ABSTRACT. Many people believe that individuals have a right not to know their genetic disease risk. Here it is argued that, if this is correct, individuals also have a right not to know their diet-related disease risk. Reasons to remain ignorant are analogous in the case of risk related to diet and genetic susceptibilities. It follows that any policy to promote healthy diets (e.g. through “judgmental” food labels, such as traffic light labels, or, hypothetically, scary pictures similar to those found in cigarette packets) ought to protect the individual right not to know.

INTRODUCTION: THE LINK BETWEEN GENETIC TESTING AND PUBLIC HEALTH GENOMICS

This paper explores the analogy between food label information and genetic information, in order to defend the right not to know judgmental nutritional information, such as the one conveyed by traffic light labels and other, more aggressive, recent proposals. Traffic light labeling judges the nutritional quality of food by means of colored flags on the front pack (figure 1).

It involves a simplification of the link between food quality and health outcomes. Unlike GDAs (Guidelines Daily Amount, the other main nutrition facts labeling system in use),¹ it does not present the consumer with neutral nutritional information, but conveys an interpretation of the link between nutritional qualities and disease. Indeed,

Traffic Light Labelling is interpretive and judgmental. It [allegedly] helps consumers to make healthier choices by taking a position on the nutritional content of the product. It identifies the foods you should avoid or eat sparingly! (Magnusson 2010, 6).
Supporters of traffic light labeling allege that it would promote the consumption of healthier food (Faculty of Public Health and National Health Forum 2008). I contend that, just like genetic information, this kind of information can be reasonably expected to involve a cost, in terms of well-being and food choice, for consumers of food signaled as “unhealthy.” Imposing these costs on individuals (who may reasonably prefer “not to know”) is objectionable. Thus, the paper calls for avoiding such labels (while focusing on societal determinants of bad eating habits) or supporting less intrusive labels, more respectful of the legitimate interest of many individuals to avoid such information.

Clearly, empirical research is needed to establish whether the value judgment implied by traffic light labels in any way affects the emotions and well-being of consumers of unhealthy food. This is true also in the case of genetic information. In the genetic case, however, regulators have given priority to avoiding the risk of causing harm through genetic information, even for those types of genetic information where evidence of significant harmful psychological sequelae is lacking. The consensus is to avoid (whenever possible) imposing what might reasonably appear as a psychological cost on people, unless clearly consented to. Not so in the food case, where reasons in support of a right not to know have never been considered, before Bonotti’s paper (in this issue). I will argue
that nothing but a traditional bias concerning the special value of genetic information justifies this disparity.

It might be objected that ordinary consumers are able to process the symbolic connotations of traffic light labels in purely cognitive, as opposed to emotional, ways (although I believe this can be reasonably doubted). If so, traffic light food labels are only more effective means to convey the usual messages, without any further psychological effect.

The worry expressed by the previous objection is a sound one. Let us then begin to consider other kinds of food labels, which are currently under discussion. There is no doubt that these are meant to exploit emotional reactions as a way to steer and control consumer choices. Consumers International and the World Obesity Federation are calling for the adoption of pictures on food packaging of the damage obesity can cause, similar to the images of smoking-related disease on cigarette boxes (Pippa 2014).

In what follows I shall refer to “judgmental labels” in general and I shall leave it to the reader to decide if these arguments apply to the already existing “traffic light” or only to more extreme proposals.

I will assume that people have a right not to know their own genetic information, at least when no harm to others follows from their doing so. There is, after all, a significant consensus that the right not to know matters (at least when its scope is limited in this way). The idea informs several national and international guidelines in this field. Of course, since the argument is based on an analogy, it may be turned the other way round. If genetic information is just as dangerous as food information, this could be treated as a reason to be more liberal about the use of genetic information in public health. In this essay the more common opposite stance is assumed. While few might defend the right not to know unconditionally, the case for it seems stronger when the assessment of genetic risk is relatively uncertain and the consequences of not informing are not extreme—when giving the undesired information, in other words, is not a matter of saving lives and avoiding death, at least imminent death. This is precisely the case of genetic susceptibilities to complex diseases, which are the basis of the analogy I will defend.

I will argue that, somewhat surprisingly, the right not to know food label information is as important. The argument is based on the analogy between the two types of information, the value of the freedom at stake, and the burdens of the respective kinds of knowledge. This argument strengthens the autonomy-based argument for the some rights not to know presented by Matteo Bonotti (in this volume).
The association of food and genetics may come as a surprise, but not to scholars (such as Holm 1999) who reject genetic exceptionalism. “Genetic exceptionalism” is the view that genetic information is special and must be treated differently from other types of medical information, even if the information coming from different sources allows the same or similar inferences about the health conditions of people.

