ON DISCRIMINATION IN HEALTH INSURANCE

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Thomas Boyer-Kassem
Sébastien Duchêne
Bart Engelen

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On discrimination in health insurance

Thomas Boyer-Kassem[*], Sébastien Duchêne[†], Bart Engelen[‡]

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Abstract

In many countries, private health insurance companies are allowed to vary their premiums, or to reject applicants, based on some information on individuals. This practice is intuitively justified by the idea that people should pay the premium corresponding to their own known risk. However, one may consider this as a form of discrimination or wrongful differential treatment. Our goal in this paper is to assess whether profiling is ethically permissible in health insurance. We go beyond the existing literature in considering any possible parameter in profiling, be it genetic, non-genetic, or even non-medical (such as age or place of living). Analyzing several ethical concerns, and tackling the difficult question of responsibility, we argue that profiling is unjust in health insurance on any parameter.

[*]Univ. Grenoble Alpes, PPL, F-38000 Grenoble, France. E-mail: thomas.boyer-kassem@univ-grenoble-alpes.fr

[†]GREDEG (UMR 7321: CNRS, Université Côte d'Azur), 250 rue Albert Einstein, 06560 Valbonne, France. E-mail: sebastien.duchene@gredeg.cnrs.fr

[‡]Tilburg Center for Logic, Ethics, and Philosophy of Science, Tilburg University, The Netherlands. E-mail: b.engelen@uvt.nl.

In many countries, private health insurance companies are allowed to vary their premiums, or to reject applicants, based on some information they collect on individuals. This is for instance the case in the United States, United Kingdom, Switzerland and France.[1] For instance, the companies can propose higher premiums for people with higher cholesterol rates. The intuitive justification for this practice is that people should pay the premium corresponding to their own known risk. If having a high cholesterol rate increases the risk of a cardio-vascular disease, and hence expected health costs, then the premiums should be adapted accordingly. Such linking of risk factors and health costs is known as health profiling. Risk factors may be as diverse as: medical history, smoking habits, alcohol consumption, age, or even genetic factors.[2] Note that health profiling can be implemented without assuming that correlation means causation, and an instrumental use of correlation is sufficient. For instance, the place of living may be used to profile if a correlation is observed with health costs, even if one is fully aware that there may be some confounders. Health profiling can be considered as a "statistical" discrimination if it is based on scientifically established statistical correlations, and we shall assume this here.

Health bills and premiums are a major issue for people in many countries. For instance, nearly 2 million people a year in the US declare bankruptcy because of unpaid medical bills (Mangan 2013). So, assessing the ethical permissibility of health premiums is a pressing issue. Our goal in this paper is to assess whether health profiling is ethically permissible. Health discrimination is wrongful, we will argue, because it makes people pay more on the basis of characteristics over which they have no control ("I can't be blamed for this"), which are group characteristics only ("judge me, not my group") and because it amounts to a double punishment ("I'm already ill, and now I have to pay more").

Our goal in this paper is to assess the above arguments in order to assess whether profiling in health insurance is ethically permissible. Discrimination refers to the "acts, practices, or policies that impose a relative disadvantage on persons based on their membership in a salient social

[1] France has exceptions: "mutuelles", which are not-for-profit health insurance companies, are not allowed to implement some profiling. French for-profit health insurance companies are allowed to profile.

[2] Profiling on genetic information has been forbidden in the US since 2008. Cf. `https://www.genome.gov/24519851/` In Australia, profiling is illegal for "health status, age or claims history". Cf.
http://www.health.gov.au/internet/main/publishing.nsf/Content/Frequently+Asked+Questions-1

group" (Altman 2016; see also Lippert-Rasmussen 2013), which can be morally wrong when this differential treatment is based on irrelevant factors so that people are differentially treated for no good reason. The question then becomes whether statistical facts about a group (for instance, people with a specific medical history) have relevant justificatory force in treating members of that group differently than others (requiring them to pay higher premiums).

