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Nudge:
the gentle power
applied to health.
The obesity and
organ donation issues

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Nudge: the gentle power applied to health.

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ABSTRACT: Nudge is a behavioural, economic and political concept theorised in 2008 by the American academics R. Thaler and C.R. Sunstein. Since then, this theory has been applied by a lot of States and International Organizations throughout the World, to support their policies and increase their effectiveness. This essay analyses the application of Nudge in the Health and Wellbeing area, especially in the Nutrition field (fighting against obesity and overweight) and in the Organ donation field.

This work aims to highlight both the successful and the problematic aspects of this theory and, in the light of these results, it tries to explore the tricky question behind the Nudge concept: how far can we go without bans and mandates?

KEYWORDS: Nudging; Choice architecture; Hard Law; EU Health Policy; Obesity; Organ donation

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1. Introduction

This paper deals with the importance that Nudging could have and actually has with regards to the possibility to influence people's behaviour. In particular, we will focus on how behavioural insights along with the application of the Nudge concept should and can be used to promote a healthy lifestyle (fighting obesity) and to solve the crisis of human organs intended for transplantation.

In relation to the obesity problem, in the past twenty years, several national and international provisions have been adopted to solve or at least try to mitigate one of the main issues that affect our society.

According to the OECD¹, in 2015, 19.5% of the adult population and between 10%-31% (depending on the country of origin) of children were obese, while the WHO registered an increment of the obesity rate amounting to the triple as compared to the 1980s². The just mentioned International Organization itself has adopted several acts addressing both adults and children in order to invert this tendency, with the support of the EU and several States throughout the world. However, the results are not the ones expected. These negative outcomes show the necessity to change the approach and the perspective to face the problem.

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¹ OECD, *Obesity update*, 2017. (Available at: <https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf>).

² World Health Organization, Fact Sheet on *Obesity and Overweight*, 2018 (Available at: <https://www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight>) [Accessed 14 Apr. 2019].

In this first part, dedicated to the examination of the obesity problem, some practical examples of Nudge will be presented and analysed: from the disclosure of the amount of calories of one portion size at the restaurant to the reduction of sugar contained in the sugar's little envelopes at the bar.

The second part of the essay will deal with the importance and the necessity of an effective and coordinated plan to solve the problem of the shortage of organs for transplants, which is nowadays a central matter in health care debate.

In this section different legislative models and approaches towards organ donation will be presented, at a European Union level as well as at the level of the Member States. The regulation overview will then be followed by some factual examples of implementation of the Nudge method, by the European Commission in its health policies and, at a national level, by the UK Behavioural Insights Team.

The main point of the work is to try to estimate which are the benefits of this practice and which may be the pitfalls hiding behind it.

2. What is Nudging

Before addressing the definition of Nudge, some semantic clarification is needed. Sometimes, the terms «behavioural Insights» and «Nudging» are used as if they have the same meaning and the same intent, but this can be confusing.

This misleading tendency started to spread right after the publication of Thaler and Sunstein' book³ and it has become so common that the UK Behavioural Insights Team has ended up being known under the unofficial name of «UK Nudge Unit»⁴.

Although connected, these concepts represent slightly different things. Behavioural Insights are defined as the result of a multidisciplinary research and they are used to understand how humans behave and make decisions in everyday life and can be integrated with other traditional forms of intervention, such as regulation and incentives⁵.

Whereas, with Nudge it is meant «any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives»⁶. The main aim of this approach is to kindly push people to take the best decisions for themselves instead of forcing or influencing them through the use of legislation or the use of any kind of incentive to reach the same purpose.

³ R. THALER, C.R. SUNSTEIN, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, USA, 2008.

⁴ <https://www.gov.uk/government/organisations/behavioural-insights-team> (21/04/2019).

⁵ European Commission, *Behavioural Insights Applied to Policy*, European Report, 2016 (Available at: http://publications.jrc.ec.europa.eu/repository/bitstream/JRC100146/kina27726enn_new.pdf) [Accessed 21 Apr. 2019].

⁶ R. THALER, C. R. SUNSTEIN, *op. cit.*, 6.

Nudge is a low cost, evidence-based strategy used to design policies that maintain and preserve the freedom of choice⁷. Nudge explores smart ways to improve the general welfare of society and our individual lives in the variety of values that we all share, such as health, wealth and happiness⁸. To really understand what Nudge is, it is necessary to analyse two essential aspects of this policy-making strategy, by explaining what is meant with «Libertarian Paternalism» and what's the role of a «Choice Architect».

«Libertarian Paternalism» is an expression which combines two oxymora and it represents the authors' attempt to combine two essential parts of the Nudge method: the libertarian aspect guarantees people's right to take their own choices in a free and independent way, in any context; the paternalistic aspect, on the other hand, seeks out to gently influence people's behaviour in the choice-making process in order to make their lives longer, healthier, and better⁹.

The «Choice Architect» is a public or private figure, who is legitimate to try to influence the social-economical context on the way to a healthier lifestyle and to a more sustainable social environment for the entire community.

Taking into account the public figure – for instance the public administration – it can be both a great and poor decision maker depending on the circumstances. If the purpose of the intervention is to nudge the citizens to do something that is known to be desired by the majority, for example push them to use the trash bins instead of leaving the rubbish on the ground in public places, the public administrations are in the position to adopt measures that can effectively contribute to have clean cities without resort to the use of legislation¹⁰. However, when it comes to take decisions that appear necessary, but in relations to which the understanding of what the community wants is not evident, the public figures are not always the most appropriate subjects. In these cases, legal acts could be the solution.

Considering the private figures, they are more frequently aware of the needs and the wishes of the group of people to whom they address their actions. If it is taken into consideration the employer, just to mention an example, he is in the position of nudging his employee in a more effective way as he can easily be aware of their behaviours: he can put motivational quotes on the stairs in order to push the workers to use them instead of the elevator when it has been registered a high use of the latter; he can provide the vending machines with healthy foods and so on.

To sum up, considering the brief analysis above presented, it can be said that Nudging is one of the several behavioural techniques, studied and developed in the field of Behavioural sciences, a multidisciplinary

⁷ R. THALER, C. R. SUNSTEIN, *op. cit.*, 5.

⁸ K. WHYTE, E. SELINGER, J. SADOWSKI, A. CAPLAN, *Nudge, nudge or Shove, Shove — The Right Way for Nudges to Increase the Supply of Donated Cadaver Organs*, in *The American Journal of Bioethics*, 12, 2, 2012, 31-38. (Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2005972) [Accessed Apr. 2019].

⁹ R. THALER, C. R. SUNSTEIN, *op. cit.*, 5.

¹⁰ In Copenhagen, footsteps have been painted on the footpath to nudge tourists and citizens to throw the garbage into the trash bins.

branch of science, that uses observation and experimentation to analyse the processes underlying human behaviour.

This academic field has challenged and criticised the neo-classical economic theory, according to which, when making decisions, individuals take into account all the available information and make rational and consistent decisions over time. On the contrary, behavioural researchers have revealed that, during the choice-making process, people do not behave in a coherent and logical way, in practical terms «similarly to Homer Simpson, we think much less than we think we think»¹¹. The results show that individuals have conflicting long-term and short-term preferences, that they are more concerned to avoid potential losses rather than make profits and they struggle in contexts where they are provided with too much information or where they face too many choices¹². Therefore, «people's current choices cannot reasonably be claimed to be the best means of promoting their well-being»¹³.

The theory object of the present work has not been exempted from critics, one of which regards the idea of transparency in the application of nudge. It has been pointed out that, since there are different types of nudging, the implementation of this principle is not always the best solution and it could lead to an «ethical paradox»¹⁴ if too strictly applied. There are indeed nudge interventions that, if disclosed to the public, will not reach the hoped results, but, since they are not in accordance with the principle of transparency, they – according to Sunstein and Thaler – should not be put into practice neither by public nor by private choice architects. An example can be found in the authors' book, where they present the technique adopted in the Chicago's Lake Shore Drive to induce drivers to reduce their speed¹⁵: if the drivers knew that there was an optic illusion *ad hoc* created, they would not slow down. Thus, the guidelines given by Thaler and Sunstein lead to a situation in which the choice architects must decide between respecting the principle of transparency, neglecting the health, wealth and happiness of those they could influence, or breaking the given constraints.

Other critics will be presented later on in this paper (§11).

The behavioural approach has gained popularity in the past years and has been implemented as an important policy-design tool by many public and private bodies, throughout the World.

¹¹ A. ALEMANNI, *The Future of Behavioural Change: Balancing Public Nudging vs Private Nudging*, 2015.

¹² European Commission, *Behavioural Insights Applied to Policy*, cit.

¹³ R. THALER, C. R. SUNSTEIN, *op. cit.*, p. 7.

¹⁴ P.G. HANSEN, A.M. JESPERSEN, *Nudge and the Manipulation of Choice. A Framework for the Responsible Use of the Nudge Approach to Behaviour Change in Public Policy*, in *European Journal of Risk Regulation*, 4, 2013.

¹⁵ R. THALER, C.R. SUNSTEIN, *op. cit.*, 37.

3. The obesity problem: WHO data and worldwide acts

According to the WHO, «overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health»¹⁶. In order to classify an adult as underweight, normal-weight, overweight or obese, the doctors and researchers apply the BMI (Body Mass Index), which is a simple index that is calculated dividing the person's weight in kilogram by the square of their height in meters. When the BMI is greater than or equal to 25, the person is classified as overweight, if the index is greater than or equal to 30, the person is classified as obese¹⁷. As mentioned in the introduction, the obesity rate increased in the past thirty years of the triple among adults and there are more and more children that are overweight or obese all over the world. As stated by the WHO's Childhood Obesity Report, in just forty years the number of children between five and nineteen years old affected by obesity has risen from 11 million to 124 million¹⁸ mostly due to a high exposure of children to an unhealthy environment and powerful marketing. If this trend will be confirmed in the future, the OECD forecasts a steady increase of the obesity rate worldwide however, comparing each States' increment, the more severe will be in the United States (47%), Mexico (39%) and England (35%)¹⁹. Obesity, as overweight, is caused by an energy imbalance, which means that people eat more than what they consume, caused by an increment of the consumption of energy-dense foods (foods that are high in calories because high in fat) and a sedentary life²⁰. This illness leads to physical and psychological issues, but most importantly it can increase the risk of developing several noncommunicable diseases (NCD) such as cardiovascular diseases, cancer and diabetes²¹ affecting not only the life of the ill and the one of his or her family members, but also the national medical system considering the high cost supported by the State for treatments.

