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## Finding Little Albert

Reports on a seven-year search  
for psychology's lost boy

Hall P. Beck, with Gary Irons

In 1920 the British Psychological Society invited John Broadus Watson to address a symposium on behaviourism (Watson, 1920). Watson was disappointed that his university was unable to fund his crossing. This article provides new information about a study Watson would most likely have presented to the Society had his monetary circumstances been more favourable.

In the winter of 1919/20, Watson and his graduate assistant, Rosalie Alberta Rayner, attempted to condition a baby boy, Albert B., to fear a white laboratory rat (Watson & Rayner, 1920). They later reported that the child's fear generalized to other furry objects. The 'Little Albert' investigation was the last published study of Watson's academic career. Watson and Rayner became embroiled in a scandalous affair, culminating in his divorce and dismissal from Johns Hopkins.

Despite its methodological shortcomings and questionable ethics (Cornwell & Hobbs, 1976; Samelson, 1980), the attempted conditioning of Albert is a staple in psychology textbooks and one of the most influential investigations in the discipline. The continuing appeal of Watson and Rayner's research is not solely due to the importance of their purported findings. Much of the fascination with the study is attributable to Albert himself. After the last day of testing, Albert left his home on the Johns Hopkins campus. His disappearance created one of the greatest mysteries in the history of psychology. 'Whatever happened to Little Albert?' is a question that has intrigued generations of students and professional psychologists (Harris, 1979). This article is a detective story summarizing the efforts of my co-authors, my students and myself to resolve a 90-year-old cold case.

### What was known about Albert

From Watson's writings we learned that Albert's mother was a wet nurse in the

Harriet Lane Home, a paediatric facility on the Hopkins campus. She and her son lived at Harriet Lane for most of the boy's first year. Watson and Rayner reported that Albert was tested at 8 months 26 days, 11 months 3 days, 11 months 10 days, 11 months 15 days, 11 months 20 days, and 12 months 21 days of age. It was also known that Albert was a male Caucasian. Though useful, this information had not led other researchers (e.g. Resnick, 1974) to Albert. New evidence was clearly needed if we hoped to identify Watson's famous participant.

In addition to written descriptions, a movie that Watson (1923) made of Albert and other infants provided a critical information source. By concurrently examining the investigators' write-up, the movie and Watson's correspondence with President Goodnow of Johns Hopkins we determined that Albert was born between 2 March and 16 March 1919. Adding 12 months 21 days, the age of the last assessment, to the birth date indicated that data collection concluded between 23 March and 6 April, 1920. The process by which these dates were derived is more fully described elsewhere (Beck et al., 2009).

We had learned a great deal about Albert. Now came the most difficult part of our inquiry: finding an individual whose characteristics matched Albert's attributes.

### **Traces of Albert**

We searched archives for the investigators' notes, drafts of the study and other pertinent documents, but found no clues as to Albert's or his mother's identity. An attempt to locate Watson's private papers was particularly maddening. Watson (Buckley, 1989) burned these documents late in his life, declaring 'When you are dead you are all dead' (p.182). We will never know what historical treasures he destroyed that day.

Efforts to uncover patient and employee records at Hopkins were equally futile. With no private papers, no patient records, and no employee records to guide us, we were without direction. At this point, we could only confirm why previous attempts to find Albert had failed.

If I had thought through the implications of the information Watson and Rayner provided, I would have known where to look for Albert on the initial day of our inquiry. Two of the first facts we learned were that the investigation was performed during the winter of 1919/20 and that Albert and his mother lived on the Hopkins campus. In 1920 a census was conducted throughout the US. If a census was taken at Hopkins then it might include Albert's mother and perhaps Albert.

On 2 January 1920 a census taker recorded the names of 379 persons residing on the Hopkins campus (US Bureau of the Census, 1920). I downloaded a copy of the census, but did not have time to study it. I was packing for Germany to conduct a series of human-computer interaction studies.

## The Census Provides A Clue

I incorrectly assumed that my work in Europe would delay the search for Albert. However, the next step on the road to Albert would not be taken by travelling to an American archive but by journeying to Granada, Spain. There, at the 2005 European Congress of Psychology, I met my future co-author Dr Sharman Levinson, who was then a professor at the University of Angers, France. We discovered a mutual interest in Watson's career. After the conference, I mailed Levinson copies of many historical documents that my students had digitized.