In the literature so far, the debate on discrimination in health insurance has been mainly on whether insurances should be allowed to use genetic information (Hellman 2003, 2008, Moreau 2010, Lippert-Rasmussen 2015b). Our scope is wider: we consider any information that could be used, genetic or not (e.g. lifestyle), medical or not (e.g. place of living). A health insurance company can rely on any scientifically established statistical correlation between some parameter and health costs. For instance, if parameter X is observed to be correlated with higher health costs per year, for whatever reason, then health profiling entails that the premium for people with parameter X increases. Possible parameters include: diagnosed illness (such as diabetes or heart failure), medical history, overweight, smoking habits, alcohol consumption, food habits, genetic information, gender, age, race, sexuality, place of living, socio-economic status.

Note that we only consider parameters correlating with higher health costs compared to an average agent, not parameters correlating with lower health costs (such as practicing sports). This is for two reasons: first, the former is currently much more important in scope and in premium variations, and second, the philosophical issues raised by the latter are different, and would require a distinct analysis. Also, for simplicity, we set aside the question of whether it is fair that people with high or low incomes pay the same health insurance premiums, and we shall assume equal incomes for agents.

Our thesis is twofold. First, profiling on parameter X is ethically acceptable on two conditions: that the agent can be considered responsible for the value of this parameter, and that this parameter is causally linked (and not only correlated) with health costs. If at least one of these conditions is not met, the same premium should be offered regardless of the person's value of this parameter. Second, no parameter actually fulfills these two conditions. So, we conclude that profiling in general in health insurance is a form of unfair discrimination in all of the cases we discuss.

The scope of our conclusion is new in the literature. In his no-profiling thesis, Lippert-Rasmussen (2015b) also discusses choices and responsibil-

ity. However, that paper only considers medical information, and relies on a luck egalitarian view (Lippert-Rasmussen 2015a). Here, we take a broader perspective, including any medical or non-medical information that is correlated with health costs, and including a variety of ethical considerations. Before discussing the various ethical problems with health profiling in Section 2, we provide a model in Section 1 to guide our discussions. In Section 3, we tackle the question of responsibility.

1 A simple model

To help analyze our problem, let us consider a simplified model. These simplifications are pedagogical only and do not impact our arguments or conclusions. Assume that 90% of agents are in good health and 10% in poor health. The health costs for healthy agents are on average €1,000 per year, and €11,000 per year for agents in poor health. Suppose there are two health insurance companies: HP which implements health profiling, and NHP which does not implement health profiling. NHP offers the same premium to everyone, while HP doesn't. Assume that the questionnaires agents have to fill in at HP accurately detect whether they are in good or poor health (this amounts to assuming that the correlations used in profiling are instrumentally sound). Assume that health insurance is compulsory, and that the insurance reimburses all health costs. The premiums of both companies are given in Table 1.

	in good health	in poor health
NHP company	2,000	2,000
HP company	1,000	11,000

Table 1: Premiums charged according to health status (in euro per year, initial situation).

It is easy to see that, if all agents subscribed to the same company, it would make no profit and no loss on average. HP charges each agent its average costs, and NHP's premium of €2,000 amounts to the average health cost of all agents ($90\% \times 1,000 + 10\% \times 11,000 = 2,000$). NHP simply shares the risk among agents, who pay the same amount each year, even if their real health costs vary.[3]

[3]The analysis would not change if each company charged a fixed amount per person per year for its running costs or for its profits, or if only a fixed fraction of health costs were covered by the insurance company.

Now, which company, HP or NHP, should an agent choose? If we assume that agents value money and nothing else, they should choose HP when in good health, and NHP when not. What are the consequences of agents freely choosing their insurance companies for those companies? HP will still make no profit and no loss, because it still charges €1,000 to all its clients (all of whom are in good health), and reimburses an average of €1,000 to each. NHP on the other hand loses €9,000 per client, because these are all in poor health and have paid only €2,000 while being reimbursed for €11,000. In order to survive, NHP will raise its premiums to €11,000 across the board. This gives Table 2. So agents in good health will stay with HP because they charge them a lower premium and agents in poor health are indifferent between HP and NHP (both charge them €11,000). In the end, both insurance companies make no profit and no loss, and the situation is stationary.

	in good health	in poor health
NHP company	11,000 (empty)	11,000
HP company	1,000 (all 90 %)	11,000

Table 2: Premiums charged according to health status (in euro per year, final situation).