The most important international organizations, the European Union and the States themselves have adopted provisions of soft-law and hard-law with the aim of eradicating this health issue that affects the society.

3.1. The WHO

The Regional office for Europe of the World Health Organization (WHO), the specialized agency of the United Nations that is concerned with international public health, adopted in 2016 the *Action Plan for the Prevention and Control of Noncommunicable Diseases in the WHO European Region* (in force for the period 2016-2025), a non-mandatory proposal whose aim is to avoid premature deaths and reduce (and

¹⁶ World Health Organization, Fact Sheet on *Obesity and Overweight*, cit.

¹⁷ *Ibid.*

¹⁸ World Health Organization, *Taking Action on Childhood Obesity*, 1, 2018 (Available at: <https://apps.who.int/iris/bitstream/handle/10665/274792/WHO-NMH-PND-ECHO-18.1-eng.pdf>).

¹⁹ OECD, *Obesity Update*, cit., 6.

²⁰ World Health Organization, Fact Sheet on *Obesity and Overweight*, cit.

²¹ <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/obesity/obesity> [Accessed 14 Apr. 2019].

eventually eliminate) NCDs, encouraging different kind of integrated actions and provisions in various areas to promote health²².

Regarding what is relevant for the current topic, the WHO suggested two main actions to improve healthy eating: new marketing policies and a product reformulation to reduce the consume of salt, *trans* and saturated fat and sugar among children and adults.

As regard the first action, it has been noticed that due to the high exposure to pervasive marketing of unhealthy food and beverages, pair with the increasing ease of their availability and affordability, the consumption of these products has drastically raised affecting the quantity of fruits, vegetables and other recommended foods (and water should be added as well) consumed. The action proposed to face the problem is to «adopt strong measures that reduce the overall impact on children and adults of all forms of marketing (including online) of foods high in energy, saturated fats, *trans* fats, free sugars and/or salt, and consider and implement a range of economic tools that could discourage the consumption of such foods and improve the affordability and availability of a healthy diet, including, where appropriate, taxes on sugar-sweetened beverages»²³.

Considering the suggestion of product reformulation, the goal is to substitute the *trans* and saturated fats contained in the most consumed foods with unsaturated fats and reduce the quantity of sugar and salt through the development and implementation of national policies to balance the different types of fat above mentioned within food products and ban *trans* fats from the food supply, all in the context of improvements to overall nutritional quality of food products; evaluate the possible measures to reduce free sugars in processed foods and beverages and improve the interpretation of front-of-pack labelling²⁴. However, as shown in the report *Better food and nutrition in Europe: a progress report monitoring policy implementation in the WHO European Region*²⁵, in the period 2010-2014, there has been an increment of the overweight population even though it should be considered that, according to the predictions presented, the situation will improve. Moreover, since the act is not mandatory, the States are implementing the actions differently in terms of depth and breadth of policies slowing down the results.

3.2. The European Union

Moving the attention to the European Union, it is possible to identify several acts – directly or indirectly linked to the obesity issue – both of soft law, such as the 2007 White Paper *A Strategy on Nutrition*,

²² WHO, *Action Plan for the Prevention and Control of Noncommunicable Diseases in the WHO European Region*, 2016. (Available at: http://www.euro.who.int/_data/assets/pdf_file/0008/346328/NCD-ActionPlan-GB.pdf).

²³ *Ivi*, 11-12.

²⁴ *Ibid*.

²⁵ WHO, *Better Food and Nutrition in Europe: progress report monitoring policy implementation in the WHO European Region*, 5, 2018. (Available at: http://www.euro.who.int/_data/assets/pdf_file/0005/355973/ENP_eng.pdf).

Overweight, and Obesity-related health issues, and hard law like the Regulations n. 1924 of 2006 and n. 1169 of 2011.

Briefly analysing the White Paper, its aim is to reduce illnesses due to poor nutrition, overweight and obesity. The two main goals of this document are having better-informed consumers and making the healthy option available²⁶. Starting from the second purpose cited, the Commission, within the Common Agricultural Policy (CAP), had among other changes reformed the Common Market Organisation (CMO) for fruit and vegetables «which is aimed at promoting consumption within specific settings, such as schools»²⁷. It was proposed to allow the distribution to school and other centres attended by children of the surplus production of fruits and vegetables and to «increase the EU co-financing to 60% for the promotion of projects aimed at young consumers»²⁸. Linked to this second aim, it is important to notice that in 2009 the Commission launched the School Fruit and Vegetables Scheme (which has been joined with the School Milk Scheme in 2017), a project whose aim is to encourage schools to distribute among children fresh fruits and vegetables according to their seasonality, variety, availability and sustainability and to forbid these institutions from the possibility to distribute added sugars, salt and fat (even if some exceptions are allowed)²⁹. The budget for the scheme is € 150 million, even though from 2017 the Commission fixed the amount per country³⁰. It is important to notice that the participation to the program is on a voluntary base and that there are relevant differences between the States that joined the project considering the quantity of fruits and vegetables distributed even though the funding received is more or less the same³¹.

Considering the first goal of the White Paper, to have better informed consumers, «this concerns, on the one hand, access to clear, consistent and evidence-based information when deciding which foods to buy and, on the other, the wider information environment which is in turn shaped by cultural factors, such as advertising and other media»³². The two main documents mentioned by the Strategy in order to achieve the purpose are the Regulations 2006/1924³³ on nutrition and health claims made on food and 2011/1169³⁴

²⁶ European Commission, White Paper on *A Strategy for Europe on Nutrition, Overweight and Obesity related health issues*, 5-7 2007. (Available at: http://ec.europa.eu/health/archive/ph_determinants/life_style/nutrition/documents/nutrition_wp_en.pdf).

²⁷ *Ivi*, 6.

²⁸ *Ibid*.

²⁹ School fruit, vegetables and milk schemes (Available at: https://ec.europa.eu/agriculture/school-scheme_en).

³⁰ European Union budget per country – 2019/2020 school year (Available at: https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/key_policies/documents/annex-c2019-2249_en.pdf).

³¹ European Union budget per country – 2016/2017 school year (Available at: <https://ec.europa.eu/agriculture/sites/agriculture/files/sfs/documents/sfs-fact-figures-2016-2017.pdf>).

³² European Commission (2007), White Paper on *A Strategy for Europe on Nutrition, Overweight and Obesity related health issues*, cit., 5.

³³ Regulation no. 1924/2006 of the European Parliament and of the Council on nutrition and health claims made on foods, 20 December 2006 (Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32006R1924&from=en>).

³⁴ Regulation no. 1169/2011 of the European Parliament and of the Council on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004, 25 October 2011 (Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32011R1169&from=EN>).

on the provision of food information to consumers. These acts – the only ones that are mandatory on the European Union level linked to the obesity issue – do not directly address the problem since the main focus is the fair circulation of products within the single market, however they establish rules that can affect the way people perceive a certain food, helping to distinguish between healthy and unhealthy foods. The Regulation 2006/1924, which, as above-mentioned, deals with the nutrition and health claims made on food, aims to avoid claims that can distort the perception of a certain food by the normal consumer prohibiting statements that «encourage or condone excess consumption of a food; state, suggest or imply that a balanced and varied diet cannot provide appropriate quantities of nutrients in general»³⁵.

The Regulation 2011/1169 deals with that information whose aim is to protect «the consumer's health and interests by providing a basis for final consumers to make informed choices and to make safe use of food»³⁶. The information here considered concern the mandatory particulars that must be «available» and «easily accessible» (art. 12.1) and marked in a place so as they are «easily visible, clearly legible and indelible» (art. 13.1). The third section of the present legal document deals with the nutrition declaration which provides information as regard the energy values (kcal/kJ) and the amount of fat, carbohydrate, sugars, protein and salt³⁷ per 100g or per portion. This information is crucial, linked to the obesity issue, for a proper consumption of food (or beverage) since a proper understanding of the quantity of calories and the composition of the product in terms of macronutrients is essential for a balanced and healthy diet. Most of the population, however, does not know how to read and put into practice this information since there is a lack of specific knowledge among consumers who «get easily confused by detail and scientific wording of the nutritional information»^{38,39}.

3.3. Denmark

In order to face the obesity issue, several countries throughout the world adopted taxation as a mean to reduce the consumption of targeted products high in sugar and (or) fat. Examples can be found in Mexico (soft drink and junk food tax), Hungary (tax on food high in fat and sugars), France (tax on soft drink) and

³⁵ Regulation no. 1924/2006 of the European Parliament and of the Council on nutrition and health claims made on foods, cit.

³⁶ Regulation no. 1169/2011 of the European Parliament and of the Council on the provision of food information to consumers, 25 October 2011, art. 3.1, *General objectives*, cit.

³⁷ Regulation no. 1169/2011 of the European Parliament and of the Council on the provision of food information to consumers, 25 October 2011, art. 1, lett. *a* and *b*, cit.

³⁸ H.C. M. VAN TRIJP, *Consumer understanding and nutritional communication: key issues in the context of the new EU legislation*, in *European Journal of Nutrition*, 48, 2009.

³⁹ It should be noticed, however, that the comprehension of the food labelling differs from country to country and it depends on the age, gender and the social grade of the consumer in addition to the type of product that he or she is going to buy. It has been underlined that the youngest and those who are less educated tend to have a lower understanding of the nutritional labels and that women are more informed than men. For more specific details, see KLAUS G. GRUNERT, LAURA FERNÁNDEZ-CELEMÍN, JOSEPHINE M. WILLS, STEFAN STORCKSDIECK GENANNT BONSMANN, LILIYA NUREVA, *Use and understanding of nutrition information on food labels in six European countries*, in *Journal of Public Health*, 18, 2010.