I will begin by situating food labeling and the right not to know in a broad evaluative framework. In contrast to Bonotti’s paper, which is narrowly focused on different conceptions of autonomy, I will present and elaborate a different and more heterogeneous set of values. More specifically, section 1 highlights moral values supporting food labeling and the right not to know; section 2 highlights those moral values supporting the right not to know. The ethical discussion of choice-limiting policies here includes a discussion of the value and disvalue of unhealthy eating, a methodology recently advocated in this journal by Barnhill et al. (2014). In section 3, I argue for the analogy between nutritional and genetic information. In section 4, I defend it against objections. I conclude that a moral claim analogous to the right not to know genetic information places serious constraints on otherwise permissible food regulations.

1. A VALUE LANDSCAPE FOR FOOD LABELING

What values support food labeling? Arguably, the health of individuals—that for whose sake public health is pursued—is an aspect of human flourishing. A compelling, if not indefeasible, consideration in favor of judgmental food labels would be that they lead to better health. It has been argued that traffic light labeling increases consumer’s understanding of nutritional facts, if compared to ordinary, non-judgmental labels. They allegedly encourage consumers to select food with lower sugar and fat intake. Moreover, traffic light labeling could provide an incentive to producers to reduce the amounts of salt and fat in their products (Louie et al. 2008). If the technique proves effective in improving health outcomes, then a straightforward direct welfarist public health argument for it could be given. This argument would appeal to health as a component of welfare, not to improving the autonomy or freedom of consumers. It is unclear, however, whether any reliable association between sales and healthiness of the product exists (Sacks, Rayner, and Swinburn 2009).5

Another welfarist argument points out the efficiency benefit (in the standard neoclassical, i.e. Pareto sense) of producing and distributing nutritional information. On the demand side, if consumers lack information
about the health impact of food, their choices only imperfectly represent the
ability of the food to satisfy their needs, including their need for long-term
health. This would be inefficient. Suppose now that consumers obtain the
relevant information. In the long run, supply will adapt to changes in the
demand for food, which better represents the utility people are expected
to derive from it. In this picture, the new market equilibrium (between
informed consumers and responsive producers) involves an allocation of
resources that benefits all and harms no one, at least excluding transaction
costs.

As Voigt, Nicholls, and Williams (2014, 78) point out, food labeling
could also be seen by (some) food producers as empowering, rather
than a burden. However, providing information that is accessible, non-
misleading, and non-manipulative may not be the interest of current food
producers and retailers. (They, on the contrary, may have a vested interest
in avoiding the transaction costs.) Nutritional information is like a public
good—one that does not get consumed when it gets used, from which it
is hard to exclude anyone (once it exists), and which might be produced
in insufficient quantities in market equilibrium. In this picture, the worry
of regulators should be that markets do not produce enough information,
not too much of it.

Leaving aside welfarist arguments, the legitimate interest in dietary
information is also supported by autonomy-based arguments reviewed
and discussed by Bonotti (in this volume), which I will not rehearse here.
Notice that, in the plausible autonomy-based arguments he reconstructs,
both the value of autonomy and the value of information are not absolute
and universal. Rather, it is not always reasonable to place autonomy
above all other considerations and it is not always rational to maximize
information.6 Moreover, food labels promote autonomy, just like labeling
of genetically modified food, only if they are accompanied by broader
education campaigns (Voigt, Nicholls, and Williams 2014; Siipi and
Uusitalo 2008).