Her attention was caught by the census. No one under 14-years-old was listed even though Watson and other sources indicate that children were living on campus. Almost everyone on the census was single, divorced or widowed, so it is reasonable to speculate that the census taker never asked about children.

Neither were any wet nurses included on the census. Three women, Pearl Barger, Ethel Carter, and Arvilla Merritte, however, were listed as 'foster mothers'. Foster mother is an occupation encompassing a variety of activities involving the maternal care of another's child. Levinson's discovery of the foster mothers gave our inquiry new direction, but did not constitute proof that these women were wet nurses. After returning to the United States, my students and I set out to discover whether Pearl Barger, Ethel Carter, and Arvilla Merritte were lactating during the winter of 1919/20.

Our attention initially focused on Pearl Barger. Could Albert B. be Albert Barger? Several hundred hours were spent searching death certificates, marriage licenses, birth records and other documents in the Maryland State Archives. These efforts failed to produce evidence of Pearl's motherhood.

Ethel Carter gave birth on 26 August 1920 at Hopkins. She could have been a wet nurse and probably knew Albert. Ethel, however, was not Albert's mother. She was a black woman and her child was a female.

Arvilla Merritte was a 22-year-old Caucasian. On 9 March 1919, she delivered a boy ('Baby Merritte') on the Hopkins campus (Department of Health and Mental Hygiene, 1919). The father was listed as William Merritte. Further searches for Arvilla Merritte yielded no additional information. Like Albert and Pearl, she had disappeared. For months, Levinson, my students and I searched for clues, finally noticing that an unknown individual had jotted down Arvilla's maiden name on the birth record: 'Irons'. Maiden names were not typically included on these documents, so I asked myself: What motivated someone to add it to this record? Did the record keeper believe that Arvilla was unmarried? One of my most trusted students was assigned to investigate.

The breakthrough came when she entered 'Arvilla Irons' into a genealogical database. Suddenly, the ancestors and descendants of the foster mother appeared across her screen. Arvilla's grandson, Larry Irons, left an e-mail address so relatives might contact

him. I responded, describing the importance of Albert to psychology, and requesting further contact.

### **Meeting the Irons Family**

It was a very emotional moment when Gary, Larry's brother, phoned. Gary confirmed that Arvilla worked at the Harriet Lane Home and that she gave birth to a boy on 9 March 1919. I learned from Gary that Arvilla named her son, Douglas.

Could Douglas be Little Albert? Descriptions of the Harriet Lane Home (Howland, 1912–1913; Park, 1957) and blueprints of the facility suggest that there were never many, probably no more than four in-residence wet nurses at any time. Douglas was certainly at Hopkins when Albert was tested, but was he Albert or Albert's nursery mate?

What is the likelihood that a Harriet Lane Home wet nurse would give birth to a male between 2 March and 16 March? To better record my own reasoning, I made my assumptions explicit. If half the babies were male and births were randomly distributed throughout the year, then the probability that the child would be male and born in this period would be 1 in 52 ( $1/2 \times 1/26$ ). Although my assumptions were estimates, the calculations definitely showed that it was unlikely that anyone other than Albert would share these attributes.

The strongest argument against Douglas is his name. Why did Watson not refer to the baby as Douglas? As we will see, Arvilla was reluctant to share aspects of her personal life. Although it is possible that Arvilla requested anonymity, a more probable explanation is that Watson did not know the baby's name. In 1920 Hopkins was a very stratified social environment (Park, n.d.). Interactions between professors and wet nurses were almost solely restricted to professional matters.

But why call the child Albert B.? At the 2008 meeting of the Southeastern Psychological Association, I asked the eminent Watson scholar, Charles Brewer that question. He reminded me that Watson was named after a prominent Baptist minister, John Albert Broadus.

Naming Albert for his own namesake might not have been Watson's only playful use of names. John and Rosalie married soon after Watson's divorce. They had two children, William and James. Perhaps it is coincidence, but it is interesting that Watson greatly admired his predecessor, the philosophero-psychologist, William James.

### **Arvilla's Story**

In the early 20th century, the Irons family moved from New Jersey to rural Amelia, Virginia, about 64 km west of Richmond. On 18 December 1915, Arvilla, age 17, gave birth to Maurice Irons: the father was not recorded. Maurice eventually fathered Larry, Gary and five sisters.

