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#### SULLOWAY, Frank J(ones) 1947-

**PERSONAL:** Born February 2, 1947, in Concord, N.H.; son of Alvah Woodbury (a lawyer and teacher) and Alison (a professor; maiden name, Green) Sulloway. **Education:** Harvard University, B.A., 1969, M.A., 1971, Ph.D., 1978.

**ADDRESSES:** *Office*—Department of Psychology, Harvard University, Cambridge, Mass. 02138.

**CAREER:** Princeton University, Princeton, N.J., research fellow at Institute for Advanced Study, 1977-78; University of California, Berkeley, research fellow at Miller Institute for Basic Research, 1978-79; Massachusetts Institute of Technology, Cambridge, Mass., research fellow, 1980-81; Harvard University, Cambridge, visiting scholar, 1981-82; University of London, London, England, research fellow, 1982-84; Harvard University, visiting scholar, 1984—. Vernon Professor of Biology at Dartmouth College, summer, 1986. Producer of documentary films, including "Charles Darwin and the Voyage of the Beagle," "The Brazilian Tropical Rain Forest," and "The Galapagos Islands: Darwin's Finches."

**MEMBER:** History of Science Society.

**AWARDS, HONORS:** Pfizer Award from History of Science Society, 1980, for *Freud, Biologist of the Mind: Beyond the Psychoanalytic Legend*; numerous fellowships, including \$192,000 MacArthur Prize from MacArthur Foundation, 1984.

#### WRITINGS:

*Freud, Biologist of the Mind: Beyond the Psychoanalytic Legend*, Basic Books, 1979.

(Contributor) William R. Woodward and Mitchell G. Ash, editors, *The Problematic Science: Psychology in Nineteenth-Century Thought*, Praeger, 1982.

(Contributor) R. J. Berry, editor, *Evolution in the Galapagos Islands*, Academic Press, 1984.

(Contributor) David Kohn, editor, *The Darwinian Heritage*, Princeton University Press, 1985.

Work anthologized in *Annual Editions: Western Civilization*, Volume 2: *Early Modern Through the Twentieth Century*, edited by William Hughes, Guilford Publishing, 1981.

Contributor to periodicals, including *Studies in the History of Biology*, *Journal of the History of Biology*, and *Nature*.

**WORK IN PROGRESS:** *Family Constellation and Scientific Revolutions: The Roots of Intellectual Rebellion and Darwin's Genius: An Intellectual Biography*.

**SIDELIGHTS:** Frank J. Sulloway is a respected scholar with particular expertise in the history of science. His high standing stems from the importance of his first major publication, *Freud, Biologist of the Mind*, in which he contends that pioneering psychoanalyst Sigmund Freud and his followers deliberately distorted his life and work to fashion a more heroic portrait. In *Freud*, Sulloway's intentions are twofold—to detail Freud's hitherto unacknowledged debt to both science and his peers and to "elucidate the development and function of the Freud legend." But Sulloway's work does not discredit Freud. Rather, it attempts to perceive him free of artifice and distortion.

In *Freud* Sulloway emphasizes that Freud had long denied any relation between psychoanalysis—Freud's creation—and biology. But Sulloway uncovers Freud's ties to seminal evolutionist Charles Darwin, whose concepts of instinctual and irrational behavior were necessary to Freud's own formulations on human motivation. Sulloway also measures Freud's debt to close friend Wilhelm Fliess, an eccentric physician whose sex theories anticipated Freud's notions of latency, sexual preference, and the psyche's unconscious, instinctual component (the id). Sulloway asserts that Freud's followers portrayed Fliess as "a crank" scientist and that these followers thus obscured Fliess's important psychobiological contributions to theories now credited solely to Freud.

Among Sulloway's other findings is that Freud once charged sexologist Albert Moll with appropriating Freud's notion of infant sexuality, although Moll presented his own theory years before Freud's appeared and actually converted Freud to this perspective. Similarly, Sulloway notes that when Freud was confronted with evidence linking his ideas to those of philosopher Friedrich Nietzsche, Freud denied having possessed knowledge of Nietzsche's work prior to having published his own findings. Sulloway reveals, however, that Freud had originally studied Nietzsche's work while a student. According to Sulloway, Freud's denial of his own mentors—biologists and philosophers—has somewhat undermined psychoanalysis's stature as a reputable field within the natural sciences and has transformed it into a self-contained school perpetually generated by Freud's subservient followers. Furthermore, Sulloway believes that Freud's efforts to obscure the origins of psychoanalysis have resulted in the misconception that the field is "pure psychology" derived from Freud's creative, original thinking.