2. A VALUE LANDSCAPE FOR THE RIGHT NOT TO KNOW

In the following paragraphs, I will provide a brief overview of legitimate
interests protected by not knowing dietary information. The relationship
between the value of autonomy and the legitimate interest to resist
information is explored in Bonotti’s paper at great length. The present
account relies on the distinction, often overlooked in the ethics and policy
literature, between the mere instrumental value of food, and the value of
food as a constituent on commensality (Voigt, Nicholls, and Williams 2014, 52; Fischler 2011). Food is valued (by some, in culturally diverse societies) not only as a means of nutrition, but is also a constituent part of the social and cultural good instantiated by eating together (Resnik 2010; Barnhill et al. 2014). This response is also motivated by what I would call, for lack of a better word, hedonism, regarded as an important truth (but not necessarily the whole truth) about well-being. By hedonism, in this context, I mean the claim that food is valued as a source of immediate enjoyment and gratification. We derive immediate gratification from food not only in virtue of the qualia of gustatory experience but also through the experience of social or symbolic meanings, and other psychological associations. This occurs especially (but not exclusively) in commensality. Once the plurality of reasons behind food choices is understood, the idea that some people, or all people in some circumstances, could value (momentary or permanent) ignorance concerning nutritional information appears less mysterious. Food policy must deal with conflicting societal goals and values, even when the efficacy of a certain food policy as a tool of public health is unquestionable. Over a plural background of potentially irreconcilable values, even the choice of unhealthy lifestyles might retain an irreplaceable role in individual lives (Barnhill et al. 2014).

Judgmental food labeling is problematic because it interferes with the freedom of choice of food in two senses: as potentially causing a restriction of options and as the imposition of special costs on certain options. The first phenomenon—interference with freedom understood as reduction of options—might take place if some food options disappear as a result of labeling. This might happen because producers of traditional food, now labeled as unhealthy, due to diminished demand may not be able to sustain competition in a given market, after the introduction of judgmental labels. This could happen if judgmental labels truly are effective means for affecting consumer behavior, as their proponents hope. Second, and perhaps more realistically, food labels impose a well-being cost on individuals for their unhealthy choices: this is constituted by forgone immediate enjoyment and gratification, which might have come through a remorseless and less conscientious buying (or tasting) of unhealthy food. Judgmental labels (or at least some of them) interfere with such immediate gratification, because they rely on emotional reactions to achieve their effect on consumers—more obviously in the case of labels involving scary pictures. This might also be counted as a mild form of coercion (i.e. an interference with freedom in a different sense from an absolute restriction

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of options), at least if we consider fines or taxes to be forms of (often legitimate) coercion. Notice that there might be an irresolvable trade-off between maximizing information and autonomy of choice, on the one hand, and promoting overall well-being (and other values) on the other. Arguably autonomous and informed choices require a reflective stance; but a reflective attitude may be inimical to the enjoyment of hedonic, symbolic, and communal experiences. These, instead, may often require an automatic, ritual, non-reflective attitude towards food-related life events (Barnhill et al. 2014).

2.1. The Value of (Food) Choice

There are different reasons why individuals may value choosing the food they eat, including—potentially—unhealthy food. I will briefly analyze them by borrowing Thomas Scanlon’s account of the value of choice (1998, 251–53; see also Resnik 2010).

First of all, choice may have instrumental value, because in many cases (e.g. choosing apples over oranges) people are better at predicting what they will derive more enjoyment from. It is clear that reasons of this kind apply to the present case. This is true even if people may not be better than outside agents at predicting what will cause them to be healthier, without adequate nutritional information. Well-being does not consist only of years free of disability, but also of years full of gratifications of the immediate, short-term type. It also consists of social experiences, some of which involve the sharing of (often unhealthy) food (Barnhill et al. 2014). It might be argued that individuals are the best judges of the optimal balance of these three (arguably irreducible) constituents of their own well-being.

Second, choice may have representative value. Often, for instance in artistic creation, we want our choices to be reflected in what we do, because the point of what we do is representing or constituting ourselves, our thoughts, or sensibilities. This kind of reason to value choice can apply to food choices as well. It is not far-fetched to argue that many people become and express who they are through the food they buy, prepare, and eat. Food preparation and consumption are linked to both group (e.g. cultural) identity and to self-styled, creative self-constitution. Certain food choices signal membership in cultural groups; such signaling might be required to socialize within those groups and preserve one’s identity, when threatened, outside them. On the other hand, for many people, food may just have a purely instrumental value. Food labeling should take into account the legitimate interest of both kinds of people.
Third, choice may have symbolic value. This occurs, for instance, because not being able to take certain choices would be seen as indicative of our not being competent enough to take them. This argument also applies to food choices. Shopping for food is usually seen as involving the kind of choice that every mentally healthy adult is competent enough to make. Given the background of these social practices, judgmental food labels undermine the symbolic value of food choice. What we are discussing under the label of symbolic value is not what a person expresses about herself by choosing a certain kind of food (that is covered under the heading of “expressive” value of choice). What has symbolic value here is the ability to choose itself. Judgmental labels express low esteem for the cognitive abilities and the ability of autonomous judgment of consumers, some of which may feel treated as idiots.

