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Ethics Paper

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Minds of Two Kinds (MOTK) is a high-technology firm that offers consulting services to business and government. Its particular approach is to wed artificial intelligence (AI) to human insight. Its employees are trained to work closely with AIs, and studies and reports are typically written by a collaboration of AIs and human authors. In particular, in formulating recommendations for clients, both humans and AIs are involved in formulating the recommendations and testing them with extensive “war games” and “what if” scenarios before they are actually passed on to clients.

MOTK has earned a reputation for coming up with “outside the box” solutions to supposedly intractable problems and is highly sought after by well-heeled clients who can afford its services. It also does a good deal of *pro bono* work for nonprofit organizations and international aid agencies.

MOTK has learned through the years that it needs many more skills than those of MBAs to do its work and serve its clients well. The standard team for consulting assignments includes subject matter experts (finance, defense, medicine, etc) but also mandatorily includes a poet, a philosopher, a fiction writer, a nonfiction writer, a historian, and a mathematician.

Having earned billions and billions of dollars, MOTK has researched its

employees extensively It has learned (through the use of employees who volunteered, many of whom had also volunteered for research projects that explored the genetic basis of high intelligence) that its most successful employees have a unique genetic pattern that affects the formation of the right lobe of the brain, which appears to have the greatest role in handling intuitive and non-verbal processing.

With that information in hand, the Director of Human Resources has proposed to her bosses that the company base hiring decisions on genetic tests that identify that specific pattern. She opines that since MOTK is flooded with resumes of highly qualified people, the company can afford to limit hiring to just those with that genetic pattern; everything else – credentials, etc. – will have been taken care of by the self-selection of applicants, The Vice-President for Corporate Development likes this idea and wants to present it to the board of directors. But before it goes to the board, it has to be vetted by the legal department.

The fly in the ointment is that the genetic pattern that affects the right side of the brain is also associated, via genes that ride along with it, to an increased susceptibility to inflammatory bowel disease.

The legal department reacts with barely disguised hysteria. First of all, they say, the specific genetic pattern the MOTK researchers have discovered is found mostly in one specific ethnic group, which also happens to be a persecuted religious minority. Second, that ethnic group has the world's highest rate of inflammatory bowel disease (see Appendix re inflammatory bowel disease). Hiring more of them is likely to raise the

costs of MOTK's employee health plan significantly. Third, the specific pattern is known to be almost non-existent in some minority groups. Fourth, hiring people on the basis of the genetic pattern requires genetic testing of applicants. The legal department is very unsure whether current law permits this, or it would be found to be a violation of laws about the privacy of medical information. And they are concerned that not hiring minorities in whom the pattern is rare could be considered racial discrimination, even though the intent is not to discriminate against them (United State Department of Labor)

. After all, hiring on the basis of the desired genetic pattern would *definitely* reduce hiring of those ethnic groups in which the pattern is rare.

So, the Vice President of Legal Affairs puts a stop to the proposed policy until all these issues can be sorted out. Remember, they are:

- They will be hiring from a persecuted religious minority whom many dislike.
- They will be hiring people who will likely become ill and jack up the costs of their employee health plan.
- Hiring on this basis will reduce hiring from some other ethnic groups *and* reduce the diversity of MOTK's work force.
- They are not sure that requiring genetic testing for hiring is legal.
- The Vice President for Legal Affairs also has worry about whether or not it is ethical, even if it is legal.

The picture painted here, of MOTK's dilemma, is far more complex than the

simple “shall we use pre-employment testing to exclude employees who are likely to get sick?” issue. It has the advantage that it illustrates both the potential and the pitfalls of pre-employment genetic testing.

The first issue to be considered in this particular case is the matter of genetic luck, a factor that is (with present technology, at least), completely beyond the control of potential MOTK employees. Remember, all of the applications will be high achievers who have earned impeccable academic credentials and desperately want to work for MOTK. Their problem is that their future performance is going to be predicted based on a genetic test. MOTK has (as would be found in the real world) that a substantial proportion of their highest flyers have the genetic pattern that affects the right brain, but not all of them do. There are some high flyers who, despite lacking it, are among MOTK’s star performers. Given that, is not hiring those who lack it, despite their other qualifications, either prudent or acceptable?

Current ethical theory gives us a hint. John Rawls, in *A Theory of Justice*, argued that a just society was one in which opportunities should, in principle, be open to all (Rawls). He derived that rule from deliberations in the “original position”, in which we are presumed to know all of the general facts about society but not know who in that society they were. Under those circumstances, Rawls asks, what would we regard as being fair? The best estimate, based on Rawls’ position, is that we would not. The reason is that having the desired genetic pattern is simply a matter of luck, and if it is used to exclude those who do not have it, the highly desirable jobs at MOTK are not open to all.

So, a Rawlsian position would shut down the genetic testing before it even started.

Using the genetic test as a hiring screen will, the MOTK researchers know, have the effect of excluding racial and ethnic groups in whom the gene pattern is rare. This will, of course, be wholly unintentional. The objective is to hire high flyers, not to discriminate. Nonetheless, it will have exactly the same effect as *if* those groups were being deliberately discriminated against. No corporate diversity program would fix this.

Under current case law, policies that have the same effects as deliberate racial and ethnic discrimination are considered no differently from deliberate discrimination – they are not permissible. Current anti-discrimination law would forbid the policy.

As noted above, the MOTK researchers know that the group that carries the desirable gene pattern also –because of genes that inseparably “ride along” with the desirable ones – have a higher rate of inflammatory bowel disease than the general population. This is a lifelong affliction with relatively high costs of treatment which, nevertheless, does not produce much in the way of death and disability.

There are several approaches that MOTK could take to this fact. One is to simply accept that the high flyers picked on the basis of the desired genetic pattern will get sicker more than average and cost more than average. Another is not to hire those in whom the disease is present at the time of application, which is discrimination on the basis of illness, and is currently forbidden, unless it affects their capacity to do the work required. Yet another is to fire them as soon as they get sick, but that is discrimination on the basis of disease, and is current illegal. Depending on which course of action

MOTK took, the policy could lead to illegal discrimination on the basis of illness or disability.

After a careful review, the Vice President for Legal Affairs decides that the proposed policy is too risky and advises against it . The Director of Human Resources feels strongly that substantial profits, in the form of more clients and more repeat business, can be gained if the genetic testing program is approved and MOTK in fact advertises that MOTK tests for genetic patterns found in high performers. To preserve internal peace, it is decided to take it to the board.

The board of directors includes Travis Kalanick of Uber, who is known for taking risks. He persuades the board to approve the policy. And MOTK is off into uncharted territory.

The pro-testing arguments seem to be two and only two: (1) that pre-employment genetic testing will save money for corporations by reducing their health care costs, and (2) it will benefit employees by making sure that those with a susceptibility to something in the work environment are not exposed to it. There simply is nothing else, although one could argue also that testing applicants could reveal to them a susceptibility to diseases that they did not know about. But corporations doing pre-employment genetic testing are unlikely to cast a very wide net, especially if they are focused on something specific, such as the susceptibility to a cancer associated with one of the chemicals used in the workplace.

It has also been argued that, now that the technology is available, corporations

failing to test for susceptibility maybe found liable for the workers' cancers by failing to test. But under current case law, this is extremely far-fetched. They are much more likely to be found liable for exposing *anyone*, susceptible or not, to cancer-causing substances in the workplace.

One of the arguments that is advanced for employer use of genetic testing is the good old libertarian argument because, you know, freedom. It is said that a free and efficient marketplace in both jobs and employees requires that people be fully informed. Genetic testing reveals those who would be harmed by exposure to certain chemicals in the work environment, it also frees the employers from having to pay for employees who are going to get sick. The counterarguments to this position are numerous:

- It is the employer's responsibility to provide a safe work environment, not to find people who will not be harmed by it and discriminate against those who will be harmed.
- Genetic testing for susceptibility can only identify a tendency to fall ill. In most cases, it does not guarantee that the employee will fall ill.
- Genetic testing exploits the asymmetry of power between employers and employees. The employer has a vast variety of employees to choose from, from all over the nation and the world. The employee, in contrast, is limited in their job search by distance, by funds, by language barriers. Fairness demands that no more barriers be thrown up in the face of finding a job, which is hard enough as it is.

Privacy is also an issue of major concern. The US Constitution, oddly, does not mention the word, but courts have found that there is an implicit right to privacy in the Fourth Amendment; prohibition against unreasonable searches and seizures. In *Griswold vs. Connecticut*, a case which invalidates a state ban on birth control, the Supreme Court held that there was a right of privacy with regard to our own bodies. This same logic would appear to apply to genetic testing by employers.

The concept of privacy is a difficult one, despite its seeming simplicity. Attempts to define it produce paradoxes and simulate even more perplexity. It has even been suggested, by a federal judge, that we should abandon all conceptions of privacy because, in practice, claims of privacy are often used for deception and swindling. One conception of privacy that seems defensible is that we have a right to construct narratives of ourselves for our various and sometimes contradictory roles in life – employee, parent, husband, wife, citizen – without having the information on which those narratives are based exposed to others without our consent. That surely includes the narratives of ourselves as at least healthy enough to be employable.

Another argument that has been raised against pre-employment genetic testing is that it is 'de facto' eugenics. The reasoning is as follows: those who are banned from employment by genetic testing will live lives of unemployed poverty and will therefore be less likely to reproduce, which will reduce the number of their genes in the population. The result is exactly the same as a eugenics program of forced sterilization, except it is done with a gene sequencer, not a scalpel.

It has long been noted that the US health care “system” is the most expensive in the world by far and produces results, that, by some measures, are worse than those of third world countries (infant and maternal mortality are examples.) This situation is exacerbated by the absence of comprehensive health insurance. The Affordable Care Act made insurance, in one form or another, available and affordable for an additional twenty million people. The American Health Care Act, recently passed by the US House of Representatives, would have the effect, according to the Congressional Budget Office, of denying coverage to some twenty-four million.

A bill recently introduced in Congress would allow employers to use genetic testing to set insurance rates for employees; those with problematic genes, and allow employers to charge higher health insurance premiums to those with susceptible genetics. Counterarguments to this position include the fact that a tendency to develop a disease does not equal a disease, that this is just one more example of the asymmetry of power between employers and employees being used to the employee’s disadvantage, and that it could actively discourage employees from seeking preventive care (Begley).

The experience with corporate wellness programs may be instructive here. They were supposed to save money (Lewis and Khanna) . By the same logic that healthier people use less medical care, they *should* have saved money. But in practice, they didn’t. A lot of research will be devoted to finding out why. But one of the eventual discoveries may be that in a population of people healthy enough to work, the increment of cost reduction gained by wellness programs is less than the cost of the wellness

programs themselves. Also, presumably, a potential employee presenting herself for work is presumably healthy enough to work. It may well be the case that, given that genetic propensity to illness is not illness, the cost of screening may exceed the savings gained by not having susceptible employees on the health plan.

Most large corporations have an international presence, including in Europe. The European Union has adopted strict limitations on the use of pre-employment testing and the revelation of genetic information. There is an increasing tendency (bemoaned in the 2016 Republican Party Program) for courts to interpret foreign laws as guiding US courts and to treat executive agreements between the US President and foreign leaders as having the force of treaties, even if they were not approved by the Senate. US courts in the future could well look askance at policies of corporations that violated the laws of the countries in which they operate, even if those policies are completely legal in the US. A prudent corporation would be absolutely sure that savings from genetic testing in the US were substantial enough to offset its legal costs before stepping into this minefield (Krajewska).

Finally, a general question that can be asked is this: in a time when the middle class is eroding in the US, when unemployment is a major concern, when wages are essentially stagnant, when average household income in real terms is less than it was in 1971, do we want to do anything that will increase the asymmetry of power between employers and employees anymore? This is a separate consideration from all the others mentioned above – even if genetic testing will save money for corporations, will it

make employees even more powerless?

In the present state of science, genetic testing pre-employment does not have enough going for it to recommend it. The chief reason is that the testing can only reveal susceptibility to any particular disease, not whether or not the disease will ever develop in a person who does not currently have it. Further, it exacerbates the asymmetry of power between employers and employees, which is arguably already too great. Finally, it is expressly forbidden by the European Union. Most large companies have some operations within the European Union. They would be hard-pressed to justify using pre-employment testing in some countries and not in others.

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