In exploring Freud's reputation as an extraordinarily original thinker, Sulloway reveals that Freud deliberately distorted his past in order to present himself as a solitary, heroic figure grappling with controversial, original ideas despite abuse and

ridicule from the scientific and medical communities. Sulloway disputes Freud's self-portrait, declaring that many scientists and doctors of Freud's time shared his interest and that Freud's willful misrepresentation of his stature distorts the reception accorded psychoanalysis in its early years. Contesting Freud's insistence that his ideas were originally mocked and resisted, Sulloway establishes that Freud's work was actually well received. He cites Freud biographer Ernest Jones's claim that one of Freud's most important writings, *The Interpretation of Dreams*, was either ignored or ridiculed by reviewers. But Sulloway shows that the book actually met with many favorable reviews, and he speculates that Jones, like many others in the psychoanalytic community, proffered a distortion specifically to enhance Freud's reputation as a heroic outsider.

But if Freud, at least in Sulloway's perspective, is hardly the radical and defiant intellect of his legend, he is nonetheless drawn throughout the book as a great figure. Sulloway readily acknowledges Freud's astounding creativity in adapting and synthesizing various concepts—some borrowed from predecessors Moll and Havelock Ellis—into a coherent interpretation and understanding of human behavior and motivation. "What remains today of Freud's insights and influences," Sulloway asserts, "provides ample testimony to his greatness."

Upon publication in 1979, *Freud, Biologist of the Mind* was hailed in many reviews as an extraordinary addition to the literature on Freud and psychoanalysis. Anthony Storr, writing in the *Washington Post Book World*, declared that "Sulloway's book is original and important" for its many revelations about Freud's personality and actual achievements. Storr added that Sulloway's work was also "an important contribution to our understanding of how . . . history can be retrospectively falsified." Similarly, Robert Kirsch wrote in the *Los Angeles Times Book Review* that *Freud* "shows what can be done in the neglected field of intellectual history to recover a sense of the current of ideas and theories." Kirsch described *Freud* as a "closely reasoned" and "fascinating" book, and he commended Sulloway for being both "fair and objective." And *Newsweek* reviewer Jean Strouse called *Freud* "an impressive intellectual biography," adding that "no one before has documented in such painstaking detail how Freud's genius worked to transform his own and others' observations into a thoroughgoing science of mind."

Sulloway has also been active as a scholar of the life and work of evolutionist Charles Darwin and has produced several essays on Darwin's early thought—especially on the *Beagle* voyage's importance in his intellectual development. In this regard Sulloway has shown that, contrary to popular belief, Darwin's conversion to evolutionism did not occur as a sudden realization during the *Beagle* exploration of the Galapagos Islands but developed after his return to England. Sulloway has analyzed the origins of the Galapagos legend and has noted its various functions within the scientific community. As for Darwin's alleged intellectual transformation during the *Beagle* voyage, Sulloway has emphasized the personal changes that accompanied Darwin's growing self-perception as a geological theorist.

Sulloway told *CA* that his most recent research focuses on the psychology and sociology of scientific revolutions. He reported that he has used "multi-variate statistical procedures" to analyze the personal and intellectual backgrounds of more than two thousand participants in sixteen major scientific revolutions since the Copernican era. According to Sulloway, birth order is a "particularly good" indicator of an individual's

opinion of revolutionary scientific theory. "Birth order is also closely linked to political and religious persuasions," Sulloway added, "with late borns being more liberal on both measures."

In recognition of his achievement and continued promise as a scholar, Sulloway was awarded a coveted MacArthur Prize from the MacArthur Foundation, a highly respected body which confers fellowships without stipulations of any kind. These cash prizes, sometimes referred to as "genius awards," are given to select individuals to provide them greater flexibility in pursuing the same creative bent that merited recognition. Sulloway's own prize was \$192,000 to be received over a five-year period beginning in 1984.