Based on these arguments, it can be concluded that there are important moral reasons to value the freedom of customers in the realm of food choices. As we have seen, judgmental labeling interferes with the freedom of choosing food. It does so indirectly by restricting the range of available options, in virtue of its market effects, and directly, by attaching hedonic costs to disfavored food choices. This means that at least certain individuals, or all individuals in certain circumstances, have reasonable (pro tanto) grounds to avoid judgmental labels. At the societal level, as a result of this, there are pro tanto reasons to reject judgmental labeling as a new, dominant social norm. What is to be achieved, here, is a balanced view that, on the one hand, does not preclude “any modification of the foods people currently enjoy, simply because they enjoy them” (Barnhill et al. 2014, 206), and yet is not blind to the possible trade-offs between the different ways food is valued.

3. THE ANALOGY BETWEEN NUTRITIONAL AND GENETIC INFORMATION AS A GUIDE TO THE BALANCE OF OPPOSING REASONS

As the previous section shows, different reasons can be invoked in support of food labeling or resisting food label information. The problem is, now, how to balance these different considerations. In his contribution, Bonotti advances an interesting proposal to increase the information available to consumers as well as defending their legitimate interest not to know. To achieve this purpose, Bonotti proposes two alternative solutions: the first, potentially very contentious, would be to ban any food labels that are excessively judgmental; the second would involve instead the use of double labels, a non-judgmental food label on the front and a judgmental
food label on the back of the package. The latter label could also be covered by a “peel off” flap hiding the more judgmental information. The protective flap could be removed by information seekers, but it would not be lost, since it is stitched to the pack. These technical solutions would allow consumers to decide whether to receive or avoid that extra information before purchasing the item (Bonotti, in this volume, italics in original).

I believe this policy proposal realizes a sensible balance of the values at stake. Some people may disagree, and claim that it gives too much weight to the legitimate interest not to know, while imposing an unreasonable additional burden to public health measures. In this section, I provide the argument that we ought to take the right not to know seriously, based on the analogy between food labels and genetic tests.

I will argue that the information provided by judgmental food labels about health risk is analogous to that provided by genetic information. This may appear counterintuitive at first. Notice that I do not have in mind, here, all genetic information but genetic information concerning multifactorial and polygenetic diseases.

To begin with, judgmental food label information might be compared to the information used by a recent direct-to-consumer (DCT) genetic testing company, 23andMe, to communicate information about genetic disease risk to the customers of its genetic tests, until the FDA required the company to interrupt service (Pollack 2013). The statistical likelihood of developing a disease, based on information about one’s genotype, is communicated both in a detailed and in a simplified fashion. Side by side with a three- or four-paragraph description of the weight of the genetic evidence and its limitations, the web-interface of 23andMe included graphs such as the one below (figure 2). Like traffic light labels, these graphs use red as an indicator of higher risk and green as an indicator of reduced risk, side by side with a quantitative measure of the increased risk (e.g. a twofold increase in genetic risk, relative to the population average).

Notice that traffic light food labels involve a similar simplification. For the general consumer, not trained in dietology, it is not always easy to predict the differential long-term health consequences of their personal food intake, on the basis of traffic light colors and nutritional facts. At the physiological level, this connection is mediated by several contextual factors, including the fact that the same diet has a different effect on people with different genetic predispositions. Just like the colored graphs
of a DTC genetic testing company, “traffic light” food labels attempt to simplify this picture, enabling people lacking medical knowledge to form rough expectations concerning the health consequences of the food they consume.

The analogy goes further. Genetic counseling is a better, but more expensive alternative, than the web content provided by this DTC genetic testing company. Genetic counseling gives the appropriate weight to genetic data, but also considers environmental and lifestyle parameters. Analogously, the evaluation in judgmental labels, precisely because of its simplicity, is much less helpful and much cheaper, than a diet by a dietologist doctor. The latter draws from a complex weighing of considerations and takes into account other environmental risk factors, such as lifestyle (smoking, sports, etc.). It does not rely on average quantities and recommended intakes but individual ones.

How do we balance the right not to know with the promise of increased population health? In the genetic case, many people claim that the right not to know *legitimately* constrains the promotion of outcomes in public health through the extended use of all available (or easily producible)
genetic information. The right not to know has been explicitly recognized by international conventions and guidelines, such as Art. 5c of the UNESCO *Universal Declaration of the Human Genome and Human Rights* (1997), Art. 10.2 of the European *Convention on Human Rights and Biomedicine* (Council of Europe 1997) and Chapter VIII, Art. 16 of a recent *Additional Protocol* [to the former document] Concerning Genetic Testing for Health Purposes. By contrast, let us imagine a policy about genetic data that does not take the right not to know seriously, such as the following “(You ought to) know your genetic risk!”