In 1918 Arvilla became pregnant again. Later that year or in early 1919, she moved to Baltimore, leaving her parents to raise Maurice. Before giving birth, she lived in the Baltimore Home for Fallen and Friendless Women, a Christian facility 1.1 km from the Hopkins campus.

Arvilla went to work at Harriet Lane shortly after Douglas' birth. In the early 1920s, she and Douglas left Hopkins and moved into the home of Raymond Brashears, a farmer in the area of Mount Airy, Maryland. Raymond's wife, Flora, was very ill; she needed help fulfilling her domestic duties and caring for her young daughter. Flora succumbed to meningitis on 15 May 1924 ('Deaths: Mrs. Flora Belle Brashears', 1924).

In 1926 Arvilla married Wilbur Hood. Thirteen years later, a daughter, Gwendolyn, was born to the couple. 'Hoody' and Arvilla grew apart after Gwendolyn's birth and divorced in the 1940s. Arvilla's senior years were healthy and vigorous. She died in 1988, leaving behind a trunk containing her most precious possessions, the landmarks of her life.

Following her mother's funeral, Gwendolyn discovered two photographic portraits in the trunk. One was of Maurice when he was four or five years old. The second was of a baby she did not recognize. Puzzled, Gwendolyn asked if Gary knew who the child was.

Many years before, Gary had inadvertently come across the open trunk. He questioned his mother about the portraits. She told him that one child was his father and the other was Douglas. Gwendolyn was understandably upset to learn about Douglas. Her mother never told her that she had a second brother.

### **Comparing the portrait and film**

I asked Gary if he would send me a photograph of the portrait. To obtain a better image, he removed the old picture from its glass-covered frame. On the back was the address of the photographic studio. It was located less than 3 km from Hopkins.

After the portrait arrived, several colleagues compared Douglas' photograph to stills of Albert made from the Watson movie. No one saw any features indicating that the two boys could not be the same person. Therefore, I felt that a more expert assessment was justified.

The principal shortcoming with the photographic evidence was that we did not know Douglas' age when the portrait was taken. Babies' facial features rapidly change making positive identification impossible. The quality of Watson's movie was another problem. Albert's eyes look like black dots; it was not possible to determine where the eye sockets began and ended. Enlarging stills from the movie brought forth some features, but the resolution was poor. Although we could not confirm that the two boys were the same individual, a disconfirmation might be possible. In other words, the baby's features might be so different that they could not be the same individual.

Money is no object if you have none. When in need, I have always depended upon the kindness of scientists. Friends called friends and I was eventually put in contact with Dr William Rodriguez of the Armed Forces Institute of Pathology. He graciously consented to compare Douglas's portrait with a number of stills of Albert.

As expected, Rodriguez (personal communication, 13 June 2008) noted that the fast rate of tissue growth during infancy precluded a definitive identification of Albert. He then addressed the question: Did the photographic evidence reveal that Douglas and Albert were different people?

"My examination using a simplified cross sectional ratio comparison appears to suggest that one cannot exclude the subject in question as possibly being baby Albert. There are certainly facial similarities based upon my observations even taking into account the differential chronological age of the subjects depicted. In conclusion the two photographs could be the same individual (personal communication, 13 June, 2008)."

Although visual and biometric comparisons found a resemblance, if the sole evidence were the photographs, we would not claim that Douglas was Albert. Fortunately, the photographic data can be evaluated in conjunction with other findings to determine the likelihood that Douglas was Little Albert.

## Conclusion

After seven years of investigation, we discovered an individual, Douglas Merritte, who shared many characteristics with Little Albert. Our findings are summarized as follows:

- Watson and Rayner tested Albert during the winter of 1919/20. Douglas' mother, Arvilla, resided on the Hopkins campus on 2 January 1920.
- Watson and Rayner tell us that Albert's mother was employed at the Harriet Lane Home. According to family history, Arvilla worked at the Harriet Lane Home.
- Albert's mother was a wet nurse. Arvilla gave birth on 9 March 1919 and was listed as a foster mother on the 1920 Hopkins census. She could have served as a wet nurse.
- Documents suggest that there were probably no more than four wet nurses residing in the Harriet Lane Home at any one time. Thus, Arvilla is one of very few women who could have been Albert's mother.
- Douglas was born on the Hopkins campus and cared for by his mother after she left the hospital. Therefore, it is very likely that Douglas lived on campus with his mother during winter of 1919/20.
- If Douglas lived with Arvilla, then he, like Albert, spent almost his entire first year at Harriet Lane.
- Like Albert, Douglas left Hopkins during the early 1920s.
- By jointly considering Watson and Rayner's article, the film , and Watson's correspondence with Goodnow, we determined that Albert was born between 2 March and 15 March 1919. Douglas was born on 9 March 1919.

