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**THE PSYCHOLOGY OF MEAT CONSUMPTION:
AN INVESTIGATION OF
ATTITUDES, IDENTITY AND NORMS**

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ABSTRACT

Background: Food is given increasing attention worldwide, especially for what its safeness, and production impacts on the quality of human life and environment (Expo 2015).

Food choice is a complex process that serves functions other than nutrition. It involves several biological, physiological and socio-psychological processes and it is a vehicle for a number of social meanings shared with human relations and culture. Universally, among all types of food, meat is the one that endorses more meanings than any other. In many societies, meat is considered the most praised food and meat dishes are synonymous with “real” food and the base around which a meal is set.

The claim of meat, once a comparatively rare commodity, has risen considerably over the years, causing major consequences on health and the environment, at both personal and social level. Reasons for meat choice do not depend on a single variable but depend on many personal and social factors, that may have a key role in contrasting pollution and health problems.

Aims: This PhD project investigated the role of meat in everyday life, especially within young, post-teen generations, shedding some light on social and psychological processes involved in meat consumption. The role of attitudes, identity and norms related to eating meat, have been explored in greater detail.

Method: A quali-quantitative approach has been used to perform three studies, aiming at investigating the psychological factors affecting meat use and choice in a sample of Italian and British subjects aged 21-31, autonomous in their purchasing decisions and consumer behaviors.

A qualitative study has been carried out to examine psychological drivers and social contexts of meat in Italian diets and lifestyles, focusing on the relevant evolutions and changes over lifetime. Fourteen life histories interviews were then analyzed using thematic analysis. In particular, mother-daughter relationships have been explored in order to understand whether or not meat choice simply is a matter of “taste” or if it is influenced by parental diets and family meanings within a specific cultural frame.

Subsequently, two parallel quantitative studies investigated factors influencing meat consumption at present-day, in a broader sample (264 Italians and 237 Britons). With that aim, a survey has been conducted using a made to purpose questionnaire integrating core aspects of the Identity and Norms theories with the Theory of Planned Behaviour (TPB), which allow to explore the role and the interaction of social variables (e.g., group norms, social identification) and individual variables (e.g., Self-identity). The relevant data have been organized and analyzed, according to standard statistical practices.

Results: The Life Histories thematic analysis proved to be a useful and effective method in collecting information and deeply seated factors affecting meat consumption and related practices. It revealed its complexity and the influential role of individuals, society, cultures and rituals. Interestingly, on the personal side, Self-identity and social norm emerge as key psychological factors. They do not stand out as isolated themes, but rather play a role in association with different conditions. Personal low meat consumption levels and healthy-eater styles were consciously used by interviewees to present themselves, whilst strong social norms appear to control or influence meat use in dietary habits.

The multiple regression analysis for the Italian sample showed that the TPB components accounted for 20% of the variance in eating meat. As expected, these results provided support for intention, perceived behavioral control and Self-identity as statistically significant predictors of meat eating behavior. As far as intention is concerned, the whole model explained nearly 40% of the proportion of the variance of an individual's intention to eat meat. In this case, results provided support for perceived behavioral control, and Self-Identity as statistically significant predictors of intention to eat meat.

Instead, for the Britons, the same model explained nearly 60% of the proportion of the variance of a meat eating behavior and almost 80% of the variance of intention to eat meat. Specifically, these results provided support for intention and healthy-eater identity as predictors of meat eating behavior, whilst attitudes, perceived behavioral control, healthy-eater identity and Self-identity as meat eater were statistically significant predictors of intention to eat meat.

Unexpectedly, the role of social variables (e.g., group norms, social identification) were not significant in both samples.

Conclusions: This PhD project produced an advancement in the knowledge of psychological factors behind meat consumption, with particular reference to the Italian context. The strategic choice of integrating qualitative and quantitative approaches allowed to overcome intrinsic limitations of both, thus allowing an articulate, in-depth vision of attitudes, identity and norm. Results may offer interesting benefits for new information strategies targeting psychological variables, such as those above and provide new insights for the study of food and eating behaviors in non-clinical contexts.

RIASSUNTO

Introduzione: Da tempo in Italia e nel mondo si assiste ad una sempre crescente attenzione nei confronti del cibo, della sua sicurezza e sulle conseguenze che i moderni metodi di produrlo hanno sulla qualità della vita e dell'ambiente (Expo 2015).

Le scelte alimentari sono processi articolati che vanno oltre le semplici esigenze nutrizionali. Esse implicano numerosi processi biologici, fisiologici e socio-psicologici e trasmettono una serie di messaggi sociali che afferiscono dalle relazioni umane alla cultura in generale. La carne, a livello universale, è il cibo più investito di simboli e significati. In molte società, infatti, la carne è il cibo più apprezzato ed i piatti a base carne sono sinonimo di "cibo vero" attorno ai quali si costituisce l'intero pasto.

Nel corso degli anni, la richiesta ed il consumo di carne, un tempo merce rara, sono cresciuti in modo esponenziale, con gravi ripercussioni sulla salute e l'ambiente, sia a livello sociale che dei singoli individui. Le ragioni che conducono al suo consumo non dipendono da una sola variabile, bensì da un complesso di fattori personali e sociali, la cui comprensione potrebbe rivestire un ruolo importante nella lotta all'inquinamento e nel miglioramento della salute.

Obiettivi: questo progetto di dottorato ha indagato il ruolo che la carne gioca nella vita di tutti i giorni e, in modo particolare, in quella delle giovani generazioni, con l'obiettivo di far luce su alcuni dei processi psico-sociali che ne influenzano il consumo. A questo proposito, sono stati analizzati in dettaglio i ruoli degli atteggiamenti, delle identità e delle norme.

Metodo: allo scopo di comprendere i possibili fattori psicologici che condizionano la scelta e l'uso della carne sono stati condotti tre studi su altrettanti campioni di giovani italiani e inglesi di età compresa tra i 21 ed i 31 anni, autonomi nelle loro scelte e nelle loro abitudini alimentari.

Uno studio qualitativo è stato condotto al fine di esaminare le ragioni psicologiche ed i contesti sociali che influenzano gli stili alimentari e il consumo di carne degli italiani, mantenendo un'ottica trans generazionale, legata al procedere dell'età del consumatore.

Sono state condotte 14 interviste secondo il metodo delle *Life Histories*, successivamente studiate con un'analisi tematica. Si è cercato di evidenziare, in particolare, le relazioni tra madre e figlia allo scopo di comprendere fino a che punto il consumo della carne sia una

questione di gusto e quanto siano importanti le influenze prodotte dai significati e dalle abitudini alimentari in un contesto culturale specifico.

Successivamente, tramite due indagini quantitative parallele, sono stati studiati alcuni fattori potenzialmente influenti sul consumo della carne su un campione più ampio (264 italiani e 237 inglesi). A questo scopo è stato preparato un apposito questionario, costruito integrando gli aspetti fondamentali della teoria dell'identità e delle norme con quelli della teoria del comportamento pianificato (*Theory of Planned Behaviour*, TPB) tale da consentire l'analisi del ruolo delle variabili sociali (norme di gruppo, identità sociale, ecc.) ed individuali (identità di Sé, ecc.). I dati così ottenuti sono stati organizzati e analizzati secondo le prassi statistiche standard.

Risultati: L'analisi tematica delle interviste si è rivelata un metodo utile ed efficace per raccogliere informazioni ed esplorare i fattori psicologici profondi che determinano il consumo di carne e le pratiche di contorno. Inoltre, sono emersi anche l'influenza e la complessità dei ruoli dei singoli individui, della società, della cultura e dei rituali. Sul lato personale, l'identità di Sé e la norma sociale sono emersi come fattori psicologici rilevanti, sebbene non siano apparsi come temi isolati ma piuttosto sembrano essere presenti in diverse condizioni. Infatti, consumi di carne modesti e abitudini alimentari "sane" sono stati consapevolmente utilizzati dagli intervistati per presentarsi e forti norme sociali sembrano influenzare, se non addirittura determinare, l'uso della carne nelle abitudini alimentari.

L'analisi della regressione multipla sul campione italiano ha indicato che le componenti della TPB rappresentano il 20% della varianza del consumo di carne. Secondo le attese, i risultati hanno individuato nelle intenzioni, nel controllo comportamentale percepito e nella identità di Sé i predittori più importanti dei comportamenti "carnivori". Per quanto riguarda invece le intenzioni, l'intero modello spiega quasi il 40% della varianza relativa all'intenzione personale di mangiar carne. In questo caso, i risultati ottenuti hanno evidenziato che il controllo comportamentale percepito e l'identità di Sé sono le variabili che meglio predicono l'intenzione di mangiar carne.

Nel campione inglese, invece, lo stesso modello ha spiegato quasi il 60% della varianza dei comportamenti "carnivori" e quasi l'80% della varianza dell'intenzione. Nello specifico, i risultati ottenuti hanno individuato nell'intenzione e nell'identità di "mangiatore sano" i predittori più efficaci dei comportamenti "carnivori", laddove gli atteggiamenti, il controllo comportamentale percepito, l'identità di "mangiatore sano" e l'identità di Sé quale

“carnivoro” si sono rivelati come i fattori statisticamente più significativi per la previsione dell’intenzione. Inaspettatamente, il ruolo delle variabili sociali (norme di gruppo, identità sociale, ecc.) non è risultato significativo in nessuno dei campioni.

Conclusioni: Questo progetto di dottorato ha prodotto interessanti progressi nella conoscenza dei fattori che stanno alla base del consumo della carne, soprattutto sul territorio italiano. La scelta strategica di integrare gli approcci qualitativi e quantitativi ha permesso di superarne i limiti intrinseci, consentendo di arrivare ad una visione articolata ed approfondita degli atteggiamenti, delle identità e delle norme.

I risultati potrebbero presentare interessanti risvolti applicativi nella preparazione di campagne informative e/o educative che facciano leva sulle variabili psicologiche individuate nonché offrire nuovi strumenti per lo studio dei comportamenti alimentari in contesti non patologici.

STATEMENT OF ORIGINALITY

This thesis and the work to which it refers are the results of my own efforts. Any ideas, data, images or text resulting from the work of others (whether published or unpublished) are fully acknowledged and clearly identified throughout this work and attributed to their originators in the text, bibliography footnotes. This thesis has not been submitted in whole or in part for any other academic degree or professional qualification.

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Date

Elena Cadel

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INTRODUCTION

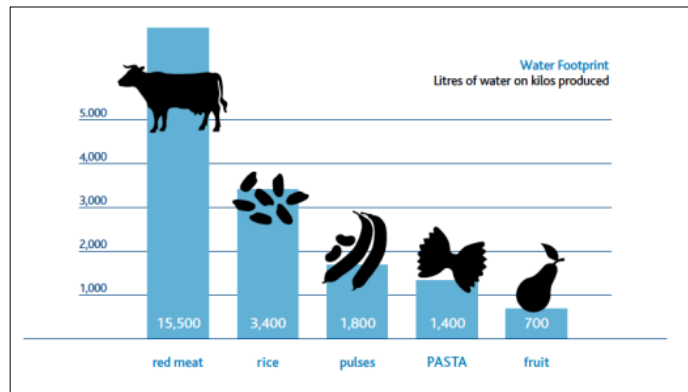
«The remedy lies in boosting our ecological intelligence, a collective understanding of hidden ecological impacts and the resolve to improve them» (Goleman, D., 2009, p.7).

Generally, food and eating behaviors endorse different meanings and several bio-socio-psycho-physiological processes that go well beyond nutrition. What we consider as food is not a simple object (Ogden, 2010), but rather a complex and a pervasive feature of everyday life, that can be also replete with contradictions, oppositions and that can be a potential source of concern, particularly in relation to personal health and the environment (Chamberlain, 2004). In particular, nowadays, food scandals and food related problems require a new broad and multidisciplinary vision of the entire food chain, from production to the final consumers, in order to meet the sustainable goals promoted by Horizon 2020 and Expo 2015.

From a psychological point of view, “ecological behaviors” is a univocal, but generic, label for all those behaviors related to the environment by an intent or an impact (Bonnes, Passafaro, & Carrus, 2006). Intent and impact refer to different concepts. The former is focused on the actor’s perspective and underlies the role of attitudes, motivations and values in affecting behaviors. The latter deals with the effects of actions on the environment. In this way, an action may be environmentally meaningful for a person without having an impact on the environment itself and vice versa. Anyway, they are not two different points of view, but two sides of the same coin. For example, in Europe and United States many people prefer to not buy sprays in order to avoid further damage to the ozone barrier. However, as we speak, dangerous gases are no longer present in these cans, since they have been banned from production many years ago (Stern, 2000). The intent is good: as people do not want to damage the environment, but their actions end having no real or appreciable ecological impact. Otherwise, there are situations where people behave ecologically without meaning to do so. For example, when someone decides to use public transports every day rather than his/her own car to go to work “because it is cheaper”. The intent is saving money, but the action is beneficial to the environment (Bonnes et al., 2006). Finally, it also happens that people act “*not-ecologically*” without being aware of it. This is the case of meat consumption, which has

been frequently done for pleasure rather than true necessity in the most developed Countries since the fifties (the end of the Second World War), ignoring its effects on the environment (FAO, Food and Agricultural Organization of the United Nations, 2007). At first sight, meat consumption and climate change may not seem directly related although they actually are. The majority of people is convinced that exhaust gases produced by factories and cars are mainly responsible for this process. Instead, according to FAO's studies (2007), raising animals for food, especially in highly industrial settings, is far more closely linked to climate change, because that is quite a polluting activity. In fact, in order to maintain a herd of cattle, large quantities of land, energy and water are needed (e.g., Dutilh & Kramer 2000; Ehrlich, Ehrlich, & Daily, 1995). Livestock is responsible for the use of a major proportion of cultivable areas. One third of the available farmland is used for the production of animal feed, whilst, 26% of land is used for grazing or pasture. It has been calculated that in order to produce a steak, which provides 100 calories, 700 calories of cattle feed are needed. In fact,

most of soy and wheat harvests issued to feed animals (BCFN, Barilla Centre for Food and Nutrition, 2012). Moreover, it has been estimated that a meat rich diet virtually consumes roughly 5,400 litres of water (Figure 1) compared to a diet based on



cereals, fish, vegetables and fruit which uses an amount of water

Figure 1. *The use of water in food production activities (after waterfootprint.org)*

between 1,500 and 2,600 litres. Not surprisingly, then, the livestock sector, at a global level, accounts for 18% of the greenhouse gases emissions, that is up to 40% more than the whole transport sector (which accounts for 13% “only”) (BCFN, 2012).

Meat is considered a key part of a balanced diet. This is not wrong because meat is rich in proteins and easily assimilated nutrients, has a great number of essential amino acids (which are essential for a correct diet), and provides both a good number of minerals (e.g., calcium, phosphorus, iron) and vitamins (e.g., B12) (Fayet, Flood, Petocz, & Samman, 2013). Moreover, robust anthropological studies confirm the advantages of a diet based on animal food. In fact, in many ethnic groups protein deficiencies have resulted in significant differences in physical and health status. (Simoons, 1991). However, this does not matter for the most developed Countries, in which the abundance of every type of food is widely

responsible for the development of the *metabolic syndrome*. According to the Adult Treatment Panel III (ATP III), the metabolic syndrome is a steady blood inflammation which is mainly characterized by abdominal obesity, atherogenic dyslipidemia, raised blood pressure, insulin resistance and glucose intolerance, pro-inflammatory state and pro-thrombotic state(Grundy, Brewer, Cleeman, Smith, & Lenfant, 2004).

In particular, several studies demonstrated a direct relationship between excessive consumption of meat¹, especially the red one, and the development of common diseases, such as obesity, some types of cancer and cardiovascular diseases (Pala et al., 2009; WCRF, World Cancer Research Fund International, 2007). From a physiologic point of view, high intakes of meat (more than 500 grams per week) are dangerous for the health for two main reasons. Animal proteins are more acid than vegetal ones and they are rich in sulfur amino acids which release hydrogen sulfide into the intestine during the meat's decomposition process (which begins immediately after the animal is killed). Hydrogen sulfide is toxic to the mucous membranes of the digestive system. The human body is genetically programmed to digest a number of toxins, but high concentrations, combined with the presence of other dangerous substances such as *nitrites* (E249,E250) and *nitrates* (E251,E252), which are normally used to preserve meat by the industry, inevitably expose individuals to a greater risk (WCRF, 2007).

Nowadays, in order to fight against this growing problem, many health specialists, such as doctors or nutritionists, recommend to switch to a *Mediterranean Diet*², because of its acknowledged benefits for the human body. In general, a good Mediterranean Diet is based on higher proportions of *pasta* (which is better than bread because it releases sugar slowly, preventing sharp rising of glycaemia levels), local and, if possible, season vegetables, fruits, olive oil and fish (especially the small and fatty/blue one, rich in Omega 3, such as mackerel) and lower amounts of red meat (any type, fresh or preserved), sugar, fats (because fats are

¹Above all, canned meat and “sausage-like” meat products, like salami or hams are bad for the health because they are fatter, full of toxic preservatives and often eaten daily (for example, in Italy many people eat a sandwich with ham at lunch or they use it as a second dish at dinner).

²The term “*Mediterranean Diet*” was coined by a nutritionist of the U.S. Army, Ancel Keys, at the end of the Second World War, after he noticed that in Naples's hospitals were no cases of stroke, which is a syndrome that caused instead a great number of deaths in North America between the two World Wars instead (Keys A. & Keys M., 1959).

often hydrogenated and/or transformed, like the ones that can be found in snacks, junk food, or industrial food stuffs) and tubers (i.e., potatoes) (WCRF, 2007).

Italian cuisine has become famous in the world for the quality and the variety of its products. The food sector is very important to the Italian economy and it makes Italians feel proud of what they produce and what they put on their tables (Neresini & Rettore, 2008). The majority of foods proposed by the Mediterranean Diet was at the base of the daily Italian alimentation in the past. Italians used to eat naturally complete foods (such as whole grains and legumes) which provided individuals with a good defense against all those diseases that are now affecting westerners (e.g., obesity, diabetes, osteoporosis, hypertension, senile dementia, many types of cancer) (see for example, Martinez-Gonzalez et al., 2009; Sofi, Cesari, Abbate, Gensini, & Casini, 2008).

However, because of growing prosperity, economic wealth, trade and industrial expansion and the emergence of a global market, Italians started to change their food habits, switching to all those products that once were eaten in exceptional circumstances only (WCRF, 2007). In particular, the Country's claim of meat has increased dramatically over the years (see figures 2 and 3, page 19). According to recent statistics (Camera di Commercio di Milano, 2010), Italian per capita meat consumption is around 20-35 kg beef and 15-20 kg poultry, compared to the mere 13 kg (beef) and 4,6 kg (poultry) of the Sixties. Furthermore, pork consumption now amounts to 50 kg. It is believed that this due to the crisis that led Italians to eat cheaper or lower quality meats, like processed meat (e.g., ham and salami).

In the collective imagination, Italians are not considered large meat-eaters, when compared to the inhabitants of northern Europe, such as the British, but duly taking statistics into account, reality may be quite different, as the number of slaughtered animals in 2009 was 23,854,793,000³ in Italy against 27.671.000⁴ in the UK (ISTAT, 2009).

³Specifically, 3,838,286 cattle/buffaloes; 6,422,733 sheep/goats and 13,593,774 pigs have been slaughtered in Italy in 2009 (ISTAT, 2009).

⁴ Specifically, 2.627.000 cattle/buffaloes; 15.540.000 sheep/goats and 9.504.000 pigs have been slaughtered in the UK in the 2009 (ONS, 2009).

	Year		
	1950	1980	2010
Cereals (bread/pasta)	516	501	435
Vegetables	373	585	625
Meat	60	206	241
Fruit	183	308	418
Wine	318	301	210
Kcal	2281	3590	3685

Figure 2. “La tavola degli italiani 1950-2010” (the Italian table from 1950 till 2010; Censis & Coldiretti, 2010)
[Figure shows product in grams per day]

Year	Meat				Total
	Beef	Pork	Poultry	Other	
1938	8,5	5,1	1,6	4,5	19,7
1958	11,4	6,2	3,2	4,2	25,0
1960	13,0	7,1	4,6	4,7	29,4
1965	17,3	7,8	10,1	5,2	40,4
1970	24,8	10,7	11,8	7,0	54,3
1980	25,5	21,1	18,2	9,8	74,6
1990	26,6	27,0	19,3	10,8	83,7
2000	25,6	37,0	17,7	11,3	91,0
2005	24,3	37,5	16,3	11,5	89,5
2007	24,8	39,2	18,3	11,1	98,4
2008*	22,8	48,6	19,2	10,5	101,1

Figure 3. Per capita meat consumption by kind/kg since 1938 till 2008, as per Camera di Commercio of Milano, (2010). Sources: Annual food ISTAT (1938-1994), ISMEA (1995-2008* interim data)

The perspective of a more polluted world full of ill people, has urged many authorities in different fields to call for a switch to vegetarian or low meat diets. The number of vegetarians in the world is rising constantly and in Italy the vegetarians’ percentage is about 6% (Eurispes, 2013a). However, at the same time, a number studies and surveys documented that a few people that consider themselves vegetarians admit to eat meat as well, somehow (e.g., red meat, chicken, and/or fish) (see for example, Robinson-O’Brien and colleagues, 2009). This complex situation suggests that people may start to hold positive attitudes towards low

meat diets but, at the same time, meat abstinence may be perceived as a demanding obligation. In line with data from literature, people do not share the same idea of vegetarianism and there is a wide number of motivations behind that choice (Ruby, 2012). Thus eating or avoiding meat is not something defined and static but something that may change overtime (Beardsworth & Keil, 1992).

From a psychological point of view, food is far more than the fuel for our body. Neither food is a simple and fixed object. Food serves functions other than nutrition. Foods are social vehicles that can establish social distinctions or different types of connection between people, for example, by sharing. Food has symbolic functions and it is related to moral issues, such as pork for religious Jews and Muslims and beef for Hindus. Moreover, food is a medium for aesthetic expressions. Elaborate dishes and experimental cuisine are present in every Country and their existence cannot be justified in terms of nutritional factors only (Rozin, 2005). In other words, what we consider as food is a complex entity, it is a pervasive presence and a primary feature of everyday life, that can be also replete with contradictions, oppositions and that can be a potential source of concern, particularly in relation to health and the environment (Chamberlain, 2004). In this sense, meat is not an exception. Actually, meat is the food that endorses more meanings than any other food. Universally, it is considered the most praised food and in many societies meat dishes are the base around which a meal is set (Twigg, 1983). However, it is also the most tabooed food (Fessler & Navarrete, 2003) and today, the most invested with contradictions concerning the health and the environment for the reasons presented above.

