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Prosocial behaviour: the case of volunteering.

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*To my grandparents, Franca and Gino,
for their eternal love.*

*To my mum,
to whom I owe everything.*

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Introduction

In this paper the theme of prosocial behaviour will be addressed; specifically, one of its most curious and economically manifestations: volunteering.

In this thesis it emerges that volunteering, although apparently it seems to be disconnected from economics, is actually well inserted in the economic theories of prosocial behaviour - which will be exhaustively analysed – and it has also possible implications in policy decisions, as volunteering is able to represent a long-lived solution to inefficiencies that affect society due to its ability to provide services that otherwise would not be provided if not for a fee, or it creates new ones.

Take Italy as an example. In this country, the third sector - that which includes, for example, voluntary associations - is estimated to be worth 80 billion euros, equal to 5% of GDP. About 6.65 million people work in this sector, of which over 90% are volunteers.

The beneficiaries of this activity are a total of 26.3 million, over 1/3 of the Italian population, thus emphasizing the more authentically social character and giving the clear feeling of a big player (the Third Sector as a whole) of social welfare; second only if compared to the public system (Srm: dal Terzo settore il 5% del Pil italiano, Il sole 24 ore, 2020).

Going into more detail, in the first chapter an overview about the evolution of the models, used over the decades, to describe the origins, motivations and results performed in the broad discipline of pro-social behaviour will be presented. Initially, the neoclassical theories will be exposed since they represent the benchmark for economic behaviour. This part will be followed by the exposition of the theories on pure and impure altruism, aversion to inequality, concluding with the inclusion of the role of intentions thanks to theories on reciprocity and the role of social identity in prosocial choices.

The second chapter will be completely dedicated to the phenomenon of volunteering, one of the major prosocial behaviours that involves millions of people every year. At the beginning, a definition of volunteering will be provided, which will be followed by a brief overview of voluntary activities in Europe and Italy. The heart of the chapter is the volunteering process of

which all three phases will be presented: the antecedents, the experience, the consequences. Greater attention will be devoted to the first stage as it is necessary to build the foundations to fully appreciate the results emerged from the analysis of the data collected in order to respond to the research questions.

Finally, the third chapter is focused on the empirical analysis of data collected through the distribution of an original, internet survey. In particular, the motivations that lead people to volunteer, the possible presence of personality traits typical of volunteers and the existence of correlations between some socio-demographic variables and the volunteers' commitment will be investigated.

Chapter 1:

Literature review: from neoclassical theory to the role of social identity.

1.1 Introduction

The first chapter provides a brief overview of the literature and the models that have followed in order to explain people's prosocial behaviour. The definitions of prosocial behaviour will be presented below. Pro social behaviour can be represented by a large whole that includes different actions such as helping others, sharing, donating, or volunteering. All these actions have a common factor, which is to bring benefits to others. In literature, the researchers' focus has been understanding what the motivations behind prosocial behaviours are, so not only the latter per se. Analysing the motivations underlying prosocial behaviours, but it is also clear how these can be classified into two large clusters: the first is composed by altruistic motivations, the second is represented by selfish motivations. In the first case the person is moved by the desire to improve others' well-being; while in the second case, in a completely selfish way, the aim is to increase the well-being of those who carry out the prosocial action. To model prosocial behaviours there are both cognitive processes and therefore both the costs and the rewards deriving from these actions are evaluated and those of the affective type or the emotions that are now connected (Dovidio and Banfield, 2015).

To characterize the prosocial behaviour are any form of kindness, acts of compassion and all those voluntary behaviours that aim to help others. We can therefore classify them among the best qualities and aptitudes of the human species (Hasenfratz and Knafo-Noam, 2015).

Although its theoretical definition is relatively recent, it can be noted that already in the course of history the sociality of man and his intrinsic relationship character had already been demonstrated. In fact, already in the 4th century B.C. Aristotle defines humans as a social animal (Politica). Sociality represents, according to the philosopher, one of the most proper characters of the human being, without which he would be a solitary animal and an atom alienated from the context and reality in which he lives. On the other hand, in this year of pandemic the generalized lockdown has shown all the fragility of men who, in the face of death, fear and loneliness, felt dispassionate and unable to give himself an answer to the event.

Human nature, to be one, requires the relationship with the other and if this is prevented, happiness and knowledge of oneself and the world itself are lost.

However, for centuries the economic literature has been permeated by theories, including classical and neoclassical theories, characterized by the presence of an almost mythological figure, the *homo oeconomicus*, which is a rational, selfish man, whose only interest is the maximization of his own well-being at the lowest possible cost. Surely everyone agrees that neoclassical theories constitute an important benchmark that has made it possible to create other models comparable with the latter. The neoclassical model is useful because it is based on clear axioms and assumptions that normally give easily verifiable and predictable results. Therefore, they represent the fundamental starting point, the benchmark which is essential as it allows us to have references with respect to which we can make comparisons.

The reality of facts and concrete experience show how neoclassical theories, however easy to understand and simple to implement, do not allow us to truthfully explain what the empirical evidence shows (Dhami, 2016). Given the presence of such limits, it is possible to state how these models, although linear and easy to apply, cannot therefore provide a clear and comprehensive answer to the variability of the phenomena observed in real life. The reality is much more complex, to the point that economics itself is not a self-sufficient social science to explain certain phenomena. To come to its aid, psychology, sociology, anthropology, and evolutionary biology are integrated with economic models and provide a better picture of what reality is. The anomalies that have been found both in the field and in the experiments carried out in the laboratory by running games such as dictator games, ultimatum games and public goods games are numerous. Before proceeding with the exposition of the various theories developed in order to explain the causes of all those deviations from the results predicted by the neoclassical theories, it is necessary to take a step back and explain the functioning of the previously mentioned games.

1.2 Games

It is important to understand the correct functioning of these games as it is thanks to the results emerged from the application of the neoclassical theorem on them that researchers were pushed towards the development of theories that better explain human behaviour or, at least, always go one

step further in the development of models able to adapt as much as possible to the complex behaviour of human beings.

Furthermore, it is precisely the predictions and results deriving from the application of the various models in these games that allow us to establish which of them best describe the reasons and the relative behaviour of people through comparison, and therefore to identify their limits.

1.2.1 Dictator game

The Dictator game is a one-shot game which involves two players. The first player, called the dictator or the allocator, is endowed by a positive amount of money, (E) .

Then, the allocator chooses the way into which the total amount is split between the two players: the share x of the endowment to keep himself ($x \cdot E$) and to be given to second player $((1-x) \cdot E)$.

The responder is passive and has no actions thus the offer made by the allocator is always implemented.

The original dictator game experiments by Kahneman et al. (1986) and Forsythe et al. (1994) were used to help determine the extent to which generous offers in ultimatum games occurred because Proposers were fair-minded or because Proposers feared having low offers rejected (Camerer and Thaler, 1995).

1.2.2 Ultimatum game

The ultimatum game is a two stages game that involves two players. As in dictator game, the first player, now called the proposer, is endowed by a positive amount of money (E) and he offers a portion of the total amount to the other player.

However, in this game the second player, the responder, is not inactive and in the second stage of the game he can decide either to accept the proposal or to reject it.

If the Responder accepts, the offer is implemented:

- the proposer earns $E-x$.
- the responder earns x .

If the responder rejects, both players earn nothing.

1.2.3 Public good game

In public good games there are two kinds of games: the first without punishment, the second with punishment. A common factor of these two macro categories is the assignment of a positive amount to the players who, in both cases are more than two, who are assigned the task of deciding if and how much to contribute to the common good. In the second type there is the possibility of punishing free riders. The two types will be detailed below:

- Without punishment

There are $i \in N = \{1, 2, \dots, n\}$, $n \geq 2$, players and an initial endowment $E > 0$, expressed in some monetary units, is provided to each of them.

They simultaneously decide the amount to keep to themselves and the amount, $g_i \geq 0$, that they want to donate in order to contribute to a public good. The total monetary contribution towards the public good is given by $G = \sum_{i=1}^n g_i$.

- With punishment

This type of game is structured by two phases. In the first one, a public good game without punishment is played. In the second, after that all the contributions that have been given in the previous stage become public information, every player simultaneously decides a punishment vector $p_i = p_{i1}, \dots, p_{in}$ where p_{ij} indicates the punishment player i assigns to player j at a cost $c \in (0,1)$

1.3 Brief overview of neoclassical theory

The key principle on which the neoclassical theory is based is the presence of an individual, later defined as homo economicus, or a perfectly rational man whose only goal is to maximize his own utility, which is defined by means of a function, at the lowest possible cost.

As a result, it is defined as a selfish individual whose only goal is to maximize their own well-being without taking into account the well-being of others.

Individuals are characterized by a preferences relation that in order to be defined well-behaved must conform to three axioms (Mas-Colell et al., 1995, p.6):

- Order
 - Completeness:
For all $x, y \in X$, we have that $x \succcurlyeq y$ or $y \succcurlyeq x$ (or both)
 - Transitivity:
For all $x, y, z \in X$, we have that $x \succcurlyeq y$ and $y \succcurlyeq z$ then $x \succcurlyeq z$
Preferences that comply this axiom are defined as rational.
Only rational preferences can be represented by a utility function.
- Continuity
For all $x, y \in X$, and any $\alpha, \beta \in (0,1)$
if $x \succ y$ and $y \succ z$ then $\alpha x + (1 - \alpha)z \succ y$ and $y \succ \beta x + (1 - \beta)z$
- Independence
For all $x, y \in X$, and any $\lambda \in (0,1)$
 $x \succ y$ then $\lambda x + (1 - \lambda)z \succ \lambda y + (1 - \lambda)z$

Furthermore, it is supposed that the preferences are time-invariant; it means that it is assumed that an individual will display constant preferences for the entire duration of its life.

In addition, it is assumed that the representative agents that is considered in neoclassical theories is characterized by:

- Perfect information and foresight: the individual has a perfect knowledge of the economic environment in which he is immersed and is in possession of all the information necessary to be able to choose the alternative capable of making him obtain the highest utility.
- Unlimited computation abilities: He is fully aware of all possible alternatives, and he can also measure the impact and consequences of the innumerable alternatives.

Let us now see what the predictions are when neoclassical theories are applied to mentioned above games and the relative anomalies have emerged.

1.3.1 Dictator game

All individuals are assumed to be selfish agents that act only to increase their own utility disregarding others.

Given this assumption, the unique solution of this game is represented by a situation in which the entire amount is kept by the dictator and nothing will be offered to the other player.

1.3.1.1 *Anomalies*

What has been observed across several experiments can be summarized in the fact that people invested in the role of dictator rarely offer an amount that represents more than half of the endowment. Furthermore, in about 80% of cases, all those offers are represented by an amount between 0% and 50% of the endowment initially allocated to the dictator. Finally, if compared to the ultimatum game, offers distributions is geometrically translated towards zero and a percentage near 20 of the offers are null (Falk and Fischbacher, 2006)

1.3.2 *Ultimatum game*

According to the neoclassical theory, due to the fact that individual's preferences are assumed to satisfy the **monotonicity assumption**, also known as the more is better assumption, the Proposer should always offer the smallest amount possible, different from zero, and the Responder should never refuse.

In fact, whatever the amount that the proposer offers represents an increase, albeit minimal, in the responder's well-being and for this reason will always accept; obviously, the proposer's utility also increases.

In case of an offer equal to 0, both accepting and refusing are best responses by the latter does not lead to a Nash equilibrium.

Solving this game by backward induction we find that the unique solution is that the proposer will keep the entire endowment for himself, while the responder will receive nothing.

1.3.2.1 *Anomalies*

What has been observed across several experiments can be summarized in: proposal are never higher than the 50% of the proposer's endowment, modal offers are represented by an amount that is between the 40% and the 50%, the proposer rarely offers an amount that is lower than 20% of the endowment, and for offers of an amount equal to 50% of the endowment or slightly lower are associated to a low probability of rejection by the responder, therefore close to zero, while in the case of offers below 20% of the endowment this percentage is high (Falk and Fischbacher, 2006).

As can be seen from the above results, individuals do not always act by pursuing their own personal interest rationally.

People tend, at the cost of giving up maximizing their usefulness, to punish other individuals when they perceive their behaviour as unfair.

This particular behaviour will be the subject of a more in-depth analysis in the paragraph concerning the theories based on reciprocity.

1.3.3 *Public good game*

As said before in this type of the game each player is endowed with a positive amount, E , and he has to decide how much keep for himself and how much provide as a contribution to public good, x_i . $P \sum_i x_i$ represents the total contribution given by all players.

Since according to neoclassical theory all individuals are self-interest, their utility function is represented by the following equation:

$$U_i = (E_i - x_i) + P \sum_i x_i$$

Whenever $1/N < P < 1$, then the optimal contribution $x_i^*=0$. However, under this assumption $\frac{\partial x_i^*}{\partial x_j} = 0, \forall i \neq j \in N$ (Croson, 2007)

Stating that $P < 1$, it always implies that contributing a positive amount does not represent an optimal choice for the selfish person. This because deciding to contribute a unit to the public good would only make him earn p while the cost incurred is 1. Assuming that $1/N < P$, it means that choosing to contribute a positive amount represents the optimal solution for the group. That is, the contribution of one unit constitutes a cost of 1 for the single individual which, however, allows the entire group to earn an amount equal to NP (Croson, 2007).

Since the neoclassical theory predicts a world entirely made up of people of this type, whenever these individuals will face games or situations as the one presented above the only possible Nash equilibrium is that in which no player will contribute to the public good; therefore, each of them will act as free riders. Consequently, in this type of equilibrium it is clear that there is not a correlation between the contribution of the single player and the contributions of the others.

In both cases, without or with punishment, neoclassical theories predict an equilibrium in which all players do not contribute to the public good. This because: in the first case, there is no threat of punishment if one does not

contribute to the public good in pursuing one's own interest. In the second case, in order to punish others for not contributing, a player has to bear a cost and for that reason he will not punish free riders.

1.3.3.1 Anomalies

Even if neoclassical theory in this setting predicts that there are no contributions to public good, both in real life and in laboratory experiments arise strong evidence against this prediction.

In general, people tend to contribute positive amount to the public good, especially when there is the threat of being punished if you decide not to contribute.

So, the results therefore differ when the object of the analysis are games with or without the possibility of punishing.

It is good to remember that the presence of these anomalies does not indicate that men are irrational, but they are only human; their behaviour is not only driven by self-interest but also by emotions, sense of justice, cognitive biases, or other-regarding preferences.

1.4 Models of other-regarding preferences

Given the numerous anomalies that have been found in the application of the neoclassical theorem both in laboratory experiments and in field applications and in everyday life, many scholarly researchers have tried to fill these discrepancies by developing theories and models that were able to explain the empirical evidence found. So, in this sub-chapter commitment, altruism and inequality aversion theories will be presented.

1.4.1 Commitment theories

When we talk about commitment theories, we refer to the situation in which individuals tend to prefer the choice they would like to be made by the other parties involved.

In this scenario they opt for the alternative that maximizes their well-being by assuming that the others involved do behave in the same way.

Based on what has just been explained, when the agents behave according to this principle, it follows that public goods are financed and as a consequence, we will observe an increase of social welfare.

In reality, we observe that these theories can be applied to cases such as philanthropy, tax evasion, elections, and voluntary contributions to public goods.

These theories are largely influenced by Kant's theories about the individual.

For this reason, when they are applied, it can be consistently observed that:

- people will contribute to public goods different not null sums.
- there is no kind of correlation between the contribution made by each individual and the contributions made by other people.

In relation to the public good game, mathematically we observe that, according to commitment theory, the utility function that is maximized by agents is the following:

$$U_i = (E_i - x_i) + P \sum_i x_i$$

subject to his belief that $x_i = x_j, \forall j \neq i \in N$ (Croson, 2007).

So, including it in the utility function we can rewrite it as:

$$U_i = (E_i - x_i) + PNx_i$$

Whenever $1/N < P < 1$, then the optimal contribution $x_i^* > 0$. However, under this assumption $\frac{\partial x_i^*}{\partial x_j} = 0, \forall i \neq j \in N$ (Croson, 2007).

As can be seen from what was stated above, the optimal contribution of each individual is represented by a constant and positive sum ($x_i^* > 0$); there is no correlation between the contribution of player I with the contributions of player j with $\forall i \neq j \in N$.

Even though commitment theory deserves mention because the starting assumptions are different from those of the neoclassical one; however, in this precise context we can affirm that the results obtained are those predicted by the neoclassical theory.

1.4.2 Altruism theories

Theories of altruism assume that individuals care directly about the consumption or utility of others. So, people's utility is based not only on their own consumption, but also on the consumption of others (positively in the case of altruism).

Among these, we will analyse pure and impure altruism theories.

1.4.2.1 Pure altruism

Pure altruism theories assume that others' consumption or utility positively affects an individual's own utility (Becker,1974).

It follows that based on what has just been stated, individuals adopt socially useful behaviours because they find well-being in improving the condition of others. These behaviours create a set of preferences that we can define as altruistic which help us to understand more clearly the set of all pro-social behaviours. Among these, for instance, we can mention volunteering and charity.

Theories about altruism predict that individuals are happy just by seeing others feel good regardless of the cause that leads to an increase of their well-being.

Therefore, this allow us to affirm that there is a negative relationship between the contribution that each person will make towards the public good and those made by other contributors to the good itself. For this reason, researchers like Roberts have focused on this type of relationship. The analysis leads to establish that there will be an inverse linear relationship between the contribution of an individual and that of the other participants called to contribute.

That is, the greater the other participant's' contributions, be they private individuals or the government, the lower the individual one. (Roberts,1984). Public charity is a perfect substitute for private charity since altruists and recipients only care about the consumption level of recipients. If altruists receive utility from the act of transferring as well, then private charity would still be positive in equilibrium (Roberts, 1984).

Then, pure altruism theories predict that other participants' contributions will crowd out completely an individual's own contribution.

In order to prove it mathematically, in this scenario we assume that individual's utility function is:

$$U_i = U_i \left\{ \left[(E_i - x_i) + P \sum_i x_i \right], PN \sum_i x_i \right\}$$

where $U_{i1} > 0$, $U_{i11} < 0$; $U_{i2} > 0$, $U_{i22} < 0$, (both personal consumption and altruistic consumption are normal goods with decreasing returns).

Constraining the value of P between $1/N$ and 1 allows to get a positive optimal contribution ($x_i^* > 0$), but it leads to $\frac{\partial x_i^*}{\partial x_j} < 0, \forall i \neq j \in N$. So, what it is obtained is an outcome analogous to crowding out (Croson, 2007).

For a more detailed mathematical proof of this phenomenon see Sugden (1982).

The predictions of this theory have been criticized both from a theoretical and an empirical point of view. From a theoretical point of view, because, as Andreoni says in his studies, in groups of many people in fact the individual is unable to observe the behaviour or payments of others, so it is clear that they are not so much influenced by them.

He says that it can also be true in small groups but in fact in groups with a large number of people no one will contribute and therefore the same result will be obtained as in the neoclassical theory, which predicts that in public goods games no participant will contribute. Therefore, all players will operate as free riders.

However, there are evidence, in everyday life, that this prediction does not hold: if these theories were true there would be no charitable organizations and no private individuals who donate positive sums, depriving themselves of portions of their income; there would be no UNICEF, Amnesty International, the Red Cross or any other non-profit organization whose core business is volunteering.

In the data collected by Amnesty International¹ it can be seen that in the year 2019 alone, 317 million dollars were collected and 74% of this amount derives from regular and non-regular donors' donations.

Instead, UNICEF² in 2019 raised a total of almost 7 billion dollars of which 1.5 billion and come from private donors.

In empirical research, it is difficult to support the one-to-one crowding out of private contributions by public grants. Government spending has been found to crowd out private contributions, but the crowding out is far from complete (dollar-for-dollar); it lies in the range of zero to one-half.

¹ <https://www.amnesty.org/en/2019-global-financial-report/>

² <https://www.unicef.org/partnerships/funding>

1.4.2.2 *Impure altruism*

Andreoni, who conducted numerous studies related to theories based on altruism, showed that models based on pure altruism are not able to explain a series of phenomena that occur in reality.

Furthermore, he has proven that another factor that influences the utility and therefore pushes people to be altruistic is the warm glow, that is the pleasure of doing something useful for others, in other words the personal benefit of a simple act of giving.

Unlike what one would think in the reality of things, those who adopt pro-social behaviours do not only care to improve the utility of the recipient of this action, but also derive a more selfish and personal advantage, deriving for example from social prestige and from Consequent gain of public image and reputation as a result of this gesture. Instead, the personal benefit understood as warm glow is something purely personal and only increases the usefulness and well-being of those who perform the action (Andreoni,1989).

To find further selfish reasons that explain why the donor benefits from the warm glow, psychology comes to our aid. Specifically, those who act pro-socially perhaps tend to want to alleviate a negative state of malaise or even to reduce their sense of guilt following a harmful behaviour towards someone.

Concerning the latter case, it has been proved through a three-person dilemma scenario: once the feeling of guilt has been primed, “guilty” person tends to behave in order to compensate the victim at the expense of himself or of other people.

An interest thing is that the way into which the amount of money is divided among three parties, in order to compensate the victim is highly influenced by cultural factors: for example, to compensate their victim, Dutch people sacrificed the allotted resources of a third party, whereas Japanese people sacrificed their own allotted resources (Furukawa et al., 2016)

In the case of volunteering, “self-determination and increased self-esteem may be intrinsically rewarding motives” (Meier,2006, p. 6).

In models of impure altruism, crowding out is never perfect because donors still receive a benefit from the donation per se.

Unlike the pure altruism model, where a complete crowding out occurs due to the fact that public charity is considered as a perfect substitute of private charity since altruists and recipients only care about the consumption level of recipients.

However, this phenomenon of crowding out does not occur in models of impure altruism, or rather it is incomplete as the giver receives a kind of private benefit from the act of giving in himself.

Thus, we can derive that public charity and private charity are not seen as perfect substitutes.

However, even in these models, as well as those based on pure altruism, between contributions of the individual and the other subjects' contributions, be it the state or private individuals, there is an inverse relationship: if there is an increase in the share donated by other agents, a partial reduction of single agent's contribution will be observed.

In order to prove this mathematically, we state that under impure altruism theorem, people are characterized and then, act in order to maximize the following utility function (Croson, 2007):

$$U_i = U_i \left\{ \left[(E_i - x_i) + P \sum_i x_i \right], PN \sum_i x_i, x_i \right\}$$

where $U_{i1} > 0$, $U_{i11} < 0$; $U_{i2} > 0$, $U_{i22} < 0$, $U_{i3} > 0$, $U_{i33} < 0$ (both personal consumption and altruistic consumption are normal goods with decreasing returns).

In order to get a strictly positive optimal contribution ($x_i^* > 0$) they stated that $1/N < P < 1$. Nevertheless, using this constraint, $\frac{\partial x_i^*}{\partial x_j} < 0, \forall i \neq j \in N$ is obtained (Croson, 2007).

These findings allow us to note that a crowding out partially occurs. More specifically, there is an inverse relationship between the amount of the public good provided and the contribution of a single agent. There is therefore a decrease in the contribution which, however, will not become null as in pure altruism (Croson, 2007).

It is possible to find a more detailed mathematical proof in Andreoni (1989). One of the assumptions on which both pure and impure altruism theories are based is that individuals exhibit a stable behaviour.

However, this statement disagrees with at least two pieces of empirical evidence: If the same game is repeated more than once, it is noted that there is a clear trend of a progressive decrease in the presence of pro-social behaviours. Therefore, the empirical evidence demonstrates the fallacy of the theories of altruism in explaining what stated above.

It is observed that there are cases in which agents engage in behaviour in contrast with what is predicted by the theories on altruism. Specifically, the latter punish others' behaviour, in full awareness that this choice will lead to a decrease in other agents' well-being.

Recently, several papers, among which the one of Fehr and Gächter (2000), have presented theoretical results which challenge theories of altruism as well as empirical data inconsistent with these models.

In order to fill the gap with these behavioural anomalies, in literature it is possible to find inequality aversion models that relies on relative well-being instead of absolute utility levels.

1.4.3 Inequality aversion theories

Models of inequality aversion assume the utility of agents depends not only on their own material payoff but also on the distribution of outcomes - how much the other players receive. Thus, according to these models, individuals compare their own well-being with respect to others' one.

Research run by Fehr and Schmidt show that people are inequality averse: either the person is better off or worst off compared to his well-being, however inequality is particularly disturbing when the other person's payoff is smaller than the one of the persons who runs the comparison.

Such models attempt to explain why people behave altruistically towards others worse off than they are but punish those who are better off.

The inequality aversion is able to explain agents' behaviours in several laboratory experiments (Fehr and Schmidt, 1999). Fehr & Schmidt (FS) model and ERC model will be presented below.

1.4.3.1 Fehr & Schmidt (FS) model

The model developed by these authors has one great strength: it can explain simultaneously both the fact that people fairly behave when they interact in small groups and he behave following his self-interest in market settings.

Furthermore, they have discovered that not necessarily all individuals must be either self-interest or other-regarding oriented, but often the presence of even a small proportion of one or the other type is enough to have important repercussions on the result we observe.

