

## LEFT-HANDED IN THE WORKPLACE

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Like everybody else, left-handed people need to work in order to survive. But unlike their right-handed counterparts, left-handers have to live and work in a world where almost everything is made the other way around. From a young age, a left-handed individual learns to adapt to this, yet the stereotypes of the left-handed person being slow, clumsy or awkward still persist. Do these very ancient preconceptions have any validity, or has modern science debunked them? Has recent scientific research proven otherwise and demonstrated that the left-handed brain (being generally right-hemisphere dominated) is more flexible and creative, providing advantages to particular occupations? If this is so, then the left-hander can be viewed as a competitive “knowledge worker,” a concept introduced in Peter Drucker’s “The Age of Social Transformation.” This can even be narrowed down to a particular field of work with the help of Thomas Friedman’s article, “It’s a Flat World, After All.” This paper will be concerned with the unique—and often misunderstood—experiences of the left-handed in the working world and how they must be given serious consideration. It is my argument that left-handed individuals are an unrecognized minority, whose distinctive way of thinking and behaving has been misinterpreted. This has inevitably resulted in discrimination from right-handed employers, as well as from their right-handed peers.

A main reason for the predicament in which left-handers find themselves in is their relative rarity. Therefore, one of the first issues that must be dealt with is that of demographics. How common are left-handers, after all? In *Right Hand, Left Hand: The Origins of Asymmetry in Brains, Bodies, Atoms and Cultures*, Chris McManus states that a little over ten percent of the Western World’s population is left-handed. Nevertheless, the proportion can differ among women (11.6 percent for males, 8.6 percent for females) and vary widely when considering the elderly (151). These fluctuations within a fairly steady ten-percent figure play a critical role in separating biological and cultural perceptions in alleged disadvantages of left-handers, which will be discussed later in the paper. First, though, the historical origins of these cultural misperceptions must be taken into account.

Being left-handed has never been considered a desirable trait. This was especially true in ancient times. According to U-En Ng’s article, “Lefties are all right!”

left-handedness has been associated in the West with awkwardness, weakness, and deviousness, resulting in left-handers suffering untimely deaths from being tortured, set on fire, or poisoned (1-2). John Charlton remarks in "Left Hand Forward" that Biblical interpretations supported these stereotypes by associating the right side with "good," and the left, or sinister, side with "evil" (15). Ng believes that the usage of language has shaped this malevolent view and discusses the origins of the term "sinistrality," a synonym for left-handedness: "Even language is a ruthless aggressor. The Latin word for 'left' is *sinister* and connotes 'ill-fortune.' Today it means a host of uncomplimentary things besides 'left-handed': evil, corrupt, dark, deceitful, inauspicious" (1). Interestingly enough, this bias for the right hand is not only limited to the West. An example can be found in China, where the left hand is thought of as unclean and its use is not looked upon favorably at the dinner table (Ng 2). However, does this historical and cultural distaste for left-handers have any scientific validity?

There is the argument that links social aversion to left-handedness with supposed biological inferiority. When first analyzing the problem, some drawbacks are apparent. There is the observation, presented by the author of the article "Sinister Origins," that lefties are at an evolutionary disadvantage because of their biological tendency for being shorter, lighter, and going through puberty later in life (80). In "Southpaw Reprieve," Nancy Shute brings to our attention a 1991 study by psychologists Stanley Coren and Diane Halpern in which they postulate that lefties have a life expectancy nine years shorter than right-handers due to susceptibility to illnesses and accidents (62). These controversial hypotheses are also in part argued because of an apparent trend in left-handedness becoming progressively lower when assessing the hand laterality of older age groups. Nonetheless, there is conflicting evidence, which suggests another reason for this decline.

If looked at more closely, the decline can simply be a case of confusing a socially-enforced detriment as having a "natural" origin. In their research study "The Association between Switching Hand Preference and the Declining Prevalence of Left-Handedness with Age," Bruna Galobardes and Martine S. Bernstein demonstrate that the real reasons for the decline of left-handers may be cultural instead of biological. The study, which was held in Geneva, Switzerland, revealed that when comparing the age ranges of 35 to 44 years and 65 to 74 years, the percentage of innately left-handed individuals that switched hands for writing increased from 26.6

percent to 88.9 percent, respectively (1873). The researchers explain their findings by stating that: "Across generations, we found an increase in the prevalence of switching hand-preference among innately left-handed subjects. This phenomenon could be explained by social and parental pressures to use the right hand" (1873). Another study by psychologist Clare Porac came to similar conclusions: a poll of 1,277 people over the age of 65 established a proportion for left-handedness of 6.9 percent, and for those 80 years and older a proportion of 3 percent (Shute 62). This, of course, is markedly lower than the general population's proportion of ten percent. Nevertheless, when taking into account activities other than writing—such as eating—nine percent of the 80-year-olds used their left hands. In addition, Porac took into account that older age groups are usually comprised of more women, whose predisposition to left-handedness is relatively less than men (Shute 62); men tend to have a shorter life-expectancy than women, regardless of their hand preference. Indeed, it can be argued that at least the tendency for the above figure of ten percent for left-handedness has been consistent throughout history.