The result is that the two types of agents cluster together and everyone basically pays their own risks. There is no longer any risk sharing: no transfers are made from agents in good health to agents in poor health (which arguably is the idea beyond insurance schemes). NHP is now charging agents in poor health the same premium as HP.

Our simple model fits the existing literature on adverse selection in health insurance markets. Often, the assumption in standard models of adverse selection is that consumers know their own health risks but insurance companies do not. Under circumstances of such asymmetric information, companies cannot engage in health profiling. Consumers with high risk profiles will buy more coverage, which in turn incentivizes insurance companies to raise premiums. The result is that low risk consumers will be driven out of the market and only high risk consumers will pay the increased premiums: "as the price level rises the people who insure themselves will be those who are increasingly certain that they will need the insurance" (Akerlof 1970: 492; see also: Rothschild & Stiglitz 1976).

Now, in our model, the differences are that (1) insurance is compulsory

and (2) health profiling is possible. If only (1) holds but (2) does not, adverse selection can be avoided as NHP companies can spread risks and use the profits from low risk consumers to cover the reimbursements to high risk consumers. As we saw in Table 1, NHP companies can set their premiums to €2,000 for everyone, basically redistributing from those in good health (whose premium is higher than their health costs) to those who fall sick (whose premium is lower than their health costs).

If, however, (2) holds as well and companies can profile, we quickly end up in a situation similar to adverse selection. If insurance companies have detailed and personal information about people's health risks, thus reducing the asymmetry in information, the abovementioned redistributive mechanism in insurance breaks down. Companies will raise the premiums for high risk consumers while offering lower premiums to low risk consumers. This shows the competitive advantage of health profiling and the incentive companies have to profile — on any information, not just health information . As a result, people in good health cluster around lower premiums (€1000 in Table 1) and people in bad health cluster around high premiums (€11,000 in Table 1, charged by both HP and NHP companies). Here, everyone is basically paying for one's own health costs. While the mechanism differs — asymmetric information in the standard models versus health profiling on the basis of personal information in our model — the outcome is similar: those in good health no longer contribute to the reimbursements of those in poor health (see also: Hoy et al 2003; Durnin, Hoy & Ruse 2012).

Let us move from our simple model of (the market dynamics of) health profiling to the ethical concerns raised by all this.

2 Ethical concerns with health profiling

This Section considers various ethical concerns with health profiling. Which reasons can one have to object to health profiling? Does it maximize total utility? Does it violate equality of opportunity? Does it harm the worst-off? Can it be justified behind a Rawlsian veil of ignorance? We raise these concerns, connect them to dominant ethical theories and apply them to our simple model introduced in Section 1. Methodologically, we choose not to endorse one ethical theory or one set of ethical concerns, but show how health profiling raises various valid – utilitarian, egalitarian, prioritarian and contractualist – concerns. Our pluralist approach analyzes the various ethical concerns raised by health profiling, each of which can plausibly claim to have normative weight. For reasons

of space, we limit ourselves to the most central concerns and do not claim to capture all relevant subtleties of different ethical theories.

2.1 Utilitarian concerns

In a utilitarian framework, one should maximize the sum of individual utilities. What matters is the total sum of utilities, not the way it is spread among individuals. Continuing with the simple model from Section 1, let us compare a world in which only NHP companies exist, and a world in which only HP companies exist. If an agent's utility depends exclusively on the money she gains and loses, the sums of expected utilities are the same in both worlds, because the insurance companies simply redistribute the same total health costs. With N agents, the total sum of utilities in the NHP world is $-2,000 \times N$ (this goes back to the initial phase discussed in Section 1 where NHP companies lacked the incentive to raise their premiums because no company engaged in profiling and all health care costs could be reimbursed). In the HP world, the sum of utilities is $-1,000 \times 10\% \times N - 11,000 \times 90\% \times N = -2,000 \times N$ (cf. Table 3). In other words, health profiling seems to raise no specifically utilitarian worries.[4]

	in good health	in poor health
NHP company	$2,000$	$2,000$
HP company	$1,000$	$11,000$

Table 3: Premiums used to compute the utilities for utilitarians.