At present, very little is known about the perception Italians have of meat. Although official statistics show that the meat sector is very important to the Italian economy (Camera di Commercio di Milano, 2010), available material investigating social and psychological variables related to its consumption (especially by the young generations) is still rare. In general, much research in psychology has focused on psychopathological aspects of food and eating behaviors, such as Anorexia Nervosa and Bulimia Nervosa. If much is known about social and environmental conditions that contribute to the development of these disorders, it is not so for the eating practices of “normal” people in their everyday lives. Marketing researches tracks purchasing trends and preferences about brand new food products but minor attention is paid to non-branded, unpacked food, such as a significant proportion of meat on the market is.

This PhD research does not simply aim at monitoring current meat consumption trends but it rather at describing meanings and uses associated to meat in specific cultural, physical and societal conditions, using a strategic combination of qualitative and quantitative approaches.

The qualitative approach intends to examine psychological drivers and social contexts of meat in Italian diets and lifestyles, focusing on the relevant evolutions and changes over lifetime, whilst the quantitative one, is designed to focus on specific psychological variables, such as identity and norms, on larger samples. Overall, this combination was conceived to strengthen the explanatory structure, thus offering a broader view of meat consumption in Italy.

In the *first part*, which includes chapters 1 and 2, an intensive and systematic review of literature about food choice is presented. The **first chapter** explores social and psychological meanings of food, meat in particular, using an interdisciplinary approach, including the contributions from anthropology, sociology and psychology. The **second chapter**, instead, presents the main psychological theories and methods on food choice, as they were used and applied over the years. The overall aim is to offer global but synthetic understanding of factors underlying non pathological food choices, such as developmental processes, attitudes, beliefs, normative expectations or perceived controls, sensory mechanisms and neuro-physiological issues. At the end of the chapter a brief review of psychological studies on meat consumption is presented and discussed.

In the *second part*, which includes chapters 3, 4 and 5, research studies on meat consumption are presented and described in greater detail.

The **third chapter** offers a qualitative study that has been carried out to examine the role that meat currently plays in Italian diet and lifestyles and how its consumption has evolved and changed over the lifetime of a sample of women. Seven mother-daughter narratives were analyzed using thematic analysis.

In the **fourth** and **fifth chapters** two further studies are presented. These researches are based on a survey and they aim at integrating core aspects of the Identity and norms theories with the Theory of Planned Behaviour to explore factors influencing meat consumption. The survey has been tested on a sample of young Italian and British adults, autonomous in their consumer behavior.

In the **conclusions**, a general discussion of the achieved findings (such as, elements of innovation and methodological implications), with a particular focus on the differences

between Italians and Britons, are exposed. Finally, also some indications for further research are briefly discussed.

In conclusion, in terms of general impact and anticipated benefits, this project aims at making an advancement in the state of knowledge about meat consumption. It is hoped that the collected results may provide useful indications for tailored interventions intended to reduce the overall amount of meat consumption, with the final goal of improving public health and contrasting pollution and climate changes in Italy, but also in the UK.

FIRST PART:

THE PSYCHOLOGY OF FOOD: LITERATURE REVIEW

The pangs of hunger are cyclically felt. They are a primordial cogent alarm signal that can switch off our attention from any other thought or activity. Eating is one of the most basic of activities of any living organism and it is necessary to survival and well-being. In contemporary developed societies food has become easily available, so that it can be purchased anywhere, anytime, almost by everyone (Sobal, 1999). That leads people to experience many and different eating opportunities (Sobal & Bisogni, 2009).

Decision making about food choice has always been a frequent and expected part of everyday life. However, the over-abundance and great food availability that characterizes industrial and post-industrial societies, has brought food choices to a more complex level, that some have called as “*the tyranny of choice*” (Schwartz, 2004)., People daily engage in multiple eating behaviors (Longnecker, Harper, & Kim, 1997), which cannot be necessarily directly linked to food itself but they can involve places, other people or time. In particular, it has recently been estimated that people usually make over 200 decisions about food each day (Wansink & Sobal, 2007).

As an important and salient feature of everyday life, food choice has been investigated in several disciplines and fields, social sciences included. Many theories and models have been presented, offering different perspectives and insights of the phenomenon, but, so far, no single unified decision theory has been presented yet. That is due to the tremendous diversity and extensive range of factors that affect food choice. They work at both macro and micro levels, but they also need to be always framed into a more holistic perspective (Sobal & Bisogni, 2009).

An interesting portrait of the food choice process has been presented by the Cornell Food Research Group, an interdisciplinary work team, mostly made up of nutritionists and social scientists (Connors, Bisogni, Sobal, & Devine, 2001; Furst, Connors, Bisogni, Sobal, & Falk, 1996). The model describes a range of factors and processes affecting food behaviors and divides them into three major groups: life course, influences and personal food systems (see figure 2, page 25). The life course is a key component and it underlies the role of time and developmental dynamics in food choice. This component, in fact, includes present and past

events and experiences related to both food decision making and eating behaviors, but also their anticipations and expectations associated to future possibilities. In particular, compared to classical developmental approaches (i.e., growth, maturation, ageing) or life stage perspective (i.e., childhood, adolescence, parenthood), the life course offers additional insights that transcends cycles or stages by taking into account the individual's agency in determining personal food trajectories, the increasing of experiences over life time or the role of changes in the social and physical environment at specific points in time (Elder, 1985).

Instead, the second component describes an array of physical, psychological and social factors that affects decision about food and eating, which have been clustered into five types (cultural ideas, personal factors, resources, social factors and present context). In particular, «each of these types of influences is embedded within and fluctuates over the life course of a person making food choices, interacts with all the other influences, and is operationalized in the personal food system of individual as they engage in specific practices» (p.15, Shepherd & Raats, 2006).

Finally, personal systems are proxies to actual food behaviors and they regard cognitive and mental processes of food decision, whereby individuals translate elements of the previous component (influences) into eating behaviors in particular situations (Connors et al, 2001; Furst et al., 1996).

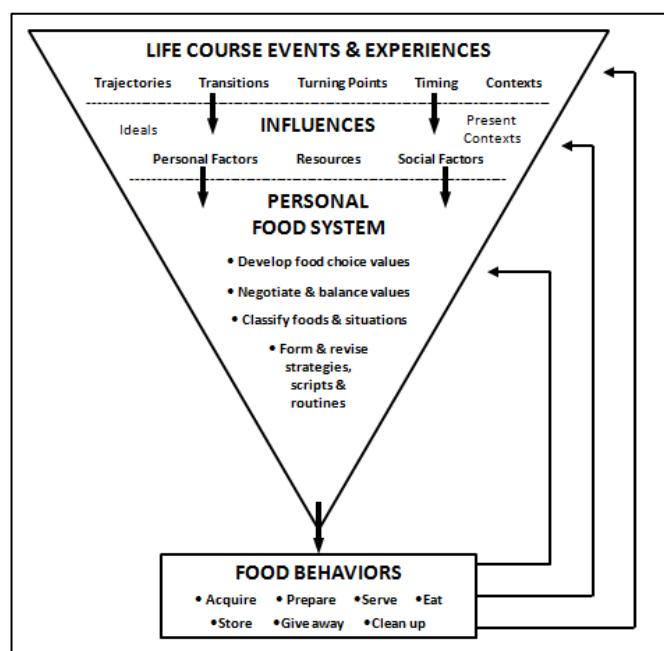


Figure 4. The food choice process (by the Cornell Food Choice Research Group, in Sobal & Bisogni, 2009, p. 40)

Specifically, personal food systems includes the development of food choice values, the negotiation and the balance of these values, the development of a taxonomy of food and situations and the development of strategies, scripts and routines for foraging and eating in different situations (Sobal & Bisogni, 2009).

The food choice process offers an interesting explanation of the broad range of factors and potential processes involved in food choice decision. However, this model has several limitations (Shepherd & Raats, 2006). In particular, it analyzes the individual's food choices and it cannot be applied to the collective ones, such as those of couples or families (Stratton & Bromley, 1999). It was developed in the U. S. and it brings typical values and features of that

Nation that may not apply to other cultures. Moreover, it has been built using an inductive approach and qualitative research methods to conceptualize food and eating behaviors (Furst et al., 1996), excluding more specific biological, psychological or social points of view. Finally, this model is not applicable for every single food choice analysis, such as meat consumption.

However, despite its limits, the food choice process clearly highlights the complexity of food decisions and their multifaceted, multi-scale and multi-component aspects. This means that no single perspective or model can sufficiently capture the full complexity of food choice and eating behavior and that contributions from different fields are needed (Sobal & Bisogni, 2009).

In the last decades, psychological sciences have greatly increased studies on eating behaviors. They did not focus on clinical issues and related food-psychopathologies only. A social approach to food choice has also grown rapidly (see for example, Conner & Armitage, 2002, Ogden, 2010). Psychotherapeutic literature has been integrated with studies on sensory characteristics of food (e.g., Lawless & Heymann, 2010), environmental influences (e.g., Larson & Story, 2009) and the role of attitude (e.g., Aertsens, Verbeke, Mondelaers, & Van Huylenbroeck, 2009; Wilcock, Pun, Khanona, & Aung, 2004). Much research focused on eating related to health behavior, trying to understand dietary choices and changes (e.g., Conner, Norman, & Bell, 2002), restraint or control patterns (e.g., Anschutz, Van Strien, & Engels, 2011; Garcia & Mann, 2003) and stress effects (e.g., Wallis, & Hetherington, 2009), in order to promote healthy eating (e.g., Leganger & Kraft, 2003) and to fight the so-called “obesity epidemic” (e.g., Gibson et al., 2012). In particular, for this “*psychology of eating*”, in the broader sense, the act of eating does not solely depend on a taste whim but rather is a socially connoted choice, which draws on various forms of rationality, such as health, the sense of culture, social integration and pleasure (Conner & Armitage, 2002).

Literature related to food and psychology is vast. First and second chapter attempt to provide a brief but comprehensive map of the main theoretical perspectives about food choice and eating behaviors, giving particular attention to meat consumption. They cover two different broad areas, following the mainstream of studies in social psychology

The former presents *the meaning of food*, using a psychological approach, including contributions from anthropology and sociology. This approach has been already used by other Authors, such as Lunt and Livingstone (1992) and Jane Ogden (2010), and aims at accurately

capturing both the psychological and the cultural dynamics that characterize the meaning of different foods, meat included. In the second chapter, instead, an overview of the main psychological theories and methods on food choice, that have been used and applied over the years, will be presented. They aim at understanding factors underlying not pathological food choices, such as developmental processes, attitudes, beliefs, normative expectations or perceived control, but also sensory mechanisms and neuro-physiological issues. Also in this case, a brief review of psychological studies on meat consumption will be presented and discussed.

CHAPTER 1

THE MEANING OF FOOD

«My definition of man is, a “Cooking Animal.” The beasts have memory, judgment, and all of the faculties and the passions of our mind, in a certain degree; but no beast is a cook... Man alone can dress a good dish; and every man whatever is more or less a cook, in seasoning what he himself eats» (The Journal of a tour to the Hebrides with Samuel Johnson, L.L.D., by James Boswell; in Crumpacker, 2006, p.3)

1.1. The meaning of food beyond nutrition

“*Mann ist, was er isst*” that is, man is what he eats. With this now famous sentence, the German philosopher Ludwig Andreas Feuerbach (1804-1872), sustained that an individual cannot be separated for the things that are introduced into his body, such as food. At the time, this was quite a radical thought that supported a materialistic and concrete vision of the world and mankind. In other words, man ceases to be considered as an immaterial and metaphysical identity and he is linked to his physicality (Montanari, 2009). However, the sentence in its original language has also another meaning, which is almost a wordplay derives from Latin, that is unavoidably lost in translation (a further demonstration of the eternal problem of translating expressions and cultural models preserving their clarity and understandability - Bettetini, 2003). It needs to be remarked that, in German, the third singular person of the verb “to eat” (*essen: isst*) is written and sounds very similar to the third plural person of the verb “to be” (*sein: ist*). So, in the original spoken language (“*Mann ist, was er isst*”) may also be understood as “a man eats what he eats” or “a man eats what he is”. In this way, Feuerbach not only proclaims the superiority of matter but also, at the same time, underlines the presence of ideas, thoughts and culture within matter itself (Montanari, 2009).

As an omnivore, man has access to a potentially endless array of foods but, in practices, his daily choice is very limited. Therefore, affirming that “*man is what he eats*” equals

recognizing that there is a lot of significance, symbols and values in the food he eats, which go well beyond its mere nutritional proprieties. The following quotation after Todhunter, (1973) reinforces very well this concept: *«food is prestige, status and wealth [...] It is a means of communication and interpersonal relations, such as an “apple for the teacher” or an expression of hospitality, friendship, affection, neighborliness, comfort and sympathy in time of sadness or danger. It symbolizes strength, athleticism, health and success. It is a means of pleasure and self-gratification and a relief from stress. It is feasts, ceremonies, rituals, special days and nostalgia for home, family and the “good old days”. It is an expression of individuality and sophistication, a means of Self-expression and a way of revolt. Most of all it is tradition, custom and security [...] There are Sunday foods and weekday foods, family foods and guest foods; foods with magical properties and health and disease foods... »* (p. 301)

From a historical–anthropological perspective, food habits have been studied following two main orientations, i.e. the cultural and the functional approach (Franchi, 2009). The former was originally proposed by Lévi-Strauss (1966) and postulates that food is above all “*good to think*”, inasmuch that tastes and food practices depend on the significance that individuals produce along their lives. Food is inextricably linked to religious traditions and to the value system of any community. It plays a symbolic role that contributes to constructing both Self and social identities and the emotional complex of social relationships. For example, in ancient times, eating and drinking played an important role because, they contributed not only to the development of biological equilibrium but also to cast the foundation of sociality through a set of rules controlling food behaviors (Muzzarelli & Tarozzi, 2003).

On the contrary, according to the functional approach of Marvin Harris (1990), food is above all “*good to eat*”. Tastes and food habits, in fact, are not only arbitrary but also have deep roots in our evolutionary history, inasmuch as they are considered the product of a “rational” adaptation to environmental, climatic and social conditions. In this sense, things that are good to eat would be those that, besides not being noxious (in the short term, at least), would be more readily available and convenient, based on the ratio between the energies produced and spent to obtain them.

Both points of view present interesting insights, but are not sufficient to explain in detail current practices related to food consumption. Indeed, culture is a pervasive factor in the entire eating system. Culture suggests what, when and also how much one can eat, but also dictates food occasions and the importance of food in life (Rozin, in Frewer, & Van Trijp, 2007). However, the act of eating does not depend on culture and food availability only. It is a complex process determined by multiple factors, such as reproductive needs, social, ethical,

religious and environmental conditions (e.g., we do not eat what we grow but also what we decide should be grown) that, as a whole, interweave with daily food practices and with food mental representations, ultimately affecting the experience of eating (Franchi, 2009). In particular, mental representations of food have a major impact on the meaning of food and food choice. Such representations will be presented and discussed in the next paragraph.

1.2. Psychological categorization of food

Once survival needs are sorted, our eating habits are strongly influenced by mental representations of what we believe to be edible. Recognizing an object or an event, naming it and assign it into a specific mental category is one of the most basic processes of human mind, called categorization (Anolli, 2006). Each category can be considered as a set of mental, culturally defined elements, which share a variable number of essential properties. Typically, each category is part of an orderly and hierarchical system, called taxonomy, which includes other categories. As a whole, the categorization process, is a cognitive device that allows applying to the reality flow a quick coding system, which, in turn, provides a considerable saving of mental energy (Anolli, 2004).

Categorical differences and peculiar cultural characteristics of this psychological process are particularly apparent in food and nutrition, in that some foods are considered as proper “food” in some cultures but not in others. For example, an insectivorous diet has been suggested in the most advanced societies in order to fight probable future problems linked to climate changes and environmental sustainability. That provoked no small stir and disgust among Westerners (FAO, 2013). However, many people in South-East Asia, such as the Vietnamese or the Thai, usually eat cockroaches, crickets, grasshoppers and other insects from immemorial time. The same happens in some African regions, where ants and termites are added to seasonal diets or large palm maggots are regarded as true delicacies (Cadel G., personal communication, April 18, 2013; Harris, 1990). Another blatant example comes for our everyday food partition. What Italians have in the morning for breakfast is a quite different set of foods, than what is given for lunch or dinner. This taxonomy does not depends on nutritional values but it reveals our mental representation of food. In the same way, indifference or rejection to certain foods, does not necessarily depend on taste. It has been reported that termites taste like almond but very few Westerners have tried them. Food acceptance is profoundly influenced by psychological mechanisms of categorization. In fact,

as Paul Rozin (2005) states, what we consider as edible stems from a cultural learning process that begins from an early age, when parents teach their children what can be eaten, preventing them from gulping down everything they put in their mouths (in Frewer & Van Trijp, 2007). This ideational ground, where preferences and aversions are set, has been investigated by Rozin and Fallon during the eighties. In particular, they identified three different type of reasons which underline food taxonomy: sensory/hedonic base, anticipated consequences assessment and ideational reason (Rozin & Fallon, 1980). The first one is the most frequently applied. People accept and reject food on a palatable reaction, mainly based on flavor and texture. On this ground, a food is considered as “good” or “bad”. A classical example of (almost) global good taste is chocolate, insomuch as it can evoke drugs/alcohol-like psychopharmacological and behavioral reactions in disposed persons (Bruinsma, & Taren, 1999). However, evidence suggests that, in general, early likes and dislikes are influenced by innate/genetic preferences for sweet and savory foods (Yamaguchi & Ninomiya, 2000) rather than the bitter and acid ones (Mattes, 2009; Tordoff, Alarcón, Valmeki, & Jiang, 2012).

A second reason that influence preference or aversion deals with the assessment of anticipated consequences. In this way, foods are labeled as “beneficial” or “dangerous”. This categorization is related to health issues and post-ingestion consequences, such as a nasty physiological reaction or food allergies. Foods can be considered beneficial or dangerous even on the basis of an ideology or belief. In the matter of this, people seem to be confused about what healthy food and eating should be, despite the different labeling strategies provided (Gravel et al., 2012). For example, most Canadians judge non-hydrogenated fats or margarine less fat than butter, and this percentage did not differ as a function of nutrition information (Canadian Council of Food, 2006). It has been estimated that many factors influence healthy/unhealthy categorization of foods, such as the perceived fat content (Carels, Harper, & Konrad, 2006), but also stereotypical beliefs related to food names (Oakes, 2006).

Finally, the third level for accepting or rejecting a given food deals with ideational issues. According to the origin of certain foods, people consider them ideationally “appropriate” or inappropriate”. Humans, as omnivores, could potentially eat almost anything. In addition, the secretions produced by their digestive tract would be able to assimilate and dispose even of things that would be difficult or even impossible to chew. Nevertheless, most of the things and living beings on the planet are considered inedible. The rejection does not depend on taste or the fear that small amounts can be harmful to health but simply from the fact that certain things are not considered as food (for example, paper, grass or meat from endangered species) (Rozin, in Frewer, & Van Trijp, 2007).

After years of research, Rozin and Fallon (1987) decided to expand their taxonomy by introducing a fourth category of food rejection, labeled as “disgust”. Disgust is an evolved psychological scheme that protects living beings from infection through disease avoidant behaviors. It is a sort of “*behavioral immune system*”, that exists in the majority of species (Curtis, de Barra, & Aunger, 2011). However, according to Rozin, disgust is a culturally connoted category. Unlike inappropriate foods, the main reason that drives people to reject a certain food is disgust, or revulsion, rising from the sole idea of incorporating a harmful substance. Disgusting food varies across cultures. However, a general tendency to reject products of animal origin has been observed (Fessler & Navarrete, 2003).

In conclusion, according to Rozin and Fallon, (1980) most food choices can be explained by the acceptance or rejection towards certain foods, after a sensory evaluation and the assessment of post-ingestion consequences. However, it must be said that no food fits only one category. This emphasizes the complexity of our eating habits, which are strongly influenced by the attribution of meaning which do not necessarily depend on nutritional values nor on the pleasantness of taste a given food. Moreover, preferences and eating habits are inextricably integrated into one’s cultural structure but they are also connected with a symbolism that, from a psychoanalytical point of view, originates during the psychosexual development of children. That happens when the child begins to exert control over the body or, conversely, when he/she begins to transgress, in order to satisfy his/her oral instincts (Olivero & Russo, 2009). In this way, a food becomes part of individual identity and it can be considered as a communication tool for Self-expression.

1.3. Food and the statement of the Self

The first meal is always a simple one and comes free. For Eve it was the bite of an apple, for a child it is breast milk (Crumpacker, 2006). However, a balanced diet, rich of nutrients and food variety is soon after essential to a child growth and development. However, abundance inevitably, leads to greater complexity. Different factors explaining the meaning of food have been previously presented. In general, the human relationship to food combines two different dimensions. The former runs from the biological origin to the cultural system, that is from the nutritional functions to the symbolic ones. The latter connects the individual to his community, the psychological issues to the social ones (Fischler, 1988).

The economical and technological development that characterized the past century, has led to the emergence and proliferation of new foods and trends of consumption. For example, enhancements in the transport sector allowed people to eat foods originating anywhere in the world (Rozin, in Frewer, & Van Trijp, 2007). At the beginning, it was believed that new food choices resulted from mere social influence, like other fashions, and that they could be explained by an *imitation* process. Prestigious and exclusive goods are firstly chosen by the upper and richer classes, and then spread, gradually, across the lower and poorer classes, always desirous of increasing their social status, at least in the appearance. From a psychological point of view, this imitation process is driven by uniqueness and differentiation needs as well as motivations to raise upwards, in this case to the standards of the upper class (McCracken, 1990). This is a rigid perspective, that considers the society as a pyramidal structure, in which the stimulus to consumption is mainly a matter of social status (Trevisani, 2003). Indeed, ostentation in the selection of rare and expensive food or luxurious restaurants in order to exhibit social status can be explained as an imitation process but, today, this explanation may not suffice any longer (Olivero & Russo, 2009).

In social sciences, the identity concept related to food and eating behavior has emerged over the year as an interesting and important feature (Devine, Connors, Bisogni, & Sobal, 1998; 1999). In fact, early qualitative studies record that, when asked about their food habits and practices, people often spontaneously reported phrases, such as “*I am a meat and potatoes person*” or “*I am a salad lover*”. Moreover, in these studies, ethnic identities interacted with other identities such as class, family or region, in determining food choice (Devine et al., 1999). Generally, from a social psychological point of view, the identity concept involves the mental Self-images that a person assigns to herself/himself which in turn derives from daily interactions with people, groups, and objects (Bisogni, Connors, Devine, & Sobal, 2002). More in detail, when dealing with identity, reference is not made to those psychic characteristics and behavioral models that make up the irreducible core of each individual and that remain essentially unaltered in the complex of contexts in which they operate (*personal identity*). In this frame, identity is placed in a continuum deeply marked by both membership to groups and social categories and by representations of interpersonal relationship. This is named “*Self-identity*” (Stryker, 1987). According to the Identity Process Theory (IPT: Breakwell, 1986, 1992, 1994, 1996), it stems from the interaction of memory skills, knowledge and organizational capabilities, together with influence processes deriving from

social contexts. Standard evaluation, assimilation and accommodation⁵ processes allow the Self-identity to be a dynamic product that changes over time. According to Breakwell, within Self-identity two closely fundamental structures are present, i.e. the dimensions of contents and values. The former deals with the set of elements that qualify the identity and mark each individual as a unique being (Bonnes, Bonaiuto, & Lee, 2004). It contains all the characteristic of the domain of both social identity (such as, but not limited to, group membership, social categories labels, intergroup relationship within a created and controlled physical environment) and personal identity (e.g., values, attitudes, cognitive model). The contents dimension exhibits an organized and flexible structure, characterized by its degree of centrality, its hierarchical setting and the importance of elements relevant to all components (Bonnes et al., 2004). Each element belonging to this structure holds a specific value (positive or negative). The whole set of elements forms then the identity's value-dimension. However, it must be stressed that these are not absolute and unchangeable evaluations because each value is subject to continuous revisions. Within this frame, identities can be both fluid and stable throughout life (Abrams, 1996; Demo, 1992; Frable, 1997), which means a person can have past and current identities (Markus & Nurius, 1986). Individuals cope with their multiple identities by assigning priorities to some identities rather than others and by enacting different identities according to different situations (Abrams, 1996; Deaux & Ethier, 1998; Markus, 1990).