#### CA INTERVIEW

*CA* interviewed Frank Sulloway by telephone on July 9, 1986, at Dartmouth College, where he was teaching during the summer.

*CA: Both of your parents were teachers, you've told CA. Did their example encourage you to pursue a scholarly career?*

*SULLOWAY:* Undoubtedly. I think they were a very important influence. Having parents who teach gives one a role model, and I think it also makes very tangible in one's mind a sense of values and of academic excellence.

*CA: Did they concentrate on science or psychology?*

*SULLOWAY:* No, neither of my parents was interested in these fields. My father was initially a lawyer who had an interest in history and literature, and my mother is a professor of English.

*CA: Is it true that Freud, Biologist of the Mind came about almost accidentally? I believe you were originally working on Darwin.*

*SULLOWAY:* Yes, that's true. I initially turned to Freud as a way of gaining some insights into the problems I encountered in Darwin's life. I was very much interested in the process of scientific creativity, in creativity in general, and in certain legends about Darwin. I thought to myself, if you want to illuminate problems of this sort, you could do worse than to turn to Sigmund Freud, who had a great interest in these issues. So I began reading his work.

*CA: What are some of the myths surrounding the life and work of Darwin that you have challenged?*

*SULLOWAY:* At the time I began working on Darwin, in the late 1960s, there was still a consensus that when Darwin had gone on the voyage of the *Beagle* and visited the Galapagos Islands, he had been converted, Eureka-like, to the theory of evolution. We had the image of Darwin, the lone genius, standing on volcanic rock in the Galapagos observing "Darwin's finches" and the giant tortoises and forming a theory of evolution right at that moment. I personally retraced Darwin's voyage around South America; and I knew from having seen firsthand the things he described in his letters that he knew much less about what he was collecting and observing than he did after he returned to England. Only then did many of the world's experts in zoology and botany fill him in on the importance of what he had collected. I also realized Darwin had made a number of crucial errors during the voyage in terms

of what he thought he had collected versus what these specimens turned out to be. He often merged separate species into one, for example, and thus confused biological identities. He could be fooled by things he saw because he was not an expert. And yet it was Darwin, ironically, who subsequently had the scientific vision to recognize his *Beagle* collections in an evolutionary light. This circumstance made me aware how important individual temperament is in revolutionary thinking. It was not the Galapagos Islands, then, that made Darwin; rather it was Darwin who made the Galapagos by daring to think what others would not.

*CA: You've written about this in scholarly journals. Will you also do a book on Darwin?*

*SULLOWAY:* I have been working on a biography, which incorporates many of these aspects of the story of his life. I had originally intended to do a biography of Darwin before I ended up doing one of Freud. So, in a way, Freud got me waylaid on the track of scholarly endeavor.

*CA: In your work on Freud, you needed the cooperation of many people and institutions. Were you always able to get the help you needed?*

*SULLOWAY:* No, I had some difficulty. I was not able to see the complete letters from Freud to Wilhelm Fliess, which have since been published. That access was denied to me by Freud's daughter Anna. She had given permission to Jeffrey Masson to edit and publish the letters, but she still would not let other scholars see them. One could describe this as an example of misguided favoritism. When the complete letters appeared, it turned out that I had correctly surmised what most of the crucial missing parts were about. Others had looked at the correspondence—Ernest Jones, for example, and Max Schur, who were psychoanalysts in favor with Anna Freud. And one could largely reconstruct from the unpublished passages to which they referred what was actually in the missing parts of the letters. I was very pleased to find that I had not overlooked anything and that I had anticipated a great deal—in fact, probably the bulk of what was missing—and that, indeed, Fliess himself had published lots of things that gave one an intimate image of the collaboration that was going on in his relationship with Freud. So I didn't miss much.

*CA: Did you get cooperation in general from other people and institutions?*

*SULLOWAY:* I was allowed to work in Freud's library in London, which was in Anna Freud's house, the house that Freud himself moved to when he emigrated from Vienna. But I think that she was always a little bit suspicious about what I was up to.