Now, total utility plausibly does not depend only on the monetary gains and losses of individual agents. Profiling itself can be costly to the insurance companies. In addition, money is not all that matters. People who have to pay more as the result of profiling may feel discriminated against and stigmatized. Such emotional costs plausibly lower

[4]This depends on the assumption that individual utilities are linear with premiums. If the aggregated utility function were convex or concave, utilitarianism would side respectively for or against profiling. However, empirical data on the shape of the utility function for losses are not consensual: in experiments, some individuals display concave functions, others display convex or linear, and there seems not to be a "typical" profile (Kahneman and Tversky 1979, Abdellaoui et al. 2007, Abdellaoui et al. 2008, Abdellaoui et al. 2013). So, it is not clear which function we should consider here, and we do not enter this complication here.

total utility. Also, whether people are happy with paying specific premiums depends on what they get in return. Imagine two people paying the same premium: A falls ill but B does not. Does it make sense to assume that the utility loss of A's sickness is compensated for perfectly by the reimbursement from the insurance? And what about B who pays the compulsory premium but never gets reimbursed because she does not fall ill? She loses money but does get a sense of security.

Let us therefore extend our simple model and assume that three factors matter for well-being (or utility for that matter):

1. money (which you lose when paying premiums and health care costs but can get reimbursed);

2. health (which can be lost but also restored when health care costs are made);

3. psychological and emotional costs (such as a sense of security or feelings of stigmatization).

In this extended model, the only difference between NHP and HP worlds will lie in the third factor: 10% of the people (the sick) will feel stigmatized in the HP world, which will thus generate less utility overall in the HP world. More interestingly, this extended model reveals the uneven distribution of utility losses and gains. In an HP world, the sick will suffer from utility losses that are not only health-related (obviously) but also money-related and stigmatization-related. In a sense, health profiling triples the harm inflicted on the sick, who are worse off not only in terms of health but also money (their premiums are higher in an HP world than in an NHP world) and psychology (they feel stigmatized). Conversely, in an NHP world, the healthy basically sponsor the treatments of the sick, more evenly distributing utility. However, such distributional concerns are best expressed not in utilitarian but in prioritarian and egalitarian terms.

2.2 Prioritarian concerns

A second set of concerns with health profiling is that it makes the worst-off even worse off. If everyone has the same amounts of money (as indicated in the end of the Introduction, we do not consider differences in incomes here for simplicity), people in poor health are the worst-off, and it would be unjust if they were made even worst off.

Leximin prioritarians believe that inequalities – e.g. paying different premiums – are just only if they improve the situation of the worst off. Take Rawls's Difference Principle, which states that "social and economic inequalities are to be arranged so that they are [...] to the greatest benefit of the least advantaged" (Rawls 1999, p. 95). In our problem, the least advantaged are those in poor health. Since inequalities should be arranged to their benefit, they should at least not be charged more than people in good health, which speaks against health profiling.

Other prioritarians argue that the same incremental well-being gains should be given more moral weight when they go to the worst off than when they go to the better off. Here too, health profiling is unjust because it further worsens the situation of the worst off while benefiting the better off. In an HP world, those in poor health will see both their wealth and health decrease. In an NHP world, at least the worst-off (in terms of health) are not made worse off (in terms of money, compared to the healthy). If any differential treatment is called for on prioritarian grounds, it is a form of inverse profiling, with the sick paying lower rather than higher premiums, which would improve their situation compared to an HP world.

The idea that health profiling constitutes an unfair treatment of the worst-off is basically a reformulation of the idea that it constitutes a double (or even triple) punishment on the sick. First, agents in poor health already pay a penalty by being in poor health. Second, they are charged more because of profiling (compare this with people in jail, who are not charged for the cost of their prison stay). Third, they suffer emotional costs through stigmatization.