If one considers consumption as a communicational act, food items bear meanings that may play a symbolic role finalized to Self-expression (Dittmar & Drury, 2000). In fact, several studies supported the idea that food is a way whereby people assign identity to themselves and others (Fischler, 1988; Mennell, Murcott, & van Otterloo, 1992). Individuals tend to judge others based on their real or supposed food choices, and people are often inclined to choose certain foods to communicate something about their selves (Conner & Armitage, 2002). A good example is provided by organic food products that, in Italy, are well known to be more expensive than others (Altroconsumo, 2011). The choice can be dictated by specific health-related needs (such as food intolerance or allergies to pesticides) but it can also be the expression of both one's identity, as being an health-caring person or an ecologist, and personal lifestyle (Olivero & Russo, 2009).

⁵The accommodation process, first defined by Piaget (1896-1980) refers to a correction to the existing structure introduced to make place for newly introduced elements (Gattico, 2001).

Studies about the relationship between identity and eating behaviors have focused on different aspects, such as gender (Counihan, 1988; Schafer, 1979), ethnicity and region (Bradby, 1997; Devine et al., 1999; Kalcik, 1984), vegetarianism (Jabs, Devine, & Sobal, 1998; Sobal et al., 2005), beef eating (Sapp & Harrod, 1989) or organic food consumption (Sapp & Harrod, 1989; Sparks & Shepherd, 1992). Last but not least, academics have recently explored “brand identities” (Petek & Ruzzier, 2013) also in relation to food choice. Where pervasive marketing communication prompts interactions and consumer engagement, brands and individuals give rise to an exclusive relationship, in which brand characteristics and values become the base of people’s identity (Conner & Armitage, 1998).

In conclusion, it is apparent that food can provide information about certain aspect of Self-identity. It can also act as a communicational tool for needs, internal conflicts and Self-expression. From a psychological point of view, different aspects related to food and Self-expression have been investigated. In particular, much research has focused on the relationship between pleasure and denial, Self-control management and sexual expression (Ogden, 2010). These three issues, will be the subject of discussion in the next sessions.

1.3.1. Food: a difficult balance between pleasure and denial

From a psychodynamic point of view, food can be considered as a peculiar relational object⁶. First of all, food is the first thing that human beings experience, even before birth, in the womb. Then, food is a fundamental tool for the development of attachment bonds between a child and his/her caregiver, usually the mother. At the beginning of this important relationship, food promotes physical contact and sensory stimulation, which help mother and child in building a primary connection (Mikulincer & Shaver, 2010). More specifically, during the psychosexual development of a child, food acts like a tool for overcoming the narcissistic stage, which is characterized by no discrimination between his/her Self and the world (Lacan & Widen 1968). The newborn, in fact, is not able to distinguish between Self and the outside world: stimuli of both internal (such as sensations produced by needs satisfaction) and external (such as contact with the caregiver) initially origin for man

⁶According to classical psychodynamic literature, internal objects are usually internalized images that stem from different, repeated patterns emerging in childhood experience of the caretaking environment (St. Clair, 1986).

undifferentiated set. It is the feeling of lack, which cyclically occurs with hunger, along with a condition of inevitable dependence, that stimulates the awareness of different objects, which are independent of, and external to the infant. In this sense, food holds a double symbolic meaning. First it is associated to pleasure and satisfaction and then, it lays the foundations for the development of social relationships (Olivero & Russo, 2009). However, impulse management is not simple. It develops along a difficult trail made of both satisfaction and control. In this perspective, hunger is no exception. Recently, in the developed world, the advent of unlimited food availability has introduced extra-complexity to the impulse management of hunger. Cultural rules, social expectations and aesthetic standards play a major role in the satisfaction and control of food intake. In fact, it has been shown that people vary their food consumption as a function of those they share it with (Herman & Polivy, 2005; Herman, Roth, & Polivy, 2003). Roth and colleagues (2001) observed the existence of two specific behavioral norms, i.e. the “*matching norm*” and the norm for “*minimal eating*”. As thoroughly demonstrated by others Authors (e.g., de Castro et al., 1997), the former is based on a presence effect, according to which people are inclined to regulate their food intakes according to the number and type of tablemates. In particular, the larger the number of tablemates, up to four, the greater quantity of food is eaten. However, when one wants to make a good impression, it is more likely that people follow the “*minimal eating*” norm, that, as the name suggests, prescribes to eat as little as possible. According to Mori and colleagues (1987) the salience of some expected social dispositions, such as femininity, seems to be quite important. In the most advantaged societies and in the Western one in particular, in fact, beauty standards for women, in the last forty years, dictate a slender and lean body. An interesting content analysis of magazines (Silverstein, Perdue, Peterson, & Kelly, 1986) has shown that the vast majority of topics in ladies’ magazines, rather than men’s, was somehow related to food with greater emphasis on sweets, snacks and diets, creating the conflicting situation of making ladies think of food all the time with the aim of becoming skinny and thus desirable. Moreover, recent studies, highlighted that most of advertised foods in magazines are those rich in fat and sugar; prepared convenience foods, such as ready meals, sauces or soups and alcoholic beverages (see for example, Adams & White, 2009; Cowburn & Boxer, 2007; Kelly & Chapman, 2007; Lohmann & Kant, 2000). The words of Lawrence (1984) are still as up to date as ever «*eating is a pleasure, but not often for the people who have the primary responsibility for providing it. Women take control of food, while, simultaneously denying themselves the pleasure of it*» (p.31). Furthermore, as Orbach (1978) states, «*woman have occupied this dual role of feeding others while needing to deny themselves[...] woman*

must hold back their desire for the cakes they bake for the others and satisfy themselves with brine canned tuna salad with dietetic trimmings» (p. 61). It is well established in the majority of societies, ever since, the preparation of daily meals and household management is still a woman duty (Muzzarelli & Tarozzi, 2003). Cross-cultural studies have clearly shown this but the same conclusion could be drawn by simply watching television programs and adverts, or reading magazines and cooking books (Ogden, 2010). In those areas, where industrially processed food is abundant, cheap and easily available, the balance between pleasure satisfaction and frustration becomes quite difficult. In fact, industrial food is especially designed to be “irresistible” by applying sophisticated combination of sugars, fats, salt and design to stimulate purchase and consumption (Piccinni, 2012). In particular, in the age of Self-awareness, frustration management conflicts with guilt-feelings that tend to be associated with the consumption of fatty and hyper caloric food. Youths, and girls in particular, start developing a specific ideal about skinniness and diets at very early ages and that is mainly derived from mass media (Anschutz, Engels, & Van Strien, 2010). Such attitudes develop at earlier and earlier age, causing increasing public health concern. Moreover, the media themselves daily prompt such conflicting feelings, launching slogans, such as “*naughty but nice*”, and explicitly mixing luxury, Eros and lust with food (Ogden, 2010). They remind us that eating is a pleasure but, at the same time, they tell us that it is wrong, which understandably leads to the development of guilt-feelings. As Piccinni (2012) p.145) states: *«si tratta di una sorta di messaggio schizofrenico: un conflitto tra la pressione culturale che ci spinge a perdere peso e la sovrabbondante e ipercalorica proposta alimentare. Un divario tra i nostri desideri di magrezza e la realtà biologica con cui dobbiamo quotidianamente fare i conti. Realtà che, rendendoci infelici e inadeguati per la forma del nostro corpo per il nostro peso, ci fa diventare vulnerabili e fragili»*³. In this sense, food as a form of Self-expression, represents a strong source of conflict between pleasure and denial because it becomes an obstacle to reach and keep a socially accepted body shape.

³*«It is a sort of schizophrenic message :a conflict between cultural pressure that urges us to lose weight and an overabundant and hyper-caloric food proposal. A gap between our desire of being slender and the biological reality which we have to daily live with. A reality that make us become vulnerable and fragile by making us feel unhappy and inadequate because of the shape of our body and our weight»*

1.3.2. Food and self-control management

By enlarge, body weight is controlled by the ratio of assumed to and consumed calories. When the calorie intake is greater than consumption (i.e., positive energy balance) the result is weight gain and, vice versa, a negative energy balance leads to a weight loss (i.e., one becomes leaner). From a physiological point of view, the human body regulates calorie intake via neural and hormonal signals (Garrow,1978; Woods, Schwartz, Baskin, & Seeley, 2000). In particular, in the ratio energy intake/expenditure, a key role is played by two hormones: leptin and ghrelin. The former is the “*satiety hormone*”; it is produced by adipose tissue and it informs the hypothalamus about energy storage level (Friedman & Halaas, 1998). The latter is a hunger-stimulating peptide and hormone that is mainly produced by P/D1 cells, that are located in the lower part of the human stomach and by epsilon cells of the pancreas (Inui et al., 2004). Moreover, new recent studies have also found out the role of the hypothalamus in controlling peripheral lipid metabolism through the sympathetic nervous system, independently from food intake (Nogueiras et al., 2007).

Clearly, men and women differ in where body fat is stored, in how they secrete their hormones, in the way their brains act in response to signals that regulate body fat and hunger (Shi & Clegg, 2009). At the same time, the control of intakes and body weight is not merely influenced by physiological mechanisms but also from several external environmental conditions, which can lead to both a positive or negative energy imbalance.

In developed Countries, where food abounds, maintaining a proper or a negative energy balance is quite difficult, especially where cultural models approve few body shapes, mostly the leaner and skinny ones (Grogan, 1999). It is believed that cultural idealization of thinness is greatly responsible for the growing and alarming diffusion of eating disorders (Stice, 2001; Stormer & Thompson 1996). They are psycho-physiological conditions characterized by abnormal eating habits, that may involve both insufficient or excessive food intakes, to the detriment of physical and mental personal health. According to a recent survey, conducted by the Italian Department of Health (2012), in Italy, about three million people are affected by eating disorders, with an exponential growth since the early years of the new millennium. Although, these data may not be accurate because diagnosing eating disorders is not easy, these numbers clearly point out the seriousness of the problem.

Among the different types of forms in which eating disorders display, anorexia nervosa (AN) and bulimia nervosa (BN) are the most common.

The former is a dangerous condition universally associated with emaciation and it is usually coupled to a remarkable increase of physical activity. It is a conscious and voluntary deprivation that ravages both mind and body (Bulik, Reba, Siega-Riz, & Reichborn-Kjennerud, 2005). As a disease category, it emerged in the 19th century, but fasting phenomena have been present many times throughout history. For example, many females used to fast in the Middle Ages as an expression of religious devotion, (Brumberg 2000). Nowadays, this disorder primarily affects women and, especially the young ones, between fifteen and nineteen years old.

People affected by AN are unable to maintain a proportionate and healthy body weight. Not infrequently, their body weight drops well below 85% of the ideal one. Despite increasing cachexia (loss of body mass along with, muscle atrophy, weakness, and significant loss of appetite), AN-affected individuals continue to be obsessed by weight gain and they are perennially dissatisfied with their body shape, that perceive large or fat. For this reason, they engage in an array of behaviors specifically designed to perpetuate weight loss (Bulik et al., 2005). Currently, the etiology of this illness is not fully understood. Several factors, coupled with multiple determinants and risk conditions and their interactions within a developmental framework seem to be the most widely accepted explanation (Steinhausen, 2002). For example, AN-affected individuals are more likely to have high constraint, limitation of affect and emotional expressiveness, anhedonia and asceticism (Kaye, 2000).

Instead, Bulimia Nervosa (BN) is an eating disorder mainly characterized by binge eating episodes. A classical episode of binge eating is characterized by both consuming and purging. Individuals affected by BN, in a defined time interval (usually within 2 hours), can eat an amount of food that is certainly much larger than most people would eat in an equivalent amount of time under similar circumstances. After that, people adopt inappropriate compensatory behaviors in order to prevent weight gain, such as self-induced vomiting; abuse of laxatives, diuretics, enemas, and/or other medications, fasting, or excessive exercise (Yager & Powers, 2008). Compared to AN disorder, BN seems to affect women only, especially those between twelve and thirty-five years old with a frequency peak around eighteen years old. Story of Barbara provides a good example: *«le cose sono cambiate intorno ai 15 anni. Non mi piacevo, mi trovavo grassa, eppure non riuscivo a smettere di mangiare. Aspettavo di essere sola in casa e poi andavo in cucina, dove divoravo tutto quello che trovavo. Solitamente queste abbuffate duravano poco più di mezz'ora, e dopo stavo malissimo. Mi*

sentivo una stupida incapace di controllare le emozioni e il comportamento».(Piccinni, 2012, pp.160-161)⁷.

Although, Anorexia and Bulimia Nervosa are different illnesses, with peculiar distinctive features, they share some risk factors, such as low self-esteem and depression. Moreover, people with AN and BN are consistently characterized by perfectionism, obsessive-compulsive leaning, and dysphoric mood (Kaye, Klump, Frank, & Strober, 2000).

Anorexia and Bulimia are often chronic and relapsing disorders. AN, in particular has the highest death rate of any psychiatric disorder. Nowadays, behavioral and cognitive-behavioral therapies are largely used to fight these illness. In particular, cognitive-behavioral therapy seems to be effective in diminishing some symptoms, such as body dissatisfaction, slimness and perfection seeking (Kaye et al., 2000). Moreover, antidepressants are used, even if their effectiveness is time limited and they cannot replace the psychotherapy. As Crumpacker states *«The virtue of self-denial, of course, is only valid when there's more than enough to eat. Anorexia is a disease of plenty [...] On a physical level, we speak of fatness -obesity- as something vaguely repellent, even though so many of us are overweight. [...] Fat means piggishness, overeating, gluttony, lack of self-control, greed, laziness, self-indulgence.»* (2006, p.17).

Despite prevention campaigns and healthy-eating promotion adverts, still 500,000 Italian women, aged between 12-25 years old, every year get sick of eating disorders, including new set of diseases, such as atypical AN, Purging Disorder (PD), Body Checking (BC), Night Eating Syndrome (NES), Sleep-Related Eating Disorder (SRED) (Piccinni, 2012). These data highlight how difficult controlling body weight may be.

⁷*«Things have started to change when I was about fifteen. I didn't like myself, I felt being fat but I could not stop eating. When I was home alone, I went to the kitchen and I gobbled whatever I could find. Usually, binges lasted at little more than half an hour and then I felt very bad and sick. I thought I was stupid and unable to control my emotions and behavior»*

1.3.3. Food between sexuality and Eros

Some food are related to sex and sexuality. At the lowest level, the most obvious association between food and sex is the shape of the food itself. Banana or sausages are “masculine” because of their phallic shape. In a similar way, oysters are considered aphrodisiac because of their female genital shape (Crumpacker, 2006). Recently, some fashionable patisserie shops in New York, Paris and other large Cities, have started to sell “sexy” candies and chocolates that explicitly replicate sexual organs and other body parts.

This relationship between food and sex is well-known in the fields of marketing and advertising, where certain foods, such as ice cream or chocolate, are shown as a path to the sexual fulfillment and are consumed in an erotic fashion (Ogden, 2010). However, apart from instrumental uses that characterize the time in which we live, the relationship between food and sexuality is a centuries long one in several cultures. Rituals that underline the passage to adulthood are a good examples. In Japan, the first menstruation is still celebrated preparing “sekihan” (赤飯), which is a dish made of steamed cooked glutinous rice and azuki beans, which give rice a reddish hue (hence the name) and, hence, the name (Tsuji, 2006).

Moreover, from a cultural point of view, foods are linked to gender differences. In fact, despite their nature, in every culture and in different historical times, foods are gendered differently. For example, in many Western post-industrial societies, beef (especially steak), hamburgers, potatoes and beer are considered masculine and typical men’s food. Instead, salads, pasta, yogurt, fruit, and chocolate are considered feminine and therefore women’s foods (Bove, Sobal, & Rauschenbach, 2003; Lupton, 1996; Sobal, 2005).

However, from a psychodynamic point of view, the relationship between food and sex should be looked for in the earliest stages of the infant’s life. According to the Father of psychoanalysis, a child being breast fed may be considered the prototype of any love relationship. In his “*Drei Abhandlungen zur Sexualtheorie*” (Three Essays on the Theory of Sexuality), Freud (1905), postulated that the child’s sexuality develops through three stages, i.e. oral, anal and genital. In the initial undifferentiated phase, sexual satisfaction is achieved through oral stimuli, whereas its symbolic representation is achieved in the act of incorporating the food-object, to which are also addressed aggressive, sadistic and cannibalistic fantasies. In particular, in the erotic fantasy of nutrition, impulse satisfaction is always followed by a certain level of ambivalence. On one side, there is the desire of assimilating/incorporating the object, trying at the same time to appropriate the object

characteristics, and, on the other, the desire of destroying it not to be harmed by the object itself (Olivero & Russo, 2009). The very same conflict merges much later, in more or less evident forms and/or pathologies, in food dependence relationships in which the vital need for nutrition and the seek for oral satisfaction clash with the dangers deriving from food itself. This takes place in a continuum where there are satisfaction, gratification and dependence on one end and abstinence, control and autonomy on the other. For the Eros point of view, oral stimulation which a child reaches through suction, takes on in adults the symbolic function of fulfilling the need of love, ensuring, at the same time, solace, especially in moments of Self fragility (Olivero & Russo, 2009). Finally, besides being dictated by primary survival needs, both oral and sexual experiences are characterized by elevated multi-sensorial levels. Pleasure related to oral gratification is not limited to the stimulation of lips and the oral cavity but involves all other senses. The same happens for sexual pleasure. Satisfaction achieved through fantasy and the act of assimilation is extended to all other sensorial stimuli that can activate the senses.

1.4. The case of meat

Throughout human history, food has been a central part of daily life. In fact, across the world, more money is spent for food than for any other essential item (Samuelson, 1990). Food also entails a number of meanings. It can act as form of social interaction, communicate love, it provides cultural or religious norms, but it can also be an expression of identity, gender, sexuality, conflict and Self-control (Ogden, 2010). Among universally accepted foods, meat seems the one to be more invested with symbolic meanings and, perhaps, more than other foods, it gives rise to many expressions of our Self. As Twigg (1983) states, «*meat is the most highly praised of food. It is the centre around which a meal is arranged. It stands in a sense for the very idea of food itself*» (p. 21).

For modern Westerners, meat is considered rich in nutrients but also physiologically risky. Moreover, paradoxically, meat seems to be at the same time the most cherished and most often tabooed food (Fessler & Navarrete, 2003). It is historically proved that the strongest and most interesting food taboos are related to entire categories of animal derived products. As an example, we can think of pork for Muslims, beef for Hindus but also milk or some fish for Jews (Simoons, 1991). Furthermore, meat is the symbol of patriarchy and it is strongly linked

to the cultural conceptions of power and masculinity⁸. It is a symbol of patriarchy, because of its persistent and globally associations with manhood, power, and virility (Adams, 1991; O’Laughlin, 1974). For example, in the present North American society, meat is still viewed as a representative manly food. Many men do not consider a meat free meal as a “*real*” meal (Sobal, 2005) and the phrase “*meat and potatoes man*”, symbolizing a strong and hearty man, is deeply rooted in colloquial language. In the past, for the Europeans meat was closely linked to power and privilege, that means a basic food for the gentry and a rare treat for the poor people (Ruby & Heine, 2011). During the first World War, instead, meat has been routinely diverted from women to male combatants (Kellman, 2000).

Thus, it is readily apparent, that «*meat is, to many, synonymous with “real” food*» (N. Fiddes, 1991; p.16). Not surprisingly, also vegetarians fill the gap left by former food habits by consuming soy based products that are deemed to be equivalent and that resemble (or are purposely shaped to match) the appearance and nutritional contents of meat. It follows that meat can be considered something more than a simple meal but rather the essence of a lifestyle (Fiddes, 1991). For example, in primitive societies meat sharing is an essential social event, inasmuch as, compared to fruits and vegetables it is more often used to favor and consolidate bonds among relatives, neighbors and akin communities. «*Yanomamo hunters [...] believed that if they do not share their catch, they will lose their hunting skills. Individuals and families rarely share their plantains and other crop, but they never consume a hunter’s catch without cutting it up into portions and distributing it to all the important men in the village, who in turn make further distributions to women and children*» (p. 27, M. Harris, 1990).

The preference for meat is also observed in food habits of more evolved societies, characterized by complex religious doctrines and structured rituals, the core of which may often coincide with a sacrifice of domestic animals and a ritual collective meal. According to Marvin Harris (1990) «*With the domestication of herds and flocks, meat, blood and milk had to be shared with the ancestors and gods, just as hunters has to share the day’s catch with*

⁸ *This may have originated in the very early times of primitive human societies, when meat was gained by hunting, an activity that does not guarantee results and undoubtedly requires great skills, knowledge, sometimes team work and, possibly, courage and great risks. In those societies, as in those few still surviving today, hunting is men’s business only. Meat was then “given” to other group members. Collecting seeds, fruit and vegetables, instead, was left mainly to women (M. Tozzi, personal communication, December 1, 2011)*

each other, to create a web of mutual obligations, to prevent jealousy and strife, and to preserve communities that embraced both the invisible rulers of the world and their earthly creations. In hallowing animal butchery as sacrifice, and in feeding the gods on animal flesh, ancient peoples expressed their own craving for meat and other animal product» (p. 28-29).

Last but not least, meat has long been considered an upper class, expensive item and this has added a further social appeal to meat based food (Montanari, 2009).

Today also, meat consumption continues to play a role as a social aggregator. However, recent food scandals and food related events (e.g., the mad cow issues in the nineties or bird and swine flues) and new medical discoveries on excessive in meat consumption (WCRF, 2007) have led to the adoption of new nutritional styles based on a low meat consumption. In particular, according to recent surveys, the number of vegetarians and vegans has grown. According to Eurispes data (2013a), in Italy, vegans and vegetarians are about 6% of the population (vegetarians 4.9% and vegans 1.1%), with a yearly increment of two points. It is believed that Westerners become vegetarian for four main reasons, i.e. disgust for the sensory qualities of meat, concern for health, concern for animal welfare and concern for the environment (e.g., Fox & Ward, 2008a; Santos & Booth, 1996; Worsley & Skrzypiec, 1998). The former reason is the less common, since meat is a highly palatable food. It is more likely that people opt for a vegetarian diet for health reasons or for being concerned about animal welfare. Usually, disgust for the sensory characteristics of meat develops later (Rozin, Markwith, & Stoess, 1997).

