

Commentary: More Thoughts on the Child Development Center Twin Study

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The editor, Nick Martin, congratulates Nancy Segal on being recognized as the 2004–5 Outstanding Professor of the Year at California State University, Fullerton.

Introduction

It is a study that will not go away.

It was fall 1982 when I arrived at the University of Minnesota as a new postdoctoral fellow, to work on the Minnesota Study of Twins Reared Apart (MSTRA). By then, the MSTRA had gained considerable stature, drawing attention from national and international scholars and journalists. But for a brief time during my early years in Minnesota, an older twin study was becoming newsworthy once again. CBS's news magazine, *Sixty Minutes*, was preparing an exposé of Dr. Peter Neubauer's 1950s Child Development Center (CDC) twin project. The program intended to show how and why a group of New York child psychiatrists and psychologists decided to 'play God', separating infant twins and tracking their development without informing the twins' adoptive families that their children were twins. The investigative journalists also wanted to know what the scientists hoped to learn from this unique study, the only one in the world to follow separated twins prospectively from birth. Ultimately, the planned television special was cancelled for reasons I would later learn. But some scientists and journalists still revisit this controversial study from time to time. It is a study that will not go away.

The project, described in detail for the first time by Dr. Lawrence Perlman, had a fairly innocuous start. In the early 1950s, Columbia University child psychiatrist, Viola Bernard, was an advisor to the Louise Wise Adoption Services in New York City. Bernard believed that monozygotic (MZ) twins growing up together suffered from never securing a special

niche in their family. Consequently, when unwed mothers relinquished their infant twins and triplets for adoption, Bernard advised the agency staff to place the babies in separate homes. Once this policy was in place, Bernard mentioned the separated twins to her friend and colleague, Dr. Peter Neubauer. He replied, 'They must be studied'.

The opportunity to study separated identical infant twins perfectly matched the interests of Neubauer and his colleagues. They wanted to determine how subtle parenting differences predicted child behaviors. They also wanted to know what constituted an optimal fit between adoptive parents and their children. Neubauer took pride in the fact that once the adoption agency identified mothers pregnant with twins, his team 'was there at the birth'.

Looking Back

The sequence of events leading to the research resolves a crucial point of contention among individuals familiar with the study, namely whether or not the twins were intentionally separated for research purposes. It seems that they were not. However, the decision to separate the twins created an ideal condition for prospectively investigating genetic and environmental influences on physical and behavioral characteristics and predispositions. Until the CDC study was conducted (beginning in the early 1950s and continuing through the mid-1970s), reared-apart twin studies were retrospective, relying on the recollections of adult twins, mostly without the observations and insights of their rearing parents (see, for example, Newman et al., 1937; Shields, 1962; Juel-Nielsen, 1966).

I suspect that the two processes (separating twins and studying them) perpetuated one other — as the research benefits of separating twins became clear, efforts to find additional cases intensified. As Dr. Perlman indicated, Neubauer had contacted Sister Bernard at Catholic Charities in New York hoping to identify other separated sets. She would not cooperate at first, arguing that what had been put together naturally (twins) should not be split apart. Neubauer replied that mothers and children (who are also put together naturally) can be separated via adoption. He said that Sister Bernard eventually agreed to help him, although she never furnished the promised pairs. The final CDC twin sample included five MZ twin pairs and one MZ triplet set, all placed through the Louise Wise Agency. Thirteen children and 13 families were involved.

Like my twin research colleagues, I always wondered about the origins, progress and ultimate fate of the Child Development Center twin study. It was curious, as well as troubling, that quantitative analyses of the data never appeared in the psychological literature. The few descriptive accounts include a 1986 case study of a single twin pair (Abrams, 1986), and a book by Neubauer and his journalist son, Alexander (1990); unfortunately, the book provides little information beyond the earlier case report. Then, a number of years ago I came across two references to a

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best interests are neglected. These views seem to support Bernard's practices and beliefs, but they were not research-based. In fact, virtual twins (near-in-age unrelated siblings raised together from infancy) in my ongoing study have obtained IQ scores that were above average and behavior problem scores that were below those of children in clinical and nonclinical samples (Segal, 2000).

Most twins dealing with twinship issues do so successfully — in fact, it has been well established that twins are no more highly represented than nontwins among psychiatric and problem-behavior populations (Kendler et al., 1995; Moilanen et al., 1999; also see Segal, 2000). I suspect that Bernard's beliefs on separating twins were based on her own clinical impressions of selected twin pairs, and possibly those of her colleagues. If so, this would not provide sufficient reason to routinely separate the infant twins. In fact, given Bernard's reasoning, one could conclude that all twins (not just those given up for adoption) should be raised separately!