2.3 Contractualism

Contractualists like Rawls and Scanlon argue that ethical concerns arise from a (hypothetical) contract between agents. Rawls uses his famous "veil of ignorance" thought experiment to argue that rational parties in the original position would agree on justice principles that ensure the best possible situation for the worst off. If you do not know which situation you will end up in (e.g. whether you will be in poor or in good health), you will only favor inequalities (1) that arise from fair equality of opportunity (see Section 2.4) and (2) that improve everyone's situation, including the worst-off. As such, we would all see the injustice of requiring those in poor health to pay more, because we might as well end up in that situation (once the veil of ignorance is lifted and the distri-

bution of health benefits is known). Health profiling would not pass this contractualist test of justice. It would indebt the sick and likely turn them into a permanent underclass. Trapping them into poverty, health profiling would generate a vicious cycle of bad health and less wealth, which besides obvious utilitarian (2.1) and prioritarian (2.2) worries, will not be consented to from the impartial point of view of Rawls' original position.

Now take the contractualist approach by Thomas Scanlon, according to which acts and policies are to be judged by moral principles, and these principles only hold if no one could reasonably reject them. "In order for a principle to be reasonably rejectable there must be some relevant standpoint from which people typically have good reason" to refuse that this principle be used by themselves or by others (Scanlon 1998: 218). Consider health profiling, i.e. adapting premiums according to the agents' risk profiles. People in poor health could reasonably object to this principle, for reasons mentioned before: it amounts to a triple punishment. Conversely, it would not be reasonable for healthy people to oppose a no-profiling principle on the basis that they are paying slightly higher premiums. Scanlon's contractualism thus seems to conclude that the sick have legitimate grounds for complaint, which adds to the conclusion that health profiling is ethically impermissible.

A general feature of contractualism is that individual benefits and burdens should not be aggregated and that utilitarians neglect what Rawls (1999) calls the "separateness of persons". Ashford and Mulgan (2012) express this as saying that contractualism "does not allow a number of lesser complaints to outweigh one person's weightier complaint". Compare this with the utilitarian approach in Section 2.1. If we assume that agents' utility functions are convex, then high premiums have comparatively less weight than low ones. When all individual utilities are added, profiling gives a higher collective utility than no profiling. Contractualists disagree: the fact that some persons have to pay an excessively high premium is sufficient to reject profiling, even though others benefit from paying a low premium with a relatively higher individual utility. This corresponds to the prioritarian insight that gains (and conversely, burdens) for the worst off have more moral weight than gains (and burdens) to those better of.

Since the rejection of a principle can be based on reasons not related to well-being or utility, contractualist concerns are not consequentialist. "I might reject a principle that arbitrarily exempts some people from a burden borne by everyone else, on the grounds that such a principle

treats me unfairly – even if the alternative is a principle that places that burden on everyone." (Ashford and Mulgan 2012) The relevance to health profiling should be clear: paying more can be considered unfair to those in poor health because of consequentialist reasons (it amounts to a triple punishment on the part of the sick), and non-consequentialist reasons (the sick are not responsible for being ill; more on this in Section 3).

2.4 Egalitarian concerns

Egalitarian concerns about health profiling are diverse, basically because of the variety of egalitarian theories, each of which provides a different answer to the question: equality of what? Utilitarian or more broadly welfarist theories can be understood as egalitarian (each unit of utility or welfare is taken into equal consideration) and so can contractualist theories (each person is given equal respect, an equal position in the contractualist scheme). Or one could favor equalizing health, but we are already assuming that insurance companies reimburse all health costs. Or one could favor equalizing access to health care, which obviously speaks against health profiling, which makes access to health care depend straightforwardly on health risks. Or one could favor equalizing wealth, which holds that the situation in which people's wealth (or spent money) are more equal should be preferred. Given the premiums in Table 1, profiling again goes against such an egalitarian theory.

A widespread egalitarian theory is resourcist and stresses that justice requires equalizing everyone's resources (rights, liberties, primary goods but also wealth and opportunities). Such responsibility-sensitive luck egalitarian theories argue that what people do with these resources is up to them. We will treat them, and their relevance to health profiling, more extensively in Section 3.