### 3.1. Background

During 2006–2010, UK Biobank conducted its recruitment phase of more than 500,000 participants who gave their consent, answered questions, had physical measurements, and gave samples (blood, urine, and saliva) at a baseline assessment visit. The Biobank provides the infrastructure and samples to study mainly gene–environment interactions in complex disease (Cambon-Thomsen 2004). Let us suppose that, in a 10-year time, several genes, or better single-nucleotide polymorphisms (SNPs), will be identified as being scientifically validated risk factors of common multifactorial disease. Assume that these SNPs, i.e. their presence in the databank population, have already been analyzed for research purposes. Researchers can identify, with a few mouse clicks, which research subjects have the SNPs associated with higher or lower probability of disease. Let us also assume that the information is actionable, i.e. knowledge of the genetic risk factor provides a rational basis for a personalized advice with respect to pharmacology, diet, and overall lifestyle.

### 3.2. The Policy

Individuals with SNP of known associations will receive a letter indicating the name and a brief (10 lines) description of the disease associated with the SNP. The letter will be written on a red, amber, or green colored paper, to indicate whether the risk associated with the SNP of the recipient is higher than normal, average, or lower than normal. At the same time, a public education campaign is launched, telling the high-risk patients about opportunities to receive adequate medical advice, at an affordable cost.

The reader needs to ask herself if the policy above fulfills an appropriate balancing of reasons in favor of communicating the information and of the right not to know. If the reader thinks that the legitimate interest not to
know takes priority over the possible public health improvement, then, I would argue, she ought to reach a similar conclusion in the case of traffic light labels, for these are, in all morally relevant respects, analogous to simplified information about genetic predispositions.13

4. OBJECTIONS: FOOD LABEL INFORMATION IS NOT ANALOGOUS TO GENETIC INFORMATION

In what follows, I will defend the analogy between nutritional information and genetic testing against several objections.

1. Very often genetic information will tell us about our predispositions for diseases for which there is no cure or effective prevention, such as Huntington’s disease and Alzheimer’s dementia. People may not want to live the rest of their lives under the burden of this knowledge. This can cause anxiety, depression, etc. Dietary information is not at all like this. We can decide not to eat foods linked to obesity, heart disease, etc. We can take steps to prevent adverse outcomes associated with our diet, unlike genetics.14

This objection touches different apparent disanalogies between the two realms, which have to be unpacked. One issue (1.A) is that of certainty vs. risk. It can be expressed as follows:

Knowledge of genetic information is knowledge that the disease will develop no matter what, while dietary information is merely information about increased risk. And certainty of outcome is a greater psychological burden than knowledge of risk.

While it is true that we lack a cure for both Huntington’s disease and Alzheimer’s dementia, we need to distinguish the two examples, for they relate to relevantly different kinds of diseases. Huntington’s disease is caused by an autosomal dominant mutation whose penetrance is very high, which means that the people with the mutation are almost guaranteed to get sick (if they do not die of unrelated causes before the age of disease onset). By contrast, Alzheimer’s dementia is a multifactorial trait, which is only weakly predicted by knowledge of our risk factor. So, in the Alzheimer’s case, the claim that “people may not want to live the rest of their life under the burden of this knowledge” refers to knowledge of a statistically increased risk, not knowledge of certain (or almost certain) health outcome.

From the point of view of certainty vs. risk, the parallel with unhealthy food still holds, even if people can do little to reduce their risk of
Alzheimer’s. Knowledge of a genetic risk factor for Alzheimer’s is only an indication of risk. No certainty is involved in this case.

One could insist that even knowledge of risks can cause psychological harm. When the question is examined empirically, it turns out we hardly have any evidence of anxiety increases due to knowledge of genetic susceptibility, for diseases in which the ability of genes to predict the outcome is low in absolute terms (even when risk is significantly higher than the population average) (Bloss et al. 2011). If it seems highly a priori that at least some people will be adversely impacted, it also seems a priori that at least some people will be adversely impacted by interacting with judgmental labels (see section 2).

The second point (1.B) is about the difference in the individual ability to prevent:

Dietary information is not at all like [genetic information]. We can decide to not to eat foods linked to obesity, heart disease, etc. We can take steps to prevent adverse outcomes associated with our diet, unlike genetics.