Denmark (tax on saturated fat), just to mention some. Focusing on the Danish case, the Government introduced through a mandatory act the so-called fat tax, a tribute imposed on those products meant for human consumption that contain a quantity of saturated fat higher than 2.3g on 100g. The *ratio* of this type of taxation is to «make ‘bad’ food more expensive, ‘good’ food relatively less so» in order to induce people to «shift at least some of their purchases to those healthier options»⁴⁰. The fat tax entered into force in October 2011, but it was abolished less than two years later, in January 2013. The changes that the provision generated in the nutrition quality of the diet and in the saturated fat consumption were really low as shown in the study presented in *The Effects of the Danish Saturated Fat Tax on Food and Nutrient Intake and Modelled Health Outcomes: an Econometric and Comparative Risk Assessment Evaluation*⁴¹ since the tax resulted in a 4% reduction in saturated fat intake among the Danish people who, moreover, used to travel to Germany or Sweden to buy the same products at a lower price. It has also been noticed that the tax had unintended consequences such as an increment in the amount of salt consumed among older individuals and a decrease in fruit consumption among young people.

According to Jørgensen, Pisinger and Toft, authors of the article *Tax on saturated fat- does it work?*⁴², the failure of the provision is due to three elements: the fact that the taxation was introduced by the Ministry of Finance primarily for finance tax reliefs and only secondary for health purpose; the lack of collaboration with public health researchers; the construction of the tax in a way that what was paid for a product did not necessarily reflect the amount of saturated fat actually contained in the final product, fact that made it easy for food industries to ridicule this provision. The tax, indeed, presented several options to determine the taxable amount: public information, technical analysis of the specific food and nutritional labelling.

However, it should be noticed that the analysis suggests «an estimated 123 averted deaths per year, of which more than 80% could be attributed to averted deaths from cardiovascular disease».

3.4. The USA

Moving our attention to the United States, where the obesity rate in 2016 was almost 40% among the adults⁴³, the Department of Agriculture (USDA) and the Department of Health & Human Services (HHS) play an important role in fighting obesity. Under the 1990 National Nutrition Monitoring and Related Research Act, the above-mentioned Departments must jointly publish a report containing nutritional and dietary information and guidelines for the general public every five years, the *Dietary Guidelines*. These Guidelines

⁴⁰ A. ALEMANNI, I. CARREÑO, *Fat Taxes in the EU Between Fiscal Austerity and the Fight Against Obesity*, in *European Journal of Risk Regulation*, 70, 2016.

⁴¹ S. SMED, P. SCARBOROUGH, M. RAYNER, J. D. JENSENS, *The effects of the Danish saturated fat tax on food and nutrient intake and modelled health outcomes: an econometric and comparative risk assessment evaluation*, in *European Journal on Clinical Nutrition*, 70, 2016, 1-6.

⁴² T. JØRGENSEN, C. PISINGER, U. TOFT, *Tax on saturated fat- does it work?*, in *European Journal on Clinical Nutrition*, 70, 2016, 867-868.

⁴³ *Adult Obesity Facts* (Available at: <https://www.cdc.gov/obesity/data/adult.html>) [Accessed 19 Apr. 2019].

are «designed for professionals to help all individuals [...] consume a healthy, nutritionally adequate diet»⁴⁴. In the Executive summary⁴⁵, the five main principles are presented: 1. Follow a healthy eating pattern across the lifespan; 2. Focus on variety, nutrient density, and amount; 3. Limit calories from added sugars and saturated fats and reduce sodium intake; 4. Shift to healthier food and beverage choices; 5. Support healthy eating patterns for all. Even though these principles are explained by a scientific approach not understandable for everyone in the Guide, they are known by most of the individuals, maybe in different terms, and however barely applied. The HHS also adopted, in 2011, a *Guide to Strategies to Increase the Consumption of Fruits and Vegetables*⁴⁶ whose aim is, as the title itself suggests, the incrementation of consumption of fruits and vegetables among children and adults through the use of ten different strategies. Both these documents, even if different from each other in several aspects (an example can be seen in the people addressed: the Guideline is written for experts while the Guide is directed to policy makers and program managers), are not mandatory and do not directly influence people behaviours, requiring instead the mediation of a third party that, in various ways, limits the possibility for the population to freely choose the best option for themselves.

3.5. Philadelphia, Pennsylvania

In the United States, as in Europe, several States introduced forms of taxation on sugary beverages to diminish the quantity consumed. An example can be found in Pennsylvania where, in June 2016, in Philadelphia, the City Council introduced the Sugar-Sweetened Beverage Tax⁴⁷, a tribute «imposed upon each of the following: the supply of any sugar-sweetened beverage to a dealer; the acquisition of any sugar-sweetened beverage by a dealer; the delivery to a dealer in the City of any sugar-sweetened beverage; and the transport of any sugar-sweetened beverage into the City by a dealer. The tax is imposed only when the supply, acquisition, delivery or transport is for the purpose of the dealer's holding out for retail sale within the City the sugar-sweetened beverage or any beverage produced therefrom»⁴⁸. As specified in §19-4101, for sweetened beverages the document refers to any non-alcoholic beverage that lists sugar or any other sweetener as an ingredient (it is not relevant if the sweetener is natural, zero

⁴⁴ USDA, *Dietary guidelines for americans eighth edition*, xi, 2016. (Available at: https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf).

⁴⁵ *Ivi*, xii.

⁴⁶ National Centre for Chronic Disease Prevention and Health Promotion (2011), *The CDC Guide to Strategies o Increase he Consumption of Fruits and Vegetables*, (Available at: <https://www.cdc.gov/obesity/downloads/strategies-fruits-and-vegetables.pdf>).

⁴⁷ Ordinance Amending Title 19 of The Philadelphia Code, entitled *Finance, Taxes and Collections*, by adding a new Chapter 19-4100, entitled *Sugar-Sweetened Beverage Tax*, under certain terms and conditions (Available at: <https://www.phila.gov/media/20170209150802/CertifiedCopy16017601-1.pdf>).

⁴⁸ *Ivi*, §19-4103 *Imposition and Rate of the Sugar-Sweetened Beverage Tax* (Available at: <https://www.phila.gov/media/20170209150802/CertifiedCopy16017601-1.pdf>).

calories, or the common glucose). As the Fat Tax in Denmark, the Sugar-Sweetened Beverage Tax has not been established with the purpose of fighting against obesity – or, at least, not as its main goal – but to help fund pre-kindergarten programs, parks, libraries and other services⁴⁹. In a study reported by the National Bureau of Economic Research working paper cited by the Mathematica Policy Research⁵⁰, it has been pointed out that the «Philadelphia’s tax on sweetened beverages did not substantially reduce children’s consumption of such [sweetened] beverages overall [and that] adults reduced their consumption of regular soda, but not of sweetened beverages overall»⁵¹. Moreover, the authors of the above-mentioned paper stated that consumers, after the introduction of the imposition, increased the purchases of the taxed beverages outside the city.

The several provisions presented are just some examples on how the public institutions, on different levels, are facing the obesity issue – directly or indirectly – through the use of legislation, however without leading to meaningful improvement. At this point, a different approach seems necessary and compelling.

4. Practical applications of Nudging linked to food

Given that the obesity rate is still increasing and the legal provisions are not leading to the results needed, some countries changed the mean following the same purpose: they put into practice the theory of Nudging. Before analysing some examples on how Nudging has influenced the eating behaviours of consumers, it is important to take into consideration two aspects of human conduct:

- a. people face self-control issues when choices and their consequences are separated in time⁵² so that they need nudges especially for decisions that does not give immediate feedbacks;
- b. (strictly related to food) people tend to eat more and, in general, to change their eating habits when they are in company⁵³.

While what presented *sub b* will be discussed later, a brief reflection on the first point seems necessary. The procedure through which the behaviours are processed is based on a double system: the Reflective System and the Automatic System⁵⁴. The former is goal-oriented and the more thoughtful one, the latter is instinctive and usually is the one most involved in the decision-making process for the situations presented *sub a*. The simplest example can be found in the choices taken at the grocery shop: everyone knows that it would be better to buy carrots instead of chips or strawberries instead of chocolate, however, since the

⁴⁹ JOHN BACON, *Push for soda taxes across the USA notches win in Philly*, in *USA Today*, 18 July 2018 (Available at: <https://eu.usatoday.com/story/news/nation/2018/07/18/philly-soda-tax-survives-court-challenge/796104002/>) [Accessed 19 Apr. 2019].

⁵⁰ J.B. MORGAN, *Study Documents Purchasing, Consumption Impacts of Philadelphia’s Sweetened Beverage Tax*, in *Mathematica*, 17 September 2018 (Available at: <https://www.mathematica-mpr.com/news/study-documents-purchasing-consumption-impacts-of-philadelphias-sweetened-beverage-tax>) [Accessed 19 Apr. 2019].

⁵¹ *Ibid.*

⁵² R. THALER, C.R. SUNSTEIN, *op. cit.*, 75.

⁵³ *Ivi*, 64.

⁵⁴ *Ivi*, 19.

consequences in terms of weight gain of these bad decisions will not show immediately, the Automatic System prevails on the Reflective one pushing us to choose what gives pleasure immediately. Nudging, in these situations, can help.

In this paragraph examples on how behavioural economics has been applied to face the obesity issue in the US, UK and Italy will be presented.

4.1. The USA

In the USA, Feeding America, one of the most important organizations for food banks whose main aim is to provide food to people in need, cooperated with the Cornell University's Center for Behavioral Economics in Child Nutrition Programs (BEN) to evaluate how the use of Nudging could influence the food choices in favour of the so called "Foods to Encourage"⁵⁵. According to this organization a nudge is «a subtle environment change in a food distribution setting, designed to make a healthy choice the easy choice» and it presented nine types of intervention in *The Power of Nudges: Making the Healthy Choice the Easy Choice in Food Pantries*⁵⁶. This report, according to which Nudging has been really effective since the clients who took Food to Encourage (F2E) increased by 46%, suggested that the best ways to push people to raise the amount of those foods who are considered the most desirable to be eaten for a healthy life are: order, salience, convenience, packaging, abundance, signage, nutrition labelling, order forms and multiple exposures⁵⁷. The types of interventions that led to the best results are multiple exposure and signage. As regard the former, it consists in «increasing the number of times a client has a chance to choose a particular F2E item that the food pantry may want to promote»⁵⁸. The experiment⁵⁹ linked to this technique consisted in the multiple exposure of whole wheat bread, which was set at the beginning and at the end of the food pantry distribution line. It has been registered a 90% increment in the likelihood that consumers took whole wheat bread and a 160% increment on the number of loafs distributed.

For what concern the signage, which is defined as the «displaying [of] a poster in the waiting area that conveys the average consumption of F2Es among members of the surrounding community or subgroup»⁶⁰, it was applied to oatmeal⁶¹. The experiment consisted in putting a shelf tag stating "Oatmeal fills you

⁵⁵ Feeding America, *Feeding America's Food to Encourage Background*, 2015. (Available at: http://hungerandhealth.feedingamerica.org/wp-content/uploads/legacy/mp/files/tool_and_resources/files/f2e-background-detail.v1.pdf).

⁵⁶ Feeding America, *The Power of Nudges: Making the Healthy Choice the Easy Choice in Food Pantries*, 6, 2016. (Available at: http://hungerandhealth.feedingamerica.org/wp-content/uploads/legacy/mp/files/tool_and_resources/files/fea-16-002-fea-nudgesreport-final.pdf).

⁵⁷ *Ivi*, 7.

⁵⁸ *Ibid*.

⁵⁹ *Ivi*, 9.

⁶⁰ *Ivi*, 7.

⁶¹ *Ivi*, 10.

longer” written both in English and Spanish next to the oatmeal. The Nudge increased the likelihood of clients to take this product by 202%, probably because people who find themselves in a situation of food insecurity are more attracted by those items which help them feel satiated for a longer period.

Feeding America made other six experiments that, conversely from the two above-mentioned, did not reach a significant increment of consumption of one or more Food to Encourage, above all because those products (such as carrots and onions) were already consumed by the buyers considered in the experiment.

4.2. The United Kingdom

Moving our attention to Europe, one of the most important examples of Nudging as a mean to improve health can be found in the UK where, from 2010, the Behavioural Insights Team⁶² works in partnership with the governments, local authorities, businesses and charities to improve people’s lives and public services through the application of Nudging. Relating to what is relevant for the topic of the present work there are two main examples that could be considered. The first one⁶³ is a research project whose aim is to improve the health and wellbeing of employees by helping them make the healthier choices overcoming the bias that, for instance, bring us to buy the less healthy option even though our intention before finding ourselves in front of the factual choice was to opt for the more nourishing one. The BI Team suggested to the employers to create a system that allows the employees to pre-ordering their meal right after breakfast or at the beginning of the working-day: in this way bias is less likely to derail the workers’ choice.

As regard the second example, in the wake of a collaboration between the Behavioural Insights Team and Guy’s and St Thomas’ Charity to fight against childhood obesity, the British government launched, in 2018, the *Calorie reduction: The scope and ambition for action*, a programme that invites the food industries to reduce by 20% the calories contained in foods addressed to children between 2019- 2024. The programme, which covers several products like «ready meals, pizzas, meat products, savoury snack products, sauces and dressings, prepared sandwiches, composite salads and other “on the go” foods including meal deals»⁶⁴, presents two main actions in order to reach the purpose: reformulation of product recipes and reduction of the portion size. Considering the great results obtained by the salt reduction programme, it has been noted that it is important to take actions aimed at changing the entire food chain and to ban the possibility to reintroduce what has been eliminated (in this case sugar and fat) to achieve the hoped outcome.

While the product recipes reformulation is only indirectly influencing people behaviours, since it is up to the industries to adopt the proper measures – even though people can be nudged to buy the new healthier

⁶² <https://www.bi.team/> [Accessed 20 Apr. 2019].

⁶³ M. SANDERS AND S. BEATHNACH, *Calling all employers looking to improve staff health & wellbeing*, 2018, (Available at: <https://www.bi.team/blogs/calling-all-employers-looking-to-improve-staff-health-wellbeing>) [Accessed 20 Apr. 2019].

⁶⁴ Public Health England, *Calorie reduction: The scope and ambition for action*, 2018, 6 (Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685359/Calorie_reduction_The_scope_and_ambition_for_action.pdf).

product – the reformulation of the portion size is perfectly suitable for being object of Nudging, especially considering what stated above as regard the tendency of people to eat more while in company. A study suggested that people consume more food and drinks when offered in a larger portion-size than what they would usually eat⁶⁵. If both the large and small portion-sizes are offered in a restaurant or fast food, people could be kindly pushed to choose the second option for example by disclosing the calories (and, for the more expert, the macronutrients) per portions or simply by making the smaller-size alternative the default option (people indeed tend to be inert and go along with the status quo⁶⁶ as will be better presented in the Italian case).

4.3. Italy

In Italy, the Nudging technique is a new approach that is slowly being applied in several fields such as reducing the food waste proposing automatically the doggy bag to the clients⁶⁷ or implicitly telling the customers they don't need a straw for their drinks⁶⁸ to cut the single-use of plastic. In 2016, the team Nudge Italia⁶⁹ put into action a project with the aim of reducing the amount of sugar consumed in a bar in Catania through the use of the default option. As mentioned above (§4.2), people tend to stick to the option offered instead of taking an active step and decide for themselves. This conduct can be exploited by the choice architect who, selecting the most appropriate option as the default one, can nudge people to take the best choice nevertheless without banning other possible solutions. The experiment presented in the Sicilian City consisted in diminishing the quantity of sugar contained in every sugar's little envelope from 7g to 4g. It was observed that people chose the quantity of sugar for their coffee based on the number of the envelopes, without questioning how many grams were contained in each. The results of the test, which lasted an hour a day for six days, showed that the number of sugar's package consumed by each customer did not change entailing a significant reduction of the sugar consumed (from 5,91g to 3,09g per person). Since the quantity of sugar consumed worldwide has tripled in the past fifty years⁷⁰ and an excessive sugar consumption is likely to rise several NCDs⁷¹, this experiment should be considered by the authorities and sugar's envelopes distributors in order to reduce the quantity of product offered and so consumed.

⁶⁵ *Ivi*, 25.

⁶⁶ R. THALER, C.R. SUNSTEIN, *op. cit.*, 7-8.

⁶⁷ M. VACCARO, *Il nudge contro lo spreco alimentare: la psicologia al servizio del benessere sociale*, 2017 (Available at: <https://www.stateofmind.it/2017/12/spreco-alimentare-nudge/>) [Accessed 21 Apr. 2019].

⁶⁸ Nudge Italia Blog (Available at: <http://www.nudgeitalia.it/blog/index.php?id=183092357383>) [Accessed 21 Apr 2019].

⁶⁹ The team is a research group established within the European Institute for the Study of Human Behaviour (IESCO), an Italian non-profit organization.

⁷⁰ R.H. LUSTIG, L.A. SCHMIDT, C.D. BRINDIS, *Public health: The toxic truth about sugar*, in *Nature*, 2012 (Available at: <https://www.nature.com/articles/482027a>) [Accessed 20 Apr. 2019].

⁷¹ *Ibid.*

5. Is nudging itself enough? The importance of food education

As presented in the first part of the present work, obesity is a big issue for our society and the legal provisions adopted by the international organizations and by the States are not capable of affecting the situation in an incisive way. However, even if Nudging can be seen as a possible solution, it is for sure not the absolute mean to provide the final solution to the problem.

As shown in the examples, people are encouraged to choose a certain type of food (USA), the smaller portion-size or the renewed product (UK) or to be inert and be guided by the choice architect in choosing the default option (Italy), but why? Why is it better to eat whole wheat bread instead of the common white bread? Why is it better to eat boiled potatoes instead of French fries, since they both are the same tuber cooked in different ways? Education is a crucial element in the fight against obesity. If people are not informed, both Nudging techniques and legal provisions will not overcome this issue since it should not be taken for granted that the subjects addressed will gain the best from the choices made. Considering, for example, the encouragement to eat more vegetables, although in general this is a great suggestion and the majority is aware that eating more vegetables is good for the overall health, still if the vegetables bought under the application of Nudging are then systematically fried or cooked with butter, the benefits that could have been obtained vanish. And again, if consumers are not put in the position to have a proper understanding of the nutritional labelling, the obligation of writing claims that are understandable and not misleading by the average buyer are irrelevant. The necessary information that will lead people to make healthy choices and improve their overall health cannot be provided without a multisectoral approach. It is crucial that the public administrations work together in order to adopt policies that, for instance, involve schools or other similar educational institutions, hospitals and the community in general to promote the importance of a balanced diet by explaining the reasons behind what are presented as “healthy choices”. An example, which not only encourages school to distribute more fruits and vegetables, but also aims at promoting healthy habits among children, can be seen in Milan (Italy), where, in 2016, the Representatives of the European Commission in Italy promoted the project “Healthy food e l’Europa”, linked to the above-mentioned School Fruit and Vegetables Scheme (§3.2). The aim of this programme, addressed to 500 students of four different schools, was to make students aware of the importance of a healthy diet, underlying how what we eat affects our overall health and the risks strictly linked to the excessive consumption of junk food. In this workshop, the basics of what macronutrients are were taught⁷². Focusing the attention on the understanding of the nutritional labels and claims, one aspect that should be considered is the role that advertising has in the decision-making process, particularly when it comes to

⁷² Italia – European Commission, *Educazione alimentare – cibo sano per le scuole*, 2016. (Available at: https://ec.europa.eu/italy/node/992_it) [Accessed 20 Apr. 2019].

food. In the European Union, some legal acts⁷³ discipline food advertising especially with the aim of protecting children who are the most easily influenceable category in this field⁷⁴. Industries' advertising, indeed, is one of the biggest opponents for the success of the Nudging techniques mainly because it has a huge impact in the choice of the consumers who are driven to buy a particular product because of the colour of the packaging⁷⁵ or because of the nutritional claims. Considering for example the claim "sugar free"⁷⁶ on the candy's packaging, even though it is perfectly legal if the ingredients contained are not monosaccharides and disaccharides, but polyols⁷⁷, still it may influence the results of any Nudging intervention intended to reduce the consumption of sugar if consumers are not aware of the fact that the common candies can only be made from sugar regardless of its chemical composition. Moreover, if there is not a basic knowledge on what the macronutrients are and how to create a balanced nutrient-dense meal, pushing people to eat more whole wheat bread will not improve their wellbeing if, for instance, it will then be eaten as side dish of pasta, since this combination leads to an excessive consume of carbohydrates that will be stored by the body as adipose tissue.

Several other examples could be listed, from the zero-calories soft drinks to the "light" foods, however the main principle does not change: without a proper food education, people will not be able to consciously eat guided by the purpose of nourishing their body instead of eating just to eat.

6. Organ Donation

Over the last 60 years transplantation of human organs, cells and tissues has become a fundamental and successful worldwide practice. Organs transplantation turned out to be the most effective treatment to end a state of organ failure. People can donate organs as well as tissues in order to save or transform someone else's life. It is nowadays possible to donate organs, such as heart, lungs, pancreas, small bowel, kidneys and tissues. Tissues may include corneas in order to restore sight, bones and tendons to repair injuries, skin for burned patients and heart valves to end state of heart failure⁷⁸.

⁷³ For instance, the cited Reg. 2011/1169 and the directive 2010/13 *on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services* (Audiovisual Media Services Directive), art. 9.1 lett. c and d and art. 9.2.

⁷⁴ EU Science Hub – European Commission, *Food and non-alcoholic beverage marketing to children and adolescents*, 4, 2017. (Available at: <https://ec.europa.eu/jrc/en/health-knowledge-gateway/promotion-prevention/other-policies/marketing>).

⁷⁵ S. SINGH, *Impact of color on marketing*, in *Management decisions*, 44, 6, 783-789.

⁷⁶ Regulation no. 1924/2006 of the European Parliament and of the Council on nutrition and health claims made on foods, 20 December 2006, Annex, *Sugar-free* (Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32006R1924&from=en#d1e32-23-1>).

⁷⁷ Regulation no. 1169/2011 of the European Parliament and of the Council on the provision of food information to consumers, 25 October 2011, Annex I, 8 (Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32011R1169&from=EN>).

⁷⁸ NHS Organ Donation, *What can you donate?*, 2019 (Available at: <https://www.organdonation.nhs.uk/helping-you-to-decide/about-organ-donation/what-can-you-donate/>) [Accessed 11 Apr. 2019].

Usually organ donation is something that takes place after death but, in some cases, it is also possible to donate some organs and tissues while alive. While living, donors can donate a kidney as well as parts of bones, the innermost layer of the placenta and a part of their liver. Kidneys transplants help patients with end-stage kidney disease, when *dialysis* is *no longer* maintaining and they are the most frequently transplanted organs in the EU, with 21.102 transplants in 2017⁷⁹.

Behind this virtuous practice there are several problematic aspects both ethical and pragmatical, related to the fact donations demand for replacement organs still heavily outstrips supply. Consequently, there are not enough transplant operations happening because there are not enough organs being donated and this perennial shortage means that the majority of people stays on a waiting list for a transplant or die while waiting for it.

The organ shortage is caused by many different factors, related to the increase in number of medical indications for transplants, family refusals, the aging of the European population and the health trends such as obesity and alcohol consumption⁸⁰. Another major limiting factor effecting organ transplantation and the exchange of organs is the *cold ischemia time*, namely the period when the organ is cold-stored and remains outside the human body. Organs with a short cold ischemia times are less suitable for long-distant transports⁸¹ and need to be transplanted within a short time.

According to the most recent data provided by the European Commission on December 2015, fifty-six thousand patients were on waiting list in the EU and in the same year four thousand patients died while waiting for a transplant, but the number of patients on waiting lists is constantly growing, reaching sixty in 2017⁸².

The most sensitive issue about organ donation and how to increase the number of donors revolves around how and when to prompt to obtain individuals' *consent* to become donors as well as the sensitive topic of individuals *personal data treatment*.

The following part of the essay intends to consider the distinct legislative approaches adopted in the policy-making strategies of the European Union and of some of its member States in the specific field of organs donation. It also tries to set out the results from the application of behavioural insights, seeking out to close the gap between the offer and the greatly higher demand of organs, which have originated from the theorisation of the concept of Nudge by Thaler and Sunstein in 2008.

⁷⁹ European Commission, *Organs*, 2016 (Available at: https://ec.europa.eu/health/blood_tissues_organ/organs_en) [Accessed 11 Apr. 2019].

⁸⁰ R. BOUWMAN, S. VAN SCHOTEN, R. COPPEN AND R. FRIELE, *Written by Study on the uptake and impact of the EU Action Plan on Organ Donation and Transplantation (2009-2015) in the EU Member States EXECUTIVE SUMMARY*, 2017 (Available at: https://ec.europa.eu/health/sites/health/files/blood_tissues_organ/docs/2017_euactionplan_2009-2015_impact_exe_en.pdf.) [Accessed 18 Apr. 2019].

⁸¹ Eurotransplant.org., *International organ exchange – Eurotransplant*, 2010 (Available at: <http://www.eurotransplant.org/cms/index.php?page=organexchange>) [Accessed 18 Apr. 2019].

⁸² R. BOUWMAN, S. VAN SCHOTEN, R. COPPEN AND R. FRIELE, *Written by Study on the uptake and impact of the EU Action Plan on Organ Donation and Transplantation (2009-2015) in the EU Member States EXECUTIVE SUMMARY*, cit.

7. The role of the European Union in Organ Donation: the legislative framework

The progress in transplantation medicine has allowed a considerable increment of the use of human organs to cure some end-stage diseases. In some cases, organ transplantation has become the most cost-effective treatment, in others it is the only one available. This medical advancement, together with a significant demographic increase, has led to a shortage in available human organs for therapeutic purposes, which has become one of the most crucial challenges that the European Union and EU countries are facing. Another main challenge is the one concerning the risks associated with the use of organs in transplantation. The use of organs creates a risk of transmission of infections from the donor to the recipient. This risk includes communicable diseases such as HIV, Hepatitis B and C, as well as other infections. Transplantation can also lead to the transmission of different types of cancers⁸³.

In the matter of public health and the organisation of national health systems, European member States hold primary responsibility. Consequently, the European Union's role in the health area consists in a supporting role, in order to complement and coordinate national policies and to encourage cooperation between Member States. Nevertheless, it is also true that the European Institutions have a mandate to ensure a *high level of human health protection and obviate sources of danger to physical and mental health*, in accordance with article 168 TFEU, which is one of the legal bases used by the European Institutions in the specific field of organ donation.

In 2008, the European Commission carried out an Impact Assessment on organ donation between European countries, in which was recognised the urgent need for common quality and safety standards for the procurement, the transport and the use of organs at a Union level, with the aim of increasing the number of organs available and reassuring the European citizens that organs procured in another Member State carry the same quality and safety standards as those obtained in their own country.

On this proposal from the European Commission and having regard of article 168 of the Treaty on the Functioning of the European Union, the European Parliament and the Council of Europe adopted in 2010 a binding act, the Directive 2010/53/EU, with the aim to lay out the minimum *quality and safety standards of human organs intended for transplantation* that EU countries must assure⁸⁴.

In a second time, the 2010 European Organs Directive has been implemented by the Directive 2012/25/EU *on the procedures for exchange of organs, between Member States*. These two documents and other non-binding acts represent the current European legal framework.

⁸³ European Commission, 2008 (Available at: http://ec.europa.eu/health/ph_threats/human_substance/oc_organ/docs/impact_en.pdf) [Accessed 14 Apr. 2019].

⁸⁴ Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:sp0008>.

The European Union legislation covers all the process of organ donation from the procurement to the use and its main objective is to reduce the risks associated with transplanted organs and maximise the benefits of this life-saving practice.

It also sets out a series of rights and rules for the deceased donor as well as for the living donor selection and evaluation. In living donation both the donor and the recipient face risks linked to the possible medical, surgical, social and psychological complications that may occur in all the donation process stages. Therefore, Member States shall take all the necessary measures to guarantee the highest possible protection for the living donor, to allow the donor to take an independent and free decision, based on a proper and complete information on the nature, the purposes and the risks of donation.

The competent national authorities should play a key role in the entire process: from the evaluation of the quality and safety of the organs donated to the patients' recovery as well as during the subsequent follow up. The national authorities shall collect all the relevant information on the transplantation procedure, including any serious and adverse reaction and other post-transplantation data. Those data shall be shared between Member States in order to facilitate organ traceability and improve organ donation across the Union.

The Directive indirectly contributes to combating practices such as trafficking in organs and trafficking in persons, which are unacceptable and unlawful practices in violation of fundamental rights and human dignity as referred by article 1 of the European Charter of Fundamental Rights⁸⁵.

Organ transplantation should be founded on the principle of altruism and voluntary donation, this principle is enshrined in article 13 of the Directive and it is essential to avoid unacceptable risks related to a non-voluntary donation, undertaken by the donor or by the deceased donor's family for the purpose of financial gain. The creation of a market in organs, besides from being a violation of fundamental rights, could also put at risk the quality of the donation process, because improving someone's life condition or saving someone else's life would not be the main and only purpose of the donation. It would also jeopardise donors' freedom of choice and his or her consent.

A market in organ would also go against «the prohibition on making the human body and its parts a source of financial gain» included in article 3 of the European Charter of Fundamental Rights, proscription confirmed also in the WHO Guiding Principles on Human Cell, Tissue and Transplantation.

In the lights of these considerations and principles it does not seem realistic and acceptable the solution introduced by Becker, Gary, S., and Julio Jorge Elías⁸⁶. In their work, the three economists embrace the possibility of introducing monetary incentives and the creation of a market in organs with the aim to solve

⁸⁵ Charter of Fundamental Rights of the European Union, 2012 (Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012P/TXT&from=EN>) [Accessed 18 Apr. 2019].

⁸⁶ BECKER, GARY S., JULIO JORGE ELÍAS, *Introducing Incentives in the Market for Live and Cadaveric Organ Donations*, in *Journal of Economic Perspectives*, 21, 3, 2007, 3-24.

the shortage of organs available for transplantation. This morally and ethically controversial theory has been recalled in Thaler and Sunstein's book but in the current legal and social framework such a proposal does not seem to have any practical relevance.

The Directive 2012/25/EU focuses on the collection of information during the donation process and on the exchange of those data between Member States in order to ensure the functionality of the process and ensure a high level of public health in the Union. In the implementation of this directive, EU countries are to ensure that the handling of donors' and recipients' sensitive and personal data complies with the respect of their fundamental rights and freedoms, their right to privacy, their well-being as individuals, as enshrined in the Directive 95/46/EC.

Since many stakeholders in the European countries are involved during the donation process, it is vital to ensure an effective communication of relevant information in the exchange of human organs across Europe. Communication and data sharing must be encouraged in order to allow a prompt response for serious events or reactions concerning the recipient or the donor, in case of living donation.

In other words, when one or more organs from one donor are transplanted into recipients in different Member States, if a serious adverse event or reaction is first detected in one Member States of destination, the competent authorities in all the Member States involved must be informed.

The exchange of information is very often a matter of urgency, therefore a list of national contacts should be made available at a Union level and be constantly updated, to avoid undue delay.

7.1. European Union policy-making

As mentioned before, European Member States hold a primary responsibility in relation to the organisation of their health systems. Therefore, the role played by the EU in Health policy serves to complement and coordinate national policies and to ensure high quality and safety standards, across the Union.

In 2009, the European Union explicitly attempted, for the first time, to introduce Behavioural insights into its policymaking. Since then the European Commission has explored the application of Behavioural insights in several policy fields, including Healthcare. Since then, the use of behavioural studies has been growing at a steady pace.

In 2014, the EU Commission founded a Behavioural Insights Unit, the European Commission's in-house science and knowledge management service, within its Joint Research Centre (JRC). This team is part of the EU Policy Lab, which is a multidisciplinary space for openly exploring policy issues and co-creating

pragmatical solutions to those issues⁸⁷. While, the JRC is the Commission's science and knowledge service, that employs scientists from different scientific sectors to carry out research in order to provide independent scientific advice and support to EU policy⁸⁸.

Behavioural Insights are implemented throughout the EU policy cycle in four different moments. In the first phase, the policy preparation stage, behavioural insights are used to better understand the issue and the objective of the policy, this is a delicate and important moment of the entire process, because a better understanding of the behavioural aspects leads to better-designed policies. Once the first phase is completed, the policy debates move on to discuss what can be done about the issue under consideration. In this second stage, behavioural insights can be incorporated into EU instruments to increase the effectiveness of the policy. Finally, behavioural insights can be applied more directly to influence people behaviour, using the nudge method, but according to the principle of subsidiarity, the possibilities for direct EU action at this stage are limited. To nudge people directly, it is fundamental to have access to their choice architecture, the context in which they make decisions and, usually, National States are the ones who have control over it. Consequently, the EU, to take part in nudging, needs to coordinate with other national authorities, in a complementary way⁸⁹.

The creation of more effective policies is a matter of great importance in the EU agenda. In the Healthcare field, the European Commission has elaborated some action plans, in order to help EU countries to raise the quality of their health systems as well as to reduce health inequalities and enhance cooperation between the Member States.

The EU Health Programme (2014-2020) is the current policy project, implemented by the European Union, that aims at improving the health of EU citizens, reducing health inequalities, encouraging innovation in health, addressing the current health issues across Member States and supporting and encourage cooperation between the EU countries.

This program has been preceded by other two EU health programmes: the first EU health program (2003-2007) and the second EU health program (2008-2013), which have generated knowledge and evidence that served as a basis for informed policymaking and further research⁹⁰.

The European Union, as mentioned above, has a limited competence in terms of Health. Therefore, the Health programmes appear to be the best way to coordinate a set of actions among Member States which,

⁸⁷ Intereconomics.eu, *How Can Behavioural Insights Be Used to Improve EU Policy?* – Intereconomics, 2018 (Available at: <https://www.intereconomics.eu/contents/year/2018/number/1/article/how-can-behavioural-insights-be-used-to-improve-eu-policy.html>) [Accessed 18 Apr. 2019].

⁸⁸ European Commission (2020), *Departments and executive agencies* (Available at: https://ec.europa.eu/info/departments/joint-research-centre_en) [Accessed 18 Apr. 2019].

⁸⁹ Intereconomics.eu, *How Can Behavioural Insights Be Used to Improve EU Policy?* – Intereconomics, cit.

⁹⁰ European Commission, *Public Health*, 2020 (Available at: https://ec.europa.eu/health/funding/programme_en) [Accessed 18 Apr. 2019].

as choice architects, can influence people's behaviours in ways that are different from each other, but that ground on the same European principles and aim at the same common purposes.

8. National legislative approaches to organ donation: opting-in & opting-out systems

At a Member States' level, the legislative approach towards the matter of organ donation is quite different from State to State. It is however possible to steer national legislations in two main different categories: the opting-in and the opting-out. This distinction is considerably important for organ donation related to deceased donors.

The first approach is based on an informed explicit consent, which means that individuals are required to opt in to allow their organs to be used after death⁹¹. The tools used to opt-in in these systems are different but generally people can become donors by signing a donor card, joining a national donor register, which are usually managed by the National Health services, or indicating their wish to donate on a document, such as ID cards, driving licences or passports. If the person has not expressed his/her consent before death, a nominated representative or a close relative has to give the permission to use the deceased person's organs⁹². Nevertheless, opt-in systems always offer the possibility to withdraw from the national donor list.

Today, among the EU countries that follow this legislative approach, there are: England (until 2020), Romania, Lithuania, The Netherlands and Germany⁹³. Italy is still adopting an opt-in system, even though formally an opt-out legislation on organ donation has been in place since 1999. This paradox is due to a political unwillingness to implement the 1999 law with the indispensable decrees for the application of a deemed consent approach⁹⁴.

The other rule used by the EU National systems is the rule of presumed consent. Under this approach, individuals are presumed donors, unless they express their unwillingness to donate, usually by joining a specific opt-out register. Opt-out systems can use either a «hard» or a «soft» strategy. In «hard» opt-out systems organs are removed after death if individuals didn't express their aversion and the family have no

⁹¹ R. THALER AND C. R. SUNSTEIN, *op. cit.*, 176.

⁹² Ministero della Salute, *Donazione dopo la morte*, 2018. (Available at: <http://www.trapianti.salute.gov.it/trapianti/dettaglioContenutiCnt.jsp?lingua=italiano&area=cnt&menu=cittadini&sottomenu=diventare&id=245>) [Accessed 19 Apr. 2019]; NHS Organ Donation, *Register your decision*, 2020. (Available at: <https://www.organdonation.nhs.uk/register-your-decision/>) [Accessed 19 Apr. 2019].

⁹³ Behavioural Insights Applied to Policy European Report, 2016, 8 (Available at: http://publications.jrc.ec.europa.eu/repository/bitstream/JRC100146/kjna27726enn_new.pdf) [Accessed 18 Apr. 2019].

⁹⁴ AIDO.IT, *Donazione organi, il paradosso del silenzio-assenso in Italia: previsto dalla legge da 18 anni, ma mai applicato*, 2017 (Available at: <https://www.aido.it/news/donazione-organi--il-paradosso-del-silenzio-assenso-in-italia--previsto-dalla-legge-da-18-anni--ma-mai-applicato-aido3411>); Ministero della Salute, *Come diventare donatore*, 2018. (Available at: <http://www.trapianti.salute.gov.it/trapianti/menuContenutoCnt.jsp?lingua=italiano&area=cnt&menu=cittadini&sottomenu=diventare>) [Accessed 18 Apr. 2019].

role in the process. This «hard» approach leads to some ethical concerns, because consent is an active process that cannot be presumed simply because no objections are known⁹⁵.

Therefore, EU opt-out countries generally choose to implement a «soft» approach. In this case, there is a presumption in favour of donation but, if the person didn't express his/her will, the family have the final say⁹⁶.

According to the most recent information available, among the countries who chose an opting-out legislation there are: Belgium, Croatia, Czech Republic, Finland, Greece, Hungary, Luxembourg, France, Norway, Poland, Portugal, Slovenia, Sweden, Wales, Scotland and Spain⁹⁷.

Spain is the EU country with the highest donation rate, with 38 deceased organ donors per million people, but the reason behind Spain high donation rates seems more linked to a virtuous policy strategy than to a particularly effective legislation, as it will be discussed later.

9. Can a change in legislation help organ donation?

As mentioned before, the need for more organs for transplantation is pressing. In the light of the researches and results in the field of behavioural sciences, National States started to rethink their approach to organ donation at a legislative as well as at a policy-making level.

The main problem in designing laws process in order to close the gap between the offer and demand of organs is to find the better way to gather peoples' consent to become donor.

A famous study (*Do Defaults Save Lives?*), carried out in 2003⁹⁸, shed the light on the mismatch between public attitudes and public action regarding organ donation and proved the power of defaults on people's choice in the donation rates. The statistics show that the vast majority of people support organ transplantation, but despite their stated willingness to become donors they fail to take actions.

Therefore, some opt-in European countries have decided to change their legislative system, while in others a change in legislation has been proposed. This switching from an opt-in approach to an opt-out law aims at making the presumed consent the default choice.

The UK legislative case is significant to explain this increasingly common tendency. In 2015 Wales introduced and implemented a law on organ transplantations based on deemed consent and in June 2018 the Human Tissue Bill (Scotland), which includes provision for a deemed authorisation system, was presented by the Scottish Government to the Parliament and is still awaiting approval, while in England,

⁹⁵ C. J. RUDGE, *Organ donation: opting in or opting out?*, in *British Journal of General Practice*, 68, 667, 2018, 62–63. (Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5774938/>) [Accessed Apr. 2019].

⁹⁶ *Ibid.*

⁹⁷ Behavioural Insights Applied to Policy European Report, cit., 25.

⁹⁸ Draft Agenda (30 June 2016), European Parliament, Committee on Budgets (Available at: file:///C:/Users/claud/Downloads/4_5904230871103178180.pdf).

from spring 2020, all adults will be considered to have consented to become potential organ donors, unless they had expressed a decision not to donate⁹⁹.