Closely related is capability theory, according to which everyone should have (equal or at least basic) capabilities or effective opportunities to do and be what one wants to (Robeyns 2005). In an HP world, the sick do not benefit from the redistribution that would characterize an NHP world and ultimately end up with substantially less capabilities than the rich, even to the extent that their most basic capabilities (like bodily health; Nussbaum 2006) are no longer met.

Another promising theory is social egalitarianism, which stresses that in a just society, everyone can relate to each other 'as equals'. Instead of trying to equalize a specific 'currency of justice' (like utility, welfare, resources or capabilities), authors like Samuel Scheffler and Jonathan

Wolff see equality in social or relational terms. Again, health profiling seems hardly defensible, as it is stigmatizing to those in poor health. Also, as the abovementioned vicious cycle between health inequalities and economic inequalities traps (a lot of) sick people into poverty, they are increasingly marginalized and effectively inhibited from relating to others as equals.

Finally, one can, like Scanlon (1996), refer to multiple reasons to object to inequality, none of which assume that such inequality is intrinsically bad. The inequalities arising from health profiling can be objected to because they ultimately result in suffering (with some sick people no longer able to pay their health costs), because they give rise to problematic relationships of superiority and inferiority (with sick people being stigmatized), because they give rise to unequal playing fields and thus unequal opportunities in multiple domains (like the job market) and undermine the procedural fairness of procedures in important basic institutions (like equal access to basic health care).

The conclusion that health profiling raises serious egalitarian concerns thus holds across the board. Regardless whatever should be equalized, an HP world raises ethical worries that an NHP does not. Let us now focus on the important set of (luck) egalitarian theories that we have set aside and analyze whether their focus on responsibility can provide a justification for health profiling or not.

3 What about responsibility?

One might object that the analysis of the previous Section is too rough: all parameters X that could be used in profiling (cf. the list in the Introduction) have been treated equally, whereas they are not equal from an ethical point of view. Some cases of poor health seem to result from deliberate choices, for which people bear responsibility. For instance, as the health risks of smoking are common knowledge nowadays, someone who smokes can be held responsible for this behavior and can thus be required to bear its consequences. It would be unfair, a responsibility-sensitive luck egalitarian argues, to have others pay for one's choices. If someone chooses to take a risk, she should be prepared to pay for it. So, the objection goes, ethical considerations regarding responsibility not only allow but even require profiling on those parameters for which people bear responsibility. This is in line with luck egalitarianism (Lippert-Rassmussen 2015a), according to which inequalities (e.g. paying a higher premium) are just when they arise from choices (option luck). From

the factors listed in the introduction, the most plausible candidates to pertain to one's responsibility are: lifestyles (bad eating, smoking and drinking habits), and place of living. Most luck egalitarians argue that resources (such as money) should be distributed equally at first but argue that inequalities may legitimately arise through people's choices (such as people with unhealthy lifestyles paying more for their health care). These parameters will be considered in this Section 3. All others (such as medical history, genetic information, gender or race) seem not to involve responsibility and luck egalitarians would argue that inequalities based on one's circumstances, through no fault of one's own (brute luck), should be eliminated or compensated for.

We agree that responsibility is of crucial ethical importance when selecting acceptable profiling factors. However, we want to point at three important qualifications. First, we argue that the problem is theoretically more complex than is often assumed (Section 3.1). Second, substantial pragmatic difficulties arise when one tries to apply the distinction in practice (Section 3.2). And third, the criterion of responsibility is not sufficient for profiling to be fair: the existence of an adequate causal relation is another necessary condition (Section 3.3). Overall, we will argue that no parameter escapes these qualifications, and thus that it is ethically impermissible to profile on any parameter.