Even if a genetic susceptibility to Alzheimer’s disease is only information about risk, it is about a risk which we (let us assume) cannot act upon. This is allegedly unlike the food case in which—supposedly—we can change our overall risk estimate, by changing our habits.

In response, this objection overestimates the freedom people have to change their diets, and underestimates the importance of “obesogenic environments” (Voigt, Nicholls, and Williams 2014). It has been argued that the broader social determinants of obesity, rather than individual choices, are the main drivers of obesity and other health issues connected with food (Sacks, Rayner, and Swinburn 2009). The stronger predictors of the consumption of unhealthy food may be found in “work and time pressures, urbanization, long commutes, more women in the workforce” (Magnusson 2010, 3). The loss of spending power, rather than a conscious preference for fast foods, has been identified as the main sociological driver behind the increased consumption of cheaper, energy-dense means during the last economic downturn (Magnusson 2010, 4). This suggests that it may not be so easy for people to prevent adverse outcomes associated with their diets, when the underlying social causes of their choosing that kind of diet (work and time pressures, etc.) persist.

If so, effective policies are unlikely to be those based exclusively on expanding the information available to individuals, using “nudges” or adopting more coercive means. While it is true that we, as society, can
take steps to prevent these social ills, sweeping socio-economic change (especially in macroeconomics) is hard to achieve for individuals. Moreover, it is even questionable whether we should prevent all the underlying social factors that are behind the increased consumption of unhealthy food. Consider for instance the empirical claim that the increase of women in the workforce contributes to raising obesity risk. Public health is not the only value we pursue as part of the common good.

In the cases under discussion, for many (if not all) people, large enough change in diet, apt to significantly affect their health risk, could turn out to be as impossible as a change in their genes. If changing risk profile is not feasible, for individuals, in either case (genes or diet) it cannot ground a difference in the weight accorded to their legitimate interest not to know in the two cases. This does not entail that people are determined to get sick by the food they eat, just as the fact that a disease has a genetic basis does not necessarily entail that people are determined to get sick. Unhealthy food worsens a person’s risk profile, but other protective factors could be in place.

It might be objected that some people are able to change their diet to reduce their risk profile. But, again, for some genes, it is true that people are able to change their overall risk in response to their genetic risk profile. People with a malign variant of the BRCA gene may undergo check-ups more often or, more drastically, undergo preventive breast surgery. And yet not many people would argue that, since the genetic information is actionable, we should not respect individual desires not to know one’s BRCA status.

Notice also that the objection relies on assuming that if risk is of a kind we can reduce (e.g. unhealthy diet) as opposed to a kind we cannot reduce (e.g. genetic risk), it causes less of a psychological burden. The implicit premise could be that because the psychological burden is less in the case of food (where we can prevent the outcome), the legitimate interest not to know should not be given as much weight in our regulations. The claim about psychological burden would need to be empirically demonstrated. There are a priori reasons to doubt that the psychological burden of reducible risk is not significant, as the following example shows. Suppose that it can be predicted that a very strong earthquake will take place in the area in which I live. However, I can avert all bad outcomes associated with the destruction of my house because I had already planned to move to a different city, for independent reasons. Suppose that, according to my plan, I should stay in my house until one month before the earthquake is
predicted to occur, then I would leave it and the house would become the
possession of new buyers. I may nonetheless feel more and more anxious
about my security as the time of the predicted earthquake approaches.
The ground for my anxiety will be the impossibility to predict the exact
moment of the earthquake. That is to say, I will not be certain of my ability
to avoid the outcome. Information about the earthquake reminds me of
my fragility with respect to earthquake risk.

The earthquake example shows that it is not sufficient to reduce risk
to have one’s anxiety disappear. This is also true in the food labels case:
a picture of a blood vessel cluttered by fat would remind me of the risk
of a stroke, to which I am exposed, even if I can do something to reduce
the risk, i.e. changing my diet. It reminds me of my fragility with respect
to strokes. So, the difference between unchangeable risk and reducible
risk may not be after all so significant in terms of psychological burden.

Moreover, knowledge of reduced genetic risk might reduce anxiety, even
when it is not actionable. In the empirical study by Bloss et al. (2011),
people who undergo genetic testing for Alzheimer and discover to be in
the low risk category have, on average, their anxiety reduced. Notice that
many of these people have already reasons to fear being at higher than
normal risk for that disease, due to other cases in the family.