In conclusion, it is apparent that meat endorses a number of meanings. However, the reasons that move food choices are more elaborate and involve several socio-psycho-physiological processes that go beyond the meaning of food itself. These processes will be analyzed in the second chapter.

CHAPTER 2

THE PSYCHOLOGY OF FOOD CHOICE

«Tell me what you eat, and I will tell you who you are»
(Brillat-Savarin, J. A., 2009, p.3)

2.1. Psychology and food choice

The meaning of food is important but it is not enough to thoroughly explain why people consume a certain item over another. Indeed, human food choice is a complex process which begins before birth. According to recent data, people start to perceive flavors in the womb, during the intrauterine life along with the development and early functioning of the gustatory and olfactory systems (Ventura & Worobey, 2013). As Manella and colleagues state (2007), *«first experiences with food flavors occur long before the first “taste” of solid foods because flavor volatiles and taste compounds from the maternal diet are transmitted to and flavor amniotic fluid and human milk»* (p.780). Thus, the mother's diet plays an important role since the very beginning of human existence. In fact, it has been estimated that early flavor experiences can effect food preferences during infancy and also permeate food choice across one's lifespan. However, it must be said that early influences do not necessarily define food tastes for good. Other elements, such as social environment, food availability or mental cognitions, will later play a role as well.

Food preferences seem to be in part genetically determined as well. Using sucking behavior and facial expression as performance indexes, newborn babies have been show to prefer sweet and umami tastes (a savory taste, which is part of the five basic ones, along with sweet, sour, bitter and salty - Yamaguchi & Ninomiya, 2000) and to reject bitter and sour tastes (Mattes, 2009; Tordoff et al., 2012). Instead, reaction to salt taste differs in that newborn babies are more likely to show neutral facial responses and exhibit less sucking behaviors (Beauchamp, Cowart, Mennella, & Marsh, 1994; Rosenstein & Oster, 1988). Some evidence suggests that salt taste is still undeveloped at birth and it needs four months to mature (Beauchamp, Cowart, & Moran, 1986). However, it is believed that innate preferences may be a reflect of a

survival instinct, in that nature preserves us from uneatable matters, such as the rotten or poisonous items, and stimulates us to research for those foods which are richer in calories or proteins, such the sweet ones (Ventura & Worobey, 2013).

Regardless these innate preferences and genetic influences, food choices in young children are sensitive to family food as well. First of all, food choice strongly depends on food availability. A restricted access to highly palatable food, usually rich in fat, sugar and calories, helps in reducing children's intake and preferences for such food (Fisher & Birch, 2002; Ogden, Reynolds, & Smith, 2006). Furthermore, parents can stimulate children food preferences by promoting the acceptance of novel or disliked foods (Wardle et al., 2003) and by avoiding excessive pressure, which seem to have no long-term effects. In particular, devaluating food practices, such as "*if you eat your vegetables you can have a dessert*", ultimately, suggest children that some foods are not preferable per se (Galloway, Fiorito, Francis, & Birch, 2006). Growing up, more influences on food choice appear and children start facing cultural exposure, personal physiological experiences, peer and media influence, and so on, until they develop mental attitudes towards food.

At this point, the complexity of food choice in adult is apparent because it involves several factors at different stages of human's life. Nowadays, much psychological research is still trying to address a variety of key questions in food choice, above all in order to encourage people eating more healthily. However, at present, the remarkable amount of studies can be divided into three overarching groups, i.e. psycho-physiological perspectives, developmental theories and cognitive models (Ogden, 2010). The first group investigates mechanisms involved in the satiety/hunger process, with emphasis on the hypothalamus' functions, sensory properties and metabolism. The second investigates the role of learning and past experiences in developing food choice and in particular, it assesses the influences of exposure, social learning and associative learning. Finally, the third examines the individual's cognitions and motivations and the extent to which they predict food behaviors. The main theoretical approaches and related experimental studies of each group are summarized in the next paragraphs.

2.2. Psycho-physiological approach to food choice

The psycho-physiological approach investigates the interplay among the individual's physiology, cognition and behavior and its effects on food choice. The metabolic model of eating is the starting point and includes the physiological processes involved in the satiety/feeding relationship (Ogden, 2010). From a biological point of view, food intake is necessary to maintain homeostasis. This term refers to a vital set of mechanisms that regulate the internal body environment in order to maintain a stable set of conditions, such as temperature, pH and others. Food intake is an essential part of this system. In order to keep homeostasis stable and, hence, to stay healthy, the human body needs to ingest a given number of calories and nutrients. Two types of internal signals are responsible for this process: hunger, which is a drive to eat, and satiety, which is an intervening process that leads to stop eating (Blundell et al., 2010). The former basically depends on the calories contained in the white adipose tissue (WAT). Once that energy stocks decrease, our body sends signs arousing a conscious sensation that reflects a need to eat. This sensation differs from person to person and it includes changes in physical sensations in some part of the body or feelings of an empty stomach, general weakness and lightheadedness. However, many external factors can also stimulate hunger. For example, lunch/dinner time, food availability, food thoughts and stress (Conner & Armitage, 2002). The latter involves many distinctive but overlapping variables, such as macronutrient composition, energy density, sensory qualities, subjective cognitions about food properties and gut reactions. A conceptual framework, called "*Satiety Cascade*", by Blundell and colleagues (1987) and recently modified by Mela (2006), has divided such factors into four categories that work both in within-meal feeling process of satiety and in-between-meal satiety (Gibney, Lanham-New, Cassidy, & Vorster, 2009). The first category incorporates sensory effects. They are produced by food palatability, which includes smell, texture, temperature and taste which lead to a short-term decrease in the sensory pleasure of eating foods with similar sensory characteristics. That means that sensory satiety is not general but specific, and that it is important in controlling calories intake, meal sizes and food variety (Havermans & Brondel, 2012; Rolls, Rowe, & Sweeney, 1981). The second category regards cognitive effects on satiety and includes learned, known and assumed properties about the ingested food. For example, everyone holds an idea about the satiety power of a certain food, in that a salad is a lighter meal than casserole. These beliefs can stem from personal past experiences, but also from media messages and advertising, or public opinion. They cannot be necessarily correct but still are able to inhibit further eating (Conner &

Armitage, 2002). Finally, the third and the fourth category include specific gastro-intestinal and metabolic mechanisms that occur during and after the digestion process. The post-ingestion phase involves neural and hormonal signals that are transported from the gastrointestinal apparatus to the brain. These signals have to inform about stomach fullness and they involve stretch receptors, hormones and gastrointestinal peptides, such as amylin, ghrelin, cholecystokinin, GLP-1 and PYY (Blundell et al., 2010). Instead, the post-absorptive phase involves metabolic processes and liver work and, in particular, it reflects nutrients circulations, energy levels, substrate oxidation and neuro-hormonal factors (Gibney, Lanham-New, Cassidy, & Vorster, 2009).

Understanding mechanisms underlying appetite is very important, especially in the light of a growing obesity epidemic and other food-related illnesses. In the past decades, a remarkable number of studies investigated several physiological elements that can affect hunger and satiety in different ways. They involved the analysis of brain sections, the role of neurotransmitters and senses but also the effects of stress and drugs on food intake. Hereinafter, three main themes are taken into account, i.e. the role of the hypothalamus, the role of senses and the effects of food on human behavior and cognition.

2.2.1. The hypothalamus' role

The central nervous system (CNS) is deeply involved in the homeostasis' maintenance and it keeps the body's energy level at a set point by regulating food intake and energy expenditure in response to different kinds of signals, such as those sent by neurons and hormones and nutrient concentrations (Diéguez, Vazquez, Romero, Lopez, & Nogueiras, 2011). After observing patients affected by tumor, lesion or damage of the hypothalamus, who became obese, biologists and neurologists tried to understand how the hypothalamus is associated with appetite and investigated other brain areas involved in this process (Carlisle & Stellar, 1969; Hoebel & Teitelbaum, 1966). Nowadays, thanks to the contributions of new technologies, there is a general agreement in assigning the hypothalamus a key role in both food intake regulation and energy expenditure.

From an anatomical point of view, the hypothalamus is located below the thalamus, just above the brain stem. It is constituted by a set of clusters of neurons, called nuclei, forming

organized and interconnected neuronal circuits, via axonal projections. The nuclei are divided into different sections that respond to different tasks. Those related to food are located in the medial hypothalamus, which is the satiety centre, and the lateral hypothalamus, which is the feeding centre (Piccinni, 2012). Nuclei are sensitive to nutrients and hormones and they control activity and secretion of neurotransmitters and neuro-modulators, which produce changes in the energy process (Flier, 2004). A key role in changes in energy intake and energy expenditure is played by two hormones: leptin and ghrelin. The former is the “*satiety hormone*”; it is produced by adipose tissues and it informs the hypothalamus about their energy storage level (Friedman & Halaas, 1998). The latter is a hunger-stimulating peptide and hormone that is mainly produced by P/D1 cells, that are located in the lower part human stomach and in epsilon cells of the pancreas (Inui et al., 2004). Moreover, recent studies have also discovered the role of the hypothalamus in controlling peripheral lipid metabolism through the sympathetic nervous system, independently from food intake (Nogueiras et al., 2007). However, despite several anatomical, biological, genetic, pharmacological, and physiological studies that have explained the hypothalamus role in regulation peripheral lipid metabolism, much further work is needed. Most of the studies have been conducted on rodents and there is still some unclear aspects about how some hypothalamus interconnections may actually work in human beings, especially in relation to different diets, gender and/or ageing influences (Diéguez et al., 2011).

2.2.2. The role of chemical senses

In this paragraph exteroceptive sensitivity is briefly described. Analytical sensory evaluation helps in recognizing perceived food attributes and differences (Tuorila & Monteleone, 2009). Since food choice is not simply a matter of hunger, every other drive to eating needs to be investigated.

In the human body, several groups of cells are responsible for processing physical and chemical outside world information. In whole, they form the sensory systems which is commonly divided into five categories, commonly referred to as senses: vision, hearing, somatic sensation (touch), taste and olfaction (smell). Although some of them are more important to food choice, all play a role in the eating process (Lawless & Heymann, 2010). First of all, taste and olfaction normally, they act together and along with the trigeminal nerve

stimulation (which is mainly responsible for detecting texture, temperature and pain) they determine and recognize flavors, that are generally defined as sensory impressions of food and non-food items/substances (Piccinni, 2012). Taste, in particular, allows food identification, via sensory organs, called taste buds, or gustatory calyculi, that are mainly located on top of the tongue. It has been already explained that human beings have innate preferences for sweet and umami tastes and reject bitter and sour tastes (see page 45). However, preferences change over one's life time. For example, laboratory tests have shown that preference for sweetness decreases with age, in that young children like more sweet solutions than adults (Schwartz, Issanchou, & Nicklaus, 2009). Anyway, a general preference for some kind of food proprieties exists and it includes a combination of sweet, carbohydrates, fat and salt (Corsica & Pelchat, 2010). This is well known within the food industry, which keeps producing goods that do not help fighting the spreading of the obesity epidemic. The same happens with many advertising claims, that use taste and flavor as key features to prompt brand fidelity (Olivero e Russo, 2009).

Vision also plays an important role in eating behaviors. Vision is the first sensation that stimulates interest in displayed food (Lawless, 2000) and creates expectation for the sensory proprieties perception (Gamble, Jaeger, & Harker, 2006; Jaeger & Macfie, 2001). Appearance properties of a food include different visual properties, such as color, size and shape (Kildegaard, Olsen, Gabrielsen, Møller, & Thybo, 2011). For example, it has been estimated that, in purchasing fresh pork meat, pork flesh must have the following features (Ngapo, Martin, & Dransfield, 2007): light and dark red color, fat cover (that must be between 8% and 17% of the surface area), marbling (about 1.5% or absent) and drip (5.5% or absent). However, food appearance is also influenced by different external factors. Lighting, for example, enhances colors and glossiness, which, in turn, increase food likeness and interest (Okuda, Okajima, & Arce-Lopera, 2012).

Finally, touch and hearing are drives for food perception as well. The former allows to detect important information about density, compactness and texture of a certain food (Fabris, 2003). Different combinations of those features are essential when we buy fresh food. For example, people expect to buy creamy ice cream but not mushy vegetable. Hearing, instead, captures the sound produced by crunching certain foods which are associated to the tactile sensations produced by the action of chewing (Zampini & Spence, 2004). Both senses contribute to the perception of pleasantness. In particular, crispness (a textural food descriptor characterized by tactile, mechanical, kinaesthetic and auditory properties) is considered one of the most

important food qualities (Yoshikawa, Nishimaru, Tashiro, & Yoshida, 1970) and this is one of the reasons why chips are liked all over the world.

Sensory food science holds a crucial position at the intersection of many disciplines and research traditions, such as psychological, biological and other applied sciences (Moskowitz & Hartmann, 2008). In the past decades it has made significant progress in developing new methods and approaches and in advancing our understanding of sensory responses to food. In particular, the food industry has recognized and capitalized the importance of sensory activities in producing new palatable food (Tuorila & Monteleone, 2009). This especially happens in post-modern society, where physical and direct relationship between consumer and product features is promoted (Olivero & Russo, 2009). However, it must be said that a sensory preference does not necessarily lead to food choice. For example, love for chocolate does not convey to eating it every day. Thus, sensory properties, though important, stand as part of a complex process which involves several other mechanisms.

2.2.3. Food effects on cognition and behaviors

Much psychological research has explored mental drives of food choice. But what we eat can also affect our cognitive state and mood and consequently influence food choice. In particular, some foods have been recently identified as having potential addictive properties, especially the “energy dense” ones, that are richer in sugar, fat and/or salt (Armelagos, 2010). Those foods are often considered as “forbidden” (i.e. chocolate, cheese) and are those on which people binge (Corsica & Pelchat, 2010). Although food craving and food addiction are two concepts that have been widely accepted among media and the general public, they have gained some credibility in the scientific community only in recent years (Davis et al., 2011) and a clinically valid concept of food addiction is still a controversial issue for many reasons. First of all, the very term “addiction” is usually referred to classical substances like drugs or alcohol. Food, even the most palatable one, is not addictive per se. Yet, recent evidence supports the idea of addiction-like behaviors and neuronal alterations under certain conditions, such as following a restriction/binge pattern of consumption (Corwin & Grigson, 2009). Then, as Pelchat (2009) states, *«two of the criteria mentioned in the Diagnostic and Statistical Manual of Mental Disorders are tolerance and withdrawal and there is evidence for food withdrawal and tolerance in animals[...] However, many of the clinical criteria for*

addiction/dependence focus on the consequences of continued use or on failure to discontinue use. If there are no negative consequences of eating food and there are no failed attempts to discontinue eating large amounts or certain types of food, there is no diagnosis of addiction» (p. 621). In this sense, food addiction cannot be diagnosed in the healthy, normal-weight individuals, for whom eating certain highly palatable food is a pleasure that does not produce negative consequences.

However, some parallels have been drawn between excessive in highly palatable food and drug dependence, both in humans and in rodents. Moreover, some neurological similarities in the way human (Pelchat, 2009) and rats (Avena, Rada, & Hoebel, 2009; Lutter & Nestler, 2009) respond to food and to drugs have been found. These researches support the food addiction hypothesis highlighting the role of neurochemistry (dopamine, endogenous opioids) and neuro-anatomy (limbic system)alterations, and self-medication behaviors (Corsica & Pelchat, 2010). In particular, laboratory research on animals has found that rats which had access to fat, sugar or some processed food, display alterations in the reward neural mechanisms that are also involved in classical addictive behaviors. Those rodents, in fact, exhibit typical addiction features, such as withdrawal, tolerance, binge consumption and continued use, although they were given a negative feedback, like an electric shock (Avena, Rada, & Hoebel, 2008; Gearhardt et al., 2012; Johnson & Kenny, 2010). In addition, research with human beings supports the idea that food and drug cravings are also associated with similar patterns in dopamine neural activation (Pelchat, Johnson, Chan, Valdez, & Ragland, 2004; Rolls & McCabe, 2007; Stoeckel et al., 2008). Last but not least, obese people and individuals affected by substance dependence seem to be linked to similar neuronal markers, such as a reduction in DRD2 receptors (Stice, Spoor, Bohon, & Small, 2008; Wang et al., 2001).

From a strictly psychological point of view, a key characteristic in substance abuse is the “loss of control” feeling. This also emerges in people affected by eating disorder and, in particular, in individuals affected by Binge Eating Disorder (BED). According to the DSM V (Diagnostic and Statistical Manual of Mental Disorders, fifth edition, APA, 2013), BED is a specific eating disorder which consists of eating, in a defined period of time (usually within a two hours period), an amount of food that is certainly larger than most people would eat the same amount of time under similar circumstances.

In order to operationalize the food addiction concept, a food addiction scale has been recently developed at the Yale University (Gearhardt, Corbin, & Brownell, 2009). The YFAS (Yale Food Addiction Scale) translates the diagnostic criteria for substance dependence, displayed

in the DSM IV TR (Diagnostic and Statistical Manual of Mental Disorders, fourth edition, Text Revision, 2000), to apply to eating behaviors (Gearhardt et al., 2012). Evidence from recent studies supports the idea that the YFAS can be a useful tool to identify individuals with addictive tendencies towards food and the scale is also under validation in other Countries (e.g., Germany – Meule, Vögele, & Kübler, 2012).

However, despite findings have demonstrated analogies between food and substance dependence, further support to the food addiction concept is still needed, especially if the final goal is to provide the population with more effective clinical interventions and to contrast the widespread obesity epidemic.

2.3. Developmental theories of food choice

As discussed earlier, different psycho-physiological models can be used to describe how biological and sensorial drives affect food choice. Early like and rejection, as well as general preference or addiction, can be explained in that way. However, exposure to novel foods and social environments also mould food behaviors. Developmental theories to food choice highlight the role of learning and experience, analyzing how food preferences develop and evolve from early childhood to maturity and old age (Ogden, 2010). Three learning paradigms influence children's eating: familiarization, associative learning and observational learning (Birch & Anzman, 2010). All of them will be taken into account in the next paragraphs. The first focus on the transition from a milk-based diet to one consisting of adult food, investigating processes involved in food acceptance and studying strategies to fight against food neophobia. The second analyzes the impact of contingent factors on eating behavior, such as reward or punishment. Finally, the third refers to social influence in food choice, taking into account the role of parents, peers and media.

2.3.1. Neophobia and exposure effecting early food choice

Many studies support the existence of unlearned taste preferences and their evolutionary need (Ventura & Worobey, 2013). This kind of preferences is more likely to resist in childhood. Not surprisingly, in fact, the more influential predictors of toddler and children's food preferences are familiarity and sweetness (Birch, 1979). In any case, with the development of the sensory system and the gradual introduction of adult's food in babies' diet, space is made available to change, fostering variety in food consumption, which, in turn, is essential to keep the human body healthy and fit.

At this early stage of life, environmental factors, such as parental modeling of eating behaviors and exposure to new food, play a pivotal role in helping children to accept and eat new foods (Adessi et al., 2005). That is not a simple process, however. Toddlers and young children (especially those aged between two and five) are easily predisposed to food neophobia (literally "fear of the new"). Food neophobia is a rejection to eat novel foods in favor of familiar ones (Scaglioni, Salvioni, & Galimberti, 2008). It is believed that aversion to the novel is another adaptive behavior which may have promoted safety from toxins or rancid food in our prehistoric past, when people used to forage for food (Fox, Pac, Devaney, & Jankowski, 2004), especially when they have access to a great number of new potential foods items (Pliner, Pelchat, & Grabski, 1993). From a psychological point of view, instead, food neophobia might depend on distaste or dislike of sensory characteristics of certain food, followed by potential harm or post-ingestion sickness (Fallon, Rozin, & Pliner, 1984; Rozin, Hammer, Oster, Horowitz, & Marmora, 1986). This happens because food choice in children has mainly an hedonic base. In fact, preferences that involve cognitive considerations such as health, social, and economic impacts of foods, appear much later in life (Glanz, Basil, Maibach, Goldberg, & Snyder, 1998). Usually, food neophobia in toddlers and young children is not associated with a specific food group (Fox et al., 2004). The type of rejected foods varies, but according to a survey based on 600 children aged between two and six, neophobia was significantly negatively associated with fruit, meat and vegetable intake (Cooke, 2004) but not with the consumption of biscuits, cakes, dairies or starchy staples (Cooke, Wardle, & Gibson, 2003). Anyway, food aversion is not a fixed condition and some strategies can be easily adopted.

It has been already mentioned that one of the strongest predictors of children's food choice is food familiarity, in that the evaluation of food stimuli increases following an individual's repeated exposure to them (Birch & Anzman, 2010). For this reason, food exposure can be a

valid strategy to promote new food acceptance. Evidence suggests that familiarization process begins in the womb, during gestation, when flavors from the maternal diet pass into her amniotic fluid, and it continues after birth with breastfeeding. For example, children whose mothers drank carrot juice during their pregnancy and lactation displayed greater acceptance of carrot-flavored cereals compared to children who did not experience any form of carrot-flavored familiarization (Mennella, Jagnow, & Beauchamp, 2001).

However, the familiarization process continues during infancy. It has been estimated that a child needs to be exposed between six to fifteen times to a novel food, on average, before an increase in intake and like levels takes place (Anzman-Frasca, Savage, Marini, Fisher, & Birch, 2012; Birch & Marlin, 1982, Birch et al., 1987a; Wardle et al., 2003). Additionally, later in childhood, repeated exposure to different solid foods enhances the acceptance of fruits and vegetables (Mennella, Nicklaus, Jagolino, & Yourshaw, 2008). Moreover, it is believed that, in early life, familiarization allows generalization of other similar foods (Birch, Gunder, Grimm-Thomas, & Laing, 1998; Pepino & Mennella, 2005). For exposure to be effective, however, food tasting needs to be experienced, because learning about new foods or merely seeing new food, even in repeated occasions, do not modify children's preferences (Birch et al., 1987a; Wardle et al., 2003).

Finally, exposure effect is enhanced by a socially positive supporting environment, that helps children during the food acceptance process (Johnson, Bellows, Beckstrom, & Anderson, 2007).

According to literature, food neophobia is more present in males than females (Birch et al., 1998) and it usually reduces with age. However, sometimes, it persists over childhood and it is characterized by the food avoidance variety, even if rejected foods are familiar (Dovey, Staples, Gibson, & Halford, 2008). In this case, food neophobia can be assessed with an *ad hoc* questionnaire (MacNicol, Murray, & Austin, 2003).