3.1 A theoretically complex issue

Theoretically, the problem is not as simple as sketched above. Many of the 'unhealthy lifestyles' listed above — such as smoking and drinking — are addictive. And it is scientifically well-established that (i) genetic predispositions (Agrawal and Linskey 2008, Kreek et al 2005) and (ii) environmental factors play an important role in both these addictions. It has been clearly shown that a wide variety of environmental factors, such as social, cultural, physical and familial environments, have a strong and significant impact on drug addictions (Rhodes et al. 2003). For example, Whitesell et al. (2013) highlight how familial risk factors — such as childhood maltreatment, level of parental education, familial socio-economic status — can increase risk of drug consumption for adolescents. Physical and sexual abuse, emotional abuse, but also social influences or deviant peer relationships are non-exhaustive factors that explain drug use (for reviews, see Hawkins et al. 1992, Whitesell et al. 2013).

Genetic and environmental factors are clearly out of the scope of people's responsibility — one doesn't choose one's genes, nor the socio-

economic status of one's parents. The importance of these factors is not anecdotal. For instance, the genetic predisposition is estimated to account for around 50% of alcohol addictions (Gierski et al 2013). There are also some vicious circles. For example, drinking a lot can affect one's abilities, such as memory, impulsivity, or decision-making (Cabé et al 2016). Then, an initial responsibility can only diminish as time goes. In addition, some psychiatric disorders, for which people cannot be held responsible, do have some effects on health. For instance, schizophrenic persons in acute delirious episodes can become disinterested in topics considered relevant for "living a healthy life", or put themselves into physical danger. Note finally that the knowledge of the causal influence of each factor is not sufficient to assess someone's responsibly. Interactions between the various factors are known to be crucial in triggering an addiction (for instance, a genetic predisposition requires some environmental factor to be active). So one needs to know much more to attribute individual responsibility.

Overall, this gives several theoretical reasons why it is not possible to simply consider that an individual is fully responsible for a parameter on which profiling could be implemented, and hence that it would be fair to do so. Free will is just not the only ingredient there.[5] From the initial list of parameters, the only exception may be some eating or living habits, and perhaps also the place of living (although socio-economic constraints obviously play a role in all cases). One might reply that the causal influence of genetic and environmental factors can be assessed, and that the premiums should vary according to what remains of one's responsibility. Unfortunately, this suggestion raises important pragmatic difficulties, that are discussed in the next Section.

3.2 Pragmatic difficulties

We now want to argue that assessing the causal influence of genetic and environmental factors, in order to remove that part from the responsibility of agents, is not pragmatically feasible for health insurance companies.[6] First, consider genetic factors. Current knowledge of the

[5]In the philosophical literature on addiction, the position we are defending here might actually seem like a truism. For instance, Wallace (1999) needs to write a whole paper to argue that volition plays at least some role in the actions of an addicted person, against those who hold a mechanistic conception of addiction, where actions are determined by desires.

[6]Note that we are actually considering a form of genetic profiling that is the opposite of the kind discussed in the literature: we use genetic factors to argue that

causal influences of genetic factors is only at its beginnings, and is not very precise yet. For example, the influence of genetic factors on alcoholic addiction is known with large uncertainties: "between 40 and 60%" (Gierski et al 2013). Which rate would it be fair to consider for profiling? Second, identifying the causal influence of environmental factors (e.g. of having an alcoholic father) is even much more complex, and existing data are even less precise. Third, these studies on environmental factors are epidemiological and concerned with averages, whereas the responsibility argument requires the assessment of *individual* responsibility. A precise individual responsibility cannot be inferred from (imprecise) averages. For instance, even if we knew that having an alcoholic father accounted for alcoholism at the rate of 30% on average, this would not imply that Mr. Y's responsibility is reduced of 30% because of his alcoholic father. Perhaps his responsibility is actually reduced of 10%, or of 50%. It is not enough that the insurance company is fair *on average*, because the argument of responsibility is precisely made at the individual level.

One might suggest that the insurance company could go beyond epidemiological medical studies, and launch studies of environmental factors of their would-be clients to assess their individual responsibilities. But this would be very difficult if not impossible (how to assess the precise influence of Mr. Y's alcoholic father?) and very costly. Furthermore, these individual inquiries could be opposed on privacy grounds. For instance, egalitarians could argue that inquiring in great detail into people's intimacy would fail to treat them with the respect that is equally due to all human beings.