Summing up, it is not always true that nutrition-related disease risks
are avoidable and even if they are, it is not clear that modifiable risk
involves a significantly reduced psychological burden, compared to non-
modifiable risk.

Let us now consider two other objections.

2. Genetic information can lead to discrimination and stigma. Yes, laws
are in place to counteract this, but laws might not be respected. Someone
might want not to know genetic information to avoid this. But dietary
information is different.

Reply: First of all, it is not obviously true that dietary information
involves no risk of stigmatization. People also risk being stigmatized
for eating food presented as “unhealthy,” associated with a culture
of obesity, which is stigmatized (Voigt, Nicholls, and Williams 2014).
Second, it is not the case that all genetic information exposes to risks
of stigmatization or discrimination. Consider discrimination: individual
differences in the susceptibility to complex diseases could be almost
useless to insurance companies, when their predictivity is low. Turning
to the social danger of stigmatization, many genetic differences are not
probable causes of stigma. Statistically speaking, almost everyone will
be at greater than average likelihood for at least one disease. Most often than not, the disease for which one is at greater than average risk would be of comparable importance to the disease(s) for which other people are at greater than average risk. Those who need special protection against stigmatization are, for instance, carriers (both healthy and affected) of severe Mendelian diseases, of traits with high predictivity (such as BRCA for family-transmitted breast cancer), or traits that risk eliciting irrational reactions in others (such rare genetic variants affecting MAOA metabolism, which, in the literature, have been associated with aggressive and antisocial behavior). But the most important point is the following: it is not very clear that what justifies the right not to know in any case is the risk of stigmatization and discrimination. For the latter can also be avoided by ensuring proper confidentiality in the communication of the genetic data. As Robert Wachbroit pointed out:

we should keep in mind where the fault lies. If a patient becomes uninsurable when a genetic condition is discovered, the proper target for criticism is the insurance industry, not the discovery. If someone suffers unfair employment discrimination because of a genetic test result, the fault lies with the practices of the workplace, not with the information revealed by the test (1998, 141).

Summing up, the issue of genetic stigmatization and discrimination cannot ground a disanalogy between the legitimate interest not to know in the genetic and the nutritional case.

3. The only source of genetic information is a genetic test performed on you (or possibly a family member). Dietary information is widespread—all over television, radio, etc. Labeling practices that promote a right not to know will not prevent people from getting dietary information.

In response, judgments widespread all over television have a less direct effect on consumers of unhealthy food than judgmental food labeling would have, if they were to become the norm.15 This is because consumers can avoid information on TV, radio, on-line newspapers, by pushing a button on their remote control or keyboard. If we imagine judgmental labeling as the future (de facto or de jure) standard, the risk is that consumers will not be able to avoid the dietary information on the food they buy. Notice the ability for consumers to avoid judgmental dietary information on the labels of food they buy, just as they can avoid it on TV, is what the arguments in this paper support. The argument does not say that dietary information ought to disappear or become scarcer, as opposed to more controllable.
Moreover, this disanalogy relies on facts that are too contingent. It is no longer a matter of technology and cost, after the recent drop in the cost of genotyping (which was offered by 23andMe for approximately 200 dollars, before the ban by the FDA). The relative scarcity of interpreted genetic information16 is largely an effect of the social norms erected as a dam against it. In and by itself, genetic information could become as ubiquitous as other kinds of personal information on Facebook. If we are to avoid circularity in our arguments, we cannot appeal to the fact that such a social norm exists as one of the reasons that justifies the norm.

4. “Genetic exceptionalism” is justified by the fact that people lack the ability to understand the complex link between genetic information and disease, so genetic information could be misleading and lead to fatalism.

In response to 4, nutrition labels are as potentially misleading as rough indicators of genetic risk. A healthy diet and lifestyle is a holistic concept while traffic light labels suggest that certain food or drink items are intrinsically bad for health. Consider now the consideration that genetic information is misunderstood due to a fatalistic attitude. Obviously, people may develop a fatalistic attitude with respect to their diet, for the reasons explored in 1b. So, traffic light labels, just as misunderstood genetic tests, may raise anxiety and fatalism about one’s health.

5. CONCLUSION

Obesity and salty (and fatty) food are risk factors for a wide range of chronic diseases including diabetes, heart disease, and several types of cancer (AIHW 2006; Flegal et al. 2007; Kim and Popkin 2006). But the same is true of genetic susceptibilities.