In conclusion, although food neophobia seems to have an evolutionary base and is no longer adaptive, still today it can negatively influence the quality of children's diet. Therefore, parents must foster willingness to try. The exposure context provides an opportunity for reducing neophobic tendencies, but also pairing food cues with some aspects of the environment (both internal and external) can be effective. The use of instrumental feeding and the impact of contingent factors on eating behavior will be discussed in the next session.

2.3.2. Associative learning in children food choice

Recent studies with young children have revealed the potential power of learning processes to encourage liking for healthier foods early in life, when eating behaviors usually change quite quickly and many flavors are still unfamiliar (Birch & Anzman-Frasca, 2011). At the beginning, children learn to eat and favor familiar food but they also start pairing food intake with different consequences. This is usually termed associative learning, and its discovery origins in classical Pavlovian conditioning and behaviorism. Basically, it happens when an initially neutral stimulus (conditioned stimulus, CS), begins to stimulate responses after repeated pairings with a meaningful stimulus (unconditioned stimulus, UCS) (Birch & Anzman, 2010).

A basic form of associative learning regards *physiological responses* to food intake. Much research has shown the development of food aversions as a consequence of gastrointestinal disorders after food intake. For example, if a novel food, like mussels (CS) is followed by a case of stomach upset, like nausea and vomiting (UCS), the negative valence of the sickness is paired with the novel food (previously neutral), even if the food itself usually did not cause any sickness (e.g., Garcia, Kimeldorf, & Koelling, 1955) and this aversion can be extended to similar foods, like the shellfish category (Ogden, 2010). Much research has also explored pairing food cues with positive consequences, like the calorific density of certain foods and post-consumption satiety (see for example, Deysher, 1986; Formon, 1974). However, most of the work in these field focused on the role of reward in food acceptance.

The use of incentives, or *instrumental feeding*, in child feeding research, is an interesting yet controversial issue. Most of the parents agree in considering rewards, such as “*if you finish your vegetable you can have the dessert*”, as effective but results of reward in experimental settings have been mixed. According to a recent review by Cooke and colleagues (2004), inconsistent data in this field can be explained looking at the measured outcome (food intake vs food liking) along with the initial motivation level towards the target foods (liked vs disliked). When the outcome is food intake, rewards usually have a positive effect. On the contrary, when food liking is the outcome, rewards can trigger opposite, negative effects, especially if the target food was a liked one. For example, in a classical study Birch and colleagues (1982) asked children to taste a novel drink. The children who had been rewarded for the tasting reported lesser “liked” degrees in a subsequent taste-test compared to those who tasted the drink without receiving a reward.

Much debate in this food area involved the type of food rewarded. In fact, offering highly palatable food is in general negatively considered, not only within the research field. Yet, literature suggests that non-food tangible rewards (e.g., stickers), or non-tangible rewards (e.g., hugs), can be very effective in encouraging young children to try new food (or less-liked food). Such exposure benefits, however, are attained only if trials are repeated for a sufficient number of times (Cooke et al., 2004).

Finally, parents have also a role in offering their children contingencies (e.g., “*if you eat the vegetables you can have a dessert*”) or pressures (e.g., “*you cannot leave the table until you finish your vegetables*”), molding food preferences. Evidence suggests that they both have some degree of effectiveness on children’s intake. However, on the other end, they do not help in increasing preferences and have no long-term effects (Birch et al., 1982; 1987a). Conversely, they also devalue or over-value targeted food, sending unintentional messages to children that those food are/are not preferable in and of itself (Ventura & Worobey, 2013). However, praising children for consuming healthy foods is demonstrably preferable, because it been related to higher intakes (Nicklas et al., 2001; Vereecken, Keukelier, & Maes, 2004). Moreover, telling children that a food tastes good is more effective than focusing of food benefits (Pliner & Leowen, 1997). Instead, the use of pressure or coercion to ensure children’s intake of healthy food, like vegetables, is considered to be particularly counterproductive, promoting dislikes. For example, in a retrospective study, young adults reported that the foods they have been forced to eat when they were children have become the ones they dislike the most (Batsell, Brown, Ansfield, & Paschall, 2002).

In conclusion, a positive emotional context is important to create effective food associations. However, many other influences can affect children’s preferences, like social and observational learning, as discussed in the next session.

2.3.3. Social learning: the influence of parents, peers and media

The social context in which people eat plays a key role in molding people's eating behaviors. For example, in a social context, preferences for a certain food can be influenced by facial expressions that other people display eating the same food. An experiment conducted by Rousset and colleagues (2008) has shown that people liked meat more after seeing another person eating the same meat with a neutral or happy facial expression compared to a disgusted one. There are several occasions in which social, or observational, learning can have both a positive or negative influence, especially during infancy and childhood, when cognitions has a marginal role in food choice. In literature, these social opportunities are usually divided into three main groups, and they are linked to the role of parents, peers and media (Ogden, 2010). The first social influence on children's food choice stems from parental eating style. As Wardle (1995) states *«parental attitudes must certainly affect their children indirectly through the foods purchased for and served in the household [...]influencing the children's exposure and[...] their habits and preferences»* (in Ogden, 2010, p. 3). Undoubtedly, food availability directly moulds food habits. For instance, French fries are the most frequently eaten "vegetable" among fifteen-months old children among adults (Block, 2004), where they are the most frequently consumed vegetable among adults (Fox et al., 2004). However, parents can also have a more indirect influence providing both positive or negative examples of eating styles. For example, research suggests that teenagers are more likely to eat breakfast if their parents also do it (Pearson, Biddle, & Gorely, 2009). In a similar way, a comparative study of mother-daughter drink choices demonstrated that mothers who drank lots of milk had daughters who have more-than-average milk as well, meet dietary recommendations for calcium and other dairy-related nutrients and, consequently, exhibit higher than average bone densities (Fisher, Mitchell, Smiciklas-Wright, Mannino, & Birch, 2004). Additionally, Birch and Fisher (2000) have discovered that the mother's level of dietary restraints is the best predictor of daughter's eating behaviors, due to mother's perception of the risk of her daughter becoming overweight.

Parental choices over food choice have a strong influence on children but peers can be even more effective than adults (Hendy, 2002). According to the social cognitive view, in fact, children are most likely to change their behaviors when they are observing models similar to themselves (Bandura, 1986). For example, in a classical quasi-experimental study Birch (1980) verified that peer models were effective in modifying preschoolers' preferences and intake for vegetables at lunch time. After just 4 days of observing the peer models choosing

and eating vegetables that the child-observers disliked, both observers' preference and intake of those vegetables significantly increased. However, children are not only influenced by what significant others are eating but they are also influenced by the type of peer whom they are eating with. For example, overweight girls are more likely to eat more when they are sitting with another overweight girl compared to one with a normal weight (Salvy, Romero, Paluch, & Epstein, 2007).

Finally, media and, in particular television, provide a powerful manifestation of the potential impact of observational learning and experience on both adults' and children's food preferences and intake patterns (Birch & Anzman, 2010; Ogden, 2010). The famous slogan "*from cradle to grave*" clearly expresses the willingness to pervade any stage of one's life (Moschis & Moore, 1982). However, marketing perfectly knows that children are uncontested persuasive actors in family decisions about grocery shopping and it works hard in order to condition their food preferences. For example, an analysis about the nutritional contents of food on preschoolers' television programs, has shown that junk foods were advertised twice as much air time and valued significantly more than healthy foods (Radnitz et al., 2009). Then, not surprisingly, research reveals that children can distinguish famous brand features (e.g., M of MacDonald's) before they can read (Codeluppi, 2003). An experimental study conducted by Halford and colleagues (2004) has revealed the severe effects of food marketing in children, evaluating the impact of exposure to food-related advertisements. Normal weight, overweight, and obese children were shown a set of adverts of both food and non food items and then their snack-food intake was measured. The results showed that, generally, all children ate more after being exposed to food adverts compared to the non-food ones. But obese children recognized more of the food adverts than the other children and their recognition level was correlated with the amount of food consumed.

It has been estimated that the great majority of currently advertised food products are high in fat, sugar, and salt (Batada, Seitz, Wootan, & Story, 2008) and this causes great concern and debate related to the growing obesity epidemic. However, media, but also exposure effect and associative learning, could be the key for a potential shift in food educational trajectories, making new commitments to mould children's environments, so that healthy choices may be learned and preferred when many foods are still unfamiliar (Birch & Anzman, 2010).

2.4. Cognitive theories of food choice

Developmental and physiological approaches address many factors involved in food choice. The former highlight the role of learning in developing food preferences. In particular, they explain the effects of important others, social cues, reinforcements and associations related to food and its consumption. From this point of view, early food choices are effected by exposure, which can help in reducing food neophobia, and social environment, through the observation of significant others such as parents, peers and media (television in particular). Finally, pairing food hints with post ingestion consequences or other environmental features has also a role in shaping food choice. Hence, these finding advocate the importance of both repeatedly exposing children to new foods and the social environment in which this act occurs (Ogden, 2010; Ventura & Worobey, 2013).

The other approach, instead, focuses on the biological and physiological aspects of eating. It highlights the importance of the relationship between satiety and hunger, the role of the central nervous system and of senses, but also some food properties and their potential addictive effects.

However important, both perspectives have several limitations. For example, developmental models, focusing on rewards, pleasure and aversion are inclined to exclude the meaning of food and body, such as power, control or sexuality. Instead, physiological models, entirely focusing on the neuro-chemical and brain systems neglect the mental side of eating, which may rather be the most relevant one. Finally, much of that research has taken place in laboratories for the sake of a controlled environment and moreover, produced models for human food choices mostly based on animal experiments. That causes a loss of data generalization and applicability (Conner & Armitage, 2002; Ogden, 2010).

In order to have a more comprehensive theoretical framework about food choice cognitive approaches must be taken into account as well. These models examine individual cognitions and motivations and the extent to which they predict food behaviors. At the beginning, it was believed that food choice could be explained by the *optimal foraging theory*, that states that living beings forage in a way that maximizes their net energy intake per unit time. In other words, organisms find, capture and consume food trying to spend as little calories and time as possible: minimal effort, maximum yield (Conner & Armitage, 2002; MacArthur & Pianka, 1966). However, a cost-benefit ratio considers only a small set of potential influences on food choice, if any. Attitudes related to a given behavior, beliefs, values, knowledge and several

other cognitive factors must be taken into account as well (Conner & Norman, 2005; Ogden, 2007).

Attitudes are cognitive representations that summarize an individual's evaluation of an object's attitude regardless it may be a person, a group, a thing, an action or an idea (McGuire, 1985; Zanna & Rempel, 1988). It is a durable and constant disposition to the evaluation action. For such reasons, attitudes are different to:

- Expectations, the nature of which is qualified by the object and constrained in time.
- Instincts, that are considered preparations to the most automatic and impelling actions.
- Habits, that are more mechanic and routinary.
- Beliefs, that are the constituent of attitudes in relation to what one considers to be true, but do not involve the expression of what one may be inclined to do

In general, attitudes are closely linked to ideas and beliefs about an object, which evaluations and positive or negative affective responses are associated to (Bonnes et al., 2006).

Beliefs are statements and claims about a specific event/object that is supposed to be either true or false. In psychology, beliefs are considered as the propositional part of an attitude (de Boer, Hoogland & Boersema, 2007). They differ from knowledge, which is considered the most practical requirement to perform a given behavior (Gardner & Stern, 2002). As far as meat consumption is concerned, beliefs deal with the concept of health, whereas knowledge, for example, is about preparing a meat-free meal (Lea & Worsley, 2001).

Instead, values are long-lasting convictions based on which specific behaviors or important choices become personally or socially preferable as oppose to other solutions or compromises (Anolli, 2004). They may be considered general internal standards independent of specific objects and situations and because of this they are clearly separately from attitudes that, on the contrary constantly refer to specific objects and situations (Rokeach, 1973). In general, values make up the backbone of cultures and find shape and expression in facts and in everyday social and individual behaviors. They are the guidelines of everybody's lives, they are not features of objects but categories that belong to subjects and that are used to organize everyday life or to get rid of ambiguities and so they influence behaviors (Bonnes et al., 2006). In the case of food and nutrition, values related to food choices involve people's ideas about food decisions along with meanings and feelings that people associate to these considerations (Sobal & Bisogni, 2009). For example, research on U.S. adults has revealed that food values typically concern cost, convenience, health, taste and managing relationships (see for example, Falk, Sobal, Bisogni, Connors, & Devine, 2001) and that values of

additional importance may be related to specific groups or individuals (e.g., ethics, environment, religion) (Connors et al., 2001; Falk, Bisogni, & Sobal, 1996; Furst et al., 1996). Generally, much of the research focusing on cognitive approach has drawn on social cognition models but it also relied on health behavior models, such as the “Health Belief Model” (Janz & Becker, 1984; Rosenstock, 1974), the “Protection Motivation Theory” (Rogers, 1983), the “Social Cognitive Theory” (Bandura, 1986; 1997), the “Trans-theoretical Model of Change” (Prochaska & DiClemente, 1983; 1984), the “Theory of Reasoned Action” (Fishbein & Ajzen, 1975) and the “Theory of Planned Behaviour” (Ajzen, 1991). In particular, as far as the health behavior models are concerned, it is possible to distinguish between predictive and explanatory models (Conner & Armitage, 2002; Sutton, 1998). The former focus on the fundamental variables related to health behaviors of individuals, with the aim of predicting changes. For example, information obtained with this models may be used to identify with a certain degree of confidence individuals at risk, that may probably need the support of a nutritionist or a dietitian (Conner & Armitage, 2002; Dunt, Day, & Pirkis, 1999). The latter, instead, focus on key variables that may cause a change. For instance, they could be used to effectively promote a modification of nutritional regimes by manipulating specific variables (Conner & Armitage, 2002). The Theory of Planned Behaviour (TPB) is a model that has been used to both predict and promote changes. The next paragraphs examines it in some detail.

2.4.1. Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA)

The Theory of Planned Behavior (TPB; Ajzen, 1985; 1991; 2002; Guillaumie, Godin, & Vézina-Im, 2010; Sparks & Guthrie, 1998) stems from the Theory of Reasoned Action (TRA, Fishbein & Ajzen, 1975; 2010). TRA and TPB are two of the best known and most used social-psychological models for the analysis of the relationship between attitude and behavior, aiming at the prediction and, possibly, the modification of behaviors (see figure 5, page 63). Both theories are based on three main assumptions (Bonnes et al., 2004). The first, as its name clearly states, assumes that individuals are aware of the consequences that their deliberate actions produce, being the product of a reasoning. The second, instead, assumes that behavior is volitional or intentional, being caused by forces that are controlled by the subject. That means people put to use a behavior in the very moment they decide to do so. Lastly, the third assumption states that the theories are “sufficient”, i.e. they include all the variables affecting

a given behavior. From these premises, both TRA and TPB postulate that the relationship between attitude and behavior is not a direct one, but rather is mediated by behavioral intention, that is the intentional level with which one intends to perform a certain action. According to these two models, in fact, attitudes allow to directly predict behavioral intentions, which in turn directly determine the actual behavior (Bonnes et al., 2006). The TRA model is made of four main components: attitudes, subjective norm, behavioral intention and behavior (Fishbein & Ajzen, 1975).

Attitudes towards a given behavior are caused by the beliefs about the consequences deriving from putting it into action; such beliefs are mediated by the evaluations of each of those consequences. In particular, it should be underlined that this theory considers only attitudes aiming at putting a given behavior in action (e.g., buying organic food, eating vegetables or fruits). So the TRA

excludes from its field of investigation the attitudes towards objects, persons or concepts that are not directly linked to actions (e.g., generic attitudes towards the health and the environment). For this reason, the concept of subjective norm represents

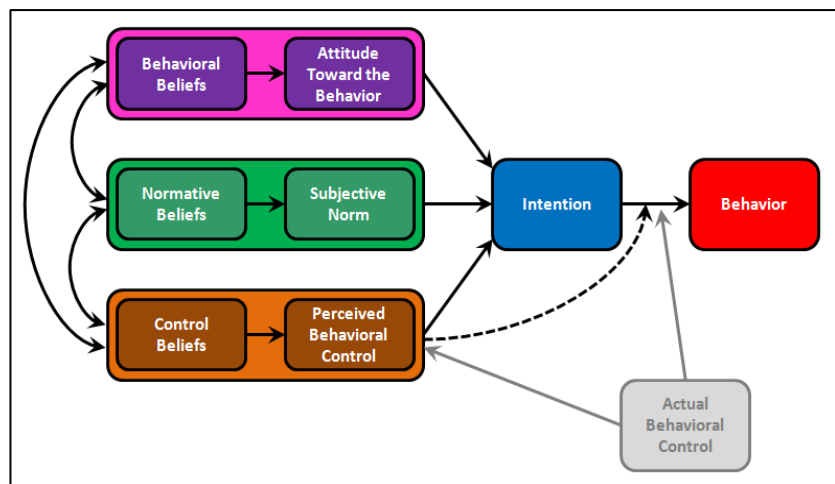


Figure 5. Model of the Theory of Planned Behaviour (© after Ajzen, 2006)

a completion of the relationship between attitudes and behavior (Bonnes et al., 2004). In fact, subjective norms deal with the influences of social norms on human behavior. Specifically, subjective norms are defined as the personal estimation about of the social pressure to perform, or not to perform, a given behavior. As for the concept of attitudes, it is assumed that subjective norms are made of two sub-concepts, which work together in interaction, and explain what persons and what groups are responsible of the normative pressure to act or non to act in a certain way, i.e. normative beliefs and motivations to comply with. The former deals with the level that one believes that a person or a group of reference wishes that he/she acts in a given way, e.g., “I feel pressure from parents to eat meat” (Bonnes et al., 2004). As far as motivation is concerned, each normative belief is evaluated based on the so called motivation to comply to the normative beliefs. That means people judge in a positive or negative way each normative belief (outcome evaluations), e.g., “in regard to my decision to

eat meat, doing what my parents think I should eat is important/ unimportant to me” (Francis et al., 2004).

The normative belief therefore measures the extent to which one allows reference people or groups to influence him/her. In conclusion, then, the subjective norm sums all the products of normative beliefs and the corresponding motivation to conform to them (Fishbein & Ajzen, 1975).

The third component is the behavioral intention which measures the willingness to perform a given behavior. According to the TRA, intention is the result of a decisional process based on attitudes and subjective norms. It can be considered the best component to predict a behavior (Bonnes et al., 2004). Last, behavior is the concrete realization of a certain act. In particular this theory analyzes only observable actions (e.g., meat consumption) excluding actions such as thinking or basic components of a routine behavior (Fishbein & Ajzen, 1975).

According to Fishbein e Ajzen (1987;2010), the behavior of interest needs to be defined according to four elements: Target, Action, Context, and Time (TACT). For example, consider buying organic food in a supermarket twice a week in the forthcoming month. Action makes reference to behavior. If one wants to investigate e.g. on organic food consumption, all the concepts of the theory must be specified in reference to such behavior (in the example, it would not be correct to measure attitudes toward health if what one wants is to predict the intention to buy organic products). Accordingly, one should always specify the target, or object (organic food in this case). Finally, time and context refer to when and where the behavior is performed, and in this example it is defined as the supermarket in forthcoming month. For this model to be effective it is necessary that all this components are formulated at the same level of specificity.

In conclusion, it should be stressed that the degree of specificity, which is associated to all the measured components of the model, is always linked to the research’s choice. Usually, researchers choose an intermediate level, between a general specificity, because this is believed to be more effective, especially for all those researches that play a support role to the realization of actions or policies finalized to improve health, quality of the environment or others (Bonnes et al., 2004).

Within the TRA, the concept of volitional control has been neglected. However, there are many behaviors that need specific capabilities or external supports to be performed. For example, buying organic products becomes difficult if there is not a shop selling them nearby and, similarly, decreasing meat consumption may be difficult if there are no

readily available equivalent nutritional solutions. For this reason, in order to extend the TRA to all those behaviors for which control is a variable factor, the Theory of Planned Behavior (TPB, Ajzen, 1991; Ajzen & Madden, 1986; Åstrøm & Rise, 2001; Ragin, 2011) was created. The TPB comprises the perceived behavioral control which accounts for the level at which people feel they can perform a certain behavior, for the reason that they have (or do not have) the necessary opportunities. That is, behavioral intentions are only relevant when an individual has both external (e.g., time and opportunity) and internal (e.g., knowledge and skills) control (Bonnes et al., 2006).

Unlike attitude and subjective norm, several studies support the fact that perceived behavioral control is often the strongest predictor of intentions and behaviors when using the TPB frame (Armitage & Conner, 2001a; Strating, Schuur, & Suurmeijer, 2006). In particular, it has been hypothesized that the perceived behavioral control is potentially effective in three ways (Bonnes et al., 2004). First of all, it is believed that the perceived behavioral control influences behavioral intentions in as much as any time people develop their intention they also consider their capacity of putting them in action. Secondly, the TPB considers that the perceived behavioral control is directly linked to behavior. Lastly, this model points out that the relationship between intention and behavior may also depend on the level of perceived behavioral control because people can decide to act in a certain way only when they feel have an adequate degree of control (c.f., Armitage & Conner, 2001a; Murnaghan et al., 2010; Rise, Sheeran, & Huckleberg, 2010). In particular, this situation is likely more probable for activities that require the performance of complex actions that in turn need a certain amount of time to be mastered (Bonnes et al., 2004).

Both the TRA and TPB are among the most followed theories worldwide, because they have been successfully applied to study many human behaviors (Rise et al., 2010). In particular, several studies have affirmed the effective predictive ability of the TPB in different ranges of health behaviors such as smoking cessation (Murnaghan et al., 2010), condom use, (Muñoz-Silva, Sánchez-García, Nunes, & Martins, 2007), household recycling, (Terry, Hogg, & White, 1999), low-fat diets (Sparks & Guthrie, 1998) or consuming organic vegetables (Sparks & Shepherd, 1992). In particular, according to Guillaumine and colleagues (2010), TPB can be considered as more efficient in predicting healthy eating than the Social Cognitive Theory or the Health Belief Model, because it expressly predicts intentions which have a key role, especially in changing dieting behaviors (c.f., Armitage & Conner, 2001a; Blanchard et al., 2009a; Rise et al., 2010).

Research has consistently confirmed that attitudes, subjective norms and perceived behavioral control are significant predictors of intentions (see for example, Blanchard et al., 2009a; Sjoberg, Kim, & Reicks, 2004). Nevertheless, many doubts are still there about the so called “sufficiency” of such variables in predicting deliberate human behaviors. Such research in fact, demonstrates that they are not always that effective (Armitage & Conner, 1999; Rise et al., 2010). For example, it is now well known that many behaviors relevant to the environment involve largely routine-based processes and are deeply influenced by moral and social implications (Bonnes et al., 2006).