*CA: Because you weren't a psychoanalyst yourself?*

*SULLOWAY:* Yes. I think she had a reaction that came out of family tradition, which was to distrust biographers or any scholar who was mucking around in old family paper and documents. She seemed to think that people should not be busying themselves with writing biographies of Freud, that if they were interested in Freud, they should be psychoanalysts. All motives were rather suspect if you were working on Freud himself. So she seemed to be a little wary of me.

*CA: Then you didn't have an opportunity to interview her extensively about her father?*

*SULLOWAY:* No. The kind of history I was doing was intellectual history, and I did know from talking with her that she knew much less about how Freud developed his ideas than I did. This was old history to her and she was not particularly interested in it. One experience I had with her really sums up our whole relationship. I once made the statement to her that having had access to all the books Freud was reading during his years of crucial discovery had, I felt, advanced my research and understanding of the man by perhaps five years. There was an astonished look on her face. She clearly could not understand that having access to the specific books her father read could tell you much about the creativity of the man. Her puzzlement stemmed from a difference in her view of where her father's creativity must have come from. She saw it as deriving from the context of patients through the analytical process, not from the books he read. But in the context of intellectual history, it was precisely the addition of this literary and conceptual element that made my approach valuable. That was not something she could appreciate, and I could see from the reaction on her face that it really mystified her. I think she said something about it at the time.

*CA: How reliable in general have you found the other major biographies of Freud?*

*SULLOWAY:* I would say this about them: that whether they are accurate or inaccurate, those that were written by first- or second-generation analysts like Ernest Jones or Max Schur convey some aspect of psychological reality. The essence of this psychological reality is the Freud legend. So if Ernest Jones says something about Freud that is simply wrong, but Jones believed it, it is sometimes very valuable to know this belief because it conveys the pervasiveness of the Freud legend as it existed in Jones's mind. In this sense, I still feel that the Jones biography is a marvelous book to read. It's the epitome of the Freud legend, and much of the interest of Freud is the legend that surrounds him.

*CA: You refer frequently in your book to James Strachey's editorial comments. Were you usually happy with his interpretations?*

*SULLOWAY:* Strachey is a real unsung hero in Freud scholarship. Here is a man who devoted his life to translating and editing the twenty-four volumes of the *Standard Edition* of Freud's works, and many of his editorial essays and sometimes long footnotes are models of careful scholarship. Because they are in the *Standard Edition*, there are often references to them by other Freud scholars—to such-and-such a page and such-and-such a footnote, for example, which may be a Strachey editorial commentary on the relationship of an idea in 1905 to an idea in 1920. But often Strachey's name gets left out of such references by other scholars. He really was a very perceptive editor of Freud's works, a gifted translator, and I benefited greatly from his scholarship. I think there were times when he was swayed too much by the Freud legend, but no one who works with Freud's *Standard Edition* in the English language can do without the assistance of Strachey.

*CA: In your biography, I believe, you had no intention of arguing that Freud's ideas were based solely on biology, only that biology was an important source for the theory of psychoanalysis.*

*SULLOWAY:* That's correct. I often was misunderstood on this point. On the one hand, biology was of course very important for Freud. After all, he began his career as a biologist and neurologist, and he continued that career into his mid-forties. On the other hand, biology is something of a bad word in the social sciences. Humanists despise the deterministic, reductionist mode of thinking that is generally associated with this discipline. Freud, of course, was adopted by humanists in the twentieth century as the great hero of poetry and literature; and, when you write a book of the sort I did, it is perhaps inevitable to be typecast as an "overly biological" interpreter of Freud. It was easier for critics to confront a paper dragon than it was to see the more sophisticated argument behind the book, and thus I often got reviewed as representing the notion that psychoanalysis is *only* biology. Psychoanalysis is really a very complicated, sophisticated psychobiology. It is very important to recognize this, and, in fact, this perspective is necessary in order to understand psychoanalysis properly. Moreover, because many of Freud's biological assumptions were erroneous, being based on now-outmoded nineteenth-century theories, understanding these assumptions allows us to see why much of psychoanalysis has turned out to be misguided and wrong.

*CA:* If so many of the terms that we associate with Freud—*infantile sexuality, dream interpretation, and the unconscious, for example—actually preceded Freud, as you've shown in your book, what is truly original in Freud's work?*

*SULLOWAY:* That's a very good question. There are many different forms that originality can take. Freud without question worked with many basic concepts that we now identify with him, such as infantile sexuality and the unconscious and dream interpretation, but that were very widespread in his day. The fact that he is now famous and we have forgotten about all his contemporaries who were working on these same notions has made it appear that Freud was the author of them. When one examines Freud in historical context, then, he seems to be much less original. But Freud took many of these contemporary ideas and gave them a unique Freudian twist. One could say that he transformed many of them. The notion of infantile sexuality as held by, say, Havelock Ellis or Albert Moll in the 1890s is *not* the same notion of infantile sexuality that Freud developed about this time and that became so famous in the twentieth century. The essence of Freud's originality lies in his unique synthesis and transformation of a number of ideas that, in their component parts, appear to be unoriginal.

*CA:* In an interview for the Italian publication *Panorama*, you commented that you were surprised to find that many psychoanalysts liked your book. Has that remained true in the last three or four years?

*SULLOWAY:* Yes. This is still one of the overriding surprises for me in terms of the reception of my book, although I think I would now issue a footnote to qualify my *Panorama* remark. When I originally published the book, I thought most analysts would hate it and nonanalytical psychiatrists, psychologists, and lay readers would enjoy it. I was surprised how many analysts actually liked it. They tended, however, to have their training in medicine and the sciences; and what they identified with in the book that I had not anticipated was the notion that Freud really did emerge out of a natural sciences background, and hence that psychoanalysis, no matter how problematic, still has its heart in the natural sciences. On the other hand,

many people who were very interested in psychoanalysis but were not analysts themselves were negative about my book, and *they* tended to have a background in the humanities. It surprised me that certain professors of, say, philosophy or English were very put off by my book. I think what bothered them was the notion that I was somehow reducing Freud to the status of a simple-minded biological determinist. The major thesis of the book was much more sophisticated, but that is the way it was often portrayed.

Having said this, I would also say that I have been a little surprised, given the positive reception my book had among many psychoanalysts, that more of a dialogue has not developed in the last six or seven years. It is as if they were appreciative, but that not much could really grow out of it. And I think this represents a problem that is institutional within psychoanalysis, which is that most analysts do not have academic backgrounds. There are not many formal bridges between the world of the analytic community and the universities. I come from a university background, where we are much more used to talking about ideas and fighting for them and having the test of academia, and academic criticism, decide their fate. Analysts, who are mostly trained within analytic institutes, tend to be overprotective of "analytic truth." So, even though there was a great deal of initial interest in my book, there were very few bridges by which that interest could be transformed into a continuing dialogue with analysts. This reflects a more serious problem in psychoanalysis, namely, its rather distant relationship to academic psychology. Thus I merely got a taste of what is a much wider problem for psychoanalysis as a science.

*CA:* And this dialogue did not take place even overseas? Your book has been translated into other languages.

*SULLOWAY:* The same problem exists in the various countries where my book has been translated. Just as in the United States, psychoanalysis in Europe is mostly taught in psychoanalytic institutes, and this gives some limits to the intellectual contacts that are generated between analysts and academics. I must say I have had a number of continuing contacts, but they almost always come from psychotherapists and researchers trained in medical or psychiatric traditions rather than in analytic ones.

*CA:* Do you feel that your biography falls in any way within the province of psychohistory?

*SULLOWAY:* I would prefer to describe my book as being in the tradition of intellectual history rather than psychohistory. The book is not a typical attempt, in a psychohistorical vein, to reduce Freud's creative life to certain childhood events. Most Freud biography, including the Freud legend itself, ultimately has a "Freudian" psychohistorical core paradigm in which Freud's creativity is derived from his unusual childhood and family constellation. What I was trying to do was to show the limited nature of this paradigm and indeed to restore the forgotten intellectual context and intellectual history surrounding Freud's achievements. In this sense, my book is an antidote to psychohistory rather than an example of it.

*CA:* How do you feel about psychohistory in general?

*SULLOWAY:* I tend to be very skeptical of most psychohistory that I read. History is difficult enough to do anyway, and it is even more difficult to establish a *thesis* in history. When one

builds a thesis from a speculative, psychohistorical perspective, one is not only erecting a historical thesis but one is also building on a theory of psychology, usually psychoanalysis, that is itself very problematical. It is like trying to construct a building on quicksand. The foundation is unstable and the building sinks as you build it.

CA: *You've received several grants for your research and writing. Have you been doing much teaching in the last ten years or so?*

SULLOWAY: I have taught only a limited amount in the last decade. During the time I was a graduate student I was fortunate enough to spend three years in the Society of Fellows at Harvard and, subsequently, to receive the MacArthur Fellowship, which lasts for five years. Recently I have done some teaching, particularly in areas that I am most interested in—the lives of Darwin and Freud and theoretical issues in psychobiology, including sociobiology; and teaching has brought me here this summer to Dartmouth College as the Vernon Professor of Biography.

CA: *Would you like to teach more, or would that keep you away from the research too much?*

SULLOWAY: As long as I have funds for postdoctoral research, that is my primary aim. But I do intend to have a career in teaching, and I have tried to use my MacArthur Fellowship as a transition into this career.

CA: *What writing projects are you involved in now?*

SULLOWAY: My research career to date has really gone through three phases. The first was publishing the Freud book, which took me seven years. The second phase, which lasted from the time the book came out until 1984 or 1985, involved publishing a great deal of research that I had done on Darwin prior to getting involved in Freud. This I have done in article form. The third phase is beginning now. It involves a project that I have worked on since the early 1970s, namely, the relationship between birth order and revolutionary temperament, particularly in science but also in other fields. It's a project that involves a large number of biographies and multivariate data analysis. I have collected biographical information on more than two thousand persons and more than a dozen scientific revolutions since the time of Copernicus in the sixteenth century. I have tried to control these samples not only for the major variable I am interested in, which is birth order—that is, whether you are a firstborn or laterborn in the family—but also for other variables that might co-vary with birth order, such as family size, socioeconomic status, religiosity, and nationality. There are more than twenty variables that I am looking at simultaneously with birth order, so my data matrix is two thousand people times twenty variables or about forty thousand data points.

CA: *So if I asked a question about your conclusions about the firstborn in the family, that would probably be too simple.*

SULLOWAY: There's a simple answer, a less simple answer, and then another even less simple answer. In general one can say that although firstborns tend to be more eminent in all fields of knowledge, they also tend to be more conservative. So there is a sort of paradoxical relationship between birth order and intellectual achievement: firstborns, for example, tend to win more Nobel Prizes in science, but they do not tend

to lead scientific revolutions. In fact, they tend to vehemently oppose revolutions in science. Where occasionally there are revolutionary firstborns, the revolution concerned has to be of a circumscribed variety. Einstein was a firstborn, for instance. His work was indeed revolutionary, but the average person in the street certainly did not know what this revolution was all about. On the other hand, the average person did understand the revolutionary significance of what Darwin or Copernicus were proposing. They were laterborns. Their followers also tended to be laterborns, and their opponents tended to be firstborns. Where revolutions have involved deep-seated implications for major issues in politics, religion, or other extra-scientific areas, there are usually major birth-order effects involved. I am doing a book on this, and I will also publish an article summarizing the results.

CA: *In the December, 1979, issue of California Monthly you are quoted as saying, "I work very hard. Long hours. Weekends. I don't take any time off. But I love working. It's fun!" Is this still true for you?*

SULLOWAY: This statement makes me sound like a real workaholic! I am still a very hard worker, and I think it's difficult to alter those patterns, but I am no longer such a workaholic. So even though I am still a pretty disciplined worker, my life has diverse things going on.

CA: *Where will you go after the summer at Dartmouth?*

SULLOWAY: I will be back at Harvard in my capacity as visiting scholar and I will do some teaching on and off, and also work on my book on birth-order and scientific revolutions. I still have another three years to go on my MacArthur fellowships, so for the next three years my career will be primarily research oriented.

BIOGRAPHICAL/CRITICAL SOURCES:

PERIODICALS

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—Sketch by Les Stone

—Interview by Walter W. Ross

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