- Albert and Douglas were Caucasian males.
- Visual inspection and biometric analyses of the Douglas portrait and Little Albert film find 'facial similarities'. No features were so different as to indicate that Douglas and Albert could not be the same individual.

Although some of these attributes are shared by more than one person, the probability that the complete set applies to anyone except Albert is very small. The available evidence strongly supports the proposition that Douglas Merritte is Little Albert. After 90 years, psychology's lost boy has come home.

## Why are we drawn to Little Albert?

It can be argued that discovering Little Albert's identity is not important. It will not alter the impact of behaviourism on psychology. Finding Douglas will not change how we conduct therapy, train intellectually challenged individuals, conduct computer-assisted instruction, etc. Yet many people do find the discovery of the identity of Albert significant or at least interesting. So why does Little Albert have such magnetism? Here are a few things which may have contributed to Albert's popularity.

- | What happened to Little Albert is a mystery. People love mysteries. Nevertheless, that fact alone cannot fully account for the interest Albert generates. What happened to the many other babies that Watson tested is also a mystery and no one to my knowledge has attempted to locate them.
- | There is a lack of closure. The Watson and Rayner study was never completed. The original plan was to decondition Albert. Unfortunately, he left Hopkins on the last day of testing.
- | Many people believe that Albert was mistreated. Certainly, by modern standards, establishing a fear in an infant is ethically questionable. Not removing the fear makes matters far worse. People want to know if Albert suffered any long-term negative consequences as a result of his conditioning.
- | For many psychologists, the Little Albert study is one of the first investigations that they learn about. We tend to value those early experiences that brought us into the discipline. It is remarkable how many people have told me in vivid detail about the first time they heard of the Albert study.
- | We know Albert's name. Whether intentional or not, giving the baby a name was a publicity masterstroke. It would be much harder for people to emotionally relate to the child if he was not given a name or called Baby A, Baby 32, or the like.
- | Albert was a baby. Many people are simply interested in and protective of babies. Babies bring out powerful emotional responses.



These six factors account for some of Albert's magic. This list, however, cannot fully explain the little boy's continued appeal. Albert has transcended his role as a participant and become an integral member of our psychological family.

Albert's fame is widespread. As much as Pavlov's dogs, and Skinner's pigeons, Albert is the face that psychology shows the general public. A more important, and often ignored role, is that stories, like that of Albert, are part of our collective memory. Our identification as psychologists is predicated upon a knowledge and appreciation of our mutual history.

## Epilogue

Gary, his wife, Helen, and I set flowers on Arvilla's grave. Then we drove several miles to the Church of the Brethren. Beside the church is a small well-kept cemetery. I followed Gary to a modest-sized tombstone. It read, 'Douglas, Son of Arvilla Merritte, March 9, 1919 to May 10, 1925.' Below his name, were inscribed lines from a Felicia Hemans poem (189-?, p.331).

The sunbeam's smile, the  
zephyr's breath,  
All that it knew from birth  
to death.

Standing beside Douglas' grave, my prevailing feeling was one of loneliness. Douglas never grew up; our search was longer than the child's life. The quest, which had for so long been a part of my life, was over. I put flowers beside my little friend and said goodbye.

Whatever happened to Little Douglas? We may never know if he experienced any long-term negative consequences from his conditioning. We did discover that his health deteriorated after leaving the Harriet Lane Home. His death certificate (Department of Health Bureau of Vital Statistics, 1925) states that Douglas died from hydrocephalus and convulsions.

To conclude that Douglas's story ended in a rural Maryland graveyard overlooks much of the significance of his life. Although we found no indication that Watson and Rayner's procedures provoked criticism in the 1920s, Douglas's treatment now exemplifies the need for an ethical code to protect the rights of participants. All behavior therapies trace their lineage to Mary Cover Jones's (1924) counterconditioning of Peter, a follow-up to the Albert investigation. Watson and Rayner's simple study of fear acquisition and generalization encouraged the development of effective treatments for phobias and an array of other behavioral problems.

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