Although it is premature to draw conclusions, the first statistic results from the application of the new opt-out legislative act in Wales are not the ones that scientists and politicians were expecting to see. After the first full year since the new law was introduced, donor numbers were almost unchanged and in the first six months of the second year they have fallen by 14% compared with a rise of 9% in England in the same time period¹⁰⁰. This is also due to the fact that opt-out European systems are «soft systems», which means that despite the registered wishes of the donor, families have the final say on whether or not to proceed with the donation. It has been estimated that in 2016, in the UK, consent rates from families of suitable deceased donors were still around 60% and the target to achieve an 80% consent rate by 2020 does not seem realistic on the basis of the current situation¹⁰¹.

Therefore, it seems that presumed consent alone is unlikely to reach a significant variation in organ donation rates. The widespread European and global tendency to support a change in the legislation and thus switch from an opting-in to an opting-out system is based on the assumption that such a change would make a significant impact in the shortage of organs and thus save hundreds of lives, but there are no scientific grounds to believe that. This assumption that brings false hope is based on some important misunderstandings. Firstly, there is a misleading conception of the Spanish organ donation experience. Spain has an opting-out legislation and for many years has had the highest donation rates in the world, but, contrary to popular belief, the Spanish success does not come from the law. Opting-out system was introduced in the Iberian country in 1979 with no apparent changes in the organ donation rates. Ten years later, in 1989, the Spanish government established a National Transplant Organisation and many medical qualified donor coordinators were employed in every hospital. These two actions led to a substantial transformation in the Spanish system and have had a great impact in the increase of the number of donors in the country.

Spain has led the way ever since and its model has been implemented in many others European realities, such as Tuscany, Croatia and Portugal, without changing the law¹⁰².

Moreover Spain, in the actual fact, does not have an organ donation register for people to either opt-out or opt-in and linked to this there is another common misconception, namely the belief that under the current opt-in legislation you have to join an organ donation register in order to be a donor and that who have not

⁹⁹ NHS Organ Donation, *Organ donation law in England*, 2019 (Available at: <https://www.organdonation.nhs.uk/uk-laws/organ-donation-law-in-england/>). [Accessed 18 Apr. 2019].

¹⁰⁰ C. J. RUDGE, *Organ donation: opting in or opting out?*, cit., 62–63.

¹⁰¹ A. SHARIF, G. MOORLOCK, *Influencing relatives to respect donor autonomy: Should we nudge families to consent to organ donation?*, in *Bioethics*, 32, 3, 2018, 155–163.

¹⁰² C. J. RUDGE (2018), *Organ donation: opting in or opting out?*, cit., 62-63.

opted-in will never have the chance to become donors. Obviously, registration is to be encouraged as it makes easier for the family to know their relative wishes, but it is not as essential as it seems. In support of this, the most recent statistical data claims that in the UK 90% of families agree to donation when the patient was registered, but also about 70% of the families agree to donate even when the patient was not registered¹⁰³. Hence, the suggestion that adopting an opting-out legislative model would somehow add the missing population who has not opted-in to the donor pool seems to be quite wrong.

Another important factor that must be taken into account is that in order to be potential donors, patients must die in “the right way”. Very few people, in fact, die in circumstances that allow to proceed with organ donation. The patient must die from “the right disease”, which means from a disease that is free from transmissible agents, such as cancer and significant infections and in the “right place”, that is in hospital, in order to assure a prompt action by the medical staff to guarantee organs conservation for future transplantations.

On this matter, according to the numbers, Spain has had, in the past years, between two and three times as many beds in the clinical intensive care units compared to the UK and this circumstance has clearly affected the organ donation rates in Spain¹⁰⁴.

To sum up, it seems that to increase organ donation rates a change in law is not the answer. On the contrary the key to this transformation seems to be a coordinated work by intensive care clinicians, general practitioners and other medical operators, alongside with a public effort by national donation organisations and governments to support and fund studies and researches in order to find out which are the most effective strategies to raise patients awareness, to prompt people to join the donors group and constructively approach deceased patients’ families when it comes to deal with these issues.

10. Nudging people towards organ donation

If a change in the law is not the answer or at least does not seem to work alone, it is important to study and eventually find alternative routes in order to create better environments for increasing the supply of organs and tissues. This ultimate purpose appears to be achievable by designing ethical and effective policies.

In the last decade, the nudge theory has been implemented in many different policy fields with the intention of detecting smart ways to improve our individual lives and therefore the general welfare of society.

It is in our human nature to try to find ways to become healthier, adopt sustainable habits and plan better for our future, but it is within our nature as well the inclination to make bad decisions about how to get what we prefer and stick to our resolutions. This tendency is particularly obvious in the context organ

¹⁰³A. SHARIF, G. MOORLOCK, *Influencing relatives to respect donor autonomy: Should we nudge families to consent to organ donation?*, cit.

¹⁰⁴C. J. RUDGE (2018), *Organ donation: opting in or opting out?*, cit., 62-63.

donation, where most people state their wish to become donors, but fail to take actions, preferring to go along with the inescapable human propensity to inertia.

Bad decisions impact individuals' lives, but when exercised in mass they can become a problem for the entire society and regulation is not the best approach to correct the problem. A change in legislation can be clumsy and expansive as well as inefficient and this is where nudges come in to help.

The Nudge Theory has been presented by Thaler and Sunstein as a useful tool for helping people to make decisions that increase individual and societal welfare, while decreasing unnecessary costs and harms. This statement is based on the assumption that individuals often make bad choices as a consequence of predictable biases guiding their behaviour and because, sometimes, they do not have enough time to make a selection, their minds are elsewhere or they lack sufficient information. It is also true that we tend to choose options that require the least effort, especially when people are trying to get something different from what they are asked to choose (for example, when we accept the default option on personal data processing, in order to access to a website page).

In the following section some examples of nudging applied in organ donation will be critically presented.

11. Mandated choice, reciprocity and anticipated regret compared

The first proposal for an application of the nudge theory is the one presented by Thaler and Sunstein in their book¹⁰⁵. In their work, they emphasise the power of the web to nudge people and explain how including messages to nudge people can have a huge impact on organ donation rates. Besides that, they identify an example of mandating choice as an effective strategy to nudge people to donate their organs with the intention of increasing the number of registered donors and therefore to save hundreds of lives¹⁰⁶. Thaler and Sunstein believe that one of the barriers preventing citizens from becoming donors is the use by States government of an explicit-consent policy, according to which people have to register their willingness to donate. Another major barrier to organ donation is the requirement for deceased relatives' consent to proceed with the donation, requirement present in both explicit-consent systems and soft opting-out systems, where deceased people are presumed to be donors unless they have opted out or their family refuse to give their consent to donation¹⁰⁷.

On paper, according to the two authors the best way to significantly increase organ donation rates is by adopting an «hard» opting-out donation system, where all citizens are presumed donors and in which families would not have the final say and therefore the power to overrule this presumption or the donor's expressed wishes. However, Sunstein and Thaler recognise that such a model is ethically questionable,

¹⁰⁵ R. THALER, C. R. SUNSTEIN, *op. cit.*

¹⁰⁶ *Ivi.* 180.

¹⁰⁷ *Ibid.*

problematic and hardly applicable in the actual context. A hard approach to organ donation could basically lead to a public backlash against «government intrusion» into people's private lives¹⁰⁸. Consequently, the two American academics have introduced a different strategy that could lead to a significant increase in donations based on the concept of mandated choice whereby, instead of presuming consent, citizens are required to take an informed decision about their donation status, deciding whether to become donors or not. These two options could be additionally presented along with information about the number of people who dies every day because there are not enough organs available, in order to nudge people to pause and think about the vital importance of donation¹⁰⁹.

A mandated choice scheme could be effectively presented to American citizens and residents when they visit the Department of Motor Vehicles (DMV) webpage in order to fill out their drivers' registration form and get what they need, for example the renewal of their driving licence. Individuals will have to decide what to do about organ donation in order to satisfy an ordinary need. Furthermore, States should not include an «unsure» or «do not know» answer, because behavioural sciences have clearly demonstrated that if an option to procrastinate is given to people, they will most likely take that option¹¹⁰.

The theorisation of nudging through forced choice offered by Sunstein and Thaler has been widely criticised by some researchers and professors of the University of Pennsylvania and the Rochester Institute of technology, who argues that Thaler and Sunstein have decided to ignore significant elements in their evaluation of a well-designed choice architecture strategy, such as the importance played by the context in which the decisions are taken¹¹¹. Introducing a compulsory choice on a sensitive matter such as organ donation in a DMV form, without giving to the website visitors the chance to think about it later can be stressful and counter-productive. In fact, when people visiting the DMV page perceive the whole environment as hostile, they are usually stressed and eager to leave, what is more is that they have to deal with unknown personnel and take a series of boring and bureaucratic decision. Therefore, such unfriendly environment can influence the entire perception of the donation problem and compromise the results¹¹².

For the reasons just given, mandatory choice could minimise rather than expand the pool of available organ donors and create a tense atmosphere between the government and its citizens, who are forced and shoved into a situation rather than nudged¹¹³.

Heading back to the European scene, another example of nudging is offered by the UK government. The UK is one of the European Countries that has more invested in Behavioural Insights studies. In 2011, the

¹⁰⁸ K. WHYTE, E. SELINGER, J. SADOWSKI, A. CAPLAN, *Nudge, Nudge or Shove, Shove — The Right Way for Nudges to Increase the Supply of Donated Cadaver Organs*, cit.

¹⁰⁹ R. THALER, C. R. SUNSTEIN, *op. cit.*, 180.

¹¹⁰ *Ivi*, 180-181.

¹¹¹ K. WHYTE, E. SELINGER, J. SADOWSKI, A. CAPLAN, *Nudge, Nudge or Shove, Shove — The Right Way for Nudges to Increase the Supply of Donated Cadaver Organs*, cit.

¹¹² *Ibid.*

¹¹³ *Ibid.*

Behavioural Insights Team, in partnership with NHS Blood and Transplant (NHSBT), the British Government Digital Service, the Department of Health and the Driving Licensing Agency ran one of the largest Randomised Controlled Trials ever ran in the UK, with the aim of prompting more people to join the NHS Organ Donor Register by nudging them to do so.

Randomised Controlled Trials (RCTs) are experiments that enable policymakers to compare the effectiveness of new interventions against what would have happened if nothing had been changed and, in this case, the trial tested the effect of including eight different messages on a high traffic webpage on GOV.UK¹¹⁴.

Once individuals had completed either renewing their vehicle tax or registering for a driving licence online, they were led to a separate page with one of the messages created.

The first message used was the one already on the control page of the NHS website. This variant was the benchmark against which the other messages were compared and also the fact that users were asked to «Please join the NHS Organ Donor Register». The control page had no additional information about organ donation.

The second variant provided information on the large number of people who have joined the Organ Donation Register and in addition to the basic request, it stated that «Everyday thousands of people who see this page decide to join». This message contained a social norm: what other people do in the same situation.

The third and the fourth written messages presented the same sentence as variant two, but in addition, these variants contained a picture.

Variant three contained a picture of a group of people, while variant four contained the NHSBT logo. The images were used to test if they could increase the effectiveness of the message.

In the fifth page the «Loss frame» was tested, namely this variant informed people of the negative consequences of their inaction. The message stated that «three people die every day because there are not enough donors».

On the contrary, variant six used a «Gain frame», promoting the positive impact of registering: «You could save or transform up to 9 lives as an organ donor».

The second to last alternative draw on people's inherent desire to give back when they receive something. The message stated: «If you needed an organ transplant would you have one? If so, please help others». Reciprocity is an important concept, which has been previously used to increase charitable donations.

¹¹⁴ Applying Behavioural Insights to Organ Donation: preliminary results from a randomised controlled trial, 2013 (Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/267100/Applying_Behavioural_Insights_to_Organ_Donation.pdf) [Accessed Apr. 2019].

The last and final message elaborated in this randomised control trial attempts to motivate people, because a lot of people express their desire to join the NHS Donor Register, but they fail to do so. This message asks people to bring their actions in line with their intentions and similar messages have been used to change behaviours in other fields, such as sexual health and smoking.

The seventh variant turned out to be the best performing message, the one based on the ideas of reciprocity and fairness, but almost all of the variants used significantly helped to increase registration rates compared to the control group. There is only one exception: the social norms message paired with the photo of a group of people.

The experiment ran for 5 weeks, during which over 1 million people saw one of the eight messages and 1.203 more people registered under the best-performing variant, compared to the control group.

Over the course of a year, this difference would have led approximately 96.000 additional registrations compared to the control page. Consequently, the message on the NHSBT page has been replaced with the best performing one¹¹⁵. The experiment shows the effectiveness of the gentle power of Nudge and how small changes in specific public contexts can have a huge impact.

Another randomised trial was led in Scotland in 2012. This time the study was conducted to state whether the implementation of «anticipated regret» would be effective in order to increase posthumous donor registrations. The experiment involved 14520 members of the adult Scottish general public who were contacted by post and collocated in 4 different groups: the no questionnaire group (NQC), the questionnaire control group (QC), the theory of planned behaviour arm (TPB) and the Anticipated regret group (AR).

This study tried to analyse the emotional factors that guide decision making and assess whether emotions and non-cognitive attitudes affect the decision to register as an organ donor or not. The specific focus of this research is the emotion of regret.

Regret is an aversive counterfactual emotion that people experience when they believe that their current situation could have been better if they had acted differently. It is possible to anticipate this emotion in order to predict how we would feel for undertaking or failing to undertake a certain action, in this case: signing the organ donor register.

The possibility to build a pre-emptive strategy for avoiding this emotion has been used successfully to drive peoples' behaviour in other fields, like weight loss, exercising and condom use.

This Scottish experiment used an opt-out approach in which participants were required to contact the researchers if they didn't want to be part of it. It was made very clear and simple for people to withdraw from the experiment.

¹¹⁵ Applying Behavioural Insights to Organ Donation: preliminary results from a randomised controlled trial, cit.

The first group simply received a letter, a donor registration form and questions collecting some demographic information. The Questionnaire control group received the same material as the first group, plus a questionnaire measuring their emotions and non-cognitive effective attitudes towards organ donation. Individuals were asked to answer questions about body integrity, medical mistrust, perceived benefits and about their intention to join the organ donors register in the next future, obviously, in case they were not already donors.

The third group (TPB) received the same materials as QC group plus additional items measuring attitudes and other questions about perceived control over the situation (namely, it is easy for me to register if I want to) and their reaction to social norms.

Finally, the anticipated regret group received the same questions of the TPB group, plus two items measuring anticipated regret.

After this first step, the questionnaires were sent to the NHS Blood and transplant executive body to perform a secure and confidential observation of the National Organ Donation Register for the 6 months following the postal interview¹¹⁶.

The results of the experiment have been published in 2016 and they stated that an anticipated regret intervention led to a decrease in registration. The reasons that led to such a negative outcome are being analysed and need to be considered in other studies that use similar interventions¹¹⁷.

More recently, in 2014, the NHS published a health report in which was highlighted the vital need to encourage more people from Black, Asian and other minority communities (BAME) to join the organ donor register and share their willingness about organ donation with their families and loved ones. In this report, it was pointed out that people from BAME communities have statistically more chances to contracting diseases that can lead to organ failure. At the time, over 650 Black and 1150 Asian patients were waiting for an organ transplant and two third (66%) of BAME families were against organ donation. Market researches in this field has revealed that this antagonism towards organ donation are based on religious and cultural beliefs. Therefore, the NHS has encouraged researchers and other stakeholders in this area to carry out studies in order to better understand the impact of religious belief on people's behaviour, to explore preferred and trusted channels for receiving information about organ donation and to create messages to nudge ethnic minorities to build a positive image of organ donation itself¹¹⁸.

¹¹⁶ R. E. O'CARROLL, E. FERGUSON, P. C. HAYES, L. SHEPHERD, *Increasing organ donation via anticipated regret: protocol for a randomised controlled trial*, in *BMC Public Health*, 2012. (Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3323431/>) [Accessed 8 Apr. 2019].

¹¹⁷ R. E. O'CARROLL, L. SHEPHERD, P. C. HAYES, E. FERGUSON, *Anticipated regret and organ donor registration: A randomized controlled trial in Health Psychology*, 35, 11, 2016, 1169–1177.

¹¹⁸ ODT Clinical – NHS Blood and Transplant: BAME Market Research, 2014. (Available at: http://odt.nhs.uk/pdf/BAME_Market_Research_NHSBT_Supporting_statement.pdf) [Accessed Apr. 2020]

12. Conclusions

In conclusion, in the present work the concept of Nudging has been presented. Nudging is not just a theoretical approach – formulated by Thaler and Sunstein – whose main purpose is to alter people's behaviour in order to kindly push individuals to act in a way that is considered the best possible by the choice architects, but it covers several practical applications, from the socio-economical aspects of everyday life to healthcare and well-being.

It has been presented that both legislation and the application of different Nudging techniques alone are not capable of reaching the necessary results in order to invert the present tendency which is leading the worldwide population to a more obese future and to a shortage of organs for transplants. However, an improvement of the current situation could still be fulfilled with a coordinated action between legislative acts, Nudging in policies, education and consciousness programmes. In some fields governmental regulation can provide the operational framework in which the choice architects can operate and develop techniques to improve our health, wealth and happiness. This might lead to abandon the belief that regulation itself is always the best approach for correcting every problem in every area. In addition, a direct legislative intervention in many situations can be perceived as a government intrusion into people's private lives or even bypassed and made ineffective, while it has been proved that well-designed Nudges can lead to significant improvements in many different areas, letting people free to choose by simply providing them more information, in order to allow them to take a more informed decision and promoting their autonomy¹¹⁹. Choice architects, to draw an effective nudge strategy, must explore and clearly identify individuals' biases, so as to be able to actually change the environment in which people take their own decisions.

On the other hand, there are risks behind Nudging. One is to fall into manipulative techniques that shove people towards a specific decision instead of gently pushing them in a way that align their intentions and wishes with their actions¹²⁰. As a matter of fact, if the interventions are not made to nudge «for good», but instead are used as a «mechanism to exploit imperfections in human judgment for greater gain», what people face is manipulation, which is far from the idea of Nudging as «an ethical, politically noncontroversial approach to influencing the choices and behaviour of citizens in accordance with their own interests»¹²¹.

¹¹⁹ K. WHYTE, E. SELINGER, J. SADOWSKI, A. CAPLAN, *Nudge, Nudge or Shove, Shove — The Right Way for Nudges to Increase the Supply of Donated Cadaver Organs*, cit.

¹²⁰ K. WHYTE, E. SELINGER, J. SADOWSKI, A. CAPLAN, *Nudge, Nudge or Shove, Shove — The Right Way for Nudges to Increase the Supply of Donated Cadaver Organs*, cit.

¹²¹ P.G. HANSEN, A.M. JESPERSEN, *Nudge and the Manipulation of Choice. A Framework for the Responsible Use of the Nudge Approach to Behaviour Change in Public Policy*, cit.

For what concerns the obesity issue, firstly it has been pointed out that several legal acts have been adopted on different levels leading, however, to results that fall far from the ones expected. Secondly, it has been shown that the implementation of Nudging can help to improve the situation, especially considering that the Automatic System tend to prevail when it comes to food choices. It has also been suggested that these two instruments must be coordinated with food education, in order to make the subjects addressed by these provisions aware of the consequences of their actions after being nudged (for example, whether to fry or to boil the potatoes). Finally, there must be a harmonized cooperation, at least at a European Union level, with the food industries to find a proper solution to balance the protection of public health (art. 168 TFEU) and the profit-oriented marketing of the industries themselves.

With regard to the organ donation issue some examples have been presented, both successful and unsuccessful. However, what is important to highlight is that to assess the pressing and urgent need of organs and to overcome people's laziness or resistance to become donors, a combination of different factors is necessary. To reach concrete and significant results, it is essential to improve the decision-making environment that deceased patients' next-to-kin encounter in hospitals, to overcome government mistrust from citizens and to prompt studies on individual biases, religious beliefs and cultural background¹²².

¹²² K. WHYTE, E. SELINGER, J. SADOWSKI, A. CAPLAN, *Nudge, Nudge or Shove, Shove — The Right Way for Nudges to Increase the Supply of Donated Cadaver Organs*, cit.