The utility function of an individual that is inequality averse in case of $n=2$ is the following (Fehr and Schmidt, 1999):

$$U_i(X) = x_i - \alpha_i \max(x_k - x_i, 0) - \beta_i \max(x_i - x_k, 0)$$

$$\alpha_i > \beta_i, \quad 0 < \beta_i \leq 1$$

In case of $n > 2$, the utility function of the person is represented by the following equation (Fehr and Schmidt, 1999):

$$U_i(X) = x_i - \frac{\alpha_i}{n-1} \sum_{k \neq i} \max(x_k - x_i, 0) - \frac{\beta_i}{n-1} \sum_{k \neq i} \max(x_i - x_k, 0)$$

$$\alpha_i > \beta_i, \quad 0 < \beta_i \leq 1$$

The FS utility function has several important features: “inequity is modelled as self-centred inequity aversion” (Dhami, 2016, p. 402), it means that each player considers his payoff as a Benchmark on which to base the comparison with other players’ payoffs. Player i does not consider the distribution of the payoffs among the other members of the group (excluding him); consequently, he is not interested in possible inequalities between them. The theory does not provide information on the structure and dimension of the reference group. According to the FS model, if an individual is self-regarding, the beta and alpha coefficients are equal to zero. The utility function presented above is based on a specific type of payoff: linear ones; however, this theory also permits us to consider cases in which they are not. However, even in this model as well as those presented so far, the intentions are not taken into consideration. By imposing a negative beta, they wanted to eliminate the possibility that a person could derive satisfaction from being wealthier than others. This restriction has no impact on the results provided by that model. While there are not upper limits attributed to alpha, for beta a domain of values limited above is fixed, this value cannot be exceeded. Imposing that beta assumes a value lower than alpha’s one implies that with the inequality between players being equal, the situation in which the one who operates the conflict between himself and the other agents is perceived as more harmful. When we have to analyse situations of inequality, whether it is favourable or not to the agents under study, it is necessary to carry out a statistical standardization to make utility functions comparable, if applied to a different initial number of players. To do this, the second and the third terms are divided by $(n-1)$ (Dhami, 2016).

Several tests have been conducted. The estimates suggest that $\beta < 1$ and typically $\beta < \alpha$ (Dhami, 2016); specifically: Blanco et al. (2011) observed that there are differences depending on the parameters are estimated at the aggregate or at the individual level and Fisman et al. (2007) found that

there is considerable heterogeneity at the individual level in social preferences.

In literature it is possible to find models that consider only altruism or envy; however, the FS model embodies both of them.

People that have this type of preferences are interested in knowing how unequal their own incomes are compared to those who are better off and worse off.

This set of models that have these characteristics is known as inequity aversion models.

When we have to analyse social redistribution problems the FS model is surely one of the models we have to consider, since it is able to explain evidence emerged in laboratory experiments on this topic.

Then, this leads us to consider the presence of social preferences and the tendency of people to be guided by a sense of justice as a possible engine of this result (Dhami and al-Nowaihi, 2010)

However, there is empirical evidence that leads to the affirmation that it is not only the desire to reduce inequities among individuals that influences people's prosocial behaviour.

In fact, in a study conducted by Charness and Rabin (2000) most of the people who took part in the experiment tend to choose an allocation of resources that is not fair but turns out to be more efficient, in terms of payoffs.

A numerical example will make what has just been stated clearer. Assume that people must choose between:

- option a: both dictator and recipient will obtain a payoff of 350 each.
- option b: the receiver will obtain a payoff of 600 while the dictator once of 350.

So, the option that will lead to a socially efficient allocation, even if it is not equal, tends to be preferred with respect the fairer one.

Other research has been conducted show how the theories of inequality aversion are unable to explain several prosocial behaviours.

1.4.3.2 *ERC model*

According to this model, individuals are not only interested in their own payoffs in absolute terms but also in their payoff compared to others' one, as a whole. Consequently, they are not interested in how the payoffs are distributed among the other players (Bolton and Ockenfels, 2000).

Suppose that there are n players, $i = 1, 2, \dots, n$.

Payoffs to all players are non-negative monetary payoffs. Denote by $x_i \geq 0$, the payoff of player i . The sum of the total payoffs is $S = \sum_{i=1}^n x_i$. The relative payoff of player i , also called the motivation factor, is given by

$$r_i = r_i(x_i, S, n) = f(x) = \begin{cases} x_i/S, & S > 0 \\ 1/n, & S = 0 \end{cases}$$

The utility function (the authors prefer the term, motivation function) of player i is

$$u^i = u^i(x_i, r_i) = f(x) = \begin{cases} u^i\left(x_i, \frac{x_i}{S}\right), & S > 0 \\ u^i\left(x_i, \frac{1}{S}\right), & S = 0 \end{cases}$$

Depending on the type of game into which the ERC model is applied it is possible to observe different results.

- Dictator game: the model forecasts that the dictator will keep to himself an amount between 50% and 100% of the endowment.
- Ultimatum game: null offers are rejected, and the rejection rate is inversely proportional to offered amount; so, if the latter decreases, the rejection rate increases (and vice versa).

In the case of competition among proposers, the model is able to explain the competitive equilibrium in which at least two proposers will offer the entire endowment to the unique responder.

Unlike the FS model, the ERC one is also able to explain the results in the three players ultimatum game version, where the third player seems to be unfairly treated; this is possible only because it allows for asymmetric information.

As previously stated, according to this model:

- people compare their own payoff with the total payoff of others.
- people characterized by ERC preferences are not interested in comparing their own payoff with others' payoffs.

Finally, given above mentioned statements, ERC has a less nuanced notion of inequality compared to FS model.

The following experimental games show that this gives rise to different predictions relative to the FS model.

The ERC model is not able to explain the outcomes in public goods games with punishments. This because in second stage of the game, since people care about the aggregate payoff and not the individual's one, they will not punish free riders, who have not contributed.

In the absence of the threat of being punished for non-contributions, people will not contribute; so, ERC predicts, both in public good game without and with punishments predict the same results – no one will contribute more.

As we can observe, these results are far from what happens in reality: individual when threatened by possible punishments will contribute positive amounts to public good as demonstrated by Fehr and Gächter (2000).

They noted that both free riders' and other players' contributions increased once the punishment setting was introduced. On average, the formers' contribution rose till an amount that represents half of their initial endowment).

So, the same group of individuals, who in case of a non-punishment setting would converge in a situation of complete defection, will cooperate, by contributing positive amounts to the public good, if the possibility of being punished is introduced.

Antisocial punishments are inconsistent not just with the ERC model but also many other models of social preferences.

Another limitation of this model is the inability to explain indirect reciprocity when it occurs in some games (Dhimi, 2016).

1.4.3.3 Comparison between FS and ERC model

When these models are applied in two players games, like dictator and ultimatum game, they often predict similar results.

However, when they are applied in a scenario with three or more players, forecasts might significantly be different.

This is because as stated in the paragraph dedicated to it, according to the ERC model each player is interested not only in his own payoff, but also in his payoff in relation to others' payoffs, considered as a whole. Consequently, the player will be interested in the single opponent's payoff only if a change in the average payoff occurs (Dhimi, 2016).

In general, indications contrary to inequity aversion theories come from the dictator game. Nevertheless, when also the counterpart has the possibility to operate a choice that can determine the final result of the game, these models work.

In all the models described till now, the intentions of other players are not taken into account. Nevertheless, in several laboratory experiments it emerged that they have a significant role and they heavily influence the decisions people take.

For this reason, the evidence observed may be better explained by a model that embodies either the intentions of other players, social preferences, and reciprocity such as the model by Falk and Fischbacher (2006).

1.5 Reciprocity theories

In theories of reciprocity, what is relevant are the intentions that people perceive in relation to others' people actions: when the perceived behaviour is kind, people will be kind too.

Otherwise, due to a sort of mirror effect, when other people's behaviour appears to be unfriendly, person will unkindly respond too.

In repeated interactions we can observe different behaviours: cooperative, retaliation and that of reciprocity. Both in cooperation and retaliatory, the presence of an expectation of material benefits is observed for the one who performs the action described above. Otherwise in reciprocity, there is a behavioural response that mirrors the actions received: generosity with generosity, hostility with hostility, regardless of the expectation of receiving something in return.

It should also be noted that reciprocity should not be confused with altruism. The latter in fact, instead of reciprocity, involves kind and benevolent behaviour in an unconditional way, without the expectation of receiving something in return (Fehr and Gächter,2000).

According to what we can find in social sciences' literature (economics, sociology etc.) it seems that reciprocity represent fundamental driver of people's prosocial behaviour.

In the early 1980s the economist George Stigler stated that in the event that a person finds himself facing a situation in which his personal interest is in contrast with his ethical values, more often than not it is the former who takes the upper hand and to guide the behaviour of the individual.

However, as we have seen so far through the various theories exposed and as we will see below in reality this is not always the case, that is, people are not always guided by their own interests.

For this reason, it can be argued with enough reasonableness that when there are both selfish people and people guided by reciprocity principles, the former do not always dominate the aggregate outcome. There are

several situations in which it is driven by reciprocity-motivated people as we will see.

1.5.1 Practical cases

Since in real world interactions, it is very difficult to rule out with certainty that an actor derives a future material benefit from a reciprocal response, we provide in the following discussion evidence on reciprocity from controlled laboratory experiment.

Maybe one of the most explicit demonstration of how negative reciprocity works is experiments with ultimatum game settings. The latter provides robust results: this type of experiments have been conducted thousands of times, in different countries, with all possible kind of subjects and what has been found is that there is a high probability that the responder will deny the offer if it represents less than 30% of the proposer's endowment (Camerer, 2003).

In this case the responder's action differ from the one predicted by neoclassical theories, in which the person would have accepted the sum, even if it is very low, since it represents an improvement, he is better off. However, people in general reject the offer in order to punish the proposer when they perceive the proposal as unfair.

Evidence of this behaviour hold even when high amounts of money are involved: results are the same or there is just a small impact on them.

For what concern positive reciprocity, it has been found evidence of it in many trust or gift exchange games.

Provision of public goods is one of the main concerns that almost all societies face.

If a society would be only composed by self-individuals none of them will contribute to the public good, wanting to behave as a free rider on the efforts of other.

The principal consequence of reciprocity is straightforward: a positive correlation between their own behaviour and others' one is observed.

Let us consider a situation in which people are asked to contribute to a public good: individuals will judge the behaviour of others as kind or not and will adjust their behaviour accordingly.

If individuals observe that others behave pro-socially, they will do so as well.

In fact, as stated by Meier (2006, p. 9), "No one likes being the only one who contributes to a good cause, and no one likes being the sucker who contributes while others free ride".

Among all predictions of this theory, one of the most idiosyncratic is that the probability that agent k will contribute to a public good increase if the number of people z ($z=1, \dots, n; z \neq k$), who donate positive amount within a specific group, increases.

As it is possible to note, this hypothesis goes in opposite direction with respect the one stated by altruism theories; in which contribution of individual k is negatively correlated to the behaviour of all other individuals. To make clearer the dynamics and the relation mentioned above an example will be provided. This example is based on the settings of the public good experiment conducted by Fehr and Gächter.

Let us consider a group composed by four people, each of them is endowed by 20 tokens. All players have to simultaneously decide how much contribute, in terms of number of tokens, to the public good and the number of tokens they want to keep to themselves. Each token that each player decides to keep for himself will earn him exactly one token; while, for each token invested by players in the public good, each player earns 0.4 tokens, independently they have invested or not in it.

So, for each token that is invested, each player will have a private gain of 0.4 tokens while 1.6 tokens represent the social return if each individual decides to allocate the entire endowment to the public good (20 tokens). Thus, the private return for investing one additional token into the public good is 0.4 tokens while the social return is 1.6 tokens (Fehr and Gächter,2000).

Since the cost to invest in public good is one token and the return is 0.4 tokens, people guided by a selfish interest, have not incentives to invest. Following this line, all individuals will keep all the amount to themselves, earning 20 tokens each, at the end of the game.

However, if all players decide to contribute a sum of tokens equal to the total endowment, each of them will earn 32 tokens.

This elementary example helps us to understand that, even if social welfare reaches its peak when all people contribute with their entire endowment, they are driven by their own self-interest to not contribute at all, whatever is the others' contribution.

According to the positive reciprocity theory, a subject will be more motivated to contribute if he sees the same behaviour held also by other participants. This because the contribution is perceived as a benevolent act capable to trigger the willingness of others to do the same (Keser and Van Winden,2000).

Given these premises, in order to make positive contribution to the public good a systematic behaviour, in the group of players a high enough percentage of agents that is inspired by the principle of reciprocity must be present. This is because, if a not negligible small group of individuals only guided by self-interest is present, there is a small probability that the contribution to public good is represented by a positive amount and it is an equilibrium.

Until now we have concentrated the discussion to positive reciprocity, nevertheless, there is another key concept that cannot be overlooked: negative reciprocity.

In the above example it was not present because due to the way the game was set up there was no possibility, in a second stage, to punish those who, in the previous stage, has not contributed, acting as free riders.

However, the impact of negative reciprocity changes radically if subjects are given the opportunity to observe the contributions of others, and to punish those who do not contribute. Indeed, if subjects expect that others free ride, and if they interpret that as a hostile act, then they can "punish" others by free riding, too (Fehr and Gächter,2000).

If observing a final result in which no player contributes to the public good, we cannot define whether this result is attributable:

- to the fact that people are completely interested in their self-interest.
- they have seen others not contribute and for this reason they have decided not to contribute themselves because they are moved by reciprocity.

Again, now we provide another simple example in order to confirmed what previously stated.

Assume that in the group we will analyse each member has the possibility to punish others by reducing their income. A necessary condition is that the punishment is costly for the punisher.

This because if the person has to pay a cost to punish:

- selfish subjects will never punish and self-interested subjects' decisions to contribute would be unaffected by the possibility to punish.
- There are subjects who will be inclined to bear a cost themselves to see free riders punished. This happens when we are looking at negatively reciprocal individuals (Fehr and Gächter,2000).

From this reasoning we can deduce people characterized by self-interest preferences will contribute in order to avoid being punished.

As a consequence of this, even the presence of a small group of reciprocity-motivated agents will lead egoistic ones to contribute too.

Fehr and Gächter show that the negative deviation from others' average contributions to the public good is a strong determinant of punishment. Consequently, the more a subject behaves in an opportunistic way towards others and therefore benefitting a good for which he has contributed little or nothing, the more he will be punished by the other players (Fehr and Gächter, 2000). Put in different words, the lower is person's contribution with respect to the mean, the stronger will be the punishment.

Moreover, independently of getting any benefits in the future from the punishment, retaliator will punish who does not contribute.

The situation analysed above, as well as other experiments based on public good games without punishment, provide a good example of a case in which selfish individuals influence reciprocity-motivated subjects' behaviour, leading them to behave selfishly too.

In fact, when there is no possibility to punish those who do not contribute, the level of collaboration drastically decreases in the later stages and in public good games there is a convergence to a situation in which all agents free ride, so a zero-contribution scenario.

Nevertheless, the latter predictions appear to contrast with the agents' observed behaviour in public good games that allow punishment.

Furthermore, from several experimental studies conducted it has been emerged that people have a greater inclination to punish actions perceived as hostile or harmful than rewarding those perceived as kind (Offerman, 2002; Charness and Rabin, 2002).

Evidence of reciprocity-based behaviours have been found also outside the laboratory experiments context.

There is also a lot of evidence of positive reciprocity even in all those interactions that we undertake in everyday life: for example, it has been noted that there is a positive correlation between being served by a smiling waiter and a tip that is left (Tidd and Lockard, 1978).

In the United States, in fact, the unwritten rule of tipping at the end of a meal and it has been observed that the more smiling and friendly waiter is the greater the amount of the tip that is left by customers.

According to Fong (2001), there are evidence that whether a person is in favour of redistribution as a tool to reduce poverty depends on how this person perceives poor people's intentions.

Specifically, those who consider themselves in favour are those who see poverty as a mere consequence of unlucky circumstances.

Instead, those who are contrary to redistribution believe that poor are not doing anything to improve their situation and that they are waiting for a sort of manna from heaven (Fong, 2001).

After performing this experiment, the author shows us how the data indicate whether the donor is sensitive to the laziness of welfare beneficiaries:

- in the first case it is clear that when the donor is sensitive to the laziness of the recipient, the amounts donated vary according to how much the other person is perceived as lazy.
- in the second case, however, we can say that the fluctuation in the amount of donations is not so evident.

We can conclude that there is a negative relationship between the amount donated and the perceived laziness of the recipient: the more the recipient is perceived as lazy, the less the amount donated to the latter and vice versa.

1.5.2 Rabin's model

As has been noted up to now, the deviations from the neoclassical model that have emerged from both field research and laboratory experiments are several.

For this reason, many theories and models that have been developed in the various fields of social sciences in order to give an explanation to all these discrepancies that occurred systematically.

In order to create a model in which interactions between players were also determined by intentions, simple neoclassical game theory was not enough.

For this reason, Rabin worked within the framework of psychological games theory developed in the late 80s by Geanakoplos et al. (1989).

This is because in the neoclassical game theory the players receive only a purely material payoff while in the second the payoff of the players is not formed only by a material component but also by a psychological component; the player experiences a psychological payoff.

So, each player's psychological payoffs rest on kindness that is determined by beliefs.

Another big difference between the two types of games mentioned above is that in the psychological ones both the strategic profile and the player's

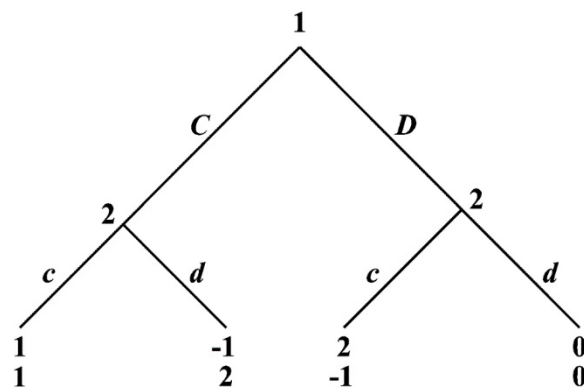
beliefs about other players' actions or beliefs determine the payoff will be obtained by the player; instead in standard ones, only strategic profile determines the player's payoffs.

Nevertheless, Rabin himself in his paper identifies a non-negligible limitation of his model: all those situations in which two subjects find themselves having to interact more than once are not considered. In particular, he stated that “extending the model to sequential games is also essential for applied research” (Rabin, 1993).

As we have said, because gentleness rests on beliefs, in case of sequential games players revise their own beliefs and in doing so they could also review other players' level of gentleness.

For this reason, it is not possible to state that players reciprocate in a constant way for the entire duration of the game: the impact of reciprocity principle have on players' behaviour can be different in each node of a game tree.

What has just been stated can be better understood through the presentation of a game, or the Sequential Prisoners' Dilemma.



It can be demonstrated that (C, c) represents one of the possible equilibria that can be reached by the players according to the theory developed by Rabin. This equilibrium occurs when player one decides to cooperate and player two does so unconditionally. This scenario holds as long as the interest in material payoff does not surmount the one for reciprocity (Dufwenberg and Kirchsteiger, 2004).

Given all these premises, it is clear that a reciprocity model when applied to sequential games has to be able to deal with belief changes and the way in which they affect reciprocity concerns.

So, “sequential reciprocity principle” must be embodied in the model.

1.5.3 Dufwenberg and Kirchsteiger's model

Dufwenberg and Kirchsteiger (2004) have also developed a model that takes into account the influence that intentions have on the behaviour of the individual.

As in the model just exposed, both positive reciprocity and negative reciprocity are considered; that is, to respond gently to a behaviour perceived as friendly, and to respond in a hostile way to a behaviour perceived as unfriendly. Thank to this sort of “sign-matching”, reciprocity can be added to person's utility function.

Certainly, one of the most innovative elements in this model is that it embraces the way in which both the strategic choices and the reason why people act according to the principle of reciprocity change when they enter in a new subgame.

Moreover, in this model it is imposed that in all stages of the game best responses (player's strategy that provides the highest payoff to the player, keeping other players' strategies fixed) in each stage of the game is suggested by strategic choices.

Therefore, it is good to remember that the classification of an action as gentle or ungentle does not rest only on the type of action per se, but also on which he thinks will be the effects of his action compared to what he thinks are the results that could have resulted from other possible actions. In other words, whether a person is considered kind depends on the intentions behind his behaviour. For this reason, before responding kindly to a kindness, the other person must have generated a belief about the first person's intentions. As stated by Dufwenberg and Kirchsteiger (2004, p.273), “Since intentions depend on beliefs, it follows that reciprocal motivation depends on beliefs about beliefs”.

This model was also created within the framework of psychological games developed by Geanakoplos, Pearce and Stacchetti.

However, there is a substantial difference between the two: in fact, Geanakoplos et al. (1989) focused their attention only on initial beliefs, considering them as the unique potential element that affect players' estimates of alternative strategy profiles.

To come to grips with such issues we work within the framework of psychological game theory (Geanakoplos et al., 1989) with difference that he confined attention to psychological games where only initial beliefs may influence players' valuations of different strategy profiles.

1.5.4 Comparison of Rabin's and Dufwenberg and Kirchsteiger's models

After introducing two of the most famous reciprocity models, a brief comment on the comparison of the two will be given below.

One of the main differences is that the Rabin's model was created within the framework of normal form games; instead, in the second model presented the strategic interactions are represented in an extensive form game, thus making it necessary to impose the concept of sequential rationality.

Reaching a particular subgame, sometimes some that are not expected, can lead players to modify their beliefs what strategy profile should be played. Given that whether a person is considered kind depend on player's belief about her, then evaluations concerning kindness could change and have an impact on how players are driven by reciprocity concerns.

Therefore, there is the need to distinguish which are the initial beliefs of the player and those that follow in the various stages of the game.

To deal with it they kept track of players' beliefs changes and they assumed that the choice made in each node is the result of his beliefs in that precise node.

Once it is established that reciprocity is an important driver of players' behaviour, it is necessary to impose that, in sequential games, the players' beliefs about the kindness of the other players update and then they behave accordingly, otherwise the results would be misleading.

Rabin's model was developed within the framework of two-players normal form games.

When the concept of sequential reciprocity equilibrium is applied to any one-shot game with simultaneous moves the conclusions that are reached are often the same of those predicted by Rabin's theory. Consequently, it appears clear that the discrepancy is due to the fact that in Dufwenberg and Kirchsteiger's theory sequential reciprocity is imposed.

Another thing where the two models differ is that the latter model admits more than two players.

1.6 Social identity

The environment is one of the main drivers in the process of creation and importance of social groups. As a matter of fact, the context in which the decision is taken makes the difference: for example, being at workplace or in a shop influences people's way in which pro-socially behave.

Persons have a propensity to identify with one or more social categories. Therefore, there is a one-to-one relationship between the social category and the social identity which is triggered. Each of these categories is regulated by social norms that are the rules that establish the behaviour that should ideally be held by each member in particular situations. It is clear that a single individual can and in general recognize himself in different social identities depending on the context in which he finds himself.

In addition to standard variables entering individual's objective functions (utility), decision makers may also derive utility/disutility from conforming or not conforming to social norms or expectations of one or more group(s) or social category(ies) to which individuals may:

- belong.
- believe to belong.
- like to belong.
- be averse to.
- have been excluded from.
- want to be distinguished from.

The social identity theory is based on three fundamental elements (Dhimi, 2016):

- CATEGORIZATION
individuals classify themselves and others into the relevant categories.
For example: gender, race, nationality, profession, etc.
- IDENTIFICATION
individuals identify with the norms and expected characteristics of the category in which they belong, believe to belong, or would like to belong.
Identifying themselves in a particular social category can lead members of that category to behave stereotyped. As will be seen during the chapter, there is a tendency to prefer and therefore to maintain behaviours that favour inside group members over outside group members.
For example: playing rugby is seen as a sport for boys and dancing as a sport for girls.
- SOCIAL COMPARISON AND DISCRIMINATION

behaviour depends on the socio-cultural roles, norms, and social category differences in relation to the individual(s) with whom one is interacting.

Comparisons are made between members in one's own category and that of others based on certain criteria, which are often largely influenced by stereotypes.

For example: gender role stereotypes in relation to the distribution of domestic activities among family members.

There is an extensive literature showing that people tend to cooperate more with their in-group (other members of the same fraternity) than with individuals not part of their in-group (members of other fraternities) (Kollock, 1998).

Not only, it has been proved that people also tend to assign a higher amount of money to people with which they share the same social identity compared to those with which they do not.

So, without necessarily having to find deep selection criteria for the creation of groups, small variables, even sometimes insignificant or trivial ones (red or blue group in laboratory), are enough to find large differences in the final division of money in an experimental setting.

Economics and evolutionary theory are intertwined in sometimes surprising results: from these experiments it emerges that people, for reasons related to his evolution, sometimes assumes behaviours that produce benevolent and socially useful results, others, on the contrary, are harmful to society (Dhami, 2016).

For instance, in dictator game it has been noted by Ockenfels and Werner (2014) that the dictator tends to offer a higher amount of money if he perceives same group identity with the other player; vice versa when he is not sure about it, he tends to transfer lower amounts. In this specific case, the sample was made by university students and the criterion according to which they were divided was the attended university. In particular, the ingroup members were Cologne's University students, while the outgroup members attended the University of Düsseldorf.

The tendency of behave in a kinder way with in-group members with respect to the out-group members appears also outside laboratory experiments.

The more a community is composed by people similar in characteristics such as ethnicity and race, the higher is the propensity to be engaged into

social organizations and activities; Not only, it has been observed in this scenario people accept income redistribution with a higher probability.

Being part of a cluster causes unconsciously cognitive biases: people that belong to the same group tend to behave in a gentler way or to punish less heavily respectively, compared to what they will do in the same situation but with out-group members.

Evidence of what has just been stated has emerged from the income redistribution scenario. In fact, it has been noted that people tend to perceive the poverty of a group member as a mere consequence of unfortunate circumstances while if the subject in question is not part of the same group, the same condition is seen as a natural result of a lack of personality or ability (Meier,2006).

Randomizing the process of assignment of people to various groups is helpful to isolate the effect of group membership. Researchers like Goette, Huffman, and Meier noted that if groups are formed in a random manner, more favourable behaviours towards their own group members are still present; however, in this scenario, people do not exhibit hostile behaviour towards non-members (Goette et al., 2006).

The evidence in favour of this phenomenon is robust, in fact it has been found both in the laboratory and outside it, in different contexts, with different types of criteria for the formation of groups.

Nevertheless, while this tendency to favour members of one's group is undeniable, the reasons behind this behaviour are not so explicit.

In particular, the fact of being kinder with in-group members can be elicited by a sort of sense of duty to them or it could be due to a more strategic motive: they behave pro-socially because they expect other members of the group will return the altruistic gesture in a sort of reciprocity.

According to models which focus on the intergroup biases the presence of concern about their own reputation within the cluster is also salient. This concern would lead people to be more altruistic towards the members of their own group (Mifune et al.,2010), and also the presence of expectations on the reciprocity of other members leads individuals to cooperate in order not to receive in response negative behaviour (Yamagishi and Kiyonari, 2000).Moreover, even the sense of belonging to a specific group per se can be considered a powerful driver, thus, lead to an in-group members' well-being that is instilled by an intrinsic value.

Other possible reasons could be identified by the intrinsic value of helping, social pressure, and sociobiological motives.

Much research has been conducted to investigate the role of social motivation as driver of humans' behaviour, suggesting that it provides both social interaction and psychological benefits. So, either chances to engage in relationship with people like them or an increase of self-confidence and the feeling of affiliation, the sense of being part of something.

Talking about motivational factors, in literature it is possible to find proofs that they largely shape person's level of empathy towards others.

Hence, the possibility of indirectly obtaining a reward could be influenced by the motivational relevance of inside group members (Hackel et al.,2017).

Given what stated above, the following predictions can be made: different responses considering the gains get by the own group and the other one should reflect different degree of affiliation: the more a person identifies himself with a specific group the higher the preference for own group's gain in an intergroup scenario; unlike, when sense of belonging is low, this type of preference is not present.

In addition, motivational factors of identification could be linked to group-based biases, past impacts of noticed likeness to others (Hackel et al.,2017).

Finally, group identities should also be noticed by the neural activity that occurs even when people simply witness other members of their group winning, therefore without winning themselves.

If those who are characterized by a high degree of identification with a particular group do not earn a reward themselves, there is the possibility that the sense of belonging per se reduces the regret for that (Hackel et al.,2017).

This indicates that strategic motivation theories cannot fully explain group-based social preferences.

Another interesting finding emerged from research conducted such as Branscombe et al. (1999) is that not all members of a specific cluster display a preference toward other members.

Clearly, how much a person identifies itself with a specific social category is unique and differ among the members of the same group. The degree of the sense of affiliation varies among individuals and different is the strength with which the identity influence and determine the behaviour with respect other inside members and the cognitive status of a person that will lead him to be more or less accommodating.

As a matter of fact, people often do not want to be associated and clustered in particular social groups: not only because they do not

recognize themselves in that particular category, or in the values that characterise them but also because they feel the need to emerge and to be considered as a unique individual (Branscombe et al., 1999).

In all these cases when the group identity is triggered a sort of opposite reaction can be observed: in particular, it has been noted, that in these scenarios, people whose sense of belonging is low tend to perceive negative emotions, to distance themselves from the reference group and sometimes, to make in-group members worse off instead having a preference for them.

All these considerations allow us to state an important result: group identity is certainly a fundamental factor in determining the behaviour of individuals, however, its impact when it is elicited can lead to either positive or negative reactions of the person (Branscombe et al., 1999); The type of reaction that will occur depends on the strength of person's sense of belonging.

The stronger or weaker sense of belonging to the group will lead in the first case the people belonging to the group to compare their output with that of the other groups, perhaps for a sense of competition or whatever, vice versa, in the second case, if this is low, the person will either not be interested in what his group produces, or he will not be equally interested in comparing his group's outcome with others' one.

Identification has been further decomposed into multiple components:

- group-level self-investment
Defines the degree of importance that people attribute to belonging to a group as a motivation. In other words, how much important the group affiliation is as motivation.
- group-level self-definition
represents the degree of similarity perceived by an individual when he compares himself with the other members of the group and that when he compares the other members of the group with each other. in other words, how much he perceives himself similar to the other members and how much he perceives the other members of the group similar to each other (Hackel et al.,2017).

1.7 Conclusions

From what it has been explained in this first chapter it is clear that, although the neoclassical theory is one of the most consolidated, the prescribed behaviour is not always in line with that actually held.

As a result, over time various scholars have deepened the question more profoundly, and this leads to the formulation of different new theories, aimed at improving the prediction of people's behaviour and the knowledge of the drives that affect it, smoothing out the difference between expected behaviour and the one held.

As it has been noticed thanks to the exposition of the various theories developed to try to explain the causes of the anomalies found both in the laboratory and in the field, there are many drivers that influence prosocial behaviour. For this reason, they cannot be analysed in isolation but must be considered as interrelated factors.

After investigating the macro category of prosocial behaviours and the respective underlying literature in this first chapter, in the second one the attention will focus on one of its most curious manifestations: volunteering.

Chapter 2:

Volunteering: antecedents, experience, and consequences.

2.1 Introduction

Volunteering turns out to be a worldwide phenomenon, in fact from the numerous surveys conducted has been emerged that millions of individuals have decided to dedicate a considerable number of hours and efforts to volunteer activities.

Volunteering is therefore one of the possible channels through which people try to improve the well-being of other people, their community and society as a whole.

It was also possible to observe how the efforts of volunteers, that are generally made in a constant and continuous manner, have led in many cases to reduce the inefficiency or to fill the gaps in the system of aid and assistance to people and communities.

Some voluntary activities, as well as social movements aim to change the status quo by bringing about radical transformations and favouring the development of lengthy solutions to collective problems.

There are numerous examples of organizations currently operating not only nationally but also globally that have sprung from small businesses where a small number of individuals have brought to light the existence of a problem and with it, a possible solution.

Among these, the neighbourhood surveillance programs that arise from a need for a sense of protection and safety from possible crimes cannot be ignored. At a national and global level, the conquest of women's rights, civil rights in a broader sense, reforms of the prison system and the system that deals with the care of people with mental illnesses, greater rights attributed to animals and, last but not least, environmental protection certainly deserve mention as an example of profound social political changes deriving from voluntary work (Omoto et al, 2010).

There are also other types of voluntary activities whose efforts are made less constantly but they are not less important, whose main objective is to provide help or assistance to people or communities in a targeted, direct, and immediate way (Omoto et al, 2010).

Volunteering by its nature requires the volunteers to make efforts, to give up their free time, and to face opportunity costs. In fact, volunteering leads to the renunciation of other activities, for example of a recreational nature, and therefore to the creation of other possible social relationships.

As a result, volunteers may find themselves facing not only additional social costs but also a possible rejection by other people with whom they could have established relationships. (Snyder and Omoto, 2008)

Furthermore, another characteristic of volunteering is that unlike the help that is offered following the occurrence of emergency situations in which an immediate or quick decision to intervene is required, in this case there is no type of pressure to act induced by the situation. More specifically, in the case of planned aid, there is a need for people to understand what their strengths and weaknesses are and consequently what are their personal inclinations, as well as the reasons that push them to support this type of help.

This introspective guide the potential volunteer in choosing the type of activity in which to be involved, the degree of involvement and the time frame in which it is performed (Clary et al., 1998).

For these reasons, volunteering turned out to be a curious phenomenon that, due to its peculiarities, should not exist.

Given the particularity and the unique nature of this activity, it has been the subject of numerous studies in different disciplinary areas including economics, psychology, sociology; however, the complexity of this phenomenon needs, to be analysed in its entirety, a multidisciplinary approach capable of incorporating concepts from all the fields of study just mentioned.

Because volunteerism can mean different things to different people an exposition of the definition is necessary.

In addition, in this chapter it is possible to find a brief overview of volunteering in Europe in which some data will be provided and an extensive, but non exhaustive. analysis of the three main and sequential stages of which the volunteering process model is composed: the antecedents, the experience stage, and the consequences stage. Greater attention has been paid on the first one, in which motivations, personality

traits and in general all variables that are related to a higher propensity to be a volunteer are explored.

2.2 Definition and classification

Wilson (2000: 415) defines volunteering as “a long-term, planned activity in which time is given freely to benefit another person, group, or cause” and it occurs within an organizational setting. It constitutes a particular kind of pro-social act in which individuals actively and freely look for opportunities to provide non-monetary aid to people in need who desire it.

As has been shown by Cnaan et al. (1996) in most of the definitions there are some elements in common to all of them: free will, the absence of a monetary reward, the beneficiary is a stranger, so there are no previous relationships, it is a lasting activity over long period of time and that takes place within a formal context such as organizations.

Another key element is the proactivity that characterizes the one who will become a volunteer who, after a careful phase of reflection, looks for opportunities to help. Being an activity that generally lasts for long periods of time, the decision-making process does not only concern the initial phase, so whether to volunteer, but also the next one, so whether to continue to do it.

As we will see in the following paragraphs, the more the activity fits motivations and needs, the greater the probability that the subject will continue to perform it (Snyder and Omoto,2008).

It is possible to recognize the following idiosyncratic characteristics:

Voluntary work is **non-mandatory**, so the aid act must not derive from a feeling of obligation towards the beneficiaries or because of coercion. Therefore, it must be the result of a free choice. Usually, this sense of duty, whether implicit or explicit, emerges in the case that the beneficiary and the recipient are friends, relatives or in any case two people between whom there is a previous relationship based on reciprocity (Dovidio and Penner, 2001; Omoto and Snyder, 1995; Penner and Finkelstein, 1998).

The practice of volunteering is the consequence of a decision-making process through which the subjects perform an analysis in terms of costs-benefits, as well as a more personal analysis such as the identification of their own motivations and attitudes (**planning**).

The presence of this phase of deliberation distinguishes volunteering from spontaneous help in an emergency. In fact, in these latter cases the person decides quickly whether to intervene, without careful and conscious reflection as the stimulus to help is triggered by the salience of the context in which the subject finds himself (Dovidio and Penner, 2001; Wilson, 2000)

However, there is the possibility that volunteering is influenced by contextual forces. In this regard, an example is provided by a relatively recent news story; in the days following the attacks on the twin towers and the Pentagon on September 11, 2001, the number of citizens who contacted various types of volunteer organizations to offer their help tripled. This behaviour cannot be classified as spontaneous help that usually occurs in emergency situations. This is because the willingness to volunteer is expressed a couple of days after the terrorist attack and the people who offered their help lived at a certain distance from the place in question, consequently this choice was preceded by a phase of consideration and planning.

It was not only organizations directly employed to provide emergency services that benefited from this wave of willingness on the part of citizens, which clearly recorded the highest increase in engaged people, but also animal protection organizations, those that provided assistance to the elderly, those which took care of children and, last but not least, those whose focus was that the LGBT movements saw an increase in the number of volunteers involved.

This leads us to make a further consideration: not only the decision to participate in these organizations had been the result of deliberation but it was already in the intentions of individuals, before the occurrence of this fact.

Voluntary work normally requires individuals' commitment for long time (**longevity**): more than 50% of the volunteers declare that they carry out these activities constantly and a consistent share of them do it for several years (Omoto and Snyder, 1995; Penner and Finkelstein, 1998).

The choice to practice this type of action derives exclusively from the motivations of the person, beyond the possibility of obtaining a reward or the possibility of a punishment in case it is not carried out.

The activities and services provided by voluntary organizations are aimed at individuals who wish to be helped and for this reason they cannot be

imposed on the recipient, i.e., the beneficiary must have the possibility to accept or possibly refuse help.

Generally volunteering is carried out within a formal context, therefore in or through organizations (**organizational context**). In fact, more than eighty percent of volunteers work within structural settings. However, it cannot be denied that some people do help on a regular basis, with no obligation to people to whom they are not related, but they represent a small part (Penner, 2002).

As mentioned before, volunteering is one of the forms in which prosocial behaviour can manifest itself.

Therefore, it is possible to separate volunteering from charitable giving and philanthropy; the first case the subject offers his time, his energies, his skills, and his efforts to a cause or to the beneficiaries of the activity, in the second case goods and money are donated.

Missionary work is also not included as they receive a remuneration, albeit minimal, or other type of subsidies and for this reason this activity does not comply with the above definition of volunteering.

In addition, as already stated, aid provided to people with whom a relationship has been established prior to the aid act, such as caring for a sick relative or spouse, is not considered voluntary work. This is because there is a past history of aid on both sides and for this reason, the underlying engine of aid is not a free choice but is constituted by the sense of duty arising from familial or marital ties or the fear of disappointing the expectations of the beneficiaries.

Before proceeding with an overview of volunteering in Europe and Italy it is also necessary to distinguish between formal and informal volunteering. The first includes all the forms of help and support that come within or through structured organizations (Wilson and Musick, 1997); the second refers instead to the help provided, in a less formal and therefore a more private way, to people belonging to one's social network such as friends and neighbours.

It is also necessary to distinguish between free volunteering and forced volunteering. Although the latter may appear in contradiction with what has been said so far, in particular the emphasis given to the concept of free choice, there are cases in which individuals are obliged to participate in

voluntary activities: in the United States, for example, some colleges have a requirement to volunteer as a prerequisite for graduation. Nevertheless, students have the possibility to choose freely the type of activity they will be involved in, according to their attitudes.

It is also important to remember that the difference in the results of studies conducted on this phenomenon could be due to the use of a different definition of the term. Indeed, the broader the concept of volunteering, the more activities it will incorporate therefore this may lead to divergences in the results of star studies conducted both nationally and internationally.

2.3 Volunteering in Europe: some data

Numerous studies conducted on volunteering by the various Member States were collected in order to analyse the number of volunteers within the union area from “The study on volunteering in the European Union” (GHK, 2010). However, as mentioned in the previous paragraph, since there is no definition of universal volunteering adopted by all member states and a single method to measure it, it is not possible to precisely establish the number of volunteers.

Given this premise, the authors established that 22-23% of citizens within the European Union over the age of 15, which is roughly equivalent to 92-94 million people, volunteer.

Instead, from the Eurobarometer it emerges that about 30% of citizens of the European Union reveal they are a volunteer in an organization or participate actively in it (European Commission, 2010).

Analysing the data of the last 10 years we can see a positive trend in the number of people involved in volunteering activities.

On one hand, according to the Eurobarometer, Austria, the Netherlands, Sweden, and Denmark are the countries with the highest number of volunteers; in all these states they represent more than 50% of the population. On the other hand, Portugal, and Lithuania, have the lowest number of volunteers in terms of percentage of the population. All reports conducted on volunteering agree that the Netherlands and Sweden are always at the top of the rankings for the number of volunteers while the bottom positions are occupied from Bulgaria, Lithuania, Poland, Portugal, and Romania. Greece also ranks in the last place; however, it is good to consider that in this country most of the free time is dedicated to helping

friends and relatives rather than volunteering at an organization (GHK, 2010). Nevertheless, studies usually focus on this latter type of volunteering.

From a general analysis it can be seen that sports and recreational fields, the cultural ones, the educational and research ones, the ones linked to services, social activities and finally the health one, are the areas in which a greater number of volunteers are registered.

Also, in this case there are differences if a comparison between individual states is made. For example, social service and healthcare sectors are the areas that most attract volunteers in Bulgaria, Ireland, Spain, Portugal, and Lithuania. In Belgium, Germany, Finland, France, the Netherlands, on the other hand, the most attractive sector is sports.

In Italy, according to Istat dataset, the categories of activities that absorb most of the volunteer population are: "culture, sport and recreation" (26.3%), "religion" (23.2%) and health care (16.4%).

The voluntary activities carried out by all Italian volunteers, in the four reference weeks, translate into approximately 126 million hours of total work, divided into approximately 114.1 million hours dedicated to the activity declared as main and 11.9 million hours dedicated to other activities. Considering, for example, a "working week" of 36 hours, the amount of voluntary work can be considered equivalent to approximately 875 thousand full-time units.

2.4 Volunteer process model

The volunteer process model represents one of the most used models in literature on volunteering. It must not be interpreted as a classic mathematical model but rather as a logical thread to follow to catalogue information and data and therefore, to analyse this phenomenon, specifying for each phase the psychological and behavioural elements that characterize it. It is divided into three subsequent phases: it begins with the antecedents phase, continues with the one inherent to the experience and it ends with the stage on consequences. (Wilson,2012)

The VPM expresses to activity at multiple levels of analysis (i.e., the individual, the interpersonal, the organizational, and the social system) (Snyder and Omoto, 2008).

At the antecedents stage, research conducted within the framework of this process has revealed that personality traits, the motivations that lead to volunteering, as well as some socio-demographic characteristics, also defined as life's circumstances, are potential drivers of the person's involvement in volunteering activities and therefore, they are able to predict among the volunteers, which of them will be more efficient and more satisfied with the activity carried out (Omoto et al., 2010).

In the experiences stage the process pays attention to the connections that are established not only among the volunteers but also, between the volunteers and the members of the organization in which they operate and finally, the one between the volunteer and the beneficiary. They are also considered undercurrents that allow both that the person continues to devote his time to volunteer activities and that the beneficiary enjoys positive benefits. Therefore, all those elements that favour a gratifying experience and those that instead threaten it are considered.

Finally, at the consequences stage, it emphasizes the effect that volunteering has on the way of thinking, knowledge, awareness and behaviour of volunteers, beneficiaries and all people who are part of the social network (Snyder and Omoto, 2009; Omoto et al., 2010). This process also allows us to examine volunteering at different levels.

At the first level (individual) it focuses on the activities and the inner process that characterize both the volunteer and the beneficiary.

At the interpersonal level it focuses on the connections that are established not only among the volunteers but also, between the volunteers and the members of the organization in which he operates and finally the relationships exist between the volunteer and the beneficiary. At the organisational one, the objectives and the process underlying the recruitment, the management, retainment of volunteers is considered; for this reason, the definition of roles, the assignment of operations and the organizational composition are also included.

Lastly, at the societal level, all the connections that may exist between a subject and the context in which it operates are considered, be they of an institutional, community and environmental type.

2.5 Antecedents

This phase focuses on the research of which personality traits, motivations and socio-demographic variables are associated with volunteering and consequently, their presence indicates a greater probability that the individual is or becomes a volunteer (Snyder and Omoto, 2008).

Most of the research that focuses on this phase has been conducted using a functionalist approach which stresses both the goal that is pursued by carrying out a certain action, and the role that this aim has in the initiation and continuation of the action.

2.5.1 Gender

In the last thirty years numerous research in various disciplines such as psychology, sociology and economics have focused on the presence of differences in the prosocial and help behaviour due to a gender difference of the subjects who perform the action and if this difference could be considered a cause or at least, be related to these kinds of behaviours.

Some studies show that women are more likely to be volunteers than men, while others have found that it is more likely that a man is a volunteer than a woman. Finally, there is another set of research which demonstrate instead that gender differences do not emerge when socio-demographic variables are controlled, so keeping socio-demographic variables fixed.

As we have seen, the results of research focusing on gender differences vary from research to research, this could be due to the way in which survey was constructed, as females are more likely to recall in mind more volunteer activities than males. However, surveys consisting of a greater number of questions that can help remember the episodes of volunteering reveal differences between men and women that are much more subtle.

It could also depend on the country in which it was dispensed endorsing the belief that these differences have a societal, not a genetic, foundation. For example, many surveys conducted in the United States have found that there are more women who volunteer than men (Bureau of Labor Statistics, 2009; Independent Sector, 2001; Wilson and Musick, 1997). Instead in Europe this gender difference is not homogeneous: there are some countries such as United Kingdom (Musick and Wilson, 2008), and the Netherlands where women are more likely to be volunteers and in

others, like in Italy and Sweden (Musick and Wilson, 2008), the opposite is true.

In experimental situations, females appear to be more prone to help others, however this behaviour changes as the settings of the experiment vary (Eckel and Grossman, 2008).

Some studies in psychology have shown that females record higher scores in most of the measures of personality traits, motivations and values that are associated with prosocial behaviour; moreover, females are more likely to help friends and relatives than males.

Some scholars have found that there are no differences in the number of hours dedicated to volunteering between men and women, others that gender differences change depending on which stage of the life cycle is taken into consideration; Specifically, at a young age, women generally tend to do more volunteer hours than their male peers, with advancing age there is a reversal of the trend, that is, men are those who dedicate more hours to it.

Education, income, motivations, and social capital are factors that can clarify possible sex differences that have risen.

The extent and the direction of gender differences in volunteering are also considerably influenced by the type of activity carried out, that is, if it involves characteristics and qualities that are generally attributed to a woman or a man (Wilson, 2000).

Even if in some types of activities these differences are not so systematic and marked, there are others where there is a strong presence of gender norms; for example, there is a male majority in voluntary work that involves participation in rescue teams, neighbourhood associations or war veterans, trade union associations and those of a political nature. On the contrary, a "pink" majority, is found in religious associations or groups, human services, associations that provide health care or educational services, organizations that deal with art and associations that provide assistance services to elderly people.

Also, in volunteering in sports there is a strong male component, in fact it can be seen that most of the coaches are men and usually women are allocated directly to the "team moms" who play a fundamental role but behind the scenes, such as communication and organizations of team

parties. This somewhat stereotyped assignment is based on the assumption that women are less interested in sports and they are less inclined to it and that they have a natural predisposition towards nurturing functions given their role within the family unit (Messner and Bozada-Dea, 2009).

Culture as well attaches to women the function of preserving the public household and they are supposed to take care of people's feelings and sentimental necessities (Daniels 1988). In fact, in a study conducted at the beginning of the 90s (Negrey, 1993), many women perceived volunteering as an expansion of the role played within the family.

However, these beliefs did not lead to a greater involvement of women than men in voluntary activities as, in those years, the latter possessed a greater human capital, that is, greater education and higher income, which as we will see in the next paragraphs they are positively related to volunteering. Gallagher (1994) argues that for equal degree of human capital, women would do more volunteering than men.

This difference in the rate of volunteering due to a greater human capital attributed to males, is reduced by a greater social capital.

In fact, women attend religious services more frequently and as a result there is a greater likelihood that they have a larger social network than men.

An unusual theory proposes the degree of economic and political power females have as elements that can trigger possible gender differences in volunteering. The higher the power women have, the higher the number of females involved in volunteerism (Wilson, 2012)

Wilson (2012) in his study demonstrates that females generally do more volunteering than males, considering all activities that fall under the definition of volunteering.

This result is corroborated by the study by Einolf (2011) which not only shows that there are more women than men involved in voluntary work but also that the former devote more hours than the latter. More specifically, he shows that almost 42% of the female population is involved in voluntary activities against 35% of the male population and that the hours of volunteering carried out on average per month by women is 14

hours while that of men is of 13 hours; however, this difference is not statistically significant.

Gallagher (1994) in his research study shows that a higher number of men volunteer in organizations; as a result, they are much more likely to engage in formal volunteering.

This result is supported by another study conducted by Einolf (2011) which shows that almost 92% of male volunteers carry out their voluntary activity through an association; while for female volunteers, 88 percent of them do formal volunteerism.

The gender differences found in the study of formal volunteering do not always emerge or if they do, they are subtle.

Females steadily evaluate themselves (and are evaluated by people) as more empathic and altruistic than men (Wilson and Musick, 1997) and they attribute higher importance to helping others. Females get greater scores than men on measures of prosocial identity, and higher attendance to religious services, agreeableness (Musick and Wilson, 2008; Einolf, 2011).

The World Values Survey shows that females, even if they belong to different cultures, are more prone to support activities and actions aimed at providing basic goods, eradication of inequalities and governance policies aimed at lowering poverty (Themudo, 2009).

2.5.2 Age

Some studies have shown that, passing from adolescence to young adulthood, the rate of volunteering decreases.

It has been corroborated by many reports, i.e. (National Association of Secretaries of State 1999) that it reaches its maximum point in middle age. However, this trend does not occur in volunteer activities which are characterized by a high risk for the volunteer. In fact, since they are also associated with a high probability of burnout, these activities generally attract young people, skewing the age profile toward youth.

Snyder and Omoto (2009) through their study noticed that the volunteer rate increases with the transition to middle age and then, it decreases as a person becomes elderly. Though, volunteering appears to be the prevalent activity among older people.

According to Penner (2002) between age and the number of associations a person is involved, and the amount of time spent volunteering on them there is a positive correlation. In fact, as people get older, they remodel their human capital and consequently the likelihood that they dedicate themselves to volunteering change as well.

Belonging to different age groups and therefore being in a different phase of the life cycle has a not negligible effect on the way life is viewed and as a result, it influences the approach towards volunteering activities.

Various theories have tried to explain the connection between the trend of the volunteer rate with the last phases of the life cycle: on one hand, the rational choice theory assumes that people after retiring have more free time and therefore, they can devote more time to volunteering; on the other hand, the exchange theory states that volunteering is perceived by retirees as a sort of “substitute good” for paid work, from which to derive the same benefits. Research have shown that retirement does not in itself constitute an element that pushes the person to volunteer. It becomes so if it is associated with a previous experience of volunteering: that is, if the person carried out voluntary work before retiring, it is likely that once he retires, he will continue to volunteer and he will increase the hours dedicated to it (Morrow-Howell, 2010).

Another difference that emerges in a consistent way between people who are in different phases of the life cycle is that concerning the motivations that push them to carry out voluntary activities. Young people give more weight to career-related ones, that is, they see volunteering as a useful tool for their career, developing and having the possibility of applying their knowledge and skills, and opportunities to expand their network of relationships. Older people are pushed to carry out the same activity by motivation linked to a sense of duty towards the new generations and of service to the community (Clary et al., 1996; Snyder and Omoto, 2009; Omoto et al., 2000).

In a study performed by Independent Sector (2001), it emerged that there is a positive correlation between having volunteer experience in youth and being a volunteer in adulthood. It can be seen that two-thirds of adult volunteers interviewed say they started volunteering at a young age and that young people who volunteer are twice as likely to be involved in this type of activity than their non-volunteer peers. This second finding is robust and consistent across income and age cluster. Finally, it was

observed that having had parents who are involved in voluntary activities and having been volunteers when young, leads people to devote more hours to volunteering activities in adulthood.

2.5.3 Education

The degree of education is probably the most robust predictor of volunteering; in most studies conducted on this topic, a positive relationship emerges between the level of education of a subject and the carrying out of voluntary activities (Penner, 2002).

This is because, as Bekker (2005) states, the greater the human capital (i.e., education, income) the greater the probability that the subject is involved in one or more voluntary associations.

Some have argued that the channel through which the level of education affects the greater propensity to volunteer is the profession: people with a high degree of education carry out jobs that allow them to have more free time and therefore more hours to devote to volunteering. Conversely, they argue that people belonging to more affluent social classes and thus with greater access to high-level education are more likely to carry out voluntary activities as this allows them to feel satisfied (Bellah et al.,1985).

Schools can be considered as a channel through which students start thinking to volunteering. Furthermore, there is greater likelihood of developing greater prosocial aptitudes and of being a volunteer during college years and in adulthood if the individual has volunteered during adolescence, so during high school.

While the individual-level theories see volunteering as a mere consequence of a cost-benefit analysis, more recent theories establish a connection between voluntary work and the status of the individual. Moreover, carrying out a job or an activity that is perceived by the community as "good" or fair gives the person who does it prestige and respect; as a result, this person is perceived as good and respectable (Smith 1994). Even the neoclassical theory, through the rational choice perspective, tries to explain the positive correlation between education and voluntary activity: according to this theory, education becomes an input that favours the matching with demand of volunteering; accordingly, volunteering is considered a mere productive activity and so, it does not take on a meaning for the person who carries it out (Wilson, 2000).

The positive correlation between education and volunteering is also due to greater awareness of the problems and the development of greater empathy and self-esteem that former confers on individuals.

Being involved in a greater number of associations, educated people are more likely to be offered to do volunteering activities, but it is good to remember that the importance attributed to the level of education is not always the same, as it depends on the type of activity carried out: the more literacy skills are needed, the more the requirement of education assumes importance. Therefore, the relationship between the level of education and volunteering is curvilinear: considering a sample of volunteer firefighters it is more likely that they have a high school diploma rather than a degree.

Furthermore, people with a high level of education are often characterized by greater open-mindedness, resulting from greater attention to current affairs, greater cognitive competence, and upper status jobs and then, they are more likely to be members of multiple associations (Gesthuizen and Scheepers, 2010).

When it comes to human capital and specifically education, it is also necessary to consider the impact that aspirations and intrinsic motivations toward schoolwork have on volunteering. In a study carried out by Syvertsen et al. (2011) that looks at the time span from 1991 to 2005, it was noted that senior high school students who intended to attend college had a greater propensity to volunteer than those who planned to attend public university or not attend it at all. Specifically, they observed that the rate of involvement in community services as a whole has increased for all students; however, the rate of those who intend to attend 4 years college faced a higher increase with respect to the other students' one (Syvertsen et al., 2011).

The positive effect of greater education on volunteering could be mitigated in the countries that are characterized by a high average level of educational achievement.

2.5.4 Income

According to economic models, individuals who earn a higher salary should be less likely to volunteer as they face greater opportunity costs (Freeman, 1997). Thus, the latter make that there is a negative correlation between

the hours that an individual dedicates to volunteering and the salary (Wolffet, 1993).

These predictions seem to go in the opposite direction to those of the civic voluntarism model and the results obtained from numerous sociological studies. The former assumes that individuals who receive a higher income are perceived by volunteering organizations as more attractive and therefore there is a greater likelihood that they will be offered to join.

This is corroborated by the findings of Hodgkinson (1995), who noted that people whose income was higher than \$ 75,000 were three times more likely to be asked to participate in volunteer work than those whose salary is less than \$ 10,000.

From the latter, it also emerged that between wages and hours of volunteering there is a positive correlation, that is, as the salary increases, the hours dedicated to volunteering activities increase (Clary and Snyder, 1991; Smith, 1994). It has also emerged a positive relationship between wage and number of associations into which a person is involved (Penner, 2002)

Evidence on this relation are heterogenous. The extent of the impact of wage on volunteering that emerged is influenced by the way in which wage and volunteering are measured and whether and which additional variable are considered in the model (Wilson, 2000).

According to the study conducted by Lee and Brudney (2010) the people who are most involved in voluntary activities are those who belong to the middle-income class, thus leading to argue that the impact that the salary has on this type of activity is not linear.

People whose income is tiny tend to volunteer a lower number of hours, maybe due to the fact that they are involved in less voluntary associations.

There is the possibility that salary affects the way in which individuals distribute their prosocial inclinations between money and time. One might think that if the salary increases and consequently an hour of time acquires greater value, these people will replace the time with money, i.e., instead of devoting time to volunteer activities they donate money directly to a cause or an association. This assumption is denied by some studies conducted in the United States as, in this country, there is an advantageous

tax treatment for donations that does not lead to a substitution of time with money. In contrast, Feldman (2010) noted that there has been an increase in both time and money donated.

Finally, it was observed that volunteers are more likely to have part-time jobs than a full-time job or to not work at all. Probably this is due to the fact that the former benefit from both the social network developed thanks to paid employment, and the higher amount of free time resulting from part-time employment. Both factors (broader social networks and free time) predict greater involvement in volunteering (Einolf,2011).

2.5.5 Social networks

Chances of volunteering can also be created by social networks (Wilson, 2000) but unlike the human capital, which is embedded in people, the social capital derives from the relationships that they maintain with others.

In addition, while assistance is a form of help that is carried out in private, volunteering, being generally carried out through organizations, represents a public form of prosocial behaviour (Musick et al., 2000).

It can be assumed that those who are exposed to numerous interactions with other members of the community of reference are more inclined to be involved in voluntary activities than those who have fewer social interactions (Omoto and Snyder, 2002). In support of this claim, it has been noted that those who in surveys report having numerous friends with whom they meet frequently and with whom they have constant conversations are more likely to be volunteers or have volunteered.

It has also been observed that having broader social networks, being involved in various associations, and having had experiences in the world of volunteering leads to an increase in the likelihood that a person decides to volunteer (Smith,1994; Wilson and Musick, 1997).

Another evidence that frequently emerges is that the volunteers before deciding to dedicate themselves to this type of activity were exposed to some social pressures both implicit and explicit (Penner, 2002). Thus, there is a positive relationship between these two elements: the higher the pressure perceived by an individual, the greater the likelihood that the individual will be involved in volunteering.

However, social pressures do not have the same impact on all individuals and consequently, they do not act randomly. In fact, some individuals, given their characteristics, are more exposed to requests for volunteering than others. Furthermore, different people can respond to the same stimulus differently: some individuals are more likely to accept being involved in this type of activities and so, to become volunteers, than others.

Social capital and in particular social networks can provide an explanation of wherefore extroverted individuals and people who attend frequently religious services tend to volunteer more. It can also explicate the reason for which among volunteers, a substantial part of them is married and have children. This because the latter pull their parents into groups related to activities they attend (sports club, catechism, school). Thus, having children who still live with their parents increases the likelihood that the latter will volunteer (Smith, 1994).

Lastly, it also clarifies why people with higher level of human capital so, higher level of education and income, are more prone to be a volunteer: since they attend a greater number of associations and organizations, they have broader social networks, and then, they are more exposed to opportunities to volunteer.

More in general, social connection among people trigger trust, which in turn in which in turn favours the involvement of people, feelings of solidarity and reciprocity and that makes them more willing to donate their time and less worried about the possibility that receivers will abuse of their kindness (Wilson, 2000)

However, there are still problems that need to be addressed. The first is that the type of volunteer activity that is carried out affects the relationship between social connections and volunteering, thus determines whether they are negatively or positively related (Musick and Wilson, 2008; Wilson and Musick, 1997).

Rotolo and Berg (2011) found that having a prior relationship with individuals that are volunteers have a strong impact in inducing someone to volunteer if the activity in question requires high level of commitment, includes some risks, and it is necessary collective effort (rescue teams in case of disasters or calamities) than those activities that are less constant and less challenging.

Having more heterogeneous social networks does not necessarily lead to more volunteer hours even if it allows you to be exposed to more volunteer opportunities, meet other volunteers, and find that your prosocial attitudes are shared by other people. What makes the difference is the type of relationships that create the network.

In almost all cases, people become aware of volunteer activity opportunities that they can join through in-person presentation. On the contrary, more impersonal forms of invitation such as those delivered through campaigns transmitted through the use of mass media are not an effective tool (Independent Sector, 2001).

However, if the recruitment method were face-to-face by one person, in general greater weight is given to the invitation made by a person with whom one has a "binding" relationship (relatives or close friends); when, in contrast, it is the subject who contacts the organization on his own initiative to ask for information about volunteering opportunities or offer his time, to take on greater importance it is social connections that we can define "bridging", i.e. those that exist with other members of the association in question. As a matter of fact, the volunteers consistently state that they were recruited by a relative or a friend (Independent Sector, 2001).

2.5.6 Religiosity

Involvement in religious groups or voluntary organisations, in which people share norms of helping, exerts external pressure on the individuals who belong to them, encouraging them to donate time or money, even if there is a low level of personal motivation (Einolf, 2011). It has been noted that attendance to religious services and participation to voluntary organisations are positively correlated. For example, in the United States where religion plays an important role in people's lives, affiliation to a religion represents one of the most important drivers for civic engagement. From the study conducted by Penner (2002) it emerges that about 80% of individuals that were member of organized religious groups, they also carried out voluntary work; So, he concluded that the affiliation to a religious group increases the probability that they are volunteers. Smith and Stark (2009) found that, in 126 of 145 states involved in the Gallup World Polls, attendance to religious services and participation in voluntary activities are positive correlated. Furthermore, the impact appears to be more or less the same, whatever the country is. There is also a positive

correlation between religious participation during the period of adolescence and youth and civic engagement in adulthood.

However, it would be impulsive to categorically establish that there is a positive correlation between being religious and volunteering. Some evidence shows that the decision of how much time to dedicate and which people will benefit from the service provided can be influenced and then mitigated by religious motivations and beliefs (Penner, 2002).

2.5.7 Identity

It has been shown that identity, that is a psychological construct, influence individuals' inclinations towards volunteering.

It is necessary to keep in mind that the identities that emerge from the context in which the individual finds himself are different from the personality traits: the latter are less pliable and more stable; consequently, identities are more easily influenced, and they are characterized by greater probability of change in time and space (Mischel and Shoda, 1998).

Volunteering can be considered one of the main sources of identity: in fact, it is something more than a simple activity carried out in one's free time, it is about the definition of oneself, becoming an integral part of who a person is or who he desires being or how he perceives himself; it gives a deep meaning to the lives of the people involved and it represents an element of personal pride (Snyder and Omoto, 2008). The role of the volunteer is defined in a precise context. Within it, the people who interact with the volunteer recognize in the latter precise characteristics strictly related to the role of the volunteer. Furthermore, the volunteer, based on the thoughts of others and to satisfy self-expectations about the role of volunteer, he persists in maintaining consistent behaviours with the role.

It has also been found by Gronlund (2010) that five dissimilar role identities can emerged: the influencer (want to fight injustice, improve the world where he lives, he does not conform, in general is an activist, he is driven by some values), the helper (sympathetic, generous, empathetic), faith based, community (driven by values of sense of community, faithfulness, solidarity,), success (conquering role of leadership and responsibility, and being a good person) Piliavin and his colleagues first established the Volunteer Role Identity, that is, how much an individual identifies himself

with the role of volunteer and the degree of introjection of it, in other words how much being a volunteer become part of the concept of himself the individual has.

Lot of research has been conducted in order to analyse the relationship between the identity of the individual and prosocial behaviour. It emerged that the extent to which commitment of a person is associated to self-identity is able to predict people's dedication to volunteerism and their prosocial behaviour (Reich, 2000). Sure enough, there is a positive correlation between the degree to which a person identify herself to the volunteer role and the amount of time, money and even blood donated (Finkelstein, 2008). The greater will be the identification of the latter in this specific role, the more the person is involved in this type of activities, and the time and money donated.

Some people believe that one of their most important qualities, which allows them to identify with the role of helper, is to provide aid to others. This means that they are more involved in the activities that they carry out and they are also prone to repeat them in the future (Matsuba et al., 2007).

According to some authors identity theory better explains why people continue to be involved in volunteering rather than the reason why they decide to start being a volunteer. Two Spanish studies showed that the stronger the identification with the role of helper the higher the likelihood that people declare they intend to continue to carry out voluntary activities (Marta and Pozzi, 2008; Chacon et al., 2007). As a result, it is one of the main drivers that lead the person to perform volunteerism over a long period of time.

For example, the rise of identity of blood donors among individuals that regularly donate blood has been studied by several investigations. Piliavin and Callero (1991) noted that those who develop and for whom this identity was relevant were more likely to continue to be donors over time.

It has been corroborated by Lee et al. (1999) who observed that the intention to continue donating in the future is greater for those who consider their identity salient than those who attach little importance to it.

Lastly, it was noted that young people who were deeply involved in voluntary activities during their adolescence perceive these activities as an

integral part of themselves that will accompany them in the future as well (Hart and Fegley, 1995).

Volunteer role identity is also influenced by the experience that the person has lived during his volunteering period.

Also, collective identities, so the identification with a particular social movements or groups and with those who receive benefits from activities carried out by them can lead to a higher involvement and commitment in voluntary activities (Snyder and Omoto, 2008).

In summary, the greater the strength of the social identity, the greater the amount of money, time and money donated, the greater the likelihood that they will continue to volunteer and more constant they be inclined to be in volunteer duties (Grube and Piliavin, 2000; Lee et al., 1999)

The relation between role identity and volunteering is positive but it is like a circle in which they feed each other: being a volunteer allows the person to develop the identity of a helper which in turn increases the commitment that is put into this type of activity (Finkelstein, 2008).

2.5.8 Culture

It has been demonstrated that the perceptions that individuals have of volunteering, the role of volunteers and the expression of them are not the same all over the world: they change according to the country which is analysed and the relative culture (Hask-Leventhal, 2009). Furthermore, the rate and the composition of the volunteer population also change depending on the reference country, as well as the cause and reasons for which one takes part in this type of activity. Democratization theory undertakes that democracies constitute a sort of fertile ground for volunteering. This theory has been used to clarify why in the States that were previously part of the Soviet Union, for which democracy is in its initial phase there, have the lowest rates of volunteering in Europe (Voicu and Voicu, 2009). In these countries new voluntary organisations had to be established and a new mindset towards volunteering had to be cultivated by citizens since the involvement in associations or political manifestations was mandatory instead of voluntary, as they should be.

Conversely, according to Welfare state theory private donations will be crowded out by state expenditure on public goods (Carpenter and Myers,

2010). However, the latter theory is not exempt from criticism. In fact, some argue that government spending is positively correlated to volunteering. As already analysed above, increasing poorest resources makes them more inclined to volunteer.

A good part of these discrepancies is related to differences in individualism and collectivism across cultures and areas of the world. In fact, it depends on whether involvement in community services to solve societal glitches is perceived as the consequence of a personal decision and a responsibility of each individual member (individualistic view) or whether it is the result of a sense of duty and a normative obligation (collectivistic view).

For instance, in his study, Miller (1994) stated that among countries the moral basis under acts of care or help could change, in particular in relation to the degree with which prosocial acts derive from personal thought (individualistic orientation) as opposed to the degree with which they are the results of societal responsibilities (collectivistic orientation).

2.5.9 Personality traits

While according to Gallagher (1994) some individuals have a general propensity to do good actions, according to a small group of scholars exists a real prosocial personality which is composed by some distinctive traits as empathy and goodness (Oliner and Oliner, 1988; Haski-Leventhal, 2009; Penner, 2002). Within the framework of social and personality psychology, in most cases volunteering is examined as an example of altruistic behaviour that is usually encouraged by traits as agreeableness, empathy, perspective taking, and extroversion (Bekker, 2005; Omoto et al., 2010). Since it appears challenging to provide a universal description of the personality of all people that carry out voluntary activities most scholars have not sought out a unique “altruistic or prosocial personality” but, instead, they focused their research on relationship between specific traits of it and a precise type of helping or specific altruistic actions. When statistically significant results were achieved, in general, scholars tend to reproduce them using similar type of prosocial behaviour; however, most of these attempts are not successful.

This could be due to the fact that changing the form of help taken into consideration in the analysis, the personality traits that are salient and therefore, that have a statistically significant relationship with it also

changes. Consequently, the "negative" results should be handled with caution, as they may not be due to an uncorrelation between personality traits and altruism but instead, they may reveal that those particular traits are not linked to that particular prosocial behaviour and that there is a low probability that a specific characteristic is associated to broad cluster of altruistic actions (Penner et al., 1983).

In recent decades, lot of research has been conducted on the correlation between volunteering and personality traits; it emerged that the propensity to be a volunteer is associated with empathy, a high level of morality, the image that the person perceives of himself, inner locus control and self-efficiency (Smith, 1994; Bekkers, 2004). The reason for a positive relationship between a person's empathy and volunteering appears almost intuitive as empathic people putting themselves in other people's shoes and having a greater propensity to react to the suffering of others are more inclined to help others and if the help come through associations, to become volunteers (Snyder and Omoto, 2008). More specifically, feelings of empathy and prosocial behaviours are linked in two potential ways: The first is a selfish connection in that by putting himself in the others' shoes the subject could experience a sort of secondary suffering and thus, helping others becomes the tool with which he relieves his own suffering. The second, can be define altruistic since this feeling creates a real aspiration to alleviate others' suffering. If the goal was to relieve one's suffering, then the help may be provided by different individuals or be useless (Hask-Leventhal, 2009).

Attachment Theory, developed by Bowlby (1969), offers a curious justification for empathic actions: people are characterized from birth by an attachment behavioural system that pushes them to forge close relationships with the people who will care for them. Therefore, according to this theory, those who have enjoyed a safe social attachment, that rest on good quality care-giving system in infancy, are more prone to recognize and respond to the others' distressed.

Einolf (2011), analysing data from General Social Survey, discovered the presence of this positive relation, corroborating what stated before. However, another study, conducted using the same dataset, indicated that the effect that empathy has on volunteering is only indirect since it is alleviated by the principle of care. That is, empathy is effective as long as

a sense of obligation is triggered. This suggests that emotions alone are not enough to spur volunteering.

From a study conducted by Davis et al. (1999) it emerged that differences in the levels of empathy between individuals are linked to the initial phase, thus to the decision to undertake this type of activity and they are influenced by the experience lived during the performance of this activity. As a result, the relationship with the maintenance of the commitment over time is weak. In another analysis, the uncorrelation between altruism and the duration of volunteering emerged, sustaining that people are driven by selfish motivation (Omoto and Snyder, 1995)

Nevertheless, results arose from the analysis conducted by Penner (2002) went to a different direction: permanence in voluntary association can be forecasted by personality traits.

One of the most famous and used models in the study of personality and its traits is the five factors model (Big Five) developed by Costa and McCrae (1992)

From research conducted using the latter model, the academics observed that certain characteristics, such as being extroverted and emotionally stable, are positively related to prosocial behaviour. This may be because this kind of people, being involved in a higher number of voluntary organisations, have a higher chance of being enrolled for volunteering activities. Others, as already stated in a previous paragraph, attribute the greater probability to the fact that extroverted have wider social networks (Wilson, 2000). Finally, Omoto and Snyder (1995) affirmed that both elements have a positive and direct impact on volunteering.

Another trait that appears to be consistently present in volunteers is fewer conscientiousness: It seems that less controlled and organized people are more prone to be involved in voluntary organisations. This result is quite unexpected because in the five factors model conscientiousness is associate to proactive comporment, high level of self-confidence and control of instinct (McCrae and John, 1992); so, all elements that are commonly associate to volunteer profile.

It has also been discovered by Atkins et al. (2005) that children that had a series of characteristics related to resilience (acquiescent, optimist, etc.)

are more prone to carry out voluntary activities when they will be adolescents with respect to those had characteristics associated to under control personality (hostile, low emotional control, insensitive) and over control personality (alienation).

Lau et al. (2004) showed that if volunteering requires overcoming problems or challenging situations, individuals characterized by prosocial personality are twice as likely to volunteer.

2.5.10 Motivations

Probably, the most explored facet of volunteering is represented by motivations. In psychology, a motivation is defined as a state of unease that take alleviation through an action, that is an “internal, psychological forces that move people to overcome obstacles and become involved in volunteer activity” (Clary et al., 1996: 486).

According to the two-factors model motivations that pushes people to carry out voluntary activities can be clustered into two main groups: altruistic reasons (people are concerned to others) and selfish one (concerned to themselves).

Evidence from a literature review conducted by Chaan and Goldberg-Glen (1991), have shown that the motivations that persuade people to undertake complex activities that last over long period of time, of which volunteering is an example, are multidimensional. Therefore, it is clear that they cannot be arbitrarily classified as purely selfish or purely altruistic; this is both because some are a combination of other-oriented and self-oriented concerns and because volunteers often claim to be driven by both types of purposes (Chaan and Goldberg-Glen; 1991). This result allows to state that pure altruism is improbable.

Many scholars have provided a different classification of the motivations: Cnaan and Goldberg-Glen (1991) sustained that people can be driven by altruism, egoism, and social reason. An octagonal model has been developed by Yeung (2004), which rest on four main components: getting-giving, action-thought; newness-continuity, and proximity-distance. It stressed that the same behaviour can be driven by a multiplicity of motivations and so, that a particular behaviour can comply distinct

functions for different people. Lastly, six main motives have been recognised by Clary et al. (1998).

It has also been discovered that the functions and motivations for which people volunteer differ among individuals.

The same voluntary activity can serve different motivations and a volunteer, as most of them, are driven by many reasons for doing it. In fact, about 65% of those who participated study conducted by Clary and Snyder (1999) said they were driven by two or more important reasons for them. Therefore, they act both for altruistic motives, i.e., to reduce others' suffering, both for more selfish motives, i.e., to enlarge their social networks making new friends; thus, benefitting not only other people but also themselves.

However, having more than one motivation for volunteering can lead to a sort of "too much of a good thing" effect as it has been noted that those who are driven by more important motivations also declare higher levels of stress and less satisfaction than those who are guided by a single and well-defined reason (Snyder and Omoto, 2009).

Individual's motivations underlying volunteering can also differ depending on the life's circle stage in which he finds himself or on how long people have been involved in the activity.

Penner et al. (2005) evaluated the service status of volunteers at 3 and 12 months from the start of the study. On the one hand, at the end of the 3 months, it was observed that the more the volunteering activity encounters their altruistic motivations, the greater the time dedicated to the beneficiaries of their activity. On the other hand, after one year, it was observed that the reasons for which people dedicate their time to volunteering are no longer associated with altruistic reasons but, rather, with reasons related more to personal growth.

For these reasons, it is possible to say that throughout the years the underlying reasons are more oriented towards a self-realization of individuals who volunteer instead than altruistic ones.

For instance, from the analysis performed by Omoto and Snyder (1995) it emerged that the volunteers are guided by the desire to see their skills applied, and by the desire to do something that makes themselves happy.

Early in the volunteering process, people are more likely to devote their time to volunteer activities that serve their motivations. Furthermore, numerous studies have shown that once they are involved in the activity, there is a greater likelihood that they will continue their engagement if the motivations have actually been met by the activity (Clary et al., 1998). This is because the matching of motives is positively linked with high performance rates and a high level of satisfaction, which in turn translates into a greater propensity to prolong the activity (Clary and Snyder, 1991).

From a study that involves university students in twelve states, it emerged that being driven by career motivations (most often this concern raise among younger) leads to be involved in sporadic rather than regular volunteering activities (Handy et al., 2010).

The identification and the understanding of what the people's different motivations for volunteering and the relative strength are a key step to develop effective strategy for attracting and pushing individuals to engage themselves in voluntary activities and organisations (Snyder and Omoto, 2009). A deeper knowledge of them could not only improve the attractiveness of activities, increasing the number of volunteers involved but also, to effectively assign proper roles to candidates.

For this reason, the research conducted on persuasive messages, as a tool for enrolling volunteers, focused on potential volunteers' motivations; thus, giving great value to the fitting of messages to motives. In fact, the more motivations are fitted by messages the higher the persuasive effect of the latter (Clary et al., 1998).

In literature it is possible to find a considerable number of studies that indicates individuals' motivations fill a key role in volunteering (Clary et al., 1998; Omoto and Snyder, 1995; Penner and Finkelstein, 1998).

Thus, the influence of motivations does not only affect the initial phase of volunteering process but also the following ones: experience and consequences (Snyder and Omoto, 2008).

Even if most of the studies a significant positive relation between motivations and volunteering is arisen (Clary et al., 1998; Omoto and Snyder, 1995; Penner and Finkelstein, 1998), there are also others in which

this correlation is weaker or not statistically significant (Finkelstein, 2007; Finkelstein et al., 2005).

2.5.10.1 The volunteer functions inventory

The volunteer functions inventory is a functional approach developed by Clary et al. (1998) to understand what are the motivations that encourage individuals to start volunteering and to maintain it over extended period of time.

More generally, functional analysis constitutes an approach that investigates the motives and objectives, the intentions, and the aims, that trigger and produce psychological events: so, the individual and social functions for which personal's ideas, emotions and activities work for (Snyder, 1993).

According to this approach, people start and then continue to carry out a certain activity if the latter satisfies the underlying personal motivations.

A central proposition of this approach is that people generally serve multiple motivational processes by carrying out the same activity. That is to say, the same volunteer activity or activity, which at first glance might seem very similar to each other, could actually reflect various underlying functions.

According to Clary et al. (1998), volunteering is carried out in order to serve the following six main personal and social functions:

- **Values** It allows volunteers to convey their values associated to altruistic and charitable interests for others. It is clear from the number of studies that concern for the condition of others appears to be a common feature of those who carry out voluntary work. From several studies it has emerged that when a person is religious is more likely to be driven by Values-related motivations (Musick and Wilson, 2008).
- **Understanding** Volunteering offers volunteers the opportunity to live a new educational experience, to broaden their knowledge, to develop not only new skills, abilities, but also to apply those already possessed that otherwise would risk being left untrained. This function seems to be particularly important for those who volunteer in the field of health and mental health, who see

volunteering as the opportunity to improve themselves through a personal growth, and to acquire knowledge.

- **Social** That is the possibility of spending time with friends or being involved in an activity that is viewed positively by other people. Individuals who pursue these motivations aim to earn social rewards for being a volunteer and thus, they prevent the social disapproval that would come from not being a volunteer.
- **Career** Motives associated to possibility of obtaining advantages related to one's professional career.
- **Protective** The reasons included in this category are those associated with the ego, both its protection from negative aspects and its externalization. In particular, volunteering can be used by the individual as a possible tool to reduce the sense of guilt to be luckier than others, to solve their own problems, to escape unpleasant feelings. Musick and Wilson (2008) found that those involved in or in some way related to religious associations highly rate the Protective function.
- **Enhancement** This category also refers to the motivations linked to the ego even if, rather than the protective aspect, it focuses on its relationship with affection. From a study on mood, it emerged that negative and positive affect do not represent the extremes of a continuum but are two separate dimensions. Furthermore, from some studies that have focused on the phenomenon of volunteering it has emerged evidence of positive strivings such as some volunteers pursue a personal growth and an improvement of their self-confidence (Jenner, 1982). Unlike the protective function, which includes all the motivations inherent in the elimination of negative aspects that can undermine the ego, this includes motivations related to the ego's growth and encompasses its positive strivings.

Tendentally, from the studies conducted on volunteering, it emerges that Values, Understanding, and Enhancement are the functions to which greater importance is given, compared to Career, Social, and Protective. For example, from many studies conducted with AIDS volunteers, it emerged that the motivation that tend to be endorsed the most is Values, while esteem enhancement the least. This patten seems to be consistent also in many other areas in which volunteering is performed (Clary et al., 1996). Nevertheless, both the order and level of importance are not constant and the same for all volunteers. They also differ according to the

group analysed: younger volunteers assign greater importance to career-related motivations than older people, thus its degree of importance decreases with increasing age. So, motivations for which a person volunteer can also vary over time.

The strength of the relationship between the level of importance that individuals assign to motivation and the amount of time spent on volunteering is not constant as demonstrated by a series of studies conducted by Finkelstein and his collaborators. For example, Finkelstein (2008) showed that the reasons that fall into the categories Values and understanding are positively linked to the number of hours spent on volunteering. Finkelstein and Brannick (2007), in their study focused on informal volunteering, noticed the existence of a positive relationship between the amount of time and the strength of motivation.

However, there are studies which show a weak relationship between time and the strength of motivation (Finkelstein et al., 2005)

The volunteer functions inventory can be also a tool that allows an increase in the efficiency of the recruitment phase of future volunteers. This because, as emerged from the analysis run by Houle et al. (2005), the choice of the activity to which to devote one's time depends on the perception that individuals have about its ability to satisfy their most important motivations. That is, the more people perceive that an activity is able to satisfy their deep motivations, the greater the probability that they decide to commit themselves to carrying out that particular activity.

In addition, according to the functional approach, individuals continue to volunteer until they satisfy their main motivations for which they volunteer (Davis et al., 2003). So, if these motivations are fulfilled by volunteering experiences, the volunteer has a greater degree of satisfaction and then a higher propensity to continue providing the service both in short and long-term than those whose motivations have not been satisfied and those whose motivations to which they attach less importance have been satisfied (Clary and Snyder, 1999; Clary et al., 1998; Stukas et al., 2005).

Instead, Fuertes and Jimenez (2000) found that independently the longevity of the activity, values represent the main motivation to volunteer and that the degree of importance that is attributed to Values is higher for volunteers involved in service for a greater number of years.

Finkelstein (2008) notes, from an analysis on the motivations conducted three months after the start of the volunteer activity, that Values turns out to be the only motivation to be significantly correlated with the time spent, while, one year after the start, to be statistically correlated with the time spent in volunteering are understanding and enhancement.

This change in trend suggests that individuals are motivated by others-oriented motivations when they decide to become volunteers, but that the amount of time devoted to this activity is related to more selfish motivations (self-oriented).

This positive correlation between selfish motives and longevity of service in a given organization is also corroborated by another study. It has been observed that volunteers who have been part of an organization for more than 18 months attribute greater salience to selfish motivations, such as personal growth and the expansion of their social network, than those who have been for a shorter time. Thus, both types of motivations, considered at the maximum levels, are significantly linked to the volunteer's stay in the association.

Even if Clary et al. (1998) declared volunteer function inventory represent a reliable measure of motivations, it has been the subject of numerous criticisms both on a theoretical and methodological level.

Shye (2009) argues that the main problem is at the theoretical level which, however, has numerous consequences at methodological level. Indeed, he complained both that it is an eclectic model that is not based on a clear theory and that there is no heterogeneous definition of motivation that is universally accepted and subsequently applied.

Pearce (1993) pointed out that often, when volunteers are asked why they volunteer, they respond that it allows them to provide help to other people or to serve others. However, these statements do not properly answer the question posed, as the term volunteering means putting oneself at the service of others. So more than answering, they are providing a definition.

Generally, studies that focus on the motivations behind volunteering do not provide a priori definition of them nor which type of factor can be classified as such.

In fact, they tend to be based on an instinctive appeal of motives by volunteers or on series of motivations pre-determined by scholars, created on the basis of lists of motives emerged from previous analysis.

In general, the direct search for motivations underlying volunteering ends in a “short circuit”, coming back to almost the same clusters of motives and eliminating those that were not noticeable in particular circumstances, for some kinds of voluntary activities or for some categories of individuals.

Failing to consider some motivations could be harmful to the formation of a complete theory in this particular field of research.

According to Shye (2009), it cannot be demonstrated that the list often used is exhaustive as new types of motivations could emerge from a more careful reflection, nor that it is exclusive as the meaning of each of them could overlap that of the other. Moreover, he also complained that the degree of generality-specificity of each motivation is different and therefore, it could lead to interpretative errors and in the assignment of the weight to each of them.

Therefore, a set of reasons is necessary which, founded on a clear theory, is either exhaustive or, at least, capable of representing all the potential underlying motives (Shye,2009).

Another problem that afflicts the studies on the motivation of volunteering, and more generally all the research that is based on the administration of surveys, is the social desirability bias. It can be defined as the tendency of people to respond in a way that they will be considered positively by others. And this, as Pearce (1993) argued, would lead volunteers to attribute greater weight to more altruistic motivations, hence to other-oriented motives.

This problem can also be reduced by presenting and requesting individuals to indicate the importance they attribute to motivations itemized in predetermined list in which selfish motives are also generally listed and legitimizing their possible selection. However, this method may not be enough (Shye,2009).

Presenting a list of predefined reasons can relieve another problem that often arises in this type of study; in fact, volunteers are not always completely conscious of the motivations that guide them. Therefore, this

list can represent a starting point for a reflection, as it allows to recall aspects that had not been thought of or they had not made explicit till that moment (Shye, 2009).

To overcome the conceptual challenges that emerged, many researchers have proposed alternative models: for example, Esmond and Dunlop (2004) proposes an augmented version of the VFI in which, in addition to the six main functions identified by three other functions are added (reciprocity, reactivity, recognition). Other studies, on the other hand, propose a version in which a smaller number of functions is present such as the one conducted by Yoshioka et al. (2007) in which understanding improvement converge into a single function and another in which the enhancement and protective functions are merged.

Shye (2009) has also developed a model, the systemic quality of life model (SQOL), to deal with the theoretical and methodological flaws of the VFI that he himself highlighted. This model relies on the Faceted Action System Theory and on the use of sixteen functioning modes that represent the possible benefits that an individual can receive by volunteering. In fact, when this model is applied, researchers do not ask volunteers what motivations they are guided by but to indicate to what extent this activity rewards them with every single benefit of specific list.

Despite the criticisms levelled against it, he still represents one of the most used methods in research on the phenomenon of volunteering and in particular, on the reasons that push individuals to do it.

2.6 Experiences stage

After exploring all the factors that are considered potential drivers of the person's participation in volunteering activities, in this paragraph the next phase of the volunteer process model will be examined, that is, the one related to the experience associated with the activity carried out.

It is intuitive that volunteers characterized by a low level of satisfaction are more likely to stop volunteering.

From a review of the theoretical and empirical literature shows that conflicting results are also present on satisfaction analysis.

On one hand, from a study conducted by Omoto and Snyder (1995) it emerged that being satisfied with the organization in which the

volunteering activity takes place, and, in general, with the experience, is positively correlated with the duration of the volunteer's stay within the association.

Likewise, Clary et al. (1999) found that satisfaction is positively related to propensity to keep on the commitment. Penner and Finkelstein (1998) noted that there is a statistically significant relation between satisfaction and both longevity of service and the amount of time dedicated to volunteering.

On the other hand, Davis et al. (2003) and Finkelstein (2008) obtained that satisfaction is not a predictor of the longevity of the service, so they are uncorrelated, and that the correlation between satisfaction and time spent is weak.

An interesting study showed that people who had a low level of education, few previous experiences of volunteering, were divorced or widowed, or suffered any form of depression are more likely to stop volunteering within the first 8 years of service. This probability was reduced if they were religious or the spouse was a volunteer (Butricia et al., 2009).

Similar results were found by Choi and Chou (2010), who, considering a time period of 10 years, found that less educated, less religious volunteers and fewer social relationships are more likely to quit.

Volunteers appreciate autonomy deriving from their role but suffer, as a cause of stress, if a defined work structure is absent.

Others two elements that can influence the volunteer's overall satisfaction, are the degree of supervision, which is positively correlated with it and the level of ambiguity in the definition of the assignments and emotional pressure.

In fact, in a study whose analysis sample consisted of Canadian volunteers, it shows that performing positions that have been unambiguously defined and to which precise responsibilities are assigned improves the satisfaction of the volunteer (Souza and Dhimi, 2008). But, in a study conducted by Skoglund (2006), those who volunteer in hospital, perceive lack of support from colleagues and staff and low levels of training as factors that lead to a decrease of personal satisfaction.

So, satisfaction is positively correlated with empowerment, support of relatives and friends, degree of supervision and appreciation. Instead, those who perceived voluntary activity in which he was involved as a waste of time were more likely to show signs of burnout than those who received appreciation from others (Kulik, 2007).

Stukas et al. (2014) have reported that greater satisfaction and a greater willingness to continue in service were expressed by volunteers who are driven primarily by other-concerns motives.

Moreno- Jiménez et al. (2010) using a sample of Spanish volunteers, found that those that are driven by extrinsic or superficial incentives are more exposed to burnout. That is, stress derived by volunteering can be alleviated if the reasons are proper.

According to Murayama et al. (2010), in Japan particularly motivated volunteers were less likely to evaluate their assignments as onerous.

Propensity to remain in a specific organisation depends also on the degree of integration within it; the latter is qualified by good relationship with colleagues, having their support, judging positively both in assignment and training received. All these elements lead to an increase of the volunteer's satisfaction.

A negative experience related to volunteering may be due to a strong disapproval from friends, relatives or more generally those who belong to the social network of the volunteer, who could perceive the hours that the person dedicates to volunteering as hours stolen from them. In addition, the context in which the organization operates or the people to whom the service is addressed, such as those who care for HIV-positive patients or those with drug addicts, can lead to hearing a stigmatization.

Consequently, being part of relatively broader social networks and being working in these areas expose the volunteers to these social pressures that can lead them to give up soon as indicated by Omoto and Snyder (1995).

Considering AIDS volunteers, it has been found that they are more likely to serve for a longer period of time whether they have a high level of satisfaction, less social support and they are driven by self-oriented motivations. The negative relationship between the extent of social support received and the length of service is consistent with the results on

the stigmatization to which this category of volunteers is exposed. Whether carrying out the voluntary activity damages the relationships that the volunteer has with those who belong to his social network and if the latter respond in a negative way both to the breakdown of the relationship and to the activity that has become the cause, the volunteers could stop volunteering earlier than those who are receive support from other people.

2.7 Consequences stage

In this paragraph the third and last stage of the volunteer process model will be presented. In particular, it will concern on the consequences and the effects deriving from carrying out a voluntary activity.

Volunteering can be seen as a fundamental factor, a kind of glue, which keeps the whole society together, promotes its proper functioning and allows a solution to the problems that could afflict it.

Many volunteers have stated that volunteering has had a significant impact in their life, as it has led to modify their habits, to get a greater awareness of the reality in which they operate and more in general of the world around them; thus, it has profoundly changed individuals' perception of themselves and their feelings (Omoto and Snyder, 1995).

Omoto et al. (2010) sustained that volunteering allows to individuals to develop a higher awareness about social issues and new abilities, they have the chances to deal with other people who are socially involved. Consequently, this opens volunteers' horizons and exposes them to new volunteering opportunities, then increasing the probability that they decide to commit themselves in further errands for their association or in other contexts too. Therefore, being a volunteer can lead people to be more interested and also involved in political concerns, than when they were not, or they were at the beginning of their experience.

From this point of view, volunteering and civic engagement cannot be considered as two isolated activities. Instead, they can be seen as sequential actions, which in cascade, modify not only the individual, and consequently also his social interactions, but also the association in which he is involved, the community in which it is established, and more generally, the society considered as a whole (Omoto et al., 2010).

Voluntary work also allows those who carry it out to increase their involvement and relations with the communities that revolve around the

service offered; that is to say, not only that in which the organization is established but also that formed by those who receive the service, and that of the volunteers (Omoto and Snyder, 2002). It is also true that some types of voluntary activities are more likely to lead those who perform it to have more confidence in other individuals (Wilson, 2012).

Other numerous intrinsic benefits are provided by volunteering experience; in fact, it is able to promote sense of community, to enhance feelings of usefulness and self-worth, to provide chances to develop and apply personal skills, and to improve well-being (Andrews, 1990).

In addition, since volunteering gives a social role to the person who carries out the activity, it is expected that the latter can enjoy the health benefits deriving from a wider social network.

It is well known that positive effects on individuals' mental health are provided by a greater social integration.

Volunteering besides having an integrative role, it represents a channel through which people have the possibility to provide aid to others and do something good, which can become a self-validating experience (Krause et al., 1992).

Being a volunteer is positively correlated with the satisfaction of life: the volunteers, in particular those who carry out this activity on a weekly or monthly basis, report a higher level of satisfaction than those who are not; this difference is statistically significant.

This relationship is statistically significant even if socio-economic variables and health have been controlled.

Furthermore, it has been noted that volunteering is also able to make changes to the identity of the individual who carries it out. One of the clearest examples is provided by those who regularly donate blood: it has been observed that "what one does as a blood donor becomes a defining part of who one is as a person" (Snyder and Omoto, 2008: 17). This identity seems to be fundamental in maintaining constant over time blood donations.

Volunteerism is also able to bumper individuals from depression because it triggers in people the idea that they can make a difference in the world (Mirowsky and Ross, 1989).

In general, people when they become older are inclined to show more signs of depression; however, a study by Li (2007) demonstrated that widows who have been involved in volunteering after the death of their husbands revealed a slower pace of increase.

Most research concludes with findings that support the assumption that volunteers are less likely to show symptoms of depression. However, some of them found these positive effects on mental health only for some subcategories of the volunteer population, for example elderly volunteers or those of the female sex (Sugihara et al., 2008).

Volunteering also appears to play a role in the prevention and reduction of stress. In addition, due to its unselfish features, it could be related to a lower level of destructive self-absorption (Oman et al., 1999)

It emerged from a series of studies conducted through the analysis of longitudinal data that those who have done voluntary activities enjoy better health as they age, have a greater functional ability, and also seem to enjoy a lower risk of mortality (Musick et al., 1999).

The negative correlation between volunteering and disease and rate of mortality is deep-rooted; for instance, people that dedicate at least one hundred hours per year to volunteer were more likely to not suffer of hypertensives.

Not all volunteers benefit from a lower risk of mortality but only those who are guided by other-concerns motivations; in fact, those who reveal that they pursue self-concerns motivation face a mortality risk similar to that of non-volunteers (Wilson, 2012).

Using a panel data analysis, Tang (2009) found that that volunteers' self-reported physical health is higher and that the dependency rate among Americans aged sixty and over has decreased. Finally, no significant effects of volunteering on people suffering from chronic diseases were found. So, we can define volunteering as a tool that contributes to a successful aging.

As for the younger people, students who have greater aspirations, achieve a higher school average, enjoy higher academic self-esteem and are driven by a stronger intrinsic motivation towards education. Bachelor's degree students who volunteer are more likely to earn a master's degree (Wilson, 2000).

In addition to having a positive effect on school performance in adolescents, leading them to higher academic achievements, volunteering is associated with a reduction of numerous social and behavioural problems, including drug abuse, aggressiveness, and premature pregnancy. It is also positively connected with a higher self-esteem, higher self-confidence, and person efficiency.

According to Weinstein and Ryan (2010) volunteers who are driven by the pursuit of intrinsic objectives have a greater probability of enjoying the benefits related to volunteering: in particular, they are characterized by a greater degree of life satisfaction and a higher psychological reward than those who pursue extrinsic goals.

From a study conducted by Cheung and Kwan (2006) volunteer that have been involved by social workers receive more psychological health benefits than those engaged by their friends or relatives. One possible explanation is the social workers' greater ability in assigning appropriate roles and tasks to volunteer candidates.

It is good to remember that counting the number of hours that volunteers devote to their activity could be misleading if you want to examine the effects of volunteering. In fact, a study conducted by Parkinson et al. (2010), analysing a group of Australian volunteers showed that older women who have volunteered consistently over a period of 9 years enjoy better mental health than those who did it occasionally.

Although so far, we have talked about the benefits enjoyed by the volunteer, the service he provides has a significant positive impact on the recipient as well.

Indeed, in a study conducted by Crain et al. (2000), HIV positive patients who were accompanied by a volunteer showed greater psychological functioning than those who were not. This outcome is related to a higher active managing, which was in turn, endorsed by the quality of the rapport.

However, it is essential not to neglect any negative effects that may arise from volunteering. In fact, it has been noted that an excessive level of involvement by the volunteer in the activity, the trip or in relations with the beneficiaries could expose him to harmful effects. So, the relation between health impact and volunteering is curvilinear.

A series of studies conducted in the last twenty years have in fact shown that volunteering can affect the mental health of those who carry it out; for example, Ironson (2007) argues that it is common among AIDS volunteers to show symptoms of depression.

This specific statement not only encompasses volunteering aimed at HIV-positive people but covers a multitude of contexts in which volunteers find themselves facing an "empathic overstimulation" (Hoffman, 2008).

The latter phenomenon seems to be able to explain the emotional suffering that affects people who offer their help in situations such as earthquakes terrorist attacks air disasters.

Most of the results illustrated so far are certainly expressive but are nevertheless not definitive. According to Wilson and Musick (1999) volunteers are less likely to be depressed than non-volunteers, regarding older volunteers it has been found a positive correlation between voluntary activities and the degree of life satisfaction and they have better physical health. In the end, volunteering seems to be related to a lesser risk of early mortality (Musick et al., 1999)

These results may be caused by a greater optimism of the volunteers than the average individual or by the desire to justify the voluntary activity carried out. Furthermore, numerous research works are based on cross-sectional data analysis; the latter do not allow to define a causal relationship between volunteering and the above benefits. In fact, those who volunteer and those who do not may differ in many other respects.

Volunteering improves the health of those who do it, but it is equally true that people who are in good health are more likely to do this type of activity. As a result, volunteering becomes a tool through which good health is maintained. Therefore, the possibility of reverse a causation can make these two causal directions seem contradictory to each other.

Nevertheless, this can be considered a sign of the presence of a self-enforcing process: volunteering improves wellbeing and happiness, which in turn in higher willingness to dedicate time to voluntary activities.

2.8 Conclusions

This chapter has been completely dedicated to the voluntary phenomenon, one of the major prosocial behaviours that involves millions of people every year who decide to give up their free time to dedicate it to others, even if given its peculiarities and its nature it should not exist.

A definition of volunteering was initially provided, which is followed by a brief overview of volunteering in Europe and Italy. The heart of the chapter is the voluntary process of which all three phases are presented: the antecedents, the experience, the consequences. Greater attention was paid to the first phase as it was necessary to build the foundations to fully understand the results emerged from the analysis of the data collected by administering a questionnaire that will be presented in the following chapter to provide an empirical assessment of some of the conclusions the literature suggests.

Chapter 3:

Empirical analysis

3.1 Introduction

This final chapter focuses on the empirical analysis of the data collected by administering an online questionnaire. The latter has been identified as the most consolidated tool for responding to the objectives pursued by the research. Initially, the methods and tools defined by the literature in order to capture the factors that appear to be related to the phenomenon under study were exposed. Then, the results obtained were examined starting from a descriptive analysis and concluding with the investigation of the possible relationships and correlations between the main variables.

3.2 Method- Measures

In order to investigate and answer the questions emerged from the previous chapters, an original, online questionnaire was developed and distributed. It consists of 6 blocks relating respectively to the commitment to volunteering, the motivations, personality, religiosity, life satisfaction and the socio-demographic variables characterizing the participants.

Not all participants had to answer all the blocks of questions as the non-volunteers were given a reduced version of the questionnaire in which both the block relating to the commitment and the one relating to the underlying reasons were not present.

The categorization of individuals into volunteers, former volunteers and non-volunteers took place at the beginning of the questionnaire, through the question "are you or have you ever been a volunteer?".

They could reply, choosing among the following three alternatives:

(i) I am currently a volunteer, (ii) I was a volunteer in the past or (iii) I have never been one of them.

The survey was created using Qualtrics, an internet-based tool, and it has been active the questionnaire was active from 23 February to 16 March 2021. Statistical test was performed in Stata.

3.2.1 Commitment to volunteering

As stated in the previous paragraph, this block was reserved for those who are currently volunteers or those who have been in the past. It consisted of five questions: The first question submitted is "How long have you been a volunteer?" or "how long has he been a volunteer?" in case the person no longer carries out this activity.

In both cases, predefined alternatives were provided, each of which indicated a time interval, from which the subject had to choose. The ranges are: "less than a year", "1-3 years", "3-6 years", "7-10 years" and "more than 10 years".

In the second question, the participants provided information about how many hours they dedicate or dedicated per month, on average, to volunteering.

In the third one, the type of voluntary activity in which people are involved was carried out was investigated. Even in this case, a list of 12 possible areas was presented, including "culture, sport and recreation" and "health". This classification was inspired by the division of the range of possible volunteering activities made by the National Statistical Institute (ISTAT). People had the possibility to provide more than one answer to the question.

Additionally, it was asked to report what prompted the subject to undertake the voluntary activity. He or she could choose among the following alternatives: "suggestion of a friend or a relative", "suggestion of an acquaintance" or "personal motivation".

The commitment block ends with a question that aims to know how volunteers and former volunteers became aware of the activity in which they were involved.

The options among which individuals could opted were: "from the mass media", "internet", "leaflet", "a friend, relative, acquaintance told me about it" and "direct knowledge".

3.2.2 Motivations

In order to analyse the motivations that lead people to volunteering, the Volunteer Function Inventory (VFI) was used. Specifically, those who claimed to be or have been volunteering for a period, were asked to

indicate on a 7-point scale, where 1 means “not at all important” and 7 corresponds to “extremely important”, how much each of the possible reasons was important or accurate to them in being a volunteer. This tool includes a total of 30 motivations grouped into the 6 main functions identified by Clary et al. (1998).

As the questionnaire was distributed within the national territory, and consequently also the VFI questions were translated from English into Italian.

3.2.3 Personality traits

This approach has been developed by McCrae and John (1992) and it rests on the assumption that the fundamental structure of personality leans on five essential traits that are presumed to be common to all individuals. These characteristics are: Conscientiousness, Extraversion, Openness to Experience, Neuroticism (or called also Emotional Stability), and Agreeableness. They also supposed that every domain is a consistent personality construct.

Some scholars claimed that this classification is too arbitrary: for instance, Paunonen and Jackson (1996) stated that every domain entails a series of distinct subdomains. This has been demonstrated through the application of the five-dimensional circumplex model, they developed, from which it emerged that many of the characteristics do not fall into just one of the big five domain but into two of them. Hence, each of the personal characteristic terms must be interpreted as a combination of two elements.

Hofstede et al. (1992) established that for every domain stated above, it is possible to identify nine bipolar facets: each fundamental characteristic alone represents a domain and further aspects that represent a domain at the main level and another at the subordinate level.

It could be that personality characteristics that have a higher order than Big-Five model ones do not occur as singular psychological unity; however, they can be helpful heuristics tools that it is possible to link with several environmental factors. As stated in the previous paragraph, results from several studies suggest that volunteers tend to get higher on Agreeableness than paid employees that carry out similar assignments and they are more likely to be more extroverted (Bekkers, 2005; Wilson, 2012). As for conscientiousness, the results are mixed: some note that those who

volunteer are characterized by a low level of consciousness, while others argue that the opposite is true.

The original version provides that participants are requested to indicate on a 4-point scale how much they feel represented by each of the 25 adjectives. However, it was preferred to use an abridged version created by Chiorri et al. (2014). This to prevent that the volunteers and former volunteers, who have had to evaluate thirty statements relative to their motivations in the previous block, would get bored or tired and therefore interrupt the compilation of the questionnaire.

The application of the latter leads to results that are consistent and very similar to those that would be obtained by applying the original version to the same sample. This reduced version provides for the administration of 10 pairs of adjectives that must be evaluated on a scale of 7 points, ranging from "strongly disagree" to "strongly agree".

3.2.4 Life satisfaction

In order to analyse the level of people's life satisfaction, the Satisfaction with Life Scale (SWL), developed by Pavot and Diener (2013), was used. Specifically, all people that took part in the survey were asked to indicate on a 7-point scale, ranging from "completely disagree" to "completely agree", how much they agreed/disagreed with each of the five statements, relative to their life, that have been presented.

The assigned numbers are added together in order to capture an overall level of life satisfaction. Specifically, the authors propose the following six macro-categories into which people can be clustered:

- Very high score, highly satisfied (if the resulted sum ranged between 30-35).
- High score (25-29).
- Average score (20-24).
- Slightly below average in life satisfaction (15-19).
- Dissatisfied (10-14).
- Extremely dissatisfied (5-9).

This tool involves all the possible elements that seem to be positively correlated with satisfaction: the social relationships that individuals undertake, work or school, and finally, the last aspect, which is more

personal, is composed of religious or spiritual life, learning and growth, leisure and more generally the satisfaction that each subject perceives of himself.

3.2.5 Sociodemographic variables

In the last block of the survey called "personal information", questions were submitted to all individuals, both volunteers and non-volunteers, in order to collect data relating to numerous socio-demographic variables such as age, gender, province of residence, education, marital status and the presence of children.

As regards age, the participants were asked to indicate their age at the time of compilation, while for the gender they were required to select one of the two possible alternatives (Male-Female). The level of education was captured by asking people to indicate the highest level of education obtained at the time of compilation. Therefore, if a subject was a student of a three-year degree course, even if he is a graduand student, he must indicate the high school diploma. The possible options vary from "middle school" to "Doctor of philosophy (Ph.D.)". To remedy the resulting bias, everyone was asked if they were university students.

In order to identify the profession of the subjects, an inherent multiple-choice question was inserted. Among the possible alternatives are "housewife", "unemployed" and employed; the latter item was split into part-time and full-time worker.

The participants' income has been captured providing nine predetermined income brackets to choose from.

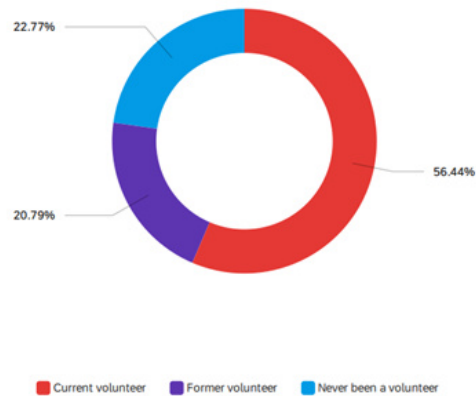
Finally, to obtain information relating to marital status a set of predetermined responses among which the subject was called to respond was also presented. In this case, however, the option "I prefer not to answer" was also present.

3.3 The sample

In total, 137 replies to the questionnaires were received, however 38 of them were rejected as they were incomplete, that is the questionnaire was not 100% completed. As a result, a total of 101 responses have been used.

The average completion rate of rejected questionnaires is 42.49%.

Sample



The sample is made up of 57 people who are currently volunteers in one or more organizations, which represent just over half of the sample (56.44%), 21 of them (20.79%) stated that they had previously been volunteers but currently they are not and finally, 23 people (22.77%) declare that they have never carried out any voluntary work.

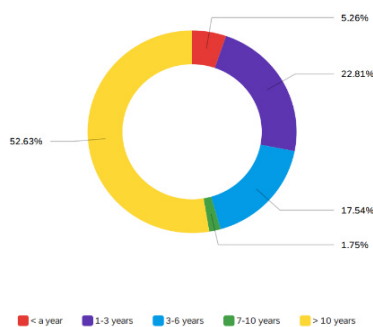
3.4 Results

3.4.1 Commitment to volunteering

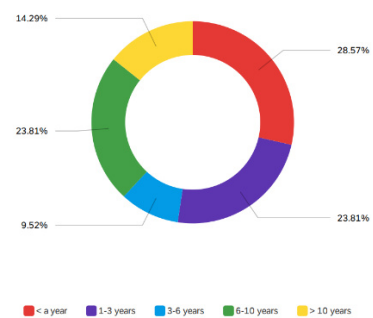
As specified above, this block of questions was only asked to those who, on the first question, declared that they are currently volunteers or have been previously volunteers.

The first question that makes up this block concerns the longevity of the service; specifically, people were asked to indicate how long it has been carried out or, in the case of former volunteers, how long the volunteering activity was carried out before quitting.

Longevity of service- Volunteers



Longevity of service- Former volunteers



Among those who are currently involved in this type of activity there is a dominance of those who have declared that they have been doing it for more than 10 years, they are about 52% of them. They are followed, by number of responses, by the intervals "1-3 years" and "3-6 years". Instead, just over half of those who later decided to stop volunteering stated they had been a volunteer for no more than three years.

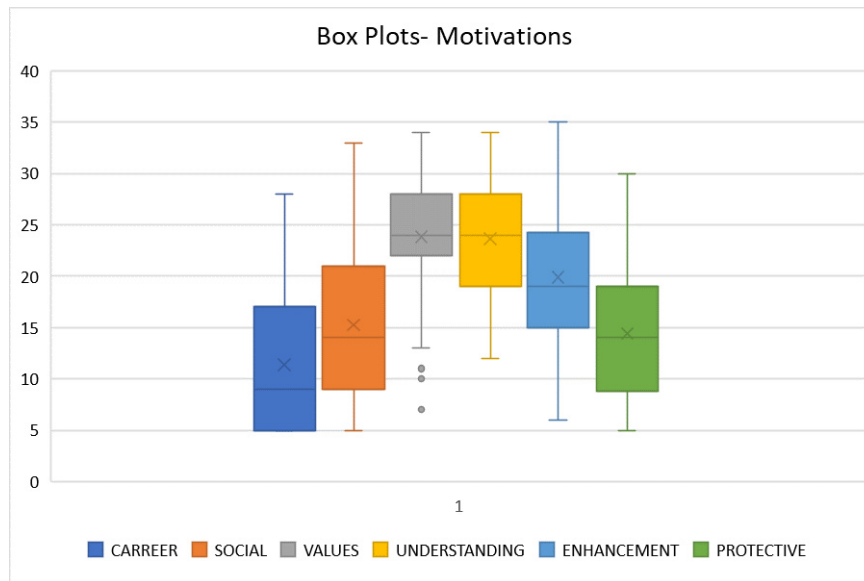
It was then asked to indicate the number of hours that are allocated to volunteering per month: on average, volunteers dedicate roughly 28 hours a month, equal to almost one hour a day. However, it should be noted that this variable is characterized by a high variance. As for the former volunteers, there is a lowering of the level of the average hours dedicated per month for volunteering, which is around 17 hours.

Finally, it was requested to specify the area or areas in which the voluntary activities are carried out. Among the current volunteers, the area where the largest number of people is employed is "culture, sport and recreation" (22.22%), followed by "social assistance and civil protection" (18.89%) and "health" (17.78%). Instead, the one linked to religion occupies only 9% of the volunteers interviewed. Analysing the answers provided by the former volunteers, we observed that at the top of the rank of the possible areas by number of people involved, there were again "culture, sport and recreation" (24.14%) and "social assistance and civil protection" (24.14%), but the third place has been obtained by the "environment" category.

Both groups were then asked what led them to volunteer and about 85% said they were motivated by personal reasons.

Finally, they were asked to reveal the means by which they became aware of the opportunity to volunteer. The results show differences between the group of current volunteers and that of former volunteers: most of the former indicated direct knowledge of this opportunity, for example as the activity was carried out in a place they frequented for other reasons (42.11%), while 60% of former volunteers stated that they had become aware of it through the indication of another person, be it a friend, relative or acquaintance, and only about 30% of them thanks to direct knowledge.

3.4.2 Motivations

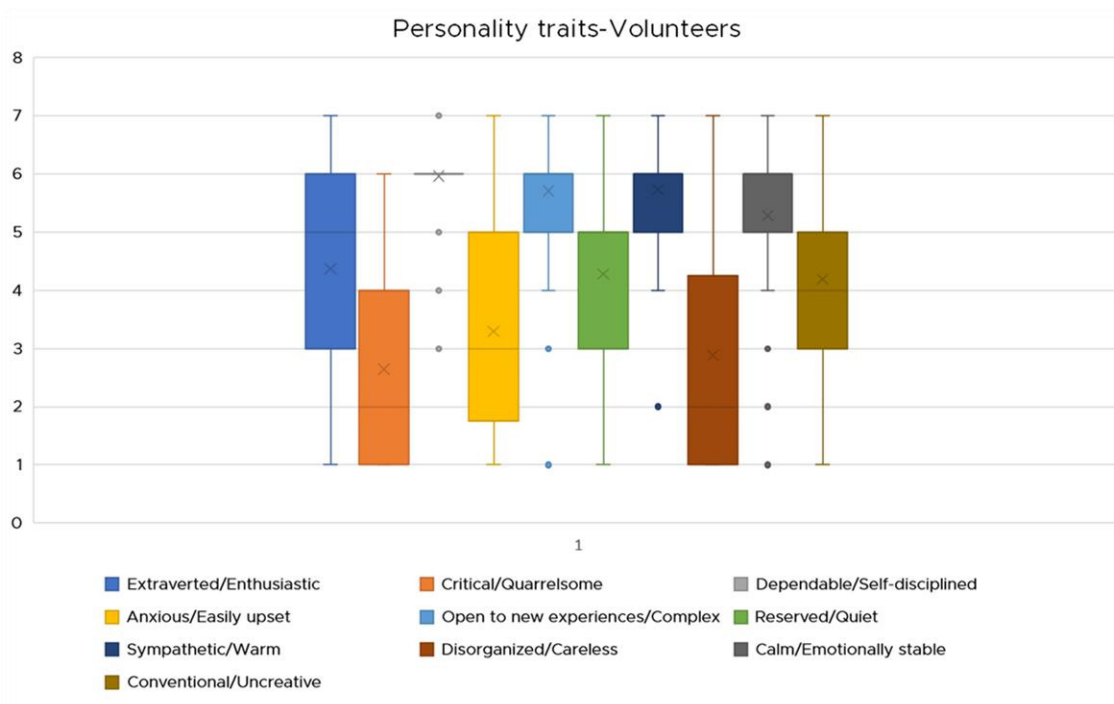


In order to analyse what are the reasons that bring people to dedicate their time to volunteering, it was necessary to perform a further step. In fact, as already explained above, the motivations are divided into six macro categories. For each individual it was necessary to add the points assigned, ranging from 1 to 7, to all 30 reasons in order to calculate the total score given to each of the 6 main functions.

It has been observed that the functions that are or have been served most by the volunteering were "Values", "Understanding" and "Enhancement". While the "protective", "social" and "career" rank in the last places in importance. The resulting ranking is consistent with the evidence that emerged from the numerous studies conducted on the subject.

Further analysis led to separately investigating the motivations of those who are currently volunteers and those who have been but are no longer volunteers. What emerged is that for both groups the three main reasons were respectively "Values", "Understanding" and "Enhancement" but the importance assigned to the others changes. Current volunteers attach greater importance to "social" than "career" while the opposite is true for former volunteers.

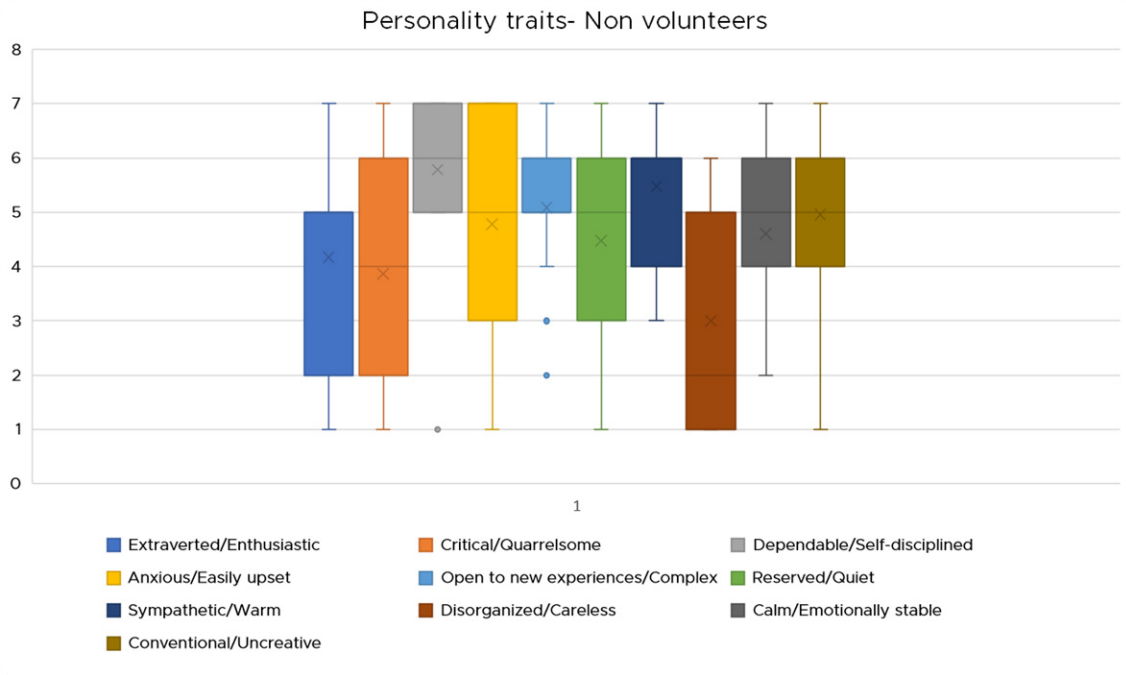
3.4.3 Personality traits



Analysing the scores that people have assigned to each of the 10 pairs of adjectives, it has been observed that the volunteers tend to consider themselves extroverted and enthusiastic people, not very quarrelsome, in fact 75% of them assigned a score equal to or less than four to this last characteristic. As far as dependability is concerned, almost all, excluding some outliers, considered themselves a reliable and self-disciplined person.

Volunteers also evaluated themselves adept at controlling anxiety. Furthermore, similar results were obtained for the following characteristics: openness to new experiences and greater propensity to develop numerous new interests, compassion and affection, and the ability to manage and maintain emotional stability. For all these latter pairs of adjectives it has been noted that 75% of people assigned a value equal to or greater than 5 to them.

Finally, it has also been observed that 75% of those who have carried out or currently carry out volunteering activities considered themselves an organized person, thus assigning to the disorganized / careless couple a score equal to or less than four, and traditionalist on average.



As for people who have never done voluntary work, it was possible to notice that they considered themselves not very extroverted. High values were also observed for dependability and for the propensity to feel anxiety. As for being critical, there was a high degree of heterogeneity within the sample observed, in fact the median stands at a score of four, which is half.

They are also generally reserved and quiet people, indeed more than half assigned a rating higher than four to this characteristic.

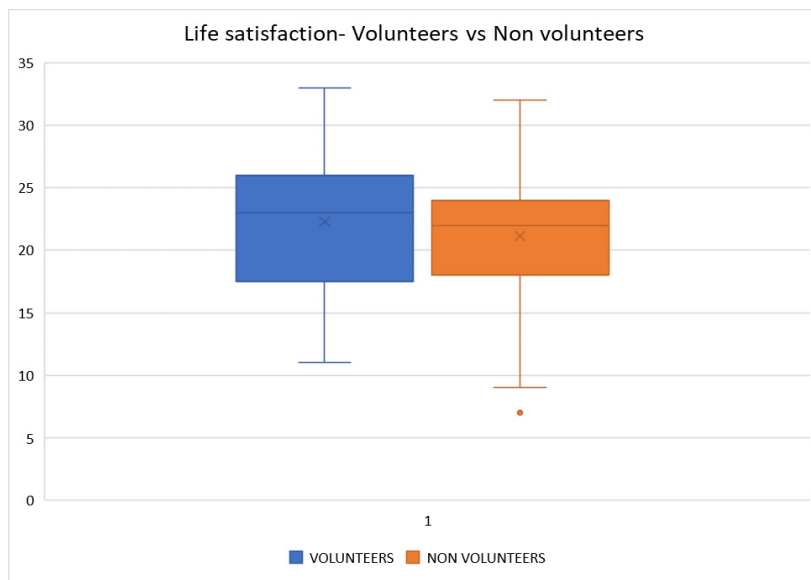
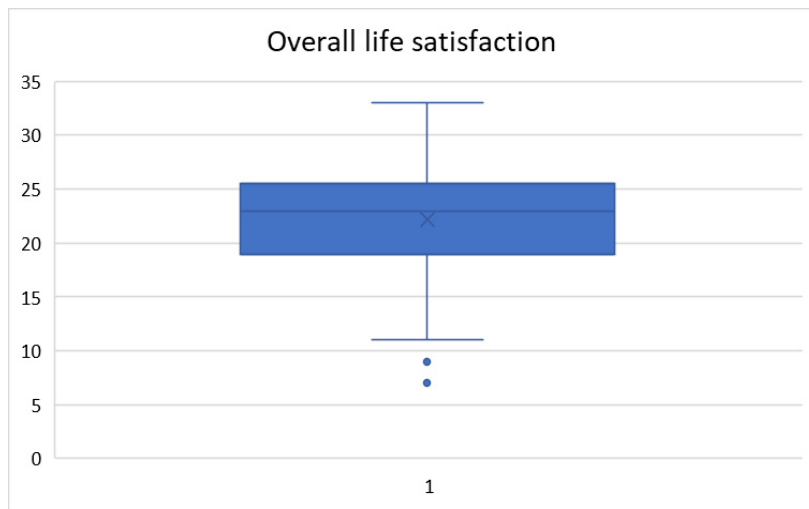
Finally, non-volunteers evaluated themselves as compassionate and sympathetic, generally conventional, calm, and adept at achieving emotional stability. As noted for the volunteers, these participants also saw themselves as organized people.

For all ten pairs of adjectives Wilcoxon rank-sum (Mann-Whitney) test was conducted in order to verify whether the differences between volunteers and non-volunteers that emerged from a first visual analysis of the results were also statistically significant.

The latter emerged in the following characteristics:

“Extraverted/Enthusiastic”, “Critical/Quarrelsome”, “Dependable/ Self-disciplined”, “Anxious/ Easily upset”, “Open to new experiences/ Complex”, “Reserved/ Quiet”, “Sympathetic/ Warm”, “Disorganized/ Careless”, “Calm/ Emotionally stable”, “Conventional/ Uncreative”.

3.4.4 Life satisfaction



Also, in the case of life satisfaction, in order to analyse the overall level of all those who answered and the sample's general level of satisfaction, it was necessary to take a further step: it was necessary to add up the scores, ranging from 1 to 7, that individuals have assigned to five predefined statements. It emerged that the satisfaction of the sample, as a whole, was heterogeneous: 50% recorded an average level of satisfaction, so they generally feel satisfied with their life but believe that there are areas for improvement; 25% said they are very satisfied but, nevertheless, it has been detected a 25% of them who is dissatisfied, with two extremely dissatisfied outliers.

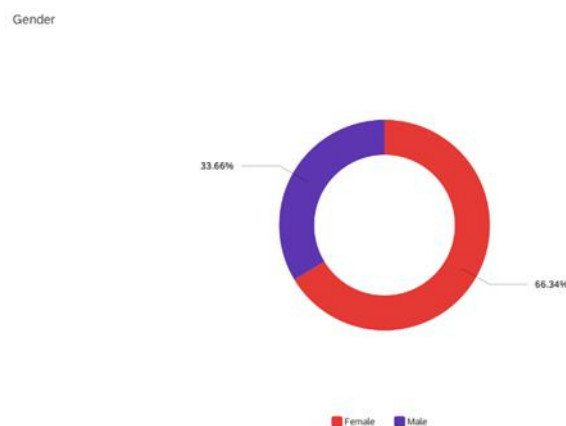
Instead, examining the level of satisfaction, distinguishing that of volunteers and non-volunteers, it has been observed that the level is similar even if, volunteers appear to be slightly more satisfied than non-volunteers. However, after having performed Wilcoxon rank-sum (Mann-Whitney) test, it is possible to state that this difference is not statistically significant (p -value=0.37). Among the latter there are the two aforementioned outliers.

3.4.5 Religiosity

The majority of volunteers and former volunteers consider themselves a spiritual person and most of the latter claim to be also believers, with an average of 5.43 visits to places of worship.

In contrast, nearly 60% of non-volunteers define themselves as a non-spiritual person. The average number of visits to places of worship by those who are believers, but do not volunteer, is around 0.80 per month.

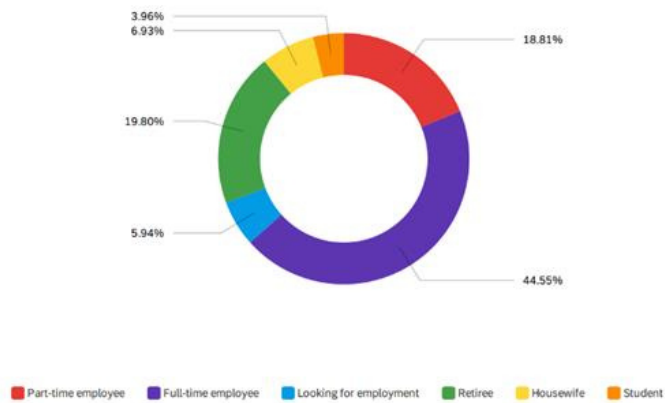
3.4.6 Sociodemographic variables



Analysing the sample as a whole, it can be seen that there is a strong female component, in fact, women represent about 66% of the sample (67 out of 101), almost double that of men, whose percentage is around 35%.

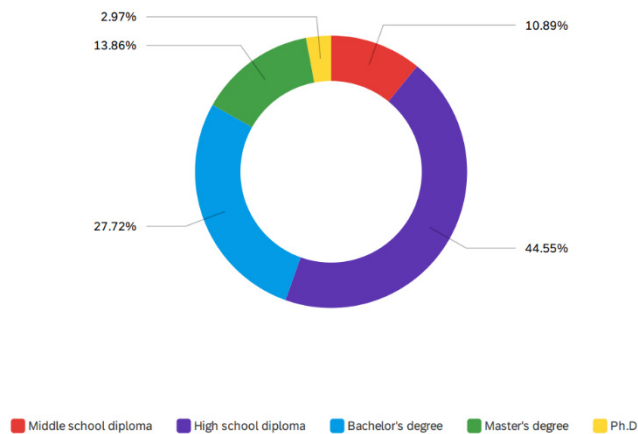
The age of the participants is characterized by a high variance, as the interval within which it varies is wide. In fact, the questionnaire was filled in by young people, whose minimum age is 21 years old and by older people, up to a maximum of 76 years. The resulting average age is 44.60 years.

Profession



As regards the composition of the sample in relation to the profession of the members, there was a prevalence of people who are employed full time (44.55%), followed by retirees (19.80%) and part-time employees (18.81%). Lower of components are, in descending order: housewives (6.93%), subjects who are currently looking for a job (5.94 %), and finally, students (3.96 %).

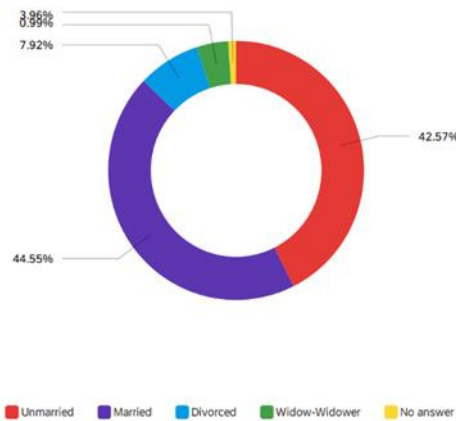
Education



By focusing attention on the level of education, it was possible to note the predominance of one cluster over the others, that was the one made up of people whose highest qualification is represented by the high school diploma, representing 45% of the participants. The most successful qualification was followed by the bachelor's degree (27.72%), the master's degree (14.14%), and the middle school diploma (13.86 %). Only 3% of those who answered the questionnaire earned a Ph.D.

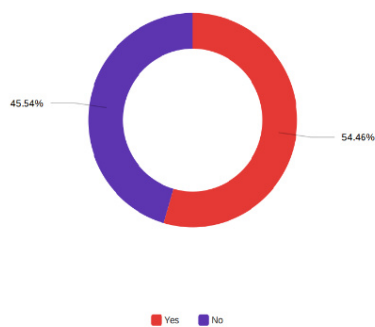
In order to investigate the participants' income, nine predetermined income brackets were provided to choose from. The results showed that more than three quarters of the sample (87.57%) declared they have an average annual income ranging from € 0 to € 40,000. The income bracket within which more individuals were positioned is the one that goes from € 15,000 to € 29,999 per year, followed by the slightly lower one, from € 7,500 to € 14,999 per year.

Marital status

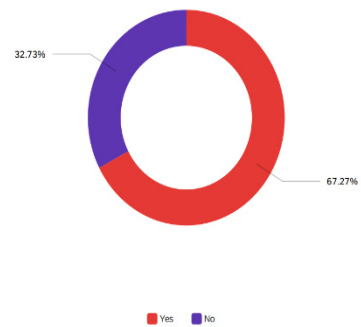


Finally, as regards marital status, almost all of the sample is made up of unmarried women and men (42.57%) and married people (44.55%).

Do you have children?



Do your children live with you?



Just over half of the interviewees have at least a child (54.46%), and almost 70% of the latter still live within the family unit. The average number of children per person is 1.58.

The overview provided by the analysis of the socio-demographic variables of the sample, considered as a whole, reflects the composition of the two

subgroups that form it: that of volunteers and former volunteers and that made up of those who have never volunteered.

Focusing on the group of volunteers, current and non-current, there was a female majority consistent with the evidence emerged from the numerous studies conducted in the literature according to which women more involved in volunteering³. However, according to data provided by Istat, there are more male volunteers in Italy.

As for the age, it has been noted that there was a not negligible difference in the average age of the group of the two groups: while the average age of the volunteers was 46.87 years that of the non-volunteers was around 36 years. This difference is statistically significant (p -value= 0.0065, α = 0.05).

In fact, the maximum age found within this subgroup is 57 years. This means that among them there was no retiree; another category does not present in this subgroup is that of students. However, the latter are represented in the cluster of volunteers. An interesting result is the predominance of full-time workers in this category. In fact, it is not in line with the theoretical assumptions provided by the literature which assume that part-time workers are more likely to volunteer (Einolf,2011). They enjoy both higher amount of free time than a full-time employee and a wider social network than those who are unemployed, thanks to their work.

Regarding both income and level of education, no statistically significant differences emerged between the two subgroups. In fact, for both, given the resulting p -values (0.722 e 0.928, respectively), it has not been possible to reject the null hypothesis (the two group have the same level of income and education). Also, in the latter case, the results appeared not to be consistent with theory that associates volunteering with a high level of education.

Finally, while in the group of non-volunteers the majority, is composed of unmarried people, in the group of volunteers, on the contrary, most of them are.

Another difference that emerged is the presence of a greater number of people with children in the second group. These results are consistent with previous studies on this phenomenon. As a matter of fact, these two

³For further information, see paragraph 2.5.1 on page 43.

factors seem to be associated with a greater propensity to be a volunteer: parents, thanks to school and extracurricular activities, are more exposed to volunteer opportunities.

3.5 Relationship and correlations

3.5.1 Commitment

Through the use of the Kruskal-Wallis test it was possible to investigate the presence or absence of statistically significant differences in the number of hours dedicated on average per month by volunteers and former volunteers, among those who have obtained a different qualification, or are clustered in different income classes, or practice a different profession and finally, belong to different groups if classified by marital status.

In all the tests conducted, there were no statistically significant differences in the number of hours dedicated on average to volunteering per month between the various groups.

However, even if there is no difference in the number of hours provided between married and unmarried people, from the results of the analysis conducted, using the Mann-Whitney test, the data collected shows that volunteers who have one or more children dedicate more time to voluntary work ($p\text{-value} = 0.227$, $\alpha = 0.05$) than those who have not.

Given the strong female component of the sample (48 out of 78 volunteers and former volunteers), we wanted to check if there was a difference in the time spent carrying out volunteering activities between men and women. Given the $p\text{-value} = 0.2718$, it was not possible to reject the null hypothesis, that is, there is no difference, in terms of monthly hours, between the two groups analysed. In other words, even if there are more female volunteers in the sample, the latter do not dedicate more time to the activity in question than the male counterpart.

It was also investigated, using the Kruskal-Wallis test, whether being aware of the volunteering opportunity in a different way (i.e., flyer, mass media, direct acquaintance) or being moved by different drivers (i.e., personal motivation, suggestion of a friend) led the interviewees to devote a different quantity of hours to this activity.

In both cases, considering a significance level equal to 0.05, it was not possible to reject the null hypothesis (equal number of hours among

categories) as the p-values resulting from the tests were 0.3043 and 0.3427, respectively.

According to the results of the Mann-Whitney test, conducted in order to investigate whether people who consider themselves spiritual (n = 49) and those who do not (n = 29) differed in the number of hours devoted to volunteering activities, no statistically significant difference emerged (p-value = 0.7675).

There is also no difference between people who define themselves as believers (n = 34) and those who are not (n = 15) since p-value = 0.7358.

In addition, the Spearman rank-order correlation test was conducted in order to determine whether there was a correlation between the average number of hours spent on volunteering per month and the following socio-demographic variables: education, income, and longevity of service.

In all three cases, a Spearman's rho close to zero emerged, so no significant correlation. Specifically, the resulting coefficients are $\rho = -0.0478$ (education), $\rho = 0.0280$ (income), $\rho = 0.2363$ (longevity of service).

The number of hours also results to not be correlated with the age of volunteers and with their life satisfaction.

The latter is also not correlated with the longevity of the service: The Spearman's rho is almost 0.

The Kruskal-Wallis test was used to investigate whether there is any age difference between people who have different longevity of Service. From the tests it emerged that there are statistically significant differences, however they are counterintuitive: while at the logical level it is expected that people who have many years of service behind them are also the oldest ones at the registry level; in our sample, nevertheless, the situation is fluctuating. There is no increasing linear trend, that is, there is no increase in the average age of volunteers with increasing years of service.

3.5.2 Motivations

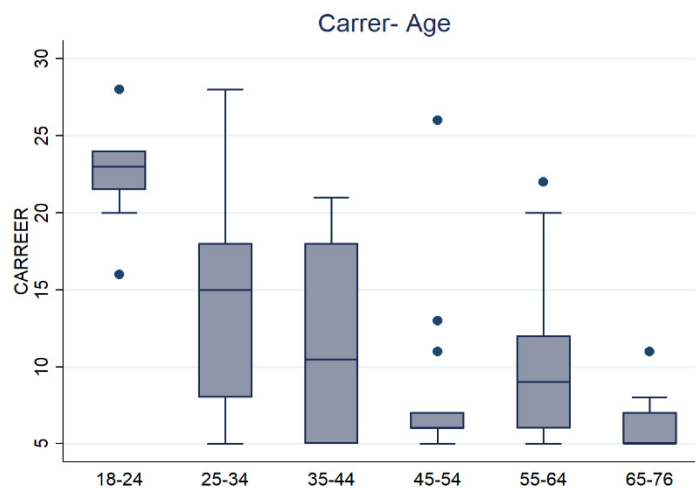
Information concerning the motivations underlying volunteering has also been the subject of numerous analyses.

By means of the Kruskal-Wallis test it was possible to understand whether the value attributed to each of the six functions identified by Clary et al. (1998) differs between people who volunteer for different time periods.

The longevity of service was captured by establishing 6 intervals: "< a year", "1-3 years", "3-6 years", "7-10 years" and "> 10 years".

The same test was conducted by classifying the subjects using age and monthly service hours as criteria.

For both variables, precise data were available and to facilitate the analysis it was preferred to group them into categories. Specifically, as regards age, the following clusters were created: "18-24", "25-34", "35-44", "45-54", "55-64", "65- 76 ". As for the hours, the resulting categories are: "1-4", "5-8", "9-15", "16-24", "25-30", "31-40", "41- 70 "and" 71-150 ".



In the first case, it is clear that young people attribute a higher value than older people to the motivation called "Career" (p-value = 0.0001); however, in the second no statistically significant difference appeared in the value assigned to each function between the categories examined.

Furthermore, for each of the six reasons we wanted to know if there was a difference between people who consider themselves spiritual and those who do not, in terms of the importance attributed to them. From this last analysis it emerged that the former attribute greater salience, compared to those who do not consider themselves as such, to the following reasons: "Values" (p-value = 0.0003), "Understanding" (p-value = 0.0266) and "Protective" (p-value = 0.0098). These differences were not found when it was investigated by dividing the subjects into those who consider themselves religious and those who do not.

Finally, it is clear, by performing the Mann-Whitney test, that women assign a higher value than men to the "Protective" function, (p-value = 0.0188).

For all the other five functions, no statistically significant differences were found on the importance attributed to each of them.

3.5.3 Personality

Kruskal-Wallis test was conducted in order to verify if, for each of the ten personality traits considered, there are differences between who have different longevity of Service. The only statistically significant difference was found in the openminded characteristic (p-value = 0.0099) if only those who are currently volunteers are considered. This difference disappears if the data relating to all volunteers, whether current or former, are analysed.

3.6 Conclusions

This chapter focused on the analysis of the data collected from which interesting results emerged: sometimes in line with the literature, sometimes in contrast with it.

In this sample there is a strong female component: many more women are involved in voluntary work than men. This trend appears to be consistent with the results of numerous papers but in contrast with Istat data according to which the opposite is true. However, this female predominance is not reflected in a greater number of hours dedicated to volunteering by women.

This difference emerges when volunteers who have at least one child are compared with those who do not: the former, on average, perform more hours of service per month than the latter, being, according to Smith (1994), more exposed to volunteer opportunities.

Most of the volunteers in this sample are employed full-time. This result is unexpected, as the literature predicts that part-time employees are more likely to volunteer, given the opportunity to take advantage not only of more free time but also of the social connections deriving from their employment.

Another result that appears counterintuitive is the relationship between the age of the volunteers and the longevity of service: there was no positive trend between age and longevity of service. That is, the average age of those who have a greater longevity of service is not higher than those who have been in this activity for less time.

The volunteers, according to the results of the numerous research on this topic, attribute greater importance to the following functions: “Values”, “Understanding” and “Enhancement”. While the “protective”, “social” and “career” rank in the last places in importance.

Analysing each of the motivations more in depth, it was noted that: young people attribute greater importance to "Career" than older people, women consider the "Protective" function more salient than their male counterpart and that people who define themselves as spiritual give greater weight to “Values”, “Understanding” and “Protective”.

As far as personality traits are concerned, the results are in line with the initial hypotheses: in fact, volunteers consider themselves calmer and less quarrelsome than non-volunteers. Furthermore, those who carry out voluntary work appear to be less anxious and less traditionalist and habitual. Nevertheless, no differences were found in terms of extroversion. According to the literature, in fact, the more extroverted people would be more likely to be involved in this type of activity.

As stated at the beginning and as it was found in the course of the chapter, not all the results are in line with the literature and in many tests no statistically significant differences emerged even if the theory assumed their presence (i.e., level of education among volunteers and non-voluntary).

These outcomes may be due to the limits to which this research work is subject. Having a time limit, which led to keeping the questionnaire active for less than a month, the resulting sample size is not high: only 101 questionnaires have been completed and therefore used.

In addition, while researchers generally conduct their studies focusing on a particular voluntary activity, such as the studies conducted on the AIDS volunteers, this research work aimed to analyse the phenomenon of volunteering as a whole, so, involving volunteers engaged in activities that are carried out in very different areas, which may require different propensities, skills, attitudes, and abilities.

Conclusion

In a frenetic society like ours, in which we run and chase ever more daring goals, there are people who decide to stop and dedicate their time to others, without wanting anything in return, with the sole desire to share this precious resource: the volunteers.

The thesis addresses these dynamics and wants to be an opportunity for a thorough reflection on the economic phenomenon of volunteering. It is an opportunity to deepen the knowledge of a fundamental theme, especially in this period of global emergence, such as prosocial behaviour.

Even if volunteerism seems to have little to do with money, it has solid roots in the economic theory of prosocial behaviour which, in order to be fully understood, in its perhaps obvious relevance, must be contextualized in the more general economic theory.

For this reason, in the first chapter an overview of the main economic theories developed in order to explain a phenomenon, simple but at the same time intertwined and complex, as prosocial behaviour, was presented. The starting point of this excursus, like that of any microeconomics course, is the neoclassical theory.

It represented the pivotal theory of modern economics and thus becomes the benchmark to rely on, the springboard for the development of new theories aimed at bridging the differences between the behaviour predicted by neoclassical theories and the one actually observed.

In fact, neoclassical theories assume the presence of a sort of mythological figure, the homo economicus, who is rational and selfishly pursues the maximization of his utility. As we have seen in the course of the paper, the reality is far from this: humans cannot be considered as isolated beings, but as part of a social network that interconnects them with others, whose utility is the result of these relationships.

Numerous theories have tried to explain what moved individuals to be altruistic with others: while the theory of pure altruism (see section 1.4.2.1) assumes that men are in solidarity only for the pleasure of helping others, Andreoni (1990) highlights the presence of the so-called warm glow, which is the private benefit people receive when they offer their help (see section 1.4.2.2).

Of another opinion are Fehr and Schmidt model and ERC model, according to which individuals, who are averse to inequity, perceive prosocial behaviours as a tool to smooth them out (see sections 1.4.3.1 and 1.4.3.2).

Nevertheless, all these theories do not consider a factor that often plays a fundamental role in the decision-making process that leads to the completion of a certain action: intentions. The latter constitute the cornerstone of reciprocity theories (see paragraph 1.5). Finally, another piece of the puzzle was added, introducing social identity to the many drivers of prosocial behaviour (see paragraph 1.6).

However, although many steps forward from neoclassical theories have been achieved, there are still many factors that have a not negligible impact on human behaviour that should be investigated, and this makes us understand that the road to a full understanding of it is still long.

This brief overview makes us understand how the phenomenon of volunteering has roots not only in economic theory but addresses a theme that has important possible policy implications.

On the one hand, in response to market inefficiencies, such as shortages of public social services and unwillingness to invest on the part of private individuals who would not obtain sufficient profit to remunerate this activity, there are cases in which the volunteerism provides services that otherwise there would not be, for example, a canteen for poor people, or sports associations dedicated exclusively to people with disability.

An example of what has been stated above is Special Olympics Games founded by Eunice Kennedy Shriver in the USA. She posed the question of how people with intellectual disabilities were marginalized from society. For this reason, starting in 1962, she began organizing summer camps at her home in order to provide an alternative to these people, involving them in physical activities. In six years, this event has aroused so much interest and participation that in 1968 it became an event of international importance.

Special Olympics prepares an international sports training and athletic competition program for 5,169,489 children and adults with intellectual disabilities. In the world, 180 countries adopt the Special Olympics program, 1,114,697 volunteers help to carry out approximately 103,540 major events every year.

To give an example of the economic value generated by one of these events, consider the 2019 Abu Dhabi Special Olympics World Games. It has been estimated by PwC that this *kermesse* generated approximately \$ 260 million in revenues by employing 20,000 local and international volunteers. The company has estimated that the event has generated about 8000 "job years", that is the equivalent of 8000 full time employees working one year.

On the other hand, the volunteers implement an already existing service to widen the catchment area of people who can use it, i.e., Croce Verde.

The latter, considering only the Padua section, in 2019 provided a total of 79,686 services, of which 27,893 were emergency services.

The total number of hours of volunteer work equal to 258,521 hours provided by Croce Verde Padova guarantees the Paduan social and health system an estimated net economic benefit of 5.1 million (calculated at the price of an employee cat. B / 3).

Therefore, it can be stated that volunteerism plays a pivotal role because it represents the glue that allows society to remain united, reduce the inefficiency and fill the gaps in the system of aid and assistance to people and communities by implementing solutions to collective problems.

It is one of the channels through which individuals can improve the well-being of other people, their community and society as a whole. As we have seen up to now, some voluntary activities, as well as social movements have changed the status quo by bringing about deep transformations.

The phenomenon of volunteering is curious and given its characteristics it simply should not exist. In fact, it requires individuals to decide consciously and voluntarily to devote their time to activities aimed at helping others for free, thus without receiving any reward for it. This is in contrast to what is taught at the Business School: the scarcer a resource is, the greater its price.

Despite this, millions of individuals around the world decide to volunteer every year. State of the World's Volunteerism Report (UN, 2018) registered that the worldwide population of volunteers counts 1 billion people that provide a workforce equivalent to 109 million full-time employees.

In Italy, according to a research conducted by Istat, CSVnet (National Coordination of Service Centers for Volunteering) and Fondazione

Volontariato e Partecipazione, there are an estimated 6.63 million active volunteers, of which 4.14 are involved in organizations.

The voluntary activities carried out by them, in the four reference weeks, translate into approximately 126 million hours of total work, divided into approximately 114.1 million hours dedicated to the activity declared as main and 11.9 million hours dedicated to other activities. Considering, for example, a "working week" of 36 hours, the amount of voluntary work can be considered equivalent to approximately 875 thousand full-time units.

Furthermore, through the use of the cost-benefit approach, it has been shown that every euro invested in the non-profit corresponds to an economic return of about 12 euros for the community (Istat, CSVnet and Fondazione Volontariato e Partecipazione,2014).

The heart of the second chapter is represented by the voluntary process of which all three phases are presented: the antecedents, the experience, the consequences. Greater attention was given to the initial stage as it was crucial to develop the foundations to fully appreciate the findings emerged from the analysis presented in the last chapter of the thesis.

In addition, as we have seen, understanding the reasons that lead individuals to volunteer has economic implications both at the organization level (within which the volunteer is involved) and at a broader level, i.e., territorial.

In fact, their knowledge allows the implementation of policies or companions that consent to efficiently recruit the largest number of people, making it possible to expand the service offered, involving a greater number of beneficiaries. Therefore, it leads to greater efficiency in the entire economic and social system as well as a higher level of well-being.

Furthermore, once these people have become volunteers, if the role assigned to them triggers a match between the reasons for which they volunteer and the activity itself, they will be more likely to stay involved in it. Consequently, by reducing the turnover rate there is a reduction in the training costs of volunteers, i.e., those who perform ambulance service or sports coaches.

Finally, in the third chapter the results of the analysis of data collected through the distribution of an original internet survey were presented.

In the sample the majority of volunteers are full- time employees and women. However, there is no statistically significant difference in the average number of hours dedicated to volunteering per month between men and women.

The results that emerge in the literature are mixed: some researchers have not found any differences in terms of hours, while others affirm that these differences emerge when certain phases of the life cycle are analysed (see paragraph 2.5.1).

In line with existing research those who have at least one child tends to perform on average more hours of service per month than those who have not.

The volunteers, according to the results of the numerous papers, attribute greater importance to the following functions of volunteering: “Values”, “Understanding” and “Enhancement”, while the “protective”, “social” and “career” rank in the last places in terms of importance. In particular young people attribute greater importance to "Career" than older people, women perceive the "Protective" function more salient than their male counterpart and that people who define themselves as spiritual give greater weight to “Values”, “Understanding” and “Protective”.

Then, personality traits have been investigated. This because, as the literature shows, there is a consistent relationship between some personality traits and a greater propensity to volunteer. Some scholars, including Haski-Leventhal (2009) and Penner (2002), have even claimed the existence of a real prosocial personality typical of volunteers. The latter tend to be extroverted people, with high levels of empathy and morality, with greater mental openness and better emotional stability.

About it, has been observed that volunteers consider themselves calmer and less quarrelsome than non-volunteers. Furthermore, those who carry out voluntary work appear to be less anxious and less traditionalist and habitual. Nevertheless, no differences were found in terms of extroversion. According to the literature, in fact, the more extroverted people would be more likely to be involved in this type of activity.

Not all the findings are consistent with the theoretical assumptions and in many tests performed on the sample data no statistically significant differences emerged even if the theory assumed their presence (i.e., level of education among volunteers and non-voluntary).

The divergence of the results emerging from this analysis compared to those that can be found in the literature, could be caused by the limits to which this research work is subjected: due to a time limit, the questionnaire has been active for less than a month, and so, the sample size is not high (101 completed questionnaires)

In addition, while research generally focuses on a specific voluntary activity, such as the studies performed on AIDS volunteers, this research work intended to explore the phenomenon of volunteering as a whole, i.e., including volunteers involved in activities carried out in very different areas, which may necessitate different predispositions, skills, and abilities.

Another interesting thing, given the developments in disciplines such as cognitive sciences and in particular neuroeconomics, to observe is the presence of differences in the neural responses between volunteers and non-volunteers and between volunteers operating in different contexts. This would allow for a deeper understanding of what motivates people to help and give their time to others.

If we think about advertising in a general sense, it is often designed to strike in the neural centres of the brain with studied and precise impulses. People's brains will react accordingly by performing certain actions in a more or less conscious way. This normally happens in consumer goods and in advertising, for example, of new mobile phones, the latest perfume just released, Vinted, etc. Try to think what could happen if advertisements were created to call people to volunteer in a more or less conscious way by activating neural responses through sensitive, touching topics; in the same way as the newest smartphone is sold today.

The question to ask is the following: why in today's society investments continue to be made to enrich the famous 1% more and more, when "it would be enough" to invest in the only investment that never fails: volunteering (Thoreau).

Some useful reasons? Here they are listed: € 1 invested in volunteering produces a return of € 12 for society.

It is estimated that among the student population, those who are also volunteers demonstrate higher self-esteem, better academic performance, consume drastically less alcohol and drugs and are less prone to having early pregnancies.

Some scholars estimate that there is a positive correlation between being a volunteer and a lower mortality rate.

What else?

All of us have to think about it.

References

- Abel, A., and Warshawsky, M., (1988), "Specification of the joy of Giving: insights from altruism", *Review of Economics and Statistics*, 70, pp. 145–149.
- Andreoni, J., (1988), "Privately provided public goods in a large economy: The limits of altruism", *Journal of Public Economics*, Elsevier, 35(1), pp. 57-73.
- Andreoni, J., (1989), "Giving with impure altruism: applications to charity and Ricardian equivalence", *Journal of Political Economy*, 97, pp. 1447–1458.
- Andreoni, J., (1990), "Impure altruism and donations to public goods: a theory of warm-glow giving", *Economic Journal*, 100(401), pp. 464–477.
- Andreoni, J., (1993), "An experimental test of the public goods crowding-out hypothesis", *American Economic Review*, 83, pp. 1317–27.
- Andreoni, J., (2002), "The Economics of Philanthropy", in N. J. Smelser and P. B. Baltes, (eds.), *The International Encyclopedia of Social and Behavioral Sciences*, Elsevier, London, pp. 11369–11376.
- Andreoni, J. (2006), "Philanthropy", in S.C. Kolm & J. M. Ythier (Eds.), *Handbook of the economics of giving, altruism and reciprocity*, Elsevier Science, 2, pp. 1201–1269.
- Andrews, H. F. (1990), "Helping and health: the relationship between volunteer activity and health-related outcomes", *Advances*, 7(1), pp. 25–34.
- Asendorpf, J. B., Borkenau, P., Ostendorf, F., and Van Aken, M. A. G. (2001), "Carving personality description at its joints: confirmation of three replicable personality prototypes for both children and adults", *European Journal of Personality*, 15(3), pp. 169-198.
- Atkins, R., Hart, D., and Donnelly, T. M. (2005), "The association of childhood personality type with volunteering during adolescence", *Merrill-Palmer Quarterly*, 51(2), pp. 145-162.

- Becker, G. (1974), "A theory of social interactions", *Journal of Political Economy*, 82(6), pp. 1063-1093.
- Bekkers, R. (2005), "Participation in voluntary associations: relations with resources, personality, and political values". *Political Psychology*, 26(3), pp. 439-454.
- Bellah, R. (1985), "Individualism and commitment in American life", *Berkeley Journal of Sociology*, 30, pp. 117-141.
- Blanco, M., Engelmann, D., and Normann, H. T. (2011), "A within-subject analysis of other-regarding preferences", *Games and Economic Behavior*, 72(2), pp. 321-338.
- Bolton, G., and Ockenfels, A. (2000), "ERC-A theory of equity, reciprocity and competition", *American Economic Review*, 90(1), pp. 166-193.
- Bowlby, J. (1969), *Attachment and Loss, Vol. 1: Attachment. Attachment and Loss*, Basic Books, New York.
- Branscombe, N.R., Ellemers, N., Spears, R., Doosje, B. (1999), "The context and content of social identity threat". In Ellemers N., Spears R., and Doosje B., (Eds), *Social Identity*, Blackwell, Oxford, pp. 35-58.
- Bureau of Labor Statistics. (2009). Volunteering in the United States, a supplement to the September 2009 Current Population Survey. Washington, DC: United States Department of Labor. <http://www.bls.gov/news.release/pdf/volun.pdf>
- Butrica, B. A., Johnson, R. W., and Zedlewski, S. R. (2009), "Volunteer dynamics of older Americans, *The journals of gerontology: Series B: Psychological sciences and social sciences*, 64(5), pp. 644-655.
- Camerer, C. F., and Thaler R.H., (1995), "Anomalies: Ultimatums, Dictators and Manners", *Journal of Economic Perspectives*, 9(2), pp. 209-219.
- Camerer, C.F. (2003), "Behavioral Game Theory: Experiments in Strategic Interaction", Princeton: Princeton University Press.

- Carpenter, J. and Myers, C. (2010), "Why volunteer? Evidence on the role of altruism, image, and incentives", *Journal of Public Economics*, 94, pp. 911-920.
- Chacon, F., Vecina, M. L., and Davila, M. C. (2007), "The three-stage model of volunteers' duration of service", *Social Behavior and Personality*, 35, pp. 627-642.
- Charness, G., and Rabin, M. (2002), "Understanding Social Preferences with Simple Tests", *The Quarterly Journal of Economics*, 117(3), pp. 817-869.
- Cheung, C. and Kwan, A. (2006), "Inducting older adults into volunteer work to sustain their psychological well-being", *Ageing International*, 31, pp. 44-58.
- Chiorri, C., Bracco, F., Piccinno, T., Modafferi, C. and Battini, V. (2014), "Psychometric properties of a revised version of the ten-item personality inventory", *European Journal of Psychological Assessment*.
- Choi, N. and Chou, R. (2010), "Time and money volunteering among older adults: the relationship between past and current volunteering and correlates of change and stability", *Ageing and Society*, Cambridge University Press, 30(4), pp. 559–581.
- Chowdhury, S. M., and Jeon, J. Y. (2014), "Impure altruism or inequality aversion? An experimental investigation based on income effects", *Journal of Public Economics*, 118, pp. 143-150.
- Clary, E. G. and Snyder, M. (1999), "The motivations to volunteer: theoretical and practical considerations", *Current Directions in Psychological Science*, 8(5), pp. 156–159.
- Clary, E. G., and Snyder, M. (1991), "A functional analysis of altruism and prosocial behavior: The case of volunteerism", In M. S. Clark (Ed.), *Review of personality and social psychology: Vol. 12*, Sage Publications, pp. 119–148.
- Clary, E. G., Snyder, M., and Stukas, A. (1998), "Service-learning and psychology: Lessons from the psychology of volunteers' motivations". In R. G. Bringle & D. K. Duffy (Eds.), *With service in mind: Concepts and*

models for service-learning in psychology, American association of Higher Education, Washington DC, pp. 35-50.

- Clary, E. G., Snyder, M., and Stukas, A. A. (1996), "Volunteer's motivations: findings from a National Survey", *Non-profit and Voluntary Sector Quarterly*, 25(4), pp.485-505.
- Clary, E. G., Snyder, M., Ridge, R. D., Miene, P. K., and Haugen, J. A. (1994), "Matching messages to motives in persuasion: a functional approach to promoting volunteerism", *Journal of Applied Social Psychology*, 24(13), pp. 1129-1146.
- Clary, G. E., Snyder, M., Ridge, R., and Copeland, J. (1998), "Understanding and assessing the motivations of volunteers: a functional approach", *Journal of Personality and Social Psychology*, 74(6), pp. 1516-1530
- Cnaan, R. A. and Goldberg-Glen, R. S. (1991), "Measuring motivation to volunteer in human services", *The Journal of Applied Behavioral Science*, 27(3), pp. 269–284.
- Cnaan, R. A., Handy, F., and Wadsworth, M. (1996), "Defining who is a volunteer: Conceptual and empirical considerations", *Non-profit and Voluntary Sector Quarterly*, 25, pp. 364–383.
- Costa, P. T., and McCrae, R. R. (1992), "Normal personality assessment in clinical practice: The NEO Personality Inventory", *Psychological assessment*, 4(1), pp. 5-13
- Crain, A. L., Snyder, M., and Omoto, A. M. (2000), *Volunteers make a difference: Relationship quality, active coping, and functioning among PWAs with volunteer buddies*, Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Croson, R. (2007), "Theories of commitment, altruism and reciprocity: evidence from linear public goods games", *Economic Inquiry*, 45 (2), pp. 199-216.
- Davis, M., Hall, J., and Meyer, M. (2003), "The first year: influences on the satisfaction, involvement, and persistence of new community volunteers", *Personality and Social Psychology Bulletin*, 29, pp. 248-60.

- Davis, M. H., Mitchell, K. V., Hall, J. A., Lothert, J., Snapp, T., and Meyer, M. (1999), "Empathy, expectations, and situational preferences: Personality influences on the decision to participate in volunteer helping behaviors", *Journal of Personality*, 67(3), pp. 469–503.
- Dhami, S. (2016), *The foundations of behavioral economic analysis*. Oxford University Press, Oxford.
- Dhami, S. and A-Nowaihi, A., (2010), "Redistributive policies with heterogeneous social preferences of voters", *European Economic Review*, 54(6), pp. 743-759.
- Dovidio, J. and Penner, L. A. (2007). Helping and Altruism. In *Blackwell Handbook of Social Psychology: Interpersonal Processes*, Blackwell Publishing, pp. 162 – 195.
- Dovidio, J. F., and Banfield, J. C. (2015), "Prosocial behavior and empathy", In J. D. Wright (Ed.), *International encyclopedia of the social and behavioral sciences*, Oxford, England: Elsevier, pp. 216-220
- Dovidio, J.F., Penner L.A. (2001), "Helping and altruism". In ed. G Fletcher, M Clark, *Blackwell Handbook of Social Psychology: Interpersonal Processes*, Blackwell Publishing, Oxford, pp. 162–95.
- Dufwenberg, M., and Kirchsteiger, G. (2004), "A theory of sequential reciprocity", *Games and Economic Behavior*, 47(2), pp. 268-298.
- Eckel, C. C., and Grossman, P. J., (2008), "Men, women and risk aversion: experimental evidence, in C. Plott, V. Smith, (eds.), *Handbook of experimental economics results: Vol 1*, Elsevier, New York, pp. 1061-1073.
- Einolf, C. J. (2011), "Gender differences in the correlates of volunteering and charitable giving", *Non-profit and Voluntary Sector Quarterly*, 40(6), pp. 1092-1112.
- Esmond, J. and Dunlop, P. (2004), "Developing the volunteer motivation inventory to assess the underlying motivation drives of volunteers in Western Australia", *Lottery west Social Research Grant*, pp. 1-81.

- European Commission (2010). Eurobarometer 73. Report Volume 1. https://ec.europa.eu/commfrontoffice/publicopinion/archives/eb/eb73/eb73_vol1_en.pdf
- Falk, A., and Fischbacher, U. (2006), “A theory of reciprocity”, *Games and Economic Behavior*, 54(2), pp. 293–315.
- Fehr, E., and Gächter, S. (2000), “Fairness and retaliation: the economics of reciprocity”, *Journal of Economic Perspectives*, 14(3), pp. 159–181.
- Fehr, E., and Schmidt K. (1999), “A theory of fairness, competition, and cooperation”, *Quarterly Journal of Economics*, 114(3), pp. 817–868.
- Fehr, E., and Schmidt, K. (2003), “Theories of fairness and reciprocity-evidence and economic application”, in M. Dewatripont, L.P. Hansen, and S.J. Turnovsky, *Advances in Economics and Econometrics, Econometric Society Monographs*, Eighth World Congress, Volume 1, pp. 208 – 257.
- Feldman, N. E (2010), "Time is money: choosing between charitable activities", *American Economic Journal: Economic Policy*, 2 (1), pp. 103-130.
- Finkelstein, M. (2007), “Correlates of satisfaction in older volunteers: a motivational perspective”, *The Journal of volunteer administration*, 24 (5).
- Finkelstein, M. A. (2008), “Predictors of volunteer time: the changing contributions of motive fulfilment and role identity”, *Social Behavior & Personality: an international journal*, 36(10), pp. 1353-1364
- Finkelstein, M. A., and Brannick, M. (2007), “Applying theories of Institutional helping to informal volunteering: motives, role identity, and prosocial personality”, *Social Behavior and Personality: An international journal*, 35(1), pp. 101-114.
- Finkelstein, M. A., Penner, L. A., and Brannick, M. T. (2005), “Motive, role identity, and prosocial personality as predictors of volunteer activity”, *Social Behavior and Personality: An International Journal*, 33(4), pp. 403–418.

- Fisman, R., Kariv, S., and Markovits, D. (2007). "Individual Preferences for Giving", *American Economic Review* 97, 1858-1877.
- Fong, C. (2001), "Social preferences, self-interest, and the demand for redistribution", *Journal of Public Economics*, 82(2), pp. 225-246.
- Forsythe R., Horowitz J. L., Savin N. E., and Sefton M., (1994), "Fairness in Simple Bargaining Experiments", *Games and Economic Behavior*, Elsevier, vol. 6(3), pp. 347-369.
- Freeman, R. (1997), "Working for nothing: the supply of volunteer labor", *Journal of Labor Economics*, 15(1), pp. 140-166.
- Fuertes, F., and Jiménez, L.V. (2000), "Motivation and burnout in volunteerism", *Psychology in Spain*, 4(1), pp. 75-81.
- Furukawa, Y., Nakashima, K., and Morinaga, Y. (2016), "Influence of social context on the relationship between guilt and prosocial behaviour", *Asian Journal of Social Psychology*, 19, pp. 49-54.
- Gallagher, S. (1994), *Older People Giving Care: Helping People and Community*, Praeger, Westport, CT: Auburn House.
- Geanakoplos, J., Pearce, D. and Stacchetti, E. (1989), "Psychological games and sequential rationality", *Games and Economic Behavior*, 1(1), pp. 60-79.
- Gesthuizen, M., and Peer S. (2012), "Educational differences in volunteering in cross-national perspective: individual and contextual explanations", *Non-profit and Voluntary Sector Quarterly*, 41, pp. 158-181.
- GHK (2010): Study on Volunteering in the European Union – Executive Summary DE.
http://ec.europa.eu/citizenship/pdf/doc1020_en.pdf
- Goette, L., Huffman, D., and Meier, S. (2006), "The Impact of Group Membership on Cooperation and Norm Enforcement: Evidence Using Random Assignment to Real Social Groups", *American Economic Review*, 96 (2), pp. 212-216.

- Grönlund, H. (2011), "Identity and volunteering intertwined: reflections on the values of young adults", *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 22(4), pp. 852-874.
- Grube, J. A., and Piliavin, J. A. (2000), "Role identity, organizational experiences, and volunteer performance", *Personality and Social Psychology Bulletin*, 26(9), pp. 1108-1119.
- Hackel, L. M., Zaki, J., and Van Bavel, J. J. (2017), "Social identity shapes social valuation: evidence from prosocial behavior and vicarious reward", *Social cognitive and affective neuroscience*, 12(8), pp. 1219-1228.
- Hallett, C., Klug, G., Lauber, C. and Priebe, S. (2012), "Volunteering in the care of people with severe mental illness: a systematic review", *BMC Psychiatry*, 12, Article 226.
- Handy, F. et al. (2010), "A Cross-Cultural examination of student volunteering: Is It all about résumé building?", *Non-profit and Voluntary Sector Quarterly*, 39(3), pp. 498–523.
- Harsanyi, J. (1980), "Rule utilitarianism, rights, obligations and the theory of rational behaviour", *Theory and Decision*, 12, pp. 115–133.
- Hart, D., and Fegley, S. (1995), "Prosocial behavior and caring in adolescence: relations to self-understanding and social judgment", *Child Development*, 66(5), pp. 1346–1359.
- Hasenfratz, L. and Knafo-Noam, A. (2015), "Intergenerational Cultural Transmission: Looking Beyond the Processes of Parent-to-Child Socialization—A Comment on Tam", *Journal of Cross-Cultural Psychology*, 46(10), pp. 1345–1349.
- Haski-Leventhal, D. (2009), "Altruism and volunteerism: the perceptions of altruism in four disciplines and their impact on the study of volunteerism", *Journal for the Theory of Social Behaviour*, 39(3), pp. 271-299.
- Hoffman, M. L. (2008), "Empathy and prosocial behavior", In M. Lewis, J. M. Haviland-Jones, and L. F. Barrett (Eds.), *Handbook of emotions*, The Guilford Press, pp. 440-455.

- Hofstee, W. K., De Raad, B., and Goldberg, L. R. (1992), "Integration of the Big Five and circumplex approaches to trait structure", *Journal of Personality and Social Psychology*, 63(1), pp. 146–163.
- Houle, B.J., Sagarin, B., and Kaplan, M. (2005), "A functional approach to volunteerism: do volunteer motives predict task preference?", *Basic and Applied Social Psychology*, 27, pp. 337-344.
- Independent Sector (2001). Giving and volunteering in the United States: Findings from a national survey. Washington, DC: Author.
- Ironson, G. (2007), "Altruism and health in HIV", In S. G. Post (Ed.), *Altruism and health: Perspectives from empirical research*, Oxford University Press, pp. 70-81.
- Jenner, J. R. (1982), "Participation, leadership, and the role of volunteerism among selected women volunteers", *Journal of Voluntary Action Research*, 11(4), pp. 27–38.
- Kahneman, D., Knetsch, J., and Thaler, R. (1986), "Fairness as a Constraint on Profit Seeking: Entitlements in the Market", *The American Economic Review*, 76(4), pp. 728-741.
- Keser, C., and Van Winden, F. (2000), "Conditional Cooperation and Voluntary Contributions to Public Goods", *The Scandinavian Journal of Economics*, 102(1), pp. 23-39.
- Kiviniemi, M. T., Snyder, M., and Omoto, A. M. (2002), "Too many of a good thing? The effects of multiple motivations on stress, cost, fulfillment, and satisfaction", *Personality and Social Psychology Bulletin*, 28(6), pp. 732–743.
- Kollock, P. (1998) Transforming Social Dilemmas: Group Identity and Cooperation. In: Danielson, P., Ed., *Modelling Rationality, Morality and Evolution*, Oxford University Press, Oxford.
- Krause, N. M., Herzog, A. R., and Baker, E. (1992), "Providing support to others and well-being in later life", *Journal of Gerontology*, 47(5), pp. 300–311.
- Laffont, J. (1975), "Macroeconomic constraints, economic efficiency and ethics: an introduction to Kantian economics", *Economica*, 42, pp. 430-437.

- Lee, L., Piliavin, J. A., and Call, V. (1999), "Giving time, money, and blood: Similarities and differences", *Social Psychology Quarterly*, 62, pp. 276–290.
- Lee, Y. and Brudney, J. (2009), "Rational volunteering: a benefit-cost approach", *International Journal of Sociology and Social Policy*, 29, pp. 512-530.
- Li, Y. (2007), "Recovering from spousal bereavement in later life: Does volunteer participation play a role?", *Journals of Gerontology: Series B: Psychological and Social Sciences*, 62, pp. 257-266.
- Marta, E., and Pozzi, M. (2008), "Young people and volunteerism: A model of sustained volunteerism during the transition to adulthood", *Journal of Adult Development*, 15(1), pp. 35–46.
- Mas-Colell, A., Whinston, M. D., and Green, J. R. (1995), *Microeconomic theory*, New York: Oxford University Press.
- Matsuba, M. K., Hart, D., and Atkins, R. (2007), "Psychological and social structural influences on commitment to volunteering", *Journal of Research in Personality*, 41(4), pp. 889-907.
- Meier, S., (2006), *A survey of economic theories and field evidence on pro-social behavior*, Federal Reserve Bank of Boston, Working Papers No. 06-6.
- Meier, S., and Stutzer, A. (2008), "Is volunteering rewarding in itself?" *Economica*, 75(297), new series, pp. 39-59.
- Mifune, N., Hashimoto, H., and Yamagishi, T. (2010), "Altruism toward in-group members as a reputation mechanism", *Evolution and Human Behavior*, 31(2), pp. 109-117.
- Miller, J. G. (1994), "Cultural diversity in the morality of caring: Individually oriented versus duty-based interpersonal moral codes", *Cross-Cultural Research*, 28, pp. 3-39.
- Mischel, W., and Shoda, Y. (1998), "Reconciling processing dynamics and personality dispositions", *Annual Review of Psychology*, 49, pp. 229–258.

- Moreno-Jiménez, P. and Hidalgo, M. (2010), "Prediction of burnout in volunteers", *Journal of Applied Social Psychology*, 40, pp. 1798 - 1818.
- Morrow-Howell, N. (2010), "Volunteering in later life: research frontiers", *The Journals of Gerontology: Series B*, 65(4), pp. 461–469,
- Murayama, H., Taguchi, A. and Murashima, S. (2010), "The Relationships between feelings of satisfaction and burden with respect to activity and social support among health promotion volunteers in Japan", *Health Education and Behavior*, 37(2), pp. 275–287.
- Musick, M. A., and Wilson, J. (2003), "Volunteering and depression: the role of psychological and social resources in different age groups", *Social Science and Medicine*, 56 (2), pp. 259–269.
- Musick, M. A., and Wilson, J. (2008), *Volunteers: a social profile*, Indiana University Press, Bloomington.
- Musick, M. A., Herzog, A. R., and House, J. S. (1999), "Volunteering and mortality among older adults: findings from a national sample", *The journals of gerontology: Series B, Psychological sciences and social sciences*, 54(3), pp. 173-180.
- Musick, M. A., Wilson, J., and Bynum, W. B. (2000), "Race and formal volunteering: the differential effects of class and religion", *Social Forces*, 78(4), pp. 1539-1570.
- Nappo, N. and Fiorillo, D. (2020), "Volunteering and self-perceived individual health: Cross-country evidence from nine European countries", *International Journal of Social Economics*, Emerald Group Publishing, 47(3), pp. 285-314.
- Negrey, C. (1993), *Gender, Time and Reduced Work*, State University NY Press, Albany.
- Ockenfels, A. and Werner, P. (2014), "Beliefs and ingroup favoritism", *Journal of Economic Behavior and Organization*, 108(C), pp.453-462.
- Offerman, T. (2002), "Hurting hurts more than helping helps", *European Economic Review*, 46(8), pp. 1423-1437.
- Oliner, S. P., and Oliner, P. M. (1988), *The altruistic personality: rescuers of Jews in Nazi Europe*, The Free Press, New York.

- Oman, D., Thoresen, C. E., and McMahon, K. (1999), "Volunteerism and mortality among the community-dwelling elderly", *Journal of Health Psychology*, 4(3), pp. 301–316.
- Omoto, A. M., and Snyder, M. (1995), "Sustained helping without obligation: motivation, longevity of service, and perceived attitude change among AIDS volunteers", *Journal of Personality and Social Psychology*, 68(4), pp. 671-686.
- Omoto, A. M., and Snyder, M. (2002), "Considerations of community: the context and process of volunteerism", *American Behavioral Scientist*, 45(5), pp. 846–867.
- Omoto, A. M., Snyder, M., and Hackett, J. D. (2010), "Personality and motivational antecedents of activism and civic engagement", *Journal of Personality*, 78(6), pp. 1703–1734.
- Omoto, A.M., Snyder, M., and Martino S.C. (2000), "Volunteerism and the life course: investigating age-related agendas for action", *Basic and Applied Social Psychology*, 22(3), pp. 181-197,
- Parkinson, L., Warburton, J., Sibbritt, D., and Byles, J. (2010), "Volunteering and older women: psychosocial and health predictors of participation", *Aging and mental health*, 14(8), pp. 917–927.
- Paunonen, S. V., and Jackson, D. N. (1996), "The Jackson Personality Inventory and the five-factor model of personality", *Journal of Research in Personality*, 30(1), pp. 42–59.
- Pavot, W., and Diener, E. (2013), "The Satisfaction with Life Scale (SWL)", *Measurement Instrument Database for the Social Science*.
- Pearce, J. L. (1993), *Volunteers: The organizational behavior of unpaid workers*, Routledge, London.
- Penner, L. A. (2002), "Dispositional and organizational influences on sustained volunteerism: an interactionist perspective", *Journal of Social Issues*, 58(3), pp. 447-467.
- Penner, L. A., and Finkelstein, M. A. (1998), "Dispositional and structural determinants of volunteerism", *Journal of Personality and Social Psychology*, 74(2), pp. 525–537.

- Penner, L. A., Fritzsche, B. A., Craiger, J. P., and Freifeld, T. R. (1995), "Measuring the prosocial personality", In J. Butcher and C. D. Spielberger (Eds.), *Advances in personality assessment*, Vol. 10, Hillsdale, NJ: Erlbaum, pp. 147-163.
- Penner, L.A., Dovidio, J., Piliavin, J., and Schroeder, D. (2005), "Prosocial behavior: multilevel perspectives", *Annual review of psychology*, 56, pp. 365-92.
- Piliavin, J. A., and Callero, P. L. (1991), *Giving blood: the development of an altruistic identity*, Johns Hopkins University Press, Baltimore.
- Rabin, M. (1993), "Incorporating Fairness into Game Theory and Economics", *The American Economic Review*, 83(5), pp. 1281-1302.
- Reich, W.A. (2000), "Identity structure, narrative accounts, and commitment to a volunteer role", *The Journal of Psychology*, 134 (4), pp. 422-434.
- Roberts, R. D., (1984), "A positive model of private charity and public transfers", *Journal of Political Economy*, University of Chicago Press, 92(1), pp. 136-148.
- Rose-Ackerman, S., (1996), "Altruism, non-profits, and economic theory", *Journal of Economic Literature*, American Economic Association, 34(2), pp. 701-728.
- Rotolo, T. and Berg, J.A. (2011), "In times of need: an examination of emergency preparedness and disaster relief service volunteers", *Nonprofit and Voluntary Sector Quarterly*, 40(4), pp. 740–750.
- Shye, S. (2010), "The motivation to volunteer: A systemic quality of life theory", *Social Indicators Research*, 98(2), pp. 183-200.
- Simon, H. (1992), "Altruism and economics", *Eastern Economic Journal*, 18(1), pp. 73-83.
- Skoglund, A. (2006), "Do not forget about your volunteers: a qualitative analysis of factors influencing volunteer turnover", *Health and social work*, 31 (3), pp. 217-20.
- Smith, B., and Stark, R. (2009), "Religious attendance relates to generosity worldwide".

<http://www.gallup.com/poll/122807/Religious-Attendance-Relates-Generosity-Worldwide.aspx>

- Smith, D. (1994), “Determinants of Voluntary Association Participation and Volunteering: A Literature Review”, *Non-profit and Voluntary Sector Quarterly*, 23, pp. 243-264.
- Snyder, M, and Omoto, A.M. (2009), “Who gets involved and why? The psychology of volunteerism: principles, policies, and practices”. in E Liu, MJ Holosko and TW Lo (eds), *Youth empowerment and volunteerism: Principles, policies and practices*, City University of Hong Kong Press, Hong Kong, pp. 3-26.
- Snyder, M., and Omoto, A. M. (2008), “Volunteerism: social issues perspectives and social policy implications”, *Social Issues and Policy Review*, 2(1), pp. 1-36.
- Souza, K. A., and Dhimi, M. K. (2008), “A study of volunteers in community-based restorative justice programs”, *Canadian Journal of Criminology and Criminal Justice*, 50(1), pp. 31–57.
- SpecialOlympics.org. 2021. 1960s: The Beginning of a Worldwide Movement. [ONLINE]. Available at:
<https://www.specialolympics.org/about/history/the-beginning-of-a-worldwide-movement?locale=en>.
- Stukas, A. A. et al. (2016), “Motivations to volunteer and their associations with volunteers’ well-being”, *Nonprofit and Voluntary Sector Quarterly*, 45(1), pp. 112–132.
- Stukas, A. A., Daly, M., and Cowling, M. J. (2005), “Volunteerism and social capital: A functional approach”, *Australian Journal on Volunteering*, 10(2), pp. 35-44.
- Stukas, A.A., Snyder, M., and Clary, E.G. (1999), “The effects of “mandatory volunteerism” on intentions to volunteer”, *Psychological Science*, 10, pp. 59–64.
- Sugden, R., (1982), “On the economics of philanthropy”, *Economic Journal*, Royal Economic Society, 92(366), pp. 341-350.
- Sugihara, Y., Sugisawa, H., Shibata, H., and Harada, K. (2008), “Productive roles, gender, and depressive symptoms: evidence from a

national longitudinal study of late-middle-aged Japanese”, *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, 63(4), pp. 227–234.

- Syvertsen, A., Wray-Lake, L., Flanagan, C., Osgood, D., and Briddell, L. (2011), “Thirty-year trends in U.S. adolescents’ civic engagement: A story of changing participation and educational differences”, *Journal of Research on Adolescence*, 21, pp. 586-594.
- Tang, F. (2009), “Late-life volunteering and the trajectories of physical health”, *Journal of Applied Gerontology*, 28, pp. 524-533.
- Themudo, N. S. (2009), “Gender and the Non-profit Sector”, *Non-profit and Voluntary Sector Quarterly*, 38(4), pp. 663–683.
- Tidd, K. L., and Lockard, J. S. (1978), “Monetary significance of the affiliative smile: A case for reciprocal altruism”, *Bulletin of the Psychonomic Society*, 11(6), pp. 344–346.
- Voicu, B. and Voicu, M. (2009), “Volunteers and volunteering in Central and Eastern Europe”, *Sociologia*, 41, pp. 539-563.
- Weinstein, N., and Ryan, R. M. (2010), “When helping helps: autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient”, *Journal of Personality and Social Psychology*, 98(2), pp. 222-244.
- Wilson, J. (2000), “Volunteering”, *Annual Review of Sociology*, 26, pp. 215–240.
- Wilson, J. (2012), “Volunteerism research”, *Non-profit and Voluntary Sector Quarterly*, 41(2), pp. 176-212.
- Wilson, J., and Musick, M. (1997), “Who cares? Toward an integrated theory of volunteer work”, *American Sociological Review*, 62(5), pp. 694-713.
- Wilson, J., and Musick, M. (1999), “The effects of volunteering on the volunteer”, *Law and Contemporary Problems*, 62, pp. 141-168.
- Wittek, R. and Bekkers, R. H. F. P. (2015), “The sociology of prosocial behavior and altruism”, in JD Wright (ed.), *International Encyclopedia of Social and Behavioral Sciences*, Elsevier, Oxford, pp. 579-583.

- Wolff, N., Weisbrod, B., and Bird, E. (1993), The supply of volunteer labor: the case of hospitals, *Non-profit management and leadership*, 4 (1), pp. 23-45.
- Yamagishi, T. and Kiyonari, T. (2000), "The Group as the Container of Generalized Reciprocity", *Social Psychology Quarterly*, 63, pp. 116-132.
- Yeung, A.B. (2004), "The octagon model of volunteer motivation: results of a phenomenological analysis", *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 15, pp. 21-46.
- Yoshioka, C. F., Brown, W. A., and Ashcraft, R. F. (2007), "A functional approach to senior volunteer and non-volunteer motivations", *The International Journal of Volunteer Administration*, 24(5), pp. 31-43.