It is unclear to me how parents' knowledge of their child's twinship would affect parenting practices in significant ways. Some critics of reared-apart twin studies have asserted that certain features of the twins' rearing environments explain their degree of adult similarity, for example, being raised by biological relatives or having had frequent contact prior to assessment (Taylor, 1980). However, reanalyses of these findings have disproved these charges (Bouchard, 1983, 1997). In addition, most separated twins have enjoyed loving relationships with their adoptive families and have delayed searches for biological parents and siblings until adulthood so as not to hurt their families. Twins who have searched earlier have usually enjoyed their adoptive parents' support. Thus, there is little reason to believe that parents' knowledge of adoptive children's twinship would have proven detrimental to their wellbeing. If anything, it might have helped explain some of the twins' developmental features, such as their lower than average birth weight and more uncertain health status, relative to nontwins (Taffel, 1995).

Further Comments

Viola Bernard's extensive archive at the Columbia University Health Sciences Library (<http://library.cpmc.columbia.edu/hsl/archives/pastacq.html>) is open to the public, with the exception of documents and correspondence associated with twins and the Louise Wise Services. Most of this material has been sealed until 2021; interestingly, these files are dated 1953 to 1997 suggesting that Bernard's involvement in this work continued after the study ended in the mid-1970s. The actual twin data have been given to the Yale Child Study Center, in New Haven, with a similar stipulation — that they not be released until 2066; an inventory of items is available at <http://mssa.library.yale.edu/findaids/stream.php?xmlfile=mssa.ms.1585.xml>

Neubauer believes this is a good thing as it will protect the twins until they are well into adulthood. However, there are reasons to reconsider these decisions. The twins are now mature adults who are entitled to know about their past. Some events that may have been unclear and confusing to them could be clarified. And those twins who have not yet met (possibly three pairs) might benefit from the medical knowledge that their twin can provide, and from the close companionship they may offer to one another.

I wondered how Peter Neubauer and his staff might have felt if they had been among the separated twins. Would they have been angry if researchers had withheld this information from them? There was a lot I wanted to ask him. The opportunity to do so presented itself when Dr. Perlman arranged a meeting with Neubauer at his New York office, in December 2004.

Neubauer was a warm and gracious host, especially when he learned that one of my best high school friends was his younger cousin. He invited us into his study, a beautifully furnished room decorated with interesting artifacts he had acquired on his travels. He answered our questions openly and honestly, echoing the views of Viola Bernard. He remains convinced that separating the twins

and studying them as he had done was correct. Amazing as it seems, he is apparently unaware of the twins' special situation, specifically how separating them, studying them, and concealing their twinship might have affected them in later years. Neubauer was still surprised that his work had come under attack from the media. Apparently, his personal contacts at CBS news had been sufficient to halt their investigation and the *Sixty Minutes* special.

Neubauer raised some question over whether the New York triplets, Bobby Shafran, David Kellman and Eddy Galland (who found each other at age 19; see Saul, 1997) were truly MZ, because there were two placentas. I reminded him that onethird of MZ twins have separate placentas. Moreover, the triplets had been blood-tested at the University of Minnesota and were shown to be MZ. He remains unconvinced.

I asked Neubauer his opinion of recent twins-reared-apart studies, such as the one in Minnesota. 'It's a starting point', he said. He explained that genetics means much less at the individual level, where one can associate twin differences with parenting differences. I was reminded of Newman et al.'s (1937) finding that, despite genetic influence on IQ, more educationally advantaged twins outperformed their less educationally advantaged co-twins. However, this does not imply that genetics 'means less' — rather, the levels of analysis differ. Genes and environments are both important for human development, but their relative contribution can be estimated only at the group level. It is impossible to say which one has greater impact at the level of the single person.

Neubauer stood up after about 45 minutes, signaling that our meeting was over. (Knowing his psychoanalytic background, I was not surprised by the '50-minute hour' limit.) Before leaving, he and I exchanged books. I felt pleased to have met him and to have gained some knowledge of the inner workings of his study. But there was another person I wanted to talk to. It was Dr. Stella Chess, one of the principal investigators on the New York State Longitudinal Study (NYSLS) of temperament. As I

indicated above, I wondered about the source of her one reared-apart MZ twin pair. I called her and we arranged to meet at her home in January 2005.

Dr. Chess, an elegant 90-year-old, greeted me warmly. It was exhilarating to meet someone whose work with childhood temperament was so well known. To her credit, she still attends meetings at Columbia University and lectures occasionally to select audiences. It turned out that Dr. Chess knew little about Neubauer's work. In fact, when we met she didn't know whether he and Viola Bernard were still alive. It seems that even though they were colleagues working in the same city they were not close.

Chess believes that twins have a right to know that they are twins. Nevertheless, she defended Neubauer's decision to keep this information from the twins' adoptive families — after all, this knowledge had been entrusted to him. 'He was being discreet', she said. Interestingly, Chess had adopted her two eldest children and had given birth to her two youngest. Consistent with the views of the 1950s and 1960s, she said that she had never wanted to learn about her adoptive children's pasts because 'they are my children'. When I mentioned Viola Bernard, Chess remembered that Bernard had regarded Chess as her protégé. Apparently, Bernard had tried hard to involve Chess in some adoption work (not at the Louise Wise Services), but her efforts did not pay off. Chess recalled, 'She [Viola Bernard] treated me as her protégé, but I wasn't'. She also recalled that Bernard had thought of herself as a 'psychiatric busybody'.