In order to enhance the amount of variance in behavioral intentions and behaviors, different strategies have been used, including the addition of other variables. Some interesting results came from adding group and Self-identity (Chatzisarantis, Hagger, Wang, & Thøgersen-Ntoumani, 2009; Rise et al., 2010; Sparks & Guthrie, 1998). In particular, Self-identity, i.e. “*the salient part of the actor’s Self which relates to a particular behavior*” (Armitage & Conner, 1999, p. 73; see also page 32), seems to provide health behaviors with additional variance such as, for instance, healthy eating (Armitage & Conner, 1999; Conner & Armitage, 1998; Åstrøm & Rise, 2001). A consistent number of studies, in fact, found that Self-identity accounts for between 3% and 9% of the total amount of variance in behavioral intentions above and beyond the TPB components for a broad range of health behaviors such as physical activity (Hagger, Chatzisarantis, & Biddle, 2002), donating blood (Armitage & Conner, 2001b; Giles, McClenahan, Cairns, & Mallet, 2004) and dieting behaviors (Armitage & Conner, 1999; Sparks & Guthrie, 1998). In particular, a recent meta-analysis conducted by Rise and colleagues (2010), found out that Self-identity is a significant predictor of intention, with the second highest beta weights (the first one belonging to attitudes).

Finally, evidence affirmed that the weakest component of the TPB model are subjective norms (Godin & Kok, 1996; Sheppard, Hartwick, & Warshaw, 1988). In order to overcome this problem, it has been suggested to split subjective norms into two components which reflect socially influenced norms (i.e., descriptive and injunctive) and Self representational norms (i.e., Self-identity and group identification; Abraham, Sheeran, & Johnston, 1998) and some studies have reported moderately better results (Rivis & Sheeran, 2003).

2.5. The psychology of meat consumption

Several approaches have been used to understand food choice. In this second chapter three overarching theories have been presented. The first focused on psycho-physiological models with an emphasis on the role of brain sections and neuro-chemicals, the impact of chemical senses on hunger and satiety and the relationship between food and cognitions. The second has presented developmental perspectives which emphasize the role of parents and important others, cues and associations in the development of food preferences. Finally, the third focused on cognitions, such as attitudes, beliefs and values, and the way they affect food choice. All of these psychological approaches do not explain thoroughly every single aspect and process related to food decision making. Primarily, they focus on the individual's food choices and not on the collective ones, minimizing the effect of more complex variables, such as cultural experiences and social meaning of food, meals, but also body shape and size. However, all of these psychological approaches bring additional insights to understanding why people eat what they eat and, overall, they help in finding new strategies to push people into eating better (Ogden, 2010).

Among the different types of food choices that have been investigated in these fields, much interest has been paid to meat consumption. As previously described in the first chapter (see pag. 42), meat seems to be the food more invested with symbolic meanings and food in turn gives rise to many expressions of our Selves. Moreover, many choices about meat do not lead to eating and that offers interesting perspective for the psychology of food, especially considering health and environmental implications (see pag. 16). In fact, meat production in highly industrialized setting is one of the most environmentally harmful activities in world, due the great amount of plant material required, and the consequently large amount of land, water and other raw materials involved (de Bakker & Dagevos, 2012). Moreover, a meat-based diet is also associated with several health problems (WCRF, 2007).

Meat is still at the center of the diets of a large number of people (Abrahamse et al., 2009; Beardsworth & Keil, 1997). Research has revealed that its choice does not depend on a single variable (e.g., nutritional values) but also depends on many other factors, such as value for money (Richardson, Shepherd, & Elliman, 1993), taste and health (Kenyon & Barker, 1998) and social influences, like family and friends (Lea & Worsley, 2001). The effect of social influence in the domain of food and eating behavior is well established (see for example, Herman et al., 2003) and meat consumption is no exception. For example, a classical study

conducted by Lewin (1958), has demonstrated the power of social influence in changing eating habits and, in particular, disliked foods, such as beef heart or kidneys.

Moreover, recent insights by Rousset and colleagues (2008) suggest that also facial expressions can affect the desire to eat meat. In particular, their results reveal that, in the case of familiar meat products, positive emotion enhances the desire to eat in the subjects expressing low eating desire, mostly women. On the contrary, negative emotions decreases the desire to eat on those expressing a high eating desire, usually men.

Importance of meat consumption in diet seems to be well rooted in the society, also in the new generations. For example, in a research conducted by Worsley and Skrzypiec (1998), a group of teenagers reported that the main reasons for eating meat derive from pressures by others, the idea that a vegetarian diet could be unhealthy, a perceived lack of equal alternatives (vegetarian meals were described as hard to prepare, boring, limited in choice and disliked), the taste of meat (which they liked a lot) and that killing animals for food was acceptable (Berndsen & van der Pligt, 2004).

However, despite all the benefits of eating meat, many people report strong feelings of ambivalence towards it, which means that a person can hold, at the same time, both positive and negative evaluations towards eating meat (Berndsen & van der Pligt, 2004). It is believed that one of the main reasons for this ambivalence, stems from the several meat scandals of recent past, such as the Bovine Spongiform Encephalopathy (BSE or “mad cow disease”), illegal hormones and medication in livestock, swine flu, etcetera. In fact, researches investigating these conflicting attitudes mainly reported conflicts between pleasure and health (Povey, Wellens, & Conner, 2001; Sparks, Conner, James, Shepherd, & Povey, 2001).

However, several studies identified reasons to avoid meat other than health, which include moral aspects of killing animals, cruelty in breeding farms and eating meat and the beliefs about the environment (Beardsworth & Keil, 1991; Povey et al., 2001).

Recently, most psychological research about meat consumption involved moral eating and vegetarian studies. Several lines of evidence suggest that Westerners are more likely to go vegetarian for four main reasons: concern for animal welfare, environment and health and disgust for the sensory qualities of meat (see for example, Fox & Ward, 2008a Santos & Booth, 1996; Worsley & Skrzypiec, 1997; Worsley & Skrzypiec, 1998). In particular, the first three (animal welfare, environment and health) seem to be the more relevant. In fact, only few people stated they have become vegetarian just because of disgust for the sensory qualities of meat. However, disgust seems to be a common element that develops later in time after becoming vegetarian (Rozin et al., 1997), due to moral misgivings about meat consumption.

Usually, it is a consequent reaction to meat and not the cause of vegetarianism itself (Fessler et al., 2003).

Furthermore, a few studies reported that vegetarians differ from omnivores/meat eaters in a number of attitudinal and demographic variables. For example, vegetarians are less likely to accept social hierarchies (Allen, Wilson, Ng, & Dunne, 2000) and usually display greater involvement of empathy-related brain areas when they see scenes of both human and animal suffering (Filippi et al., 2010). The emotional sphere is also a key mechanism. For example, Bilewicz and colleagues (2011), found out that vegetarians ascribe to animals similar emotional states to humans for different types of emotions, especially the secondary, such as nostalgia or regret. Instead omnivores think that animals, and those that are typically eaten in particular, have fewer emotions. Moreover, additional evidence has proven that people who deny animal suffering and place animals at lower hierarchical levels than humans, also report a significantly greater consumption of meat (Rothgerber, 2013). Thus, it is believed that a possible way to accept and justify meat consumption is to «*distance animals from humans in terms of their perceived emotional experiences, especially those “higher level” emotions that are given greater value and are more difficult to discern*» (p. 99, Rothgerber, 2014).

SECOND PART:

RESEARCH PROJECT: THE STUDIES

Food choice is a complex entity. The literature review of chapters 1 and, attempted to explain the reasons behind food choices and the network of meanings in which they take place. Food, and meat in particular, holds a central position in every culture. The first chapter explored this complex set of meanings starting from the categorization system, that is a deep psychological structure which accepts, orders or rejects food items, regardless their nutritional values. Acceptance or rejection towards certain foods mostly depend on their mental representation and do not necessarily depend on taste, but rather on the social context. In fact, food taxonomies differ across cultures. Moreover, in the first chapter, the role of food and eating as a communication act has been presented. Food and meat can serve as a statement of the Self and much psychology focused on the relationship between pleasure and denial, Self-control management and sexual expression. On a social level, food can represent religious identity, it can symbolize power, love and caring but also conflicts about health and pleasure.

However, the reasons that move food choices are more elaborate and involve several socio-psycho-physiological processes that go beyond the meaning of food itself. Several approaches have been used to understand food choice. In the *second chapter* three overarching theories have been presented. The first focused on psycho-physiological models with an emphasis on the role of brain sections and neuro-chemicals, the impact of senses on hunger and satiety and the relationship between food and cognitions. The second has presented developmental perspectives which emphasize the role of parents and important others, cues and associations in the development of food preferences. Finally, the third focused on cognitions, such as attitudes, beliefs and values, and the way they affect food choice. All of these psychological approaches, though, do not explain thoroughly every single aspect and process related to food decision making. Primarily, they focus on the individual's food choices and not on the collective ones, minimizing the effect of more complex variables, such as cultural experiences and social meaning of food, meals, but also body shape and size. However, all of these psychological approaches bring additional insights to understanding why people eat what they eat and, overall, they help in finding new strategies to push people into eating better (Ogden, 2010).

These theoretical chapters explained the role that meat plays in past and current society and the reasons behind its choice. However, in recent years, claims for the adoption of vegetarian diets have in been strongly promoted by either sustainable environmental or medical areas. The number of vegetarians in the world is rising constantly and in Italy the vegetarians' percentage is now about 6% (Eurispes, 2013a). However, a number studies and surveys documented that quite a few people that consider themselves vegetarians admit that they also eat meat (e.g., red meat, chicken, and/or fish). For example, Robinson-O'Brien and colleagues (2009) recently found out in a sample often age vegetarians that 46% of them stated to eat fish and 25% admitted to eat chicken. Literature still fails in giving a clear explanation for this phenomenon. However, it is reasonable to believe that possible justifications stem from the social environment. For example, those semi-vegetarians may face lack of suitable alternative or poor social networks (Ruby, 2012). Otherwise, it is reasonable to believe that social opinion about vegetarianism is not that clear and those people are low meat eaters acting under an imprecise operational definition (Rothgerber, 2014).

However, despite the possible explanations for this phenomenon, it is apparent that meat consumption is not easy to give up. In the next chapters, three studies investigating psychological factors affecting meat in a sample of young subjects, autonomous in their purchasing decisions and consumer behaviors (aged 21-31) will be presented.

The first study (chapter 3) aims at examining the role that meat currently plays in the diet and life style of Italians, and how that evolves and changes over lifetime. In particular, mother-daughter relationships have been investigated in order to understand whether or not meat choice simply is a matter of "taste" or if it is influenced by parental diet and family meanings within a specific cultural frame.

The second (chapter 4) and the third study (chapter 5), instead, operate together in a cross-cultural perspective. They aim at integrating core aspects of the Identity and Norms theories with the Theory of Planned Behaviour to explore factors influencing meat consumption. The research is built on a survey investigating the role of social variables (e.g., group norms, social identification) and individual variables (e.g., attitudes). In order to stress cultural differences, a sample of young Italian and British adults, autonomous in their consumer behavior, has been involved

CHAPTER 3.

MEAT IN ITALIAN LIFE HISTORIES

«To bring about a paradigm shift in the culture that will change assumptions and attitudes, a critical number of us have to tell stories of our personal revelations and transformations» (Bolen, 1995, p. 272).

3.1. Introduction

There is a general perception that this is “the time of food”. Food has been an obsessive, compelling need for early mankind, being it a matter of survival and harsh competition. We need food to stay healthy and alive but both in human and many animal societies, food serves functions other than nutrition. Even in those Countries, where food is readily available and affordable almost by everyone, food is a vehicle for a number of social meanings (see chapter one for a detailed review) and its consumption is strongly linked to human relations and culture, highlighting, for example, position, status and belonging (Chamberlain, 2004). Moreover, food has symbolic functions and it is related to religious issues, such as pork for practicing Jews and Muslims and beef for Hindus (Rozin, 2005). Finally, food is a medium for aesthetic expressions (Rozin, 2005). In fact, elaborate, good-looking dishes and experimental cuisines are present in every Country and their existence cannot be justified in terms of nutritional factors only.

In other words, nowadays, what we consider as food is not a simple object (Ogden, 2010), but rather a complex and a pervasive presence “*around the clock*” (Franchi, 2009). It is a primary feature of everyday life, that can be also replete with contradictions, oppositions and it can be a potential source of concern, particularly in relation to health and the environment (Chamberlain, 2004). Paradoxically, in fact, despite the abundance of food, people in developed Countries have never been so obsessed and worried about what to eat and several authorities, from different backgrounds, are working in order to improve the quality of our food choices at different levels (e.g., regulatory, physiological wellbeing, hedonistic,

etcetera). Pollution and health are key issues in modern society and, among all foods, meat consumption is the most controversial and discussed one from the environmental point of view. In recent years, in fact, the claim of meat has risen considerably, also in Italy (Camera di Commercio di Milano, 2010) (see also page 20 for further details). Meat is perceived as nutritious and healthy, it is liked for its flavor and texture (Verbeke et al., 2010) and its consumption is deeply embedded in the culture of Western Countries (de Boer, Hoogland & Boersema, 2007). However, raising animals for food in highly industrialized settings is quite a polluting activity that, at present rates, risks to become unsustainable for the environment. Additionally, eating too much meat, especially the preserved and the red ones, is directly linked to the development of common illness, such as obesity, some types of cancer and cardiovascular diseases (Pala et al., 2009; WCRF, 2007). In the last decade, the growing number of meat avoiders has increased in many Countries suggesting that meat consumption is losing its dominant position (Berndsen & Van der Pligt, 2004). However, recent studies have also documented that part of the people that consider themselves as vegetarians simultaneously admit to eat meat too (e.g., red meat, chicken, and/or fish) (see for example, Robinson-O'Brien, Perry, Wall, Story, & Neumark-Sztainer, 2009). Different explanations have been given for this phenomenon (see page 71) but it is apparent that eating meat is hard to give up and people are not ready for a significant change. Thus, in order to achieve a remarkable shift towards more sustainable and healthy diets, new insights about meat consumption must be revealed.

This study examines the role that meat currently plays in Italian diet and lifestyles and how its consumption has evolved and changed through generations. Although applied marketing research may have investigated the matter with commercial goals, published psychology research is rather scarce and usually focused on disorders or pathological aspects of eating behaviors. A noticeable exception is the recent work of White and colleagues (2011) that investigated meat consumers behavior in the UK, using a qualitative Life Histories approach. The very idea of this study originates from this working paper, to satisfy my curiosity about possible differences due to different cultural influences. Thus, this “Italian” study is based on a set of semi-structured Life Histories interviews (Thompson, 2000), which explores the role of salient beliefs, values related to meat consumption, childhood memories and experiences, and the influence of parenthood, specifically of mothers, given the main role of women in food provision and caring (Roos, Prättälä, & Koski, 2001) and their stronger influence on attitudes and eating behaviors of their children (Oliveria et al., 1992; Wertheim, Mee, & Paxton, 1999). Finally, past and present practices, traditions and symbolic meanings related to

eating meat have been taken into account as well. In the following paragraphs, some findings about meat and eating practices will be briefly examined, along with an explanation about the life histories methodology.

3.2. Meat and food consumption

Among all types of food, meat holds a central position in the diet of many people and cultures, either as a cornerstone of a meal or as the food to be avoided (Fiddes, 1990). Fiddes (1990) stated that «*meat is, to many, almost synonymous with “real” food*» (p.14). This may be emphasized by the wide range of “vegetable meat substitutes”, which today are becoming increasingly available in every supermarket. These products resemble meat in form, dietary role and nutritional values underlying the need to fill a gap in a routinized food system. It is believed that this central position is due to the symbolic nature of meat (see chapter 1, page 42). From an anthropological point of view, meat represents power that people have over nature, not just because of hunting but for the role that meat plays in cultured system (Fiddes, 1990). In fact, meat, more than other foods, is subject to religious restrictions about animals to be eaten or cooking and eating manners (Odgen, 2010). In addition, some studies have shown that meat consumption are related with ideas about gender. In fact, red meat and processed meats function as important markers of masculinity in different cultures (Beardsworth, Bryman, Keil, Goode, Haslam, & Lancashire, 2002; Jensen & Holm, 1999), whereas vegetables, fruits and sweet foods represent the idea of femininity (Roos et al., 2001). Literature has extensively demonstrated men’s preference for meat in Western cultures (Adams, 1994; Bourdieu, 1989; Charles & Kerr, 1988; Fiddes, 1991; Holm & Møhl, 2000) and a recent study, discussing impacts of food consumption, has still reported that «*eating less meat is antagonistic to prevailing socio-cultural contractions of masculinity*» (DEFRA, 2000, p.19).

Furthermore, more than other foods, meat seems to give rise to many expressions of our Self (Odgen, 2010). Psychology and sociology investigated the role of food in mediating aspects of social order and organization, helping people to reflexively create their identities (Buchanan, 1997; Fox & Ward, 2006; Giddens, 1991; Negrin, 2002; Williams & Bendelow, 1998). Like other embodiment practices, such as exercise or disability, diet and identity may be mutually constitutive, in that an identity can derive from and influenced by food choices (Bisogni et al., 2002). As Fox and Wardle (2008b) state: «*over time, dietary choices foster*

Self-images and are an on-going cue for reflection and self-evaluation. These identity processes stabilise eating behaviours, establishing a feedback loop that is resistant to change» (p. 2587). In this regard, meat eaters and meat avoiders are not an exception (e.g., Bisogni, et al., 2002; Devine et al., 1999, Fox & Ward, 2008b). For example, people who label themselves as vegetarians do not just express a cognitive predisposition or a response to food, but they may also communicate an embodied practice that is used as a cue to identity (Bisogni, et al., 2002; Devine, et al., 1999, Fox & Ward, 2008b). Instead, people who more strongly identify themselves with being a meat eater hold more favorable attitudes towards eating meat (Abrahmse et al., 2009).

However, from a psychological point of view, research has not clearly understood the relationship between meat consumption and identity, and the link between them is still poorly defined. Instead, investigations have primarily focused on motivations and attitudes towards vegetarian diets (e.g., Beardsworth & Keil, 1993; Dietz, Frisch, Kalof, Stern, & Guagnano, 1995) and eating meat (e.g., de Houwera & de Bruyckera, 2007). In particular, collected data have revealed that, meat and meat products may cause strong dislike reaction or disgust, regardless their taste and their status, due to moral issues (e.g., associating meat consumption to cruelty and killing animals, concern for the environmental impact or political concerns) and health aspects (Allen et al., 2000; Amato & Partridge, 1989; Fessle et al., 2003; Kenyon & Barker, 1998). In the last decade, in fact, the growing number of meat avoiders in many developed Countries suggests that meat consumption is on the decline. People had faced with meat crisis and several scandals such as, the Bovine Spongiform Encephalopathy (BSE), swine flu, hormones in beef and chicken, antibiotics in fish and new dietary guidelines are quickly gaining ground (Berndsen & van der Pligt, 2004). In every County the number of vegetarians and vegans⁹ has increased. However, a number of studies and surveys, as mentioned earlier, documented that a few people that consider themselves as vegetarians simultaneously admit that they also eat meat (e.g., red meat, chicken, and/or fish) (see for example, Robinson-O'Brien et al., 2009). That suggests that meat consumption and, generally, eating behaviors, are far beyond nutrition. Meat is a complex entity and a more holistic view of its consumption is needed. Meat offers pleasure but it is also a potentially confusing and anxiety-provoking ground for eaters and avoiders. Much research in this field tends to consider food as an object and/or as a given element (Ogden, 2010). But people

⁹A vegan person is a follower of the veganism practice, which states to completely abstain from the use of animal products (e.g., meat, eggs, dairy products, fish, honey).

frame food and meat in their relations, in their identities, in their moralities and their cultures (Rozin, 2005). It is also important to consider the historical contexts that influenced meat consumption such as industrialization, economic conditions, personal or global events, etc. Some clear examples are the invention of tinning, a procedure for coating iron with a thin layer of tin, which led to the widespread availability of cheaper, conveniently packed and transportable preserved foods, meat included, or the invention of refrigeration and freezing appliances to preserve food longer (Welch & Mitchell, 2000). Instead, from an economical point of view, the current crisis is changing food habits of many people. In Italy, recent statistics reported a further decrease of food expenditure of about 2%. Italians are now more likely to eat pasta, egg and poultry and less fish and red meat (Coldiretti, 2013). However, the meat still makes the highest expenditure of monthly grocery shopping (ISTAT, 2012).

All these factors, together, help in creating a more comprehensive understanding of the factors related to meat consumption and they cannot be excluded from the analysis. Traditionally, research on meat and, in general, food habits in psychology has provided only a limited understanding of contextual factors behind meat consumption. Much research in psychology has focuses on psychopathological aspects of food and eating behaviors, such as Anorexia Nervosa and Bulimia Nervosa (see chapter 1, p. 38). We know many things about social and environmental conditions that contribute to the development of these disorders. We know the story of many people with eating disorders but still we know little about eating practices of “normal” people in their everyday lives. In order to understand how meat consumption has evolved and changed over lifetime, qualitative studies, including of an historical approach, have been suggested to take better account of meat complexity. The study presented in this chapter is one of these.

The life histories approach has been used in this research. A brief overview of the method is provided in the next paragraph.

3.3. Method: The life histories approach

Qualitative research is an investigation employed in different academic sectors, aiming at exploring meanings and perceptions in order to achieve a better understanding and/or to produce hypotheses (DiCicco-Bloom & Crabtree, 2006). The introduction of qualitative research into social and clinical research brought several formats of qualitative interviews that have «*greatly expanded the process of data collection and the depth of information being gathered*» (DiCicco-Bloom & Crabtree, 2006, p. 314). Qualitative interviews have been mostly categorized into three different groups: unstructured, semi-structured and structured interviews (Bernard, 1988; Fontana & Frey, 2005). It has been pointed out that the distinction between unstructured and semi structured is artificial, because no interview can be really considered unstructured, the focus of this paragraph is on the semi-structured, which are the main source of data for qualitative research (Adams et al., 2002). Compared to the unstructured interviews, which are conducted along with the collection of observational data, the semi-structured interview is usually scheduled before the interview and, generally, is prepared around a set of predetermined open-ended questions. In addition, other questions, that spontaneously emerge during the interview, are taken into account as well, enriching the amount of data collected. The most widely used interviewing format for this type of investigation is the semi-structured in-depth interview. Usually, such interviews are conducted on individuals and last between 30 minutes to several hours (DiCicco-Bloom & Crabtree, 2006). They can also be done with groups of individuals but they risk to turn into focus groups, with multiple participants sharing their experiences and opinions about a particular topic (Barbour & Kitzinger, 1998; Owen, 2001). Individual in-depth interviews have the main advantage to research deeply into social and personal matters, instead group interviews are more restrained by the public nature of the format, hence by forms of social control, so they rarely reach deeply into the individual beliefs, even though they can collect a wide range of experiences anyway (Chirban, 1996; Rubin & Rubin, 2005).

Among the many types of semi-structured interviews (DiCicco-Bloom & Crabtree, 2006), the “life history interview” (Atkinson, 1998; Birren & Birren, 1996) is a powerful method for digging into personal biographies, inclusive of social and historical facts.