Here I have argued for the conditional proposition that if the “right not to know” applies to genetic information for multifactorial diseases, then it also applies to the information conveyed by traffic light labels. The argument relies on an analogy between the information about health risk provided in either case.

In conclusion, the concept of legitimate claim to avoid nutritional information, defended by Bonotti (in this volume), cannot be easily discarded by those public health experts and policy makers who take the “right not to know” genetic information seriously.

ACKNOWLEDGMENTS

The idea behind this paper was born during the 2013 MANCEPT workshop on “Food Policy and Political Theory” convened by Matteo Bonotti. The paper benefited from e-
tensive discussion with Matteo Bonotti and was presented at the “Mercoledì Filosofici del Maino” in Pavia, 16th April 2013, with the title “Etichette alimentari e il diritto di (non) sapere.” The author wishes to thank all the participants to that debate and Federico Zuolo in particular for a very fruitful (and in some cases extended) discussion. The author wishes to thank two anonymous referees for their insightful comments and the editors of the Kennedy Institute of Ethics Journal and Dr. Lee Young for extensive editing and help with the linguistic form. In spite of the best attempts by referees and colleagues to show me the flaws in my argument, I remain convinced of its validity and take full responsibility for it.

NOTES

1. Or similar labels, such as Daily Intake (DI).

2. The color “red” is a conventional indicator of danger, conveying the idea that inadequate nutrition is harmful. A signal of risk might evoke emotional reactions. A high content of fat, sugar, or salt is not represented as a neutral fact, but as a danger for health. So, traffic light labels information is information about risk (potential harm) and evokes negative emotions, at least by association.

3. If this were the case, one potential objection against traffic light labels would be that they are not particularly effective, or worse, misleading. Notice that this is not the gist of the argument against judgmental food labels in this paper. It is, however, the argument used most frequently by their detractors. Another argument not discussed in this paper is that like “nudges” more broadly, traffic light labels are forms of (paternalistic) deception, as they exploit unconscious mechanisms, leading to the shaping of choices through means other than rational persuasion. This can be characterized as a threat to autonomy (Hausman and Welch 2010).

4. Some reasons for this stance, analogous to those for not knowing nutritional information, are provided in the footnotes of the section on the value of choice. For autonomy-based arguments, see Bonotti, in this volume.

5. This emphasis on health outcomes is a common feature of arguments within public health, even justifying losses of freedom, conceived as non-interference. For instance, fluoridation of drinking water is considered a good public health measure because it has proven effective to improve dental health (CDC 1999), even if it reduces the (negative) freedom of citizens, by depriving them of the option to drink non-fluoridated water from the tap.

6. As Alan Gibbard (1990, 20) notes, in a state of full information about the details of food digestion you may lose any appetite for delicious food. It is hard to see how that could contribute to autonomy.

7. It might be objected that many consumers enjoy more what they eat if it is labeled as unhealthy (perversity effect). However, many other consumers
do not and their interests are also at stake. But suppose for the sake of the argument that all enjoy it. If so, we are discussing judgmental labels that lead to greater enjoyment, and therefore consumption, of unhealthy food, the proposal turns out to be objectionable on other grounds.

8. It could also be conceptualized as a restriction of valuable options. In virtue of judgmental labels, agents loose the option of buying and tasting unhealthy food without thinking about their health or without having feelings of guilt.

9. Notice that the having of these semi-automatic or passive attitudes in daily life can itself be part of a reflectively chosen plan of life and thus be required by (higher-order) autonomy.

10. Analogously, in the case of genetic testing, individuals may be considered better at predicting the optimal balance between the bliss of ignorance and rational life planning.

11. Analogously, in the case of genetic testing, not wanting to know how one is constituted genetically could be an act of self-expression or self-constitution.

12. Analogously, in the case of genetic testing, treating people as unable to decide how much genetic information to use may express disrespect for their agential capacities.

13. On an alternative policy, the letter is not colored but contains a picture of the disease or condition made more probable by the predisposition. If the reader thinks that the legitimate interest to avoid such letters takes priority over the possible public health improvement, then she ought to reach a similar conclusion in the case of “scary” food labels (those with the picture of a disease, which some groups are advocating).

14. The author wishes to thank an anonymous referee for raising objections 1, 2 and 3.

15. It might be objected that people get accustomed to images they see every day. In reply, this would reduce the effectiveness of the judgmental labels and here we are interested only in labels that are effective.

16. It might be objected that the reason the service was so cheap is that the information provided was so poor. That is correct, but, as argued above, the same is true of judgmental food label information.

REFERENCES


