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Oliver Sacks: Renaissance Man

For devoting his career to the loving investigation of puzzling and oft stigmatized neurological ailments, British physician and neurologist Oliver Sacks should be nominated to win the Nobel Prize for Cutting Edge Research in Humans in 2011. Throughout his career Sacks has investigated the minds, experiences, and behaviors of patients afflicted with conditions such as Parkinsonism, hallucinations, Tourette's syndrome, Autism, deafness, blindness, colorblindness, and amusia (the inability to enjoy music). In addition, he has also contributed to the fields of chemistry and botany, publishing books on curious plants, ferns, and the many delightful oddities of the elements within the periodic table. But what is most curious and admirable about Sacks are not his scientific discoveries (of which he's had a few), but rather his work and his approach; he has filled a crucial niche in the study of human experience by investigating the unique faculties of an assortment of brain disorders through personalized case-studies instead of laboratory experiments. In the process, he reveals the diversity of the psychological human experience and the awesome capabilities of the mind that can seemingly only be observed when "unlocked" by such illnesses. An expert on a wide variety of topics and curious about many more, Sacks is a man of many trades, a renaissance man, who has blended hard science with human interest.

Sacks' resume reads like that of a celebrity, not of a typical scientist—because of the numerous topics he's investigated during his career and his jovial writing style, his work appeals

to literati, scientists, doctors, Hollywood, and the average person alike. So far the Oxford graduate has penned ten books, contributed to countless neuroscience journals, and has written many additional articles on his findings. Currently, he is the professor of neurology and biology at Columbia University, and is the first to receive the title of Columbia University Artist for his efforts in science, literature, and patient care. He's spoken at the TED conference, been interviewed by the New York Times, and is the inspiration of numerous films, one of which was academy-award nominated, *Awakenings*.

However, while Sacks has accumulated many awards and honors across the board at the institutions at which he's worked or for his literary accomplishments, Sacks has surprisingly few national recognitions that reward him for his scientific endeavors. Perhaps this is because he doesn't fit the mold within the scientific hierarchy—Sacks has foregone to pursue the world of competitive science and its network of scientific partners and competitors clawing for publications, citations, and nominations. Instead, Sacks' work is difficult to classify—his breadth of interests and his background as a house-calling physician interferes with many people's opinions of him as a classical, authoritative neurologist. Rather than measuring opiate receptors in the brain by making tissue milkshakes all day, Sacks is out exploring the households of patients with a number of different illnesses, interviewing them, looking at their artwork, watching what they eat, and noting how they interact with others. However, his behavioral case-studies are not superficial or any less mature than those done in institutions—Sacks has made some remarkable deductions from his macro studies of the mind. Once a familiar form of scientific discovery before the rise of institutionalized, measurable science, the case study is no longer respected as a method of scientific investigation. However, this is partly because the scientific method has been updated to avoid certain factors that may alter the data. For example,

Oliver Sacks' case studies omit certain scientific fundamentals that may strongly irk fellow scientists and laboratory researchers. For example, during his early experiments with L-DOPA and the encephalitis lethargica patients, it was clear that Sacks was toying with a variety of doses according to each individual patients' reactions, rather than basing his dosages off a set base level for comparison purposes. In Sacks' examinations of patient Margaret A. he wrote, "No effects of any kind were experienced or observed until the dosage had been raised to 2 gm daily. ...By 15 May (the dose had now been raised to 3 gm L-DOPA daily)...On 17 May (with raising of the dosage to 4 gm L-DOPA daily)..." (Sacks 141) While this decision is justified by Sacks' claims that each patient has a highly different neurological situation, and indeed he describes the many different behaviors of the 20, it cleanly sidesteps any idea of a control. He is simply tweaking the dose per patient and taking notes, rather than conducting a base study. Additionally, Sacks' obvious emotional investment in patients such as Leonard L. and their close doctor-patient relationship demonstrates the possible presence of an observer bias, where the researcher imposes their own hopes onto reality and skews the data, or the placebo effect, where the patient "performs" rather than is genuinely affected by the treatment. However, although the case-study method may have its flaws, Sacks demonstrates that many fascinating roles of the brain can sometimes only be seen when part of a larger picture, not as an isolated hormone in a test tube.

For instance, in his book An Anthropologist on Mars, Sacks demonstrates his ability to make logical deductions about the mind from paradoxical illnesses. In one chapter, Sacks investigates "Mr. I," an artist who solicited Sacks after a car accident left him not only colorblind, but color-deprived, even in his imagination; "He founds foods disgusting due to their grayish, dead appearance and had to close his eyes to eat. But this did not help very much, for the

mental image of a tomato was as black as its appearance,” Sacks explains. In the chapter’s conclusion, Sacks discusses why this might be by citing research papers which suggest that the brain has multiple areas that are crucial for the perception of color, not simply a matter of cones and rods within the eye. In another case study, he studies “the Last Hippie,” a man named Greg whose frontal lobe tumor had manipulated his demeanor so much so that it convinced his fellow Buddhists that he had reached enlightenment. “And indeed,” Sacks writes, “he seemed to be becoming more spiritual by the day—an amazing new serenity had taken hold of him. It is beauty, said his swami—he is becoming a saint.” Sacks deduces that, because of Greg and other case studies of injuries involving the frontal lobe, if the absence of a functional frontal lobe leads to a feeling of “nirvana,” the frontal lobe’s normal role must involve “the weight of consciousness...the weight of duty, obligation, responsibility...” (Sacks 64). This profound idea opens up the relationship between the physical brain’s and the intangible soul, an idea that is still attempting to be proven in labs, yet is so poignantly described through Sacks’ macro anecdote. While some disability activists argue that Sacks’ case-study publications remind them of “P.T. Barnum, whose own professional career (and its subsequent monetary profit) was based to a large degree upon his employment of PWD as “freaks...” (Verlager 1), and others pun that he is the “The man who mistook his patients for a literary career” (Shakespeare 137), Sacks’ observations of these patients is not manipulative, but explorative. So although Sacks does not play the part of a modern neurologist and chosen to avoid the institutionalized laboratory path, his questions and approach still ask crucial questions about the functions of the brain, and receive equally stunning answers.

However, there is still a hierarchy within the science world that places the institutionalized science at the top, which so far has left no room for Sacks’ methods, despite the

fact that those within that world, such as Dr. Candace Pert, revealed it to be every part immature as it is genius; “Science in the big leagues is a lot like what goes on up at the basket at the NBA play-offs: very competitive, with sharp knees and elbows flying hard and fast” (Pert 107). Yet while that environment may indeed prepare participants for the top, it is obvious within Pert’s book, Molecules of Emotion, that the love of research often gets shunted behind a love of success and selfishness. However, even the Nobel panel is guilty of favoring the institutionalized—thus far, two scientists, Arvid Carlsson and William S. Knowles, have been given fractions of the award for their work on L-DOPA, the very miracle drug that Sacks himself first rose to fame with. All of them were involved with the miracle drug in the mid-1960’s, and each contributed to the use of L-DOPA as a treatment for Parkinsonism. The major difference between these two rewarded scientists and Sacks is that they both did their work in the institutionally-preferred style; Carlsson investigated L-DOPA’s role in lab rats and published a paper demonstrating that L-DOPA eased the rat’s induced tremors, paralysis, and stiffening of the limbs. Knowles, on the other hand, played a large role in creating a version of L-DOPA that made its production and commercialization much simpler. Meanwhile, Sacks is the one that actually applied L-DOPA to humans and demonstrated it as a miracle cure for those suffering from Parkinson’s, Tourette’s syndrome, and encephalitis lethargica, or the “sleeping sickness,” a disease characterized by a coma-like stillness.

At the time, he was criticized for “experimenting” on humans (which he somewhat guiltily admits to in the prologue of Awakenings), but it is Sacks’ process, notes, and relationships with those patients that reveal him to be an extraordinary scientist deserving of recognition. Perhaps New York Times reviewer says it best, ““It should be seen by doctors, nurses and medical students, but it should also be seen by poets, philosophers, journalists, social workers, legislators

and historians. It should be seen by everyone who writes, produces or acts in a hospital show, on television or in the movies. It should be seen by anyone who has a chronically ill friend or relative, or anyone who has to take psychotropic drugs for a medical or biochemical condition, or anyone who has ever been any kind of patient at all.”

Abstract: For devoting his career to the loving investigation and illumination of puzzling and oft stigmatized neurological ailments, British physician and neurologist Oliver Sacks should be nominated to win the Nobel Prize for physiology in 2011. His resume reads like that of any busy neurologist—So far he has penned ten books, contributed to countless neuroscience journals worldwide, and written many additional articles on his findings. He has been asked to speak at the TED conference, interviewed by the New York Times, and is the inspiration of numerous films, one of which was academy-award nominated. Rather, to many in the medical, academic, and literary worlds, his work fills an invaluable and crucial niche in the study of modern science—he is a man of many trades, a renaissance man. But what is most curious and admirable about Sacks are not his scientific discoveries, per se—aside from one or two breakthroughs, Sacks has never been one to participate in the cold, calculating chase of laboratorial scientific discovery, and therefore he has often been overlooked in scientific award ceremonies.