According to Dr. Chess, the single reared-apart MZ twin pair in the NYSLS was found serendipitously. Sophie Ladimer, one of Chess's assistants, was visiting her pediatrician's office and noticed a photograph of a beautiful baby girl. The doctor mentioned that it was not his child, but was a member of an MZ twin pair that he had helped to separately place. Ladimer was interested in the case from a scientific point of view and received permission to contact the two adoptive families. Soon, the twins were part of the NYSLS and were

studied by the researchers until they turned 16. They had a *Parent Trap*-like meeting. Twin A (who did not know she was a twin) attended summer camp when she was 12 or 13 years old. A girl there seemed surprised to see her and called her by the wrong name. It was a case of mistaken identity — the girl had been friendly with Twin B (who was aware that she was a twin). One day after camp had ended the telephone rang in Twin A's home. Her mother answered — it was her daughter's twin (Twin B). When the mother told her daughter who had called, the girl cried and accused her mother of lacking the confidence in her to tell her she was a twin. Eventually, the twins met and became close for a while. Chess recalls that the twins had many similarities — interests in music and gymnastics, average skills on the Information and Similarities subscales of the WISC, and elevated scores in creativity.

Chess received written permission from the twins' families to write up their research for publication, but never did so. She explained to me that one twin's father was concerned that someone would recognize his family from the report — even though he himself had spoken to many people about raising a separated twin. I asked Dr. Chess if she intended to ever write up the data. She said no and indicated that she might not even have the material anymore. But when I was ready to leave two hours later she said to call her in a few weeks — perhaps she would write it up after all. This seemed reasonable to me because the families knew that they had adopted twins and were informed participants in her studies. Chess had even obtained consent to present her findings as a case report. However, she had promised the family that she would not publish them once their privacy concerns were known. I called her in March 2005 to obtain her final decision — she has decided against publishing, citing her earlier promise not to. She added that it was 'just one small story', but clearly acknowledged its interest and importance. This clarified why the paper in progress by Chess, Ladimer and Thomas never went to press.

Closing (but not Final) Thoughts

Neubauer's twin data are clearly unique, the only existing data on separated twins to have been gathered prospectively. A key question is whether or not to publish the findings in the event that one can gain early access to the Columbia University and Yale Child Study Center materials that are sealed until 2066. Among the issues this would raise are: Would potentially new findings emerge, and would analysis and publication by current investigators condone or excuse the fact that important life history information was concealed from the participants?

New findings would emerge in the sense that prospective longitudinal data (e.g., IQ scores, physical measures, parental reports) on separated MZ twins would be available for the first time. However, it is unlikely that the findings would really be 'new' or would significantly change current thinking on genetic and environmental influences on development. In other words, it is likely that the MZ twin children would show synchronized patterns of behavioral and physical development, outcomes that would be explained with reference to their identical genetic make-up, as in the 1986 case study and in other published works (e.g., Wilson, 1983). Thus, the findings would probably not be new, in and of themselves, but they would offer a new way of confirming what is known.

Inspection of the CDC twin data might yield new ideas about how experience affects development. It may be that co-twin differences could be tied to specific features of the twins' rearing environments more directly and more accurately than has been possible with available data. Such analyses have been conducted with young twins reared together (Reiss et al., 2000), but not with young twins reared apart. Given that only 13 families were involved in the CDC study (five twin sets and one triplet set), it is unlikely that firm conclusions regarding associations among parental rearing practices, childhood experiences and behavioral

outcomes could be drawn. But new hypotheses may be generated.

I have generally maintained that arguments in favor of publishing questionable data would be acceptable if the data helped save a life or uniquely benefited some individuals or groups. However, the CDC study data do not meet these criteria. The twins and their families were not hurt physically, but some were hurt psychologically and still suffer, which should not be dismissed or taken lightly. A concern is that publishing the data would send an inappropriate message to current and future investigators, namely that gathering information under misleading conditions is 'okay' because even if the data could not be used at the time of collection they could be used in the

future. One way to handle this would be to preface publications with a note explaining the origins of the study, in what ways the data collection procedures were inappropriate, and why such practices should be avoided in the future. The papers could then be used as educational examples of how not to study twins and families.

We really do not need the data to be analyzed and published to make this point; writing about the study and discussing it with students and colleagues should be enough. However, some participants may favor publication to justify their separation from their twin, to call attention to the study, or for various other reasons. It may be possible to consult the twins and their families before making a decision to

publish the material. This may be one way to begin to compensate the twins for their lost years together.

It is curious that Bernard's files have been sealed until 2021 and the twin study data have been sealed until 2066. Neubauer said that this was done to protect the twins. But the twins are now adults and able to decide for themselves whether they want to see their files. Researchers today often make project information available to participants with their written consent. I wonder who will seek access to the data when it becomes available years from now. Perhaps someone will try to inspect the material before that. I wonder who is being protected by waiting so long.

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