The life histories method is time consuming and not easy to carry out; however it is a very rich qualitative methodology, extraordinarily fruitful and full in possibilities (Connell, 2010), characterized by a particular relationship between the interviewer and the interviewed (Portelli, 1997; Thompson, 1988).

Life histories is a form of “history telling”, based on tradition and oral history. It dates back thousands of years, but it has been used intensively by historians after the second world war in order to add single and personal narratives to the main historical discourse (White, Uzzell, Rathzel, Gatersleben, 2010). It helps making individuals’ lives *«intelligible both by linking together disparate elements of the individual life, and by connecting individual lives to broader aspects of humanity»* (Haynes, 2006, p. 2). In fact, the life histories methodology differs from oral history, in that rather than focusing on big and public events or places, it pays attention on recording ordinary people’s memories and experiences across their lifetime (White et al., 2011). In particular, historians were concerned that increasingly hectic modern lifestyles and the introduction of new technologies, such as phones, would have led to a sharp reduction of written production, such as diaries and memories. For this reason, archivists and historians began to collect as many records as possible and they started giving a say to those groups that official history traditionally neglected, such as working class people, minority groups, women or dissidents (Grele, in Portelli, 2007). Thompson (1988) states that the use of oral history opened a window on previously inaccessible aspects of family structures such as *«the roles of husbands and wife, the upbringing of boy and girls... courtship [and] sexual behaviours»* (p.29). In summary, the life histories approach marks the transition from chronicle to narration, highlighting either individual, social and historical influences on human behavior. These data can be used to make a picture of social structures and social dynamics, enriched by a characteristic emotional depth that are not usually present in other research methods, such as focus groups because of their public nature (Chirban, 1996; DiCicco-Bloom & Crabtree, 2006; Rubin & Rubin, 2005). These can be key information in order to better understand development and behavioral changes; for this reason, the life histories approach can be an extremely valuable tool for social sciences.

As White and colleagues (2011) state, the life histories interview *«can be used to examine every day practices (both past and present), attitudes and values, and memorable experiences, for example, whilst providing the context of the interviewee’s life. A life history interview typically examines the interviewee’s family background, experiences of childhood, school, marriage, parenthood, and retirement (for older interviewees), and present day activities, although the topics are limitless within the bounds of the interviewee’s guidance»* (p. 4). In fact, within this approach, the **interviewer plays an active role**. Rather than being a passive listener or a neutral questioner, the interviewer can be considered as a director and an important part of the dynamics of the conversation itself. Oral histories result for a dialogic exchange. It is a meeting in which the interviewer has to offer some information about

him/herself in order to obtain people revealing their real selves Portelli (1997). That should also prevent the development of what Portelli (2007a) called “*vigilanza rivoluzionaria*” (*revolutionary alertness*), when people avoid to reveal something to unfamiliar persons or to people belonging to a different social class. Moreover, it is needless to say that also biasing situations such as “*I tell you what you expect to be told*” should be avoided or otherwise correctly handled. Finally, the interviewer must “accept” the interviewee, by giving priority to what the person wants to say first and discussing any other relevant matter at the end, to reinforce the importance of the interviewee contribution. That implies that **life histories interviews rarely proceed in a linear way** (Portelli, 2007a). It often happens, in fact, that during the discussion the narrator introduces several time leaps following the thoughts inspired by the themes. Allowing interviewees to follow the chronological logic of their conversation is very important for several reasons. Firstly, as a form of respect. It is very important to give the interviewee as much attention as possible and this usually helps conversation too. As recommended by classical works by Douglas (1985) and Palmer (1928), the process of establishing relationships should not be underestimated. That not just involves trust, respect and privacy for the interviewee’s information, but it also includes establishing a safe and comfortable environment, from a psychological point of view as well. According to Warren and Karner (2005) only through the connection of these supporting factors (called truths), interview research helps in building knowledge about the meaning of human experience and practices.

Within this perspective, during life histories interviews, repeated interruptions and/or rigidly adhering to the questions schedule may lead to the interlocutor’s inhibition. Moreover, some questions of the schedule may not be entirely relevant to the interviewee and data obtained forcing the dialogue, at the end, may not be useful for the research (Yow, 1997). In fact, more than a list of facts and events, the life histories approach aims at finding the relevant meanings for those who lived them. Silence can be a valuable source of information as well. However, it is impossible to entirely exploit people’s memory; thus, interviews are incomplete sources of information by definition Portelli (2007a). Additionally, it is impossible to exclude the influences and perspectives of others from interview’s life. For this reason, the life histories methodology requires to consider the interview as a “unity” (Connell, 2010).

In any case, irrelevant data can be always excluded at a second time, during the analysis process. In summary, it is **important that people feel comfortable during the interview, telling their story how they like**, following the thread of their conversation but also using communication skills they are most familiar with, including jargon and slangs. For example,

dialect is often used for digressions or for talking of specific episodes. In particular, this is more likely to happen when the event is intimately related to the narrators or when it is deeply embedded in the social memory Portelli (2007a).

Frequently, people's stories can involve sad or distressing memories that may accidentally arise recalling other memories during the interview. The interview must respect privacy and never force interviewees revealing facts which they feel uncomfortable to share. However, life histories experts, such as Portelli (1997b) and Thompson (1988), suggest **not to be afraid of asking some questions**, because usually the interlocutor perceives the interviewer's embarrassment and this may ruin the climate of the interview, making people feeling uneasy.

Another peculiar feature of life history approach is asking participants to **name their story**. Anonymity is an essential characteristic of many researches, especially within the frame of social sciences; not just because of the privacy issue but especially for the success of the research itself. In fact, people are more likely to respond honestly in assessment formats they perceive as being characterized by greater anonymity (Anderson, Simmons, Milnes, & Earleywine, 2007; French, et al., 1998; Keel, Crow, Davis, & Mitchell, 2002). However, within the life histories approach, the idea is to enhance individuality offering people the option to put their name on their interview. From an historical point of view, this logic origins in the fact that the life histories approach was born as a tool to give a say to less privileged groups and elder people, enhancing self-confidence and self-esteem. Additionally, they usually take pleasure in telling their story and many enjoy the idea to pass their experiences to next generations (Thompson, 1988).

Life histories approach is a **idiographic methodology**. It allows taking pictures of some realities in order to better understand development and changes. Thereby, the stories are not objective neither trustworthy: they are partial and variable (Portelli, 2007b). However, in this frame, a lack of reliability at the referential level is not a barrier. The life histories approach aims at exploring the narrated event's meaning, rather than at listening to the event itself. Imagination and desire emerge from the gap between narration and facts, and so people beliefs make a much valuable working material. Furthermore, it must be considered that it is very difficult to split the present Self from the past one while talking. Memories are always a mind product, they are always re-elaborated and that also works for related emotions and memories (Portelli, 2007a). Finally, the influence of media and other official sources have to be taken into account. In developed Countries, in fact, it is almost impossible to find illiterate people. Interviewees read books, listen to radio and television and most of them browse the internet and these source have necessarily influenced their thoughts.

Life histories approach allows to collect a richer source of data which does not generally aim at being representative of a certain population. This is not necessarily a limit. This technique reveals in-depth information and helps in building a view of the complexity of some issues as it frames them both into a historical and personal evolution. However, every approach has limits. Apart from the topics selection process and low reliability of people's memory, (as discussed before), which is also common to many other methods, the main limit of the life histories approach sits in the transcription of the interviews. In fact, the transcription process inevitably modifies voiced materials. Transcription is a mere representation of them. As Portelli states (2007a) *«pretendere che la trascrizione possa sostituire il documento originale ai fini di un'analisi scientifica è come pensare di poter fare storia dell'arte solo sulle fotografie, o critica letteraria solo sulle traduzioni»*¹⁰. (p.7). Usually, life histories interviews do not take into account paralinguistic features, such as voice volume, speaker's velocity or pauses, and other types of non-verbal communication that are generally lost in the transcription process. However, these limits do not necessarily reduce the value of the tool itself. For example, many psychological approaches investigate attitudes but little attention is given to their origin and evolution over lifetime. This, in particular can be the case of food. Except for eating disorder, in which past investigation is needed, usually, "normal" food habits are rarely investigated in-depth or sit in a historical frame. Instead, this knowledge could be a real help in finding new effective responses. Undoubtedly, the data gathered with this method are not representative and it is not possible to generalize. However, Armstrong (1982, in Walmsley, 1995) suggests that in many biographies it is possible to find several commonalities and differences, despite all the idiosyncrasy. In particular, some analysis (see, for example, White et al., 2011) have been able to find interesting common categories among different interviews.

In conclusion, the life histories approach can be considered as a reliable and challenging methodology which shares with many other psychological approaches several of the aforementioned assumptions. This study used this approach and its assumptions to examine psychological drivers and social contexts of meat in Italian diets and lifestyles, focusing on the relevant origins, evolutions and changes over lifetime. In particular, it examined in-depth

¹⁰ *“expecting transcription may replace the original document in a scientific analysis is like pretending to make history of art with photographs only, or to make literary critic merely based on translations”*

the role that meat consumptions holds in the new generation of Italian women. Moreover, attitudes, values, family's influences and daily practices are also taken into account.

3.3.1. Participants

In the present study fourteen women – seven couples of mothers and daughters – were interviewed. The point of interest was undertaking some cross-generational comparisons and in investigating some patterns in food transmission and the pattern related to meat consumption in particular. The reasons for these choices are explained below.

First of all, only female participants were recruited, given the relationship between mother and daughter (Birch & O Fisher, J., 2000). Both mother and father have a role in influencing the food attitudes and eating behaviors of their children (Johannsen, Johannsen, & Specker, 2006; Woodward et al., 1996). However, child's characteristics, such as sex, age, birth order, physical appearance or skills, also influence and shape parenting educational practices (Costanzo & Woody, 1985; Holden & Miller, 1999), eating styles included (Golan, & Crow, 2004; Savage, Fisher, & Birch, 2007). Interestingly, in fact, even if siblings live in the same house and share the same food, it has been reported that child feeding practices may be different (Johnson & Birch, 1994; Waxman & Stunkard, 1980). It has been reported that mothers, in comparison to fathers, tend to have the strongest influence on food (Oliveria et al., 1992; Wertheim et al., 1999) and their influence are stronger on daughters (Cooley, Toray, Wang, & Valdez, 2008; Cutting, Fisher, Grimm-Thomas, & Birch, 1999; Elfhag & Linné, 2005; Francis & Birch, 2005; Hanson, Neumark-Sztainer, Eisenberg, Story, & Wall, 2005; Jaffe & Worobey, 2006; Pike & Rodin, 1991). In fact, mothers play an important role in their daughters' diet and they are largely responsible for the development of a healthy control of food intake (Birch & Fisher, 2000; Edmunds & Hill, 1999; Hill, Weaver, & Blundell, 1990).

A second reason behind the “women only” choice concerns the central role that women have traditionally played in the kitchen, also in Italy (Gabaccia & Iacovetta, 2002). In fact, most of the food-related activities, such as grocery shopping or cooking, are conventionally perceived as female prerogatives (Caplan, Keane, Willetts, & Williams, 1998; Warde & Hetherington, 1994). That happens in most cultures, according to cross-cultural research that reveals women's responsibility in the cooking of food and household management (Muzzarelli & Tarozzi, 2003). Last but not least, research suggests that men are still more likely to rely on women for advice and support about food (Blaxter, 1990; Courtenay, 2000).

If research confirms the woman's hegemony in the kitchen, that cannot be affirmed for parent's influence on children food practices. Some studies suggest that parents are the most important influencing factor for food behaviors for their children (Scaglioni et al., 2008), acting as role models, transmitting, directly or indirectly, norms, values and behaviors (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). Conversely, despite this general perception of a strong association between parent and child in dietary intakes, other studies have raised some doubts (Cullen, Lara, & de Moor, 2002; Feunekes, Stafleu, de Graaf, & van Staveren, 1997), pointing out that other factors are more influential than parents in influencing young people's eating patterns (French, Story, & Jeffery, 2001; Vereecken, Inchley, Subramanian, Hublet, & Maes, 2005). In particular, a recent meta-analysis about the food transmission patterns between parents and their children, conducted by Wang and colleagues (2011) stated that *«although the reported degree of association and similarity varied considerably across studies, nutrients and foods, overall, the association is weak»* (p. 186). Thus, further investigation is warranted.

This study aims at throwing additional insights on this topic, in particular related to a specific food. At present, in fact, no studies have investigated food transmission patterns of meat consumption and meat-related practices in an Italian sample.

Women, both daughters and mothers, were recruited according to a number of specific criteria. Daughters were to be aged between 21 and 31 and autonomous in their consumer behaviours, in order to ensure they chose what they eat. Then, they had to be living on their own in large towns or cities (more than seventy thousand citizens) in Northern Italy. They had to have no food allergies or food related problems and no particular cooking skills were required. Finally, daughters had to have a higher education (bachelor degree or greater) or at least to be attending a university course, in the assumption that people with higher education or students are more likely to be interested in changes in general, in health related matters and environmental issues (Olli, Grendstad, & Wollebaek, 2001). Finally, all but one, ate meat at the time of the study. The choice of adding a vegetarian should help in better understanding the role of meat.

Instead, mothers had to be Northern Italian natives and to be still living in the North, to ensure local food availability. Italy is world famous for the variety of his food products and dishes and cooking styles greatly differ across the peninsula. In particular, traditionally, Northern cuisine is based on larger proportions of meat than the Southern one, which uses more fish and vegetables and stems out of the so-called Mediterranean diet.

Most of the daughters were recruited by approaching them at different universities (Università degli Studi di Pavia, Università di Torino and Università degli Studi di Milano-Bicocca). Others, was recruited through email advertisements. Tables 1 and 2 present a summary of key demographic information of all the 14 participants.

Daughter	Age	Born at	Live in	Alone from	Meat eater
Simona	30	Milano	Milano	4	Yes
Paola	26	Asti	Torino	7	Yes
Elena	21	Pinerolo (TO)	Torino	1,5	Yes
Valentina	23	Como	Pavia	5	Yes
Anna	23	Varese	Pavia	5	Yes
Diana	24	Casale Moferrato (AL)	Pavia	5	Yes
Giulia	25	Venaria (TO)	Torino	6	No

Table 3. Key demographic information for each daughter.

Mother	Age	Born at	Live in	Meat eater
Tiziana	58	Milano	Milano	Yes
Onorina	60	Priocca (CN)	San Damiano (AT)	Yes
Silvia	58	Carignano (TO)	Pinerolo	Yes
Carla C.	51	Como	Como	Yes
Emanuela	54	Varese	Varese	Yes
Giusy	50	Morbegno (SO)	Lomello (PV)	No
Carla T.	59	Costigliole d’Asti (AT)	Torre Pellice (TO)	No

Table 4. Key demographic information for each mother

3.3.2. Design and Interview Schedule

Before the interview, mothers and daughters have been asked to keep a seven days food diary in order to better monitor meat intakes (see page 175 Appendix B). Diaries, in fact, are considered one of the most accurate of self-report methods in motivated groups (Bingham & Day, 1997) and they can be a very helpful support in order to reduce social desirability bias that might affect interviews. Literature, in fact, affirms that under-reporting answers are quite frequent in women that fear negative evaluations for their eating habits and behaviors (Subar et al., 2003; Tooze et al., 2004).

Semi-structured life histories interviews took place between July 2012 and January, 2013. The interviews were conducted either at the homes of the interviewees or at the premises of Milano-Bicocca University. All of them lasted between one and two hours each. All but one interviews were conducted “vis-à-vis” with the interviewee. Giusy only interviewed in the presence of her partner. Even if he hasn’t had an active role in the interview (he was sitting in the opposite corner of the room browsing the internet) his presence might have had some influence.

Prior to the interview, the subjects were asked to sign an informed consent form, which provided them with a list of their rights. The form was also meant to acquire permission to use voice recordings as a source of data for publications and further work. Moreover, the interviewees were given the choice of remaining anonymous or of being named, as well as whether they would like their voice recording to be deleted, in which case the researchers would have been allowed to work solely on a transcript of their interview. Finally, interviewees were reminded they could terminate the interview at any time.

The interview schedule was built on the schedule used by White and colleagues (2011), which was in turn based on a schedule developed by Thompson (2009) for the Edwardians Project (see, appendix C, page 183). Schematically, it includes fourteen macro-areas of investigation:

- Family background (e.g., where were you born? What did your parents do at that time? Do you have any siblings?)
- Domestic routine (e.g., what kind of upbringing did you have? How was the cleaning and the washing done?)
- Meals (e.g., who was in charge for cooking? Did all the family sit at the table for the meal?)

- Family activities at home (e.g., when you had a birthday would it be different from any other day? How did you spend Christmas Day?)
- Family activities outside (e.g., did you ever go away for a holiday? For how long? Where?)
- Weekends and religion (e.g., could you tell me how you spent Saturdays and Sundays in those days? Was your family religious?)
- Work (e.g., while you were at school, did you have a part-time job or any means of regularly earning a little money?)
- Home life after finishing school (e.g., did you continue to live at home? For how long? Did you go to university?)
- Marriage (e.g., at what age were you married? Can you describe your wedding day?)
- Childbirth and infancy (e.g., how many children do you have? What changed when you had children? Did you receive any help?)
- Family life after marriage (e.g., how was your routine? How was your new domestic routine? How was the cooking done? How were your holidays and weekends?)
- Relations, friends and neighbors (e.g., did you ever go out to visit friends or neighbors? Did they live nearby?)
- Other interests and leisure (e.g., how do you and your husband spend your time after work is over? Did/do you ever go out together in the evening? Where? Do/did you have any hobbies? Do/did you do any gardening?)
- Present day (e.g., do you do a lot of cooking yourself? Do you dine out much? What is your favorite type of food? Do you enjoy cooking?)

(Obviously, the daughter's schedule ends at "home life after leaving school").

The schedule was not meant to be rigidly followed but rather used as a general guideline for the interviewer, to assist in focusing on specific and important items. As it was explained in the section on the life histories approach, the interviewer did play a role in structuring the interview and picking topics that interviewees wanted to elaborate in greater detail.

3.3.3. Equipment

A Sony ICD-UX512 digital voice recorder has been used for the interviews. Then, voices have been transcribed to a Microsoft Word document by an independent transcriber not associated with the project, as previously done by other researches (see, for example, White et al., 2011)

3.4. Findings and discussion

3.4.1. Data analysis

The interview transcripts were analyzed using a thematic analysis method (Braun & Clarke, 2006), supported by a qualitative analysis tool, MAXQDA, 2007. This method aims at identifying patterns within a dataset that has to be collocated into corresponding categories, or themes. In this case, any food related data has been recognized and coded. Usually, themes can be created in two ways, with a bottom up approach or a top-down one, and then they are condensed into broad categories. For this study, the second one has been chosen. Previous categories, created by White and colleagues (2011), have been applied to this research. However, new elements about food and meat consumption emerged and, consequently, were properly coded into themes.

3.4.2. Themes

The thematic analysis reveals the presence of several food related themes, most of which were also present in the work of White and colleagues (2011). Themes from this rich data set reflect the individual's sphere, society, cultures and rituals, and they have been grouped (see figure 6) as follows:

1. functions that meat serves;
2. subjective interpretations of meat;
3. origins and changes in meat consumption and meat-related food practices;
4. past and present cultural conditions;
5. taste of meat

Themes will now be described in greater detail and, in particular, the role of meat will be discussed using extracts from the life histories interviews.

In most of the interviews, reference is made to popular Italian dishes or to the structure of Italian meals. To Italian readers such names have an obvious meaning and the relevant ingredients, textures, tastes and appearances are quite likely to be well known. This may not be true for other readers and, for their convenience, a small glossary (appendix A, page 171) of Italian culinary terms is attached. In the study text, such terms are highlighted in *italics*.

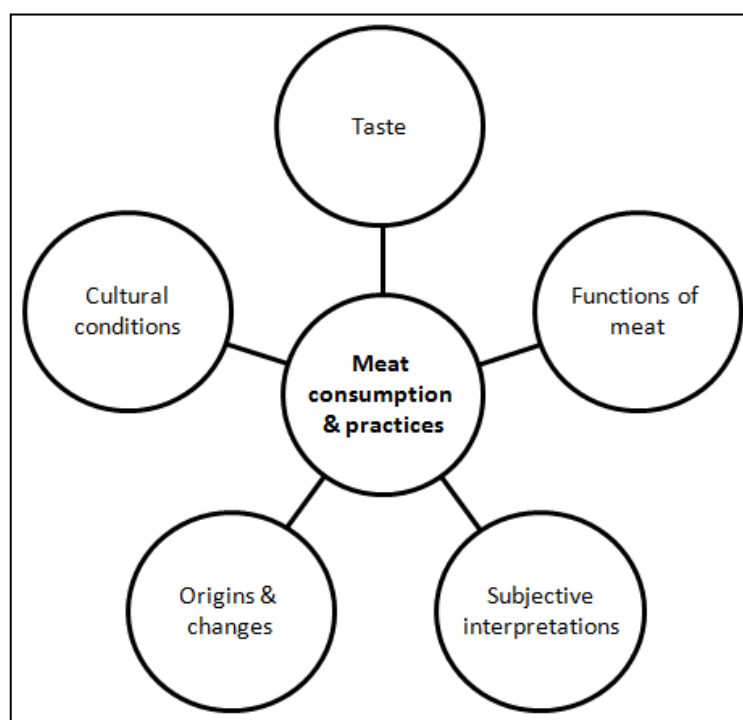


Figure 6. Themes affecting meat consumption in the Italian sample, summary scheme

The functions of meat

Food entails a number of meanings that go beyond nutrition (see chapter 1). Above all, food can act as form of social interaction and the women interviewed in this study confirm it. However, food also serves necessity and health and plays a role in the development and display of capabilities (e.g., the ability to make elaborate and praised traditional meals, such as *casoeûla* or *agnolotti*). Interestingly, meat played an important role in each theme as it will be discussed in the next sections.

Food as a catalyst for social relations

Sharing food is an essential social practice that can be found in every culture. It may have very deep origins, as it has been well documented in non human, primate and non-primate societies, where it strengthens bonds and set hierarchies (Melis, Schneider, & Tomasello, 2011). Not surprisingly, then, the strongest themes which emerged during the analysis concerns the way in which food serve as a catalyst for social relations. Food is an excuse to see people and stay together and meat, and meat based dishes, have a great visibility in this function; this emerges from both samples, British and Italian. Both mothers and daughters spotted meat in the most important moments when Italian families and friends sit together around the table. However, compared to the British sample, Italians seem to have more occasions to share food. This reflects a typical aspect of the Italian tradition that fosters conviviality at the table.