If being left-handed is not as detrimental, at least biologically, as we once thought, can it be said, contradictory to the previously held notions discussed above, that left-handers may have an unperceived evolutionary edge? Indeed, there is archaeological evidence proposing that there have been stable numbers of left-handers for thousands of years ("Sinister Origins" 80). However, in order to explain any professed evolutionary advantage, a hereditary basis for left-handedness must be established. McManus has come up with a genetic model that determines the trait with two co-dominant genes, D (the right-handed gene) and C (the "chance" gene). If an individual acquires a DD set from both parents, then there is no possibility of becoming left-handed. A DC genotype indicates a twenty-five percent possibility and a CC genotype gives an individual a fifty percent chance of being left-handed (McManus 161-162). The fact that the C gene has not been eliminated by evolution and that it functions as a chance gene may be one of the factors for the small but consistent frequency of left-handers. The question is why does this gene still survive in our genome?

Can it be that lefties have always had a unique upper-hand in an important primordial activity? Dr. Michel Raymond of the University of Montpellier in France puts forth this very idea. His reasoning is as follows:

left-handers have long had a substantial advantage in fighting. Because of the prevalence of right-handedness in the population, right-handers are used to fighting with other right-handers. Lefties, as long as they are rare, have the advantage of hitting from unexpected directions. During evolution this advantage offset the disadvantages of left-handedness enough to ensure that left-handers survived and passed their handedness (which has a genetic component) on to their children. (“Sinister Origins” 80)

Dr. Raymond and his colleagues came to this conclusion by gathering data on the hand preference of professional and college athletes over the course of six years. The researchers used confrontational sports such as boxing, fencing, cricket, baseball, and tennis as analogies to fighting (80). They determined that in these sports there are an unusually high number of left-handed competitors. For example, 15-27 percent of international cricket bowlers and major league pitchers are left-handed, as well as 33-50 percent of world-class fencers (80). This seems to imply a sort of natural and developed competitiveness on the part of left-handers. Ironically, it can be argued that the consequence for the competitive disposition could have been viewed as a threat and may have been historically misconstrued into the sinister, conniving stereotype of the left-handed.

However, it cannot be denied that being competitive and adaptive is extremely important, especially in the workplace. Peter Drucker puts a lot of emphasis on being and staying competitive, especially in today’s world which he dubs the “knowledge society.” He describes “knowledge work” as being highly specialized, therefore making it more effective and in turn inherently competitive (61). Because of its competitive nature, the only way for “knowledge work” to become productive is for workers to be organized into cohesive teams or organizations which replace the individual as the work unit (61-62). The sports industry definitely fits in Drucker’s category of “knowledge work.” Athletes can be considered as specialized workers, and they are, of course, generally organized into teams. In fact, the concept of the “team player,” which is borrowed by the business world, is the cornerstone of sports. The industry’s competitive nature is also fairly obvious. Finally, as stated above, left-handers definitely perform very well and are highly sought after in that industry. Nevertheless, are there any other lines of work where lefties also excel?

The processing of data and the control of its flow are skills that are highly sought after in many of today's jobs. This once again brings up the concept of Drucker's "knowledge work" and its merger into specialized organizations. However, Thomas Friedman takes this idea a step further by describing the merger as a blending of all the world's "knowledge pools" (81). Therefore, the world's information can now be readily tapped, and the spigot to all these pools is the field of information technology and communications. In fact, Friedman believes that this "IT revolution" has just barely scratched the surface, citing a computer company C.E.O. as predicting "an era in which technology will truly transform every aspect of business, of government, of society, of life" (85). Interestingly enough, this is one of the fields in which there is evidence that left-handers are also successful. What are the traits possessed by left-handers that contribute to their success in information technology? According to a survey held by the International Left-Hander's Club which analyzed left-handers' career choices, more than 10 percent of web designers are left handed. The people surveyed refer to "lefty" advantages in the IT field as "being better at design, structure, and analysis; better visualization in three dimensions; approaching problems from different perspective" ("Official Left-Hander's"). The survey also listed the arts, music, and, of course, sports as jobs in which lefties do well in ("Official Left-Handers"). Curiously, Drucker also considers the arts as an advanced type of "knowledge work," providing the opera as a case in point (61). On the other hand, jobs in healthcare, education, administration, and manual labor were cited by respondents as disadvantageous: tools, equipment, and computers are designed for the right-handed; sharing of this equipment with right-handed people is difficult (elbow bumping); bank teller and post office stations are set up for the right-handed; awkwardness in writing on blackboards ("Official Left-Handers"). Once again, it must be asked how accurate these perceptions really are. Is the information in this survey biased because its participants are left-handed, or does its testimonial nature reflect something worth considering?

If the way the brain is organized is taken into account, one can readily see that the respondents in the survey have a valid position. In "Do Left-handers Make Good IT Professionals?" Yvonne Gleeson describes the left hemisphere of the brain as linear-thinking, and directing such functions as language, writing, logic, math, and science; the right hemisphere is holistic-thinking and is in charge of music, art, creativity, fantasy, perception, genius, and emotional expression (24). However, it

must be pointed out that the brain is “cross-wired,” with the left hemisphere controlling the right side of the body and the right hemisphere controlling the left side (24). Aside from the trouble with right-handed equipment, this simplified map of the brain does seem to reflect left-handers’ choice for more creative careers, instead of for a procedural occupation. The logic lies in the innate mental activities for which left-handed individuals tend to be biologically selected.. However, even the “perfect” job is not entirely biased to one hemisphere and one has to learn to adapt, as the testimony of left-handed IT management consultant David Parry illustrates:

There is certainly a high proportion of left-handers working IT—about 20 percent. . . Left-handers. . . have an edge in spatial awareness—which helps in drawing a conceptual data model—and attention to visual detail. . . it was easy for me to grasp and apply data analysis, information modeling and database design skills. It wasn’t so easy to learn technical skills such as programming. (Charlton 16)

While it is the case that most complex mental tasks require an aptitude in the skills of both hemispheres of the brain, the physical world presents a more concrete challenge.

Lifelong adaptation is also the key when it comes to the development of tactile skills, as only a left-hander can fully understand and experience. McManus argues that not only must left-handed people develop the mental, linear-oriented “righty” skills that do not come naturally, they also have to adapt to the “right-handed world” and all its manual nuisances (152). He cites a study on hand preference in a group of three thousand London schoolchildren; the results indicated that while more than two-thirds of the right-handed children were strong right-handers (lean almost totally toward the use of that hand), only one-third of left-handers were strong left-handers (149-152). These unexpected results could point to an overcompensation or super-adaptation resulting from an initial disadvantageous position. Indeed, McManus declares that the reason for this phenomenon is because all lefties must learn to make certain adjustments in the way they manipulate objects that were designed with only right-handed needs in mind (152). The notion that left-handers are generally more bilateral is further augmented by a 2002 study conducted in the University of California. The research assessed that left-handed individuals have a “more flexible brain structure” resulting from a comparatively “symmetric brain” that uses both hemispheres more equally (Charlton 16). Can it therefore be said that throughout left-handed human history, natural selection has shaped the left-handed (right-

hemisphere dominated) brain into a unique structure in response to the pressure of right-handed cultural impositions?

Despite functional adjustments to a “right-handed world,” the long-held belief of left-handers being generally clumsy people still continues. The reason for this once again goes back to the adaptation in the use of right-handed tools. Galobardes and Bernstein argue that “Western societies promote use of the right hand either by imposing it during childhood or simply by designing most instruments (including cars and tools) for right-handed people” (1873). As a result, most of the time left-handed people do not have a choice in using right-handed tools and machinery, leading to a general view of left-handed awkwardness (Gleeson 24). The simple use of everyday devices can reflect this often misunderstood conundrum. Left-handed secretary Chong Siew Chin illustrates: “Telephone receivers are almost always located on the left side of the set, forcing you to dial numbers and take notes with your right hand. Left-handers end up cradling the receiver in their necks and getting into a tangle of wires as they juggle with pen and paper” (Ng 2). These difficulties with right-handed equipment can vary from just mere annoyances, as demonstrated above, to severe limitations.

There is no doubt that extremely dextral jobs have the potential to frustrate a left-handed worker. Therefore ultimately, the traditional right-handed arrangement of tools may be the reason why there are a small number of left-handed people whose job requires them to work with their hands, ranging from construction workers to surgeons (“Official Left-Handers”). An example of this problem is a left-handed laborer trying to safely use a right-handed electric saw for the first time. In the case of highly skilled “knowledge work” such as surgery, extensive theoretical knowledge must be accompanied by equally developed manual skill (Drucker 60). But how can a left-handed surgeon develop such a skill to the fullest potential if already facing the very fundamental problem of having everything set up the other way around? Can simply adjusting the tools of the trade to a left-handed orientation reveal the true abilities of a prospective left-handed talent?

This very premise of switching tools to the left side has been considered and implemented with surprising results. In the study, “Performance of left-handed dental students is improved when working from the left side of the patient,” researchers M. Dursun Kaya and Recep Orbak investigated the practice in dental school of almost always having right-sided dental chairs as the norm. These

researchers set out to analyze the effectiveness of left-handed dental students in removing plaque and calculus from patients while utilizing the traditional right-handed chair, and then a specially made left-sided chair. The data gathered was then compared to the performance of right-handed students (390). The results indicated that although the performance of right-handed dental students was on average better than that of left-handed students working from right-sided chairs, those same left-handed students actually did a better job than their right-handed peers when allowed to work from the left side (394). This makes sense since left-handed students initially learned their skills from a position that 85.7 percent of them described as very uncomfortable (394). If given the chance to work from their natural side, of course they would perform drastically better. Once again this may be a sign of left-handers' adaptive bilateralism as a functional mechanism for performance. Kaya and Orbak argue that making left-handed chairs available is very relevant to their industry stating that "it cannot be denied that the overall average performance of left-handed practitioners could be improved by providing the opportunity to work from the left side of the patient" (387-388). Therefore, is the lack of this type of consideration a sign of discrimination?

Sharlene A. McEvoy seems to think so. In her essay, "Left-Handed Compliment: *de la Torres v. Bolger* and the Rehabilitation Act of 1973," McEvoy discusses the case of Daniel de la Torres, a left-handed postal carrier who eventually was fired for allegedly being too slow on the job (360). However, de la Torres claimed that both his trainers and supervisors only tolerated the use of his right hand when delivering the mail; therefore, according to McEvoy, he should have been protected under the Rehabilitation Act because they considered his left-handedness a handicap and had not accommodated him (360, 363). The idea is that left-handedness is a perceived handicap in the mind of the employer, and that it only "impairs" an employee because of prejudice and lack of deserved consideration on the part of the employer (McEvoy 358-359). However, this idea can eventually blur the distinction between a true and perceived disability if not argued carefully. McEvoy explains that if "handicapped" employees can perform their job with adequate accommodation, then they should be provided with such (368). In the case of de la Torres, either his employers should have let him deliver the mail left-handed or accommodated him by either "modifying the job or extending his training program" (368). While this may sound fair, many left-handers are uncomfortable with the idea



of any accommodation in the workplace being considered as a compensation for a disability. Why would left-handers want to be considered handicapped on top of all the other stigmas that hang over their head? Secretary Chong Siew Chin is one lefty that does not: "There is nothing wrong with us. We're neither disabled nor has our mental development been curtailed in any way. In fact it's the right-handers who point us out and draw attention to the fact that we're different" (Ng 2). Left-handers have survived for millennia in a world designed for right-handers, and all they would like to see in their respective workplaces (as well as in other aspects of life) is a long-overdue modification in work conditions and attitudes from their right-handed peers.

If truth be told, maybe the real problem rests on the shoulders of the right-handed. Right-handers were the ones who created all the stereotypes in the first place, which gave way to the idea that "the right-handed way is the correct way for certain jobs to be done" (McEvoy 360). This cultural consequence prevented many left-handers from ever fulfilling their true competitive nature. Fortunately, we are seeing that times are slowly changing. It is now up to left-handers to do away with these old notions and prove that they are capable of competing just as well and even outperforming their right-handed counterparts. This newfound prowess is demonstrated in various jobs requiring skilled "knowledge work," such as sports, information technology, the arts, and even dentistry.

Eventually, we must all realize that while there are some marked differences among the right and left-handed, they are not enough to justify the everyday, frivolous distinction in hand preference. The first steps are being taken to acknowledge and validate possible contributions left-handers have to offer to the working world, along with ending any remaining preconceptions about left-handed "otherness" that still linger. Just ask Chong Siew Chin: "I really don't see why there should be a difference between 'handedness' in the modern world" (Ng 3). Indeed, surely we have come a longer way than that, right?

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