If implemented, profiling can raise premiums dramatically and this can have dire consequences on individuals. Given our previous point about the financial and emotional harms of health profiling on those who are already in poor health, we believe a cautious attitude should be adopted: without high-standard proofs of someone's individual responsibility about parameter X, profiling on X should not be implemented. A kind of presumption of innocence should prevail.

This cautious approach can be re-expressed as a value judgment between two possible kinds of errors: either charging high fees for individuals who are not responsible for the value of parameter X, or charging only slightly higher fees for all individuals, some being responsible and some being not. We believe the latter situation is preferable when knowledge is sparse and responsibility cannot be assigned with enough confidence. It would be morally wrong to charge someone very high fees without being

premiums should *not* be raised.

sufficiently sure that she is responsible. As we have argued above, the knowledge that health insurance companies can reasonably hope to have on individual responsibilities is very low and imprecise on many parameters. As a consequence, the cautious approach we embrace recommends that profiling should not be implemented for these parameters. The only parameter for which individuals can be argued to be responsible is place of living (but see next Section).

3.3 Responsibility and causality

Profiling is based on correlations between some parameters and health costs. So far, the concept of responsibility has been considered as a relation between an agent and a parameter X (e.g. smoking habits or diabetes). But the relation between X and health costs also matters. If someone is responsible for some X, but that X is not what makes health costs be higher, then it is unfair to charge the person more for the increased health costs. The responsibility of the person just bears on something irrelevant for health costs. More specifically, we consider that for profiling on X to be fair, there should be a *causal* relation between parameter X and costs (of which people should be aware). Summing up with previous Sections 3.1 and 3.2: there are two necessary conditions for a profiling on X to be fair: (i) the agent should be responsible for X, and (ii) X should be causally responsible for health costs. (i) has been investigated in Section 3.2, and (ii) is our focus now.

Consider correlations between health costs and the place of living (a neighborhood, a town, a county), which is the only parameter that remains. Some correlations might be interpreted causally, for instance when the place is particularly polluted and gives rise to special diseases. But in this case, it seems that the other part of the responsibility condition is not met: people who live there probably didn't deliberately choose to live in this polluted area, but were constrained by various external factors (money, generally). When the correlations cannot be interpreted causally, the socio-economic status might be a confounder. So, the place of living does not meet our sufficiency criteria, and it would be unjust to use this parameter in profiling. Overall, no parameter from our initial list fulfills the necessary criteria (i) and (ii). Profiling on no parameter is therefore permissible in health insurance.

4 Conclusion

We have argued that profiling in health insurance raises substantial ethical concerns. In addition, we have argued that this conclusion holds for any parameter and have provided theoretical and pragmatic arguments in support. As such, we can conclude that people should not be discriminated in health insurance for reasons of medical history, diagnosed illness, obesity, smoking habits, alcohol consumption, food habits, sport practicing, genetic information, gender, age, race, sexuality, place of living or socio-economic position. Because insurance companies have an interest in health profiling, it seems that the only way for practice to be in accordance with our ethical principles is that the law forbids profiling in health insurance, as is already done in some countries for some parameters.

Some further generalization might be considered. We have assumed that the reimbursement rate is identical for everyone. What if some people would like a lower or higher coverage? Our no-profiling thesis can be reproduced for any level of reimbursement. However, the various levels of reimbursement should vary uniformly, and not be specialized on some specific illness. Otherwise, for instance, smokers would choose the special reimbursement for lung cancer, while non-smokers would avoid it, and this could lead to a de facto profiling.

Our general thesis might be nuanced for some voluntary (possibly punctual) practices, such as the practice of extreme sports like bungee-jumping or climbing, or traveling to dangerous countries. These practices involve higher health risks and thus higher expected health costs. Given that responsibility is clearly involved in these choices (although extreme sports may to some extent be addictive), health profiling could be ethically permissible in such exceptional cases. Rather than allow health profiling, however, the already current practice to require people to take additional insurances when practicing specific sports or when traveling serves the same purpose. In sum, we believe that on any plausible account of what matters ethically, health profiling is objectionable.

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