Christmas lunch, New Year's Eve dinner or New Year's Day lunch, dinners with friends and weddings (by mothers) were unanimously appointed at the top of this context, followed by Easter and Easter Monday. Conversely, in this sample, the more routinely Sunday lunch did not always serve as a special moment for social relations, except for the family of Valentina. Carla C., Valentina's mother, reported:

«tutte le Domeniche a mangiare da mia sorella e mia mamma.. quindi vado a Canzo e mangiamo tutti insieme, quindi ci sono i miei genitori, mia sorella con la sua famiglia, io con la mia famiglia, ci troviamo e mangiamo tutti insieme [...] mia mamma sì, è speciale poi sa cucinare un po' di tutto perché mio papà è un cacciatore, un pescatore, un raccoglitore di funghi, di castagne, per cui la mia mamma ha un'ampia gamma di.. cose da cucinare fra cui la selvaggina che la cucina benissimo [...] e quando non c'è la selvaggina comunque fa

sempre tutte le Domeniche o il coniglio, o la gallina arrosto, o.. cioè la carne, primo e secondo, a casa mia c'è sempre primo e secondo»¹¹

However, meat is always present on Italian Sunday tables. Giusy, recalling her childhood tells «*la Domenica c'era il coniglio con le patatine fritte*»¹². From an historical point of view, Sunday lunches were for the many poor the only decent meal of the week (a kind of religion related reward) and, for the lower clerical middle class, the chance to pretend to be, if not “rich”, at least “respectable”. Carla T., Onorina and Giusy, who lived in poor rural areas when they were children, still recall the lack of food. They were not properly suffering from hunger but certainly they were not enjoying abundance. For example, Carla T. remembers «*si mangiava mezzo uovo a testa, mezzo uovo sodo a testa.. quindi (ride) [...] la Domenica si facevano gnocchi[...] venivano conditi con forse un pochino più di carne*»¹³

As White and colleagues (2011) correctly point out, «*the Sunday lunch has something special, distinct from the everyday meals. This echoes the private, family-orientated nature of the day itself*». The main reasons why Italian families gather around the table on Sundays can be either re-affirming the family link, when children start living on their own (much later than in the UK) or just a normal lunch, in the sense that Italian families normally have meals together, when working schedules allow. On Sundays, however, most of the interviewees have something special, where special may mean “tastier”, or more “elaborate”. For example, Anna, talking about her mother, said: «*le cose [...] che tiene per il weekend, per la Domenica, che quindi magari fa o la polenta con l'arrosto, il brasato.. lo spezzatino.. eh appunto con la polenta, oppure fa, non so, le lasagne*¹⁴». Interestingly, meat is also present at Sunday lunch

¹¹“*on Sundays I go and have lunch at my mother's and sister's... hence I go to Canzo and we all have lunch together, hence there are my parents, my sister with her family, my family and me, we meet and we all have lunch together [...] yes, my mother is special, then she can cook a bit of everything because dad is a hunter, a fisherman, a mushroom and chestnuts collector, so that my mother has a wide range of ... stuff to cook among which game that she can do very well [...] and when there is not game, every Sunday, she cooks either rabbit, or roast hen, or ... I mean meat, first and second course, at home there are always first and second*”

¹²“*on Sundays, we always had rabbit and chips*”

¹³“*we had half an egg each, half a hardboiled egg each, then (she laughs) on Sundays we had dumplings [...] they were seasoned with a little more meat*”

¹⁴“*the things [...] she keeps for the weekend, for Sunday, she then makes maybe polenta and roast, braised meat... stew... er precisely with polenta or, I do not know, lasagna*”

at Giusy's. Although Giusy and her husband followed a vegetarian diet they used to cook roasts for their daughter. Diana, in fact, reported: *«c'era mio padre che cucinava che faceva magari il pollo con le patate fatto al forno, per me, perché poi loro non lo mangiavano, mangiavano solo le patate»*.¹⁵

In particular, it seems that most of the mothers (Silvia and Carla T. excluded, who are less attached to traditions) put more effort in preparing their Sunday lunches as a way to remedy their lack of time during working days. In this occasion they usually work more and cook more traditional meal formats (such as first and second course) over the quicker forms of the week. Onorina, for example, says *«la Domenica cerco di fare qualcosa di più, di cucinare un po' di più, di solito»*¹⁶ and Paola, her daughter, specifies *«di solito la Domenica c'è anche l'antipasto ogni tanto, perché sì c'è l'antipasto, il primo, il secondo, il dolce non necessariamente, ecco la frutta così, però di solito l'antipasto che non c'è mai in settimana comunque c'è un primo, un po' di frutta, un secondo così»*¹⁷

Instead, the Christmas holidays offer proper different occasions to meet many family members, in-laws and friends at the table. To everybody, Christmas lunch (Christmas's eve and boxing day), New Year's Eve dinner or New Year's Day lunch, appear to be the most important platforms for socialization. During these feast days, meat and meat dishes play an important, if not a central role. However, data suggest that the most important thing is that traditional meat-based meals provide an occasion for people to stay and spend time together. Simona, in particular, explicitly tells it: *«beh, il Natale è sempre stato abbastanza stabile negli anni a casa mia, nel senso che... noi festeggiamo il ventiquattro sera, la vigilia [...] il Natale, a pranzo, si andava dai nonni invece una cosa un pochettino più.. cappelletti in bordo, il cappone ripieno [...] Quindi la vigilia questo cenone immenso con antipasti... soprattutto antipasti, qualsiasi cosa [...] non so neanche dirtele tutte veramente... poi magari*

¹⁵“my father used to cook and maybe cooked chicken and potatoes in the oven, for me, because they did not have it, they just had the potatoes”

¹⁶“on Sundays I try to make something more, to cook a bit more than usual”

¹⁷“on Sundays there usually is also a starter, once in a while, because, yeah, there is a starter, first and second course, not necessarily a dessert, and fruit, but usually there are no starters on weekdays, but there is a first course, a little fruit, a second course or so”

si mangia ravioli in brodo e poi un arrosto, qualcosa di leggero; ma non ci si arriva quasi mai al secondo.. è giusto una scusa per trovarsi poi»¹⁸

In a similar way, Onorina reports that recently she and her family chose to celebrate Christmas at the restaurant where they usually book a traditional Piemontese menu (a few starters, first course, second course and dessert) in which meat is ubiquitous, or at least the main component of starters and second courses. The importance to have traditional dishes together is also highlighted by Silvia who, among the sample, is the one less involved in classical family gatherings, and by Carla T., who is vegetarian. Now that she is in charge for the Christmas lunch, she works hard to prepare special meat-free dishes, which however try to resemble the traditional ones, such as *tagliatelle* or *agnolotti di magro* (the vegetarian ones). Talking about her latest New Year's Eve, she says: *«chiaramente a Capodanno se si viene qua la carne non c'è, si fa un Capodanno senza carne [...] i miei amici che son venuti, quando ho messo in tavola gli agnolotti è saltato su un.. il battimano, si son messi a battere le mani. Era tutto buono, quegli agnolotti, cioè, hanno creato.. un.. un'atmosfera diversa no?»¹⁹* Within the Season holidays, New Year's Eve is seen more as an occasion to dine with friends rather than with the family of origin (especially for the younger generations). Also in this case, traditional meat dishes such as *"cotechino e lenticchie"* are cooked and eaten regardless the age. Diana, for example, says:

«abbiamo preparato noi tutta la cena, abbiamo cucinato.. le crespelle col prosciutto e il formaggio.. le crespelle ai quattro formaggi... io ho fatto i dolci [...] hanno fatto cotechino con le lenticchie...»²⁰

¹⁸“well, Christmas at my place has always been pretty much the same along the years, I mean that ... on the 24th evening, we celebrated Christmas eve [...], on Christmas day we went for lunch to the grandparents', instead [we had] a bit more... cappelletti soup, stuffed capon [...]. Hence on Christmas eve this huge dinner with starters... mainly starters, anything [...] I can't even tell them all really... then we maybe have ravioli soup and then a roast, something light; but we rarely make it to the second course... it is just an excuse to be all together”

¹⁹“clearly on New Year's Eve, if they come here, there is no meat, we have New Year's Eve without meat [...] those friends of mine that came here, when I served the agnolotti ...suddenly clapped their hands. Everything was good, those agnolotti, I mean, created ... a... different atmosphere, didn't they?”

²⁰“we prepared the whole dinner ourselves, we cooked... ham and cheese crespelle... I baked the cupcakes [...] they cooked a cotechino with lentils”

An interesting trend that emerges from daughters concerns *Pasquetta* - Easter Monday, a day in which young people enjoy having a barbeque with friends. Interestingly, the daughters' group perceived this event as being part of a well-established tradition even if their families did not report it as such at all. Clearly, Anna states: «*nel senso, mi sembra una cosa classica[...] che il giorno di Pasquetta diciamo: "si inaugurano tutte le grigliate dell'anno!"*»²¹. All the daughters reported to attend Easter Monday barbeque, even Elena and Giulia. During the interview, Elena, who has been a vegetarian for four years, recalled that she usually joins those barbeques bringing extra dishes to share with her friends, such as rice salad. Instead, Giulia, the daughter that recently turned vegetarian, tried to skip them but, once she was involved in one, she ate a little of meat anyway, despite her attitudes. Now she is quite concerned for the next and she doesn't know what to do.

Finally, weddings are another important occasion in which food servers as a social catalyst. All the interviewed mothers are married and they all had a wedding party. All of them underlined that wedding parties are a chance to stay together to share the joy of the day and celebrate it with good food. In fact, their weddings differed in number of guests and styles but they all had a luncheon. In this case, everybody, even the vegetarian ones, opted for a traditional menu. In Italy, a menu for special occasions must be "tasty" and "rich" and include an *antipasto* (entrée), a *primo* (first course), a *secondo* (main course), *contorno* (side dish), cheese, dessert and fruit, not to mention beverages. There are no rules to follow for antipastos, as they can be made of a variety of tasty foods, including fish and meat items. Rules however apply to *primi* and *secondi*. The former (either a soup or a pasta-based dish) have a main "vegetable" component, but they very often include meat (such as different types of hams or mince) as sauce or as taste enhancer; the latter are mainly meat or fish, where veggies are used only to add particular scents or flavors. *Contorni*, are instead mandatorily vegetable-based. Interestingly, whilst meat was always referred to in the conversations about festivities, dinners with friends and Sunday lunches, it has been rarely mentioned for the weddings. Recalling the structure of Italian menus for important events (and weddings *are*), it may be assumed that interviewees did not mention meat because it was obvious that there was. This may be confirmed by the interviews of both vegetarian mothers, Giusy and Carla T., who specified they had meat in their menu. In particular, Carla T., says: «*abbiamo fatto questa*

²¹“*I mean it looks like a classical thing to me [...] that on Easter Monday we say: "we open the year's barbeques!"*”

festa di cento e più persone, dove il pranzo è stato appunto preparato però da mia madre che ha preparato degli arrostiti che ha fatto cuocere nel forno del panettiere di fronte a casa nostra, e... e gli amici invece hanno preparato tutto il resto [...] Finito il pranzo di nozze [...] siamo diventati vegetariani»²². In this case, although it was not clearly stated in the interview, it can be reasonably supposed that including all that meat in the menu had been done not to displease the parents and the expectations of their guests.

Therefore, consuming food with others seems to be more relevant to the social contact than to the simple act of eating. It is apparent that food is a strong catalyst for social relationships and meat and meat dishes are focal points of the celebratory meals, also in Italy. They are part of a well-established tradition that gives people an excuse to sit down together around the table on a special day and talk. However, the stories of Giusy, Carla, Elena and Giulia, who are or have been vegetarians, remind us that meat per se may not be as important as it might be expected. In fact, in these special days, what is eaten seems to be not so important. Instead, the act of staying together with family and friends, often in a way that is considered traditional, is something that both mothers and daughters clearly value. However, meat dishes are an indisputable part of tradition.

Necessity and Health

The second strongest theme which emerged during the analysis concerns the role that meat plays in maintaining health. For the majority of Italians interviewees, mothers in particular, meat is strongly believed to be an essential part of a proper diet and, in particular, that of children. All the mothers but Carla T. provided their children with meat when they were young. Tiziana, for example says: «*quando Simona era più piccola, appunto che doveva mangiare chiaramente cercavo di fare sempre primo e secondo ecco. Però.. tante volte facevo anche solo il secondo [...]mi sembra più completo»²³. Similarly, Onorina reports: «*Io cercavo**

²² “we had this party for hundred and more people, where by the way it was my mom herself that prepared the lunch that made the roasts and she had them cooked at the baker’s in front of us and ... friends instead made all the rest [...]. After the wedding luncheon [...]we became vegetarians.”

²³ “when Simona was a little child, she exactly had to eat, I clearly always tried to make a first and a second course, that’s it. Yet... many times I made only the second course too [...] it looked more complete to me”

di dargliela tutti i giorni [...] un pezzettino, non mattino e sera eh, però almeno una volta al giorno un pezzettino di carne glielo davo, un primo e un secondo»²⁴.

Even when unnecessary or clearly redundant, meat is given to children (because it is “good for their growth”). Emanuela, talking about her Easter lunch, which was all but light, recalls: *«poi mia sorella fa il capretto, fa il capretto con le erbe amare, al forno, che è molto buono, però siccome ai ragazzi non piace, spesso e volentieri abbiniamo, non so per esempio, un vitello tonnato che i bambini mangiano [...] quando erano piccoli... non mangiavano quelle cose lì, quindi bisognava.. anche quando, per esempio, si facevano cose particolari e a loro non facevi... l’agnello, ma appunto gli facevi... il vitello tonnato»²⁵.*

In this context, the story of Giusy and her husband is particularly meaningful. In fact, Giusy told they did not have full confidence in growing up a vegetarian child. She says: *«ci siamo informati, su cosa praticamente per creare una dieta bilanciata, perché un bambino deve crescere. Non me la sono sentita e anche mio marito ha detto: “mah sì, ma mangi quello che vuole”»²⁶.* Meat is considered as a fundamental food for the proper development of a child. Only Carla T., whose husband is well-known pediatrician and a specialist in nutrition, decided to grow up her children without meat, not without criticism though. She recalls: *«sapevano che noi non la mangiavamo quindi ... cercavano di non cucinarla.. però poi dopo c’è questa cosa: “poveri bambini”. E quindi mia suocera, per esempio, lei lo faceva di nascosto, di nascosto gli rifilava il prosciutto»²⁷.*

Moreover, meat is perceived as a necessity, as a practical food that allows to have a nourishing meal in a little amount of time. Pasta, although easy to cook, requires more time to

²⁴“I tried to give her [meat] every day [...] a little piece, not both at noon and evening hey, but a little piece of meat at least once a day, I gave her, a first and a second course”

²⁵“then my sister makes kid, she makes it with costmary, in the oven, and it is very good, but since the boys do not like it, we often couple it with, I do not know, for example, with veal in tuna and caper sauce that children eat [...]. When they were little... they did not eat those things and we had to ... even when, for example, we made something special and we did not cook ... kid for them but, precisely, we would do veal in tuna sauce for them”

²⁶“we enquired about what to practically [do]in order to create a balanced diet, because children must grow... I did not feel like it and also my husband said. “yeah, let him have what he wants”

²⁷“they knew we did not eat it then ...they tried not to cook it... but then there is this other issue: “poor children”, And hence my mother-in-law, for example, she made it secretly, she secretly gave them ham”

be prepared and without any sauce is not particularly tasty. Silvia, for example, states: «sicuramente la bistecca ai ferri è la cosa più veloce che puoi fare, con un po' di insalata rispetto a.. cioè fai prima che farti la pasta»²⁸.

The most practical meat is *prosciutto cotto* (cooked ham) which is used as a “light” *secondo*, mostly for dinner, or as “*the*” (normal) filling for sandwiches when travelling or pick nicking. Carla C., talking about her usual food habits at home says: «magari primo e secondo si intende un bel.. buon primo, poi un affettato o un formaggio o carne»²⁹. Instead, Diana, recalling what her mother used to prepare for her when she travelled with her family says: «... panino normale [...] cioè il panino di solito ci metti dentro il prosciutto»³⁰. Analyzing the stories, it indirectly appears that ham is considered by all the interviewees (except for the vegetarians ones) as a basic item to always have in the fridge. Moreover, among all the Italian types of ham, the cooked one is considered as the most healthy. Something good for children but also for people with health problems. In this regard, Carla C., talking about dishes she prepares for her family says: «mia mamma che aveva dei problemi con.. gli zuccheri quindi alcune cose non le può mangiare... e poi anche di colesterolo, il prosciutto cotto quindi c'era la.. diciamo il ripieno della nonna col prosciutto cotto»³¹. Contrary to WCRF (2007) recommendations, that strongly suggest to ban any type of processed meat, *prosciutto cotto*, in Italy, is strongly believed to be an healthy food. Even Onorina, who was very careful in her children's diet, gave them sandwiches with *prosciutto cotto* as a healthy snack.

Daughters also consider meat as a part of a balanced diet, but its consumption doesn't seem to be strongly associated with health. For the young interviewees, in fact, meat is more a necessity, made strong by a well-established routine. In particular, meat allows to eat something nutritious but above all in a quick time. Compared to their mothers, daughters in fact seem to have less time for cooking. Also mothers who worked reported they had limited time for cooking but, probably, their daughters, who are not urged by family needs, can freely

²⁸ “certainly, grilled steak is the fastest thing you can do, with a little fresh salad as compared to... it's faster than having pasta”

²⁹ “possibly, by first and second courses one means a nice proper first and then some salami or cheese or meat”

³⁰ “a normal sandwich [...] that is, you usually stuff the sandwich with ham”

³¹ “my mother had problems with ... [blood] sugar, then she could not have some things... and then also with cholesterol... hence cooked ham was... let's say that grandma's filling was cooked ham”

choose how to spend their time and, in general, none of them seem to be particularly interested in cooking. Paola, for example, tells about her dinners: *«le verdure tutte in padella proprio velocemente con un po' d'olio così e... la bistecca la salti»*³². Much the same, Simona, reports of her lunches when she started cooking as follows: *«mangiavo le cose rapide, la bistecca e l'insalata sono facili e veloci però non c'era un grosso pensiero dietro»*³³.

Additionally, daughters seems to consume ham for further practical reasons, as it doesn't require any coking at all and be kept, in the fridge longer. Valentina says: *«Non avevo proprio voglia di cucinare, sì. Quindi mettevo su la pasta che era la cosa più semplice, prendevo gli affettati con un po' di pane»*³⁴. Interestingly, Diana referring to ham, comments: *«abbiamo preso i beni di prima necessità: pasta, sugo, un po' di affettati...»*³⁵.

Contrary to what is suggested by health authorities, ham is considered as a basic good that can replace light meat dishes. In particular, from the interviews, it is possible to infer that “ham is not meat”, even if it is processed pork. Mother and daughters agree in perceiving “meat” as a separate entity. Valentina, for example, points out that while she was on holiday, waiters used to suggest her to choose only between meat and ham at lunch. Onorina, who stated she never buys meat at the supermarket, actually, buys ham. This way of considering meat is confirmed by Carla T. that, recalling her experience as a vegetarian, tells: *«mi hanno detto che la richiesta di cibo vegetariano anche nei ristoranti normali è aumentata [...] devi fare l'equivalente della portata senza carne, senza.. ecco, senza pesce, senza prosciutto, perché se no ti cominciano a dire: “ma neanche prosciutto?” “E pesce?” e “E tonno?(ride) [...] Cosa mangia questa quindi?”»*³⁶.

³²“the veggies all together in a pan is really quick” with a little oil and... you fry the steak”

³³“I had something quick, steak and salad are easy and fast [to make] hence there were no worries behind it”

³⁴“I really did not feel like cooking, indeed. Hence I made pasta, which was the simplest thing, I grabbed some salami with a little bread”

³⁵“we grabbed the indispensable: pasta, sauce, a little salami”

³⁶“they told me that the demand for vegetarian meals has increased also in normal restaurants [...] one must make the equivalent course without meat, without, you see, fish, without ham, 'cause otherwise they start asking “not even ham?”, “and what about fish?”, “tuna?” (she laughs) [...]. What does she eat then?”

This data clearly point out that Italians consider meat as very important food which is perceived as both practical and healthy. Meat is a necessity but people do not seem to be aware of the total amount of meat eaten. In fact, most of them do not consider ham as a meat, even if it is pork. Moreover, its consumption is more harmful to health than meat itself. Contradictions between meat being seen as healthy or unhealthy is present in these stories. Interviewees have a blurred idea about meat unhealthiness and, generally, the concept is associated to large daily intakes of red meat or fat cuts. Carla C., for example, says about health: *«Allora come le ho detto io carne rossa poca, noi mangiamo appunto più che altro selvaggina, pollame, conigli (ride).. carne rossa un po' meno, poi è chiaro serve anche quello, fra le varie cose, c'è anche quello non è.. non tutti i giorni ecco, magari primo e secondo si intende un bel.. buon primo, poi un affettato o un formaggio o carne, tutti i giorni no, da noi no, mia figlia piccola, lei ne mangerebbe tutti i giorni»³⁷.*

Information about appropriate daily meat intakes are available in Italy but strong misbeliefs about their truthfulness seem to exist. In general, meat and *prosciutto cotto* (ham) are still perceived as nutrition as healthy and claims aiming at reducing the relevant consumption should appeal to different things.

The display of capabilities

As White and colleagues (2011) discovered in their research, cooking and preparing certain dishes requires culinary skills, that interviewees, especially mothers, use to impress family members and friends. Interestingly, meat and meat-based dishes have a great visibility in this role. Carla C., for example, is good at cooking *crepelle al prosciutto* (ham crepes), whereas Paola affirms that her mother is good at making *risotto, pasta fresca, agnolotti* but: *«anche gli arrosti forse i secondi... sì»³⁸*. Tiziana and Emanuela who to have particular cooking skills add that they are also good at some meat dishes. Tiziana, for example, describes in greater

³⁷ *“then, as I told you, I (have) little red meat, we precisely have more of game, poultry, rabbit (she laughs) ... red meat a little less, then it is clear that one needs that too, among various things, there is also that... not every day, there, possibly by first and second one means a nice, good first course, then some salami or cheese or meat, not every day, not us, my little daughter, she would have it everyday”*

³⁸ *“roasts too, maybe second courses ...yeah”*

detail one of the dishes she cooks in winter «*di inverno facciamo la casoeùla con la polenta [...]le costine di maiale, poi io ci metto dentro anche i pezzetti del maiale di lombo che sono.. morbidi, come uno spezzatino [...] E le salamelle ci vogliono [...] Si fanno rosolare, così, si fanno cuocere e poi dopo ci si mette dentro la verza, per ultima, sempre con la pentola a pressione dieci minuti, ed è una puccia diciamo, un sugo. E poi si fa la polenta. [...] O si fa questo o si fa gli ossi buchi con i funghi o si fa lo spezzatino con piselli*»³⁹.

As White and colleagues (2011) also report in their study, the ability to cook meat dishes is not just valued by the interviewees but it is also linked to some positive memories of the past. Both mothers and daughters considered meat dishes as a peculiarity of their mothers or grandmothers. Paola, for example, recalling her grandmother tells: «*a pranzo proprio faceva cose, cioè della tradizione non so gli gnocchi fatti da lei, l'arrosto che ci metteva delle ore e ore a cuocere e... però sì ho sