, and Smithson (2013) as well as Digdon, Powell, and Harris (2013) for a more detailed discussion of the evidence both for and against Albert Barger versus Douglas Merritte as Little Albert. The Powell et al. paper also includes a discussion of Albert Barger's apparent aversion to animals when he grew up, and the extent to which this may or may not have resulted from the fear conditioning procedure he had been exposed to as a child.

ALBERT-AS-NEUROLOGICALLY-IMPAIRED AND THE CHALLENGES OF HISTORICAL REVISION

As mentioned earlier in our paper, Watson had a reputation for scandals. Some were known during his lifetime, but others were discovered posthumously and led to revised interpretations of his legacy. In the case of the alleged sex research, Benjamin et al. (2007) showed how scandal founded on rumor could nonetheless seem credible when interpreted from a present day perspective, resulting in historical revision notwithstanding the evidentiary weakness. Similarly, the scandalous story of a neurologically impaired Albert, which we believe to be incorrect, may nevertheless be enlightening for understanding the process of historical revision.

It shows how easily claims that were initially acknowledged as hypothetical can evolve into statements of fact. For example, when reporting their initial discovery of Douglas Merritte, Beck et al. (2009) were somewhat cautious, stating that "the available evidence strongly supports the hypothesis that Douglas Merritte is Little Albert" (p.612), not that it *proves* it. Contrary to this, Fridlund et al. (2012) begin, in their abstract, with the premise that "Albert B., the 'lost' infant subject of John B. Watson and Rosalie Rayner's (1920) famous conditioning study, *was* [italics added] Douglas Merritte" (p.1). This seemingly subtle shift in language is significant because it constrains Fridlund et al.'s later arguments. For instance, when noting that Watson and Rayner's account of Albert being healthy "cannot be reconciled with the facts that we have uncovered about Douglas Merritte" (p.21), Fridlund et al. logically conclude that Watson and Rayner's account must be invalid. The alternative conclusion – that Douglas was not Albert – is blocked by the 'factual' premise that Douglas-was-Albert. Similarly, when developing the argument that Watson knowingly experimented upon a neurologically impaired child, Fridlund et al. noted the close proximity between Watson's laboratory and the pediatric facility that housed the children of wet nurses, and argue that "it strains credulity to suggest that no one would have mentioned Albert's health problems" (p.24). Again, the Douglas-was-Albert premise obscures an arguably more parsimonious interpretation of strained credulity – that it casts serious doubt on the hypothesis that Douglas was Albert.

The lack of an alternative candidate for Little Albert, despite Beck's lengthy search for one, may have contributed to the plausibility of Fridlund et al.'s revision. If Douglas's neurological impairment and light body weight had disqualified him as being Albert, then Albert would have been lost to history, and his fate would have remained one of psychology's unsolvable mysteries. But we ponder the point at which an unsuccessful search for an alternative candidate can be considered reasonable grounds for inferring that such a person does not exist. Our discovery of Albert Barger, who eluded Beck's extensive search, might not have happened so quickly, if at all, if our research team did not include a professional genealogist, our third author. More generally, collaboration with professional genealogists might be a valuable safeguard against prematurely concluding that unsuccessful searches mean that individuals do not exist.

Another issue concerns the minimal quality of evidence that is sufficient for putting forth a historical revision. Fridlund et al.'s evidence for Albert being neurologically impaired was derived from a brief silent film in which Albert is shown only in the experimental setting, where he is crawling, grasping objects, and reacting to the stimuli presented to him. As previously noted, all of the scenes featuring Albert are extremely short clips (the longest being about 32 seconds). Nevertheless, on the basis of a behavioral and neurological analysis of this very brief film, Fridlund et al. concluded that

Albert's temperament and behavior are not within the normal range for his age, and the abnormalities observed on film cannot solely be attributed to the hospital environment or the physical context of filming. Numerous diagnoses suggest themselves, including mental retardation, an autism spectrum disorder, or another pervasive developmental disorder (p.9)

But, when we compare the film's portrayal of Albert to the sort of information required by diagnostic protocols for assessing an infant's behavior, the film is clearly an inadequate yardstick. See, for example, the Diagnostic and Statistical Manual of Mental Disorders [DSM-IV-TR] (American Psychiatric Association, 2000) and the American Neurological Society's practice parameters for diagnosing autism (Filipek, Accardo, & Ashwal, 2000). Fridlund's and colleagues' diagnostic expertise would be insufficient to compensate for the deficiencies in the film and its non-representative sampling of Albert's behavioral repertoire. Further, as noted earlier, the tendency for false positive diagnoses of impairment in young children and infants is an enduring problem (see Valentine, 1965; Werner, Dawson, Osterling & Dinno, 2000).

Another issue concerns the fact that historical revisions are constructed and viewed through the lens of the contemporary zeitgeist, which might favor some re-interpretations over others for reasons unrelated to the past. Elsewhere, we note that

ethical issues are notably salient and pervasive in the current zeitgeist (Digdon, Powell, & Harris, 2013). Within the current climate, concerns about the ethical implications of Fridlund et al.'s interpretation may have undermined the acceptability of alternative interpretations. Fridlund et al.'s historical revision exposes what appears to be an egregious example of ethical misconduct, the recognition of which may partially atone for this misconduct, if only symbolically. Conversely, the rejection of Fridlund et al.'s interpretation may turn a blind eye to such misconduct, which could be construed as compounding the harm. As in the recent controversy over recovered versus false memories of abuse (Simon & Gutheil, 1997), well-meaning individuals, in an attempt to right the wrongs of the past, may sometimes be tempted to err on the side of a less than critical perspective.

The timing of Fridlund et al.'s revision is also significant in that it illustrates how quickly and extensively alleged scandals can be disseminated in the age of the internet. It attracted considerable attention within and outside the discipline of psychology as demonstrated by the over 8600 hits produced by the Google search 'Fridlund, Little Albert, and Neurologically Impaired' (on November 10, 2013). In contrast, dissemination of McConnell's 1974 revelation about Watson's alleged sex research was largely confined to textbooks and classrooms, but nevertheless persisted into the 1980s (Benjamin et al., 2007). Interestingly, Fridlund et al.'s revision is starting to be featured in introductory textbooks (see Kalat, 2014), but the impact that this will have on students is uncertain. In the age of the internet, alternative versions of the Little Albert story can be quickly disseminated and easily accessed, creating a scenario whereby students may be exposed to accounts that either agree with or conflict with the textbook one. Will students automatically discount interpretations that are incongruent with the textbook, assuming that the textbook must be right? Or will students exercise critical thinking before accepting one interpretation over others?

We also speculate about whether the salience of the Albert-as-neurologically-impaired story on the web, and the emotional reactions and widespread moral outrage that it has elicited, will make people more skeptical of alternative accounts, such accounts being construed as attempts to cover-up scientific misconduct in a manner akin to conspiracy theory. Several web sites that feature the Albert-as-neurologically-impaired story allow for comments, which are overwhelmingly negative toward Watson, and often toward science more generally, as illustrated by the following comment to the story in MacLean's magazine: "Hmmmmm? More quack science, not surprising. We have 'climate gate' why not Watson's psycho gate... What people (scientists?) do to score funding is pathetic" (Retrieved from <<http://www2.macleans.ca/2012/02/22/bad-behaviour/>>). Comments like this suggest that conspiracy theories about Watson's misconduct may already be percolating. As Goertzel (2010) noted, "Conspiracy theories are easy to propagate and difficult to refute" (p.493). Will the story of a neurologically

impaired Albert, and Watson's related misconduct, join the growing ranks of conspiracy theories disseminated on the internet? Or will it become an exemplar of some of the challenges inherent in historical revision, and become accepted as another Watson myth?

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EXAMPLE OF LITTLE ALBERT'S GRASPING ABILITY



Figure 1. In contrast to Fridlund et al.'s claimed that Albert shows only primitive grasping ability, Albert displays a well-coordinated and developmentally appropriate pincer grasp when grasping a small marble. Captured during filming of the baseline session when Albert was 8 months 26 days of age.

POSSIBLE EXAMPLE OF SOCIAL REFERENCING



Figure 2. In contrast to Fridlund et al.'s claim that Little Albert shows no evidence of social referencing, this still strongly suggests the occurrence of mutual gaze between Albert and Watson. Note the rabbit between Albert and Watson. Captured during filming of the baseline session when Albert was 8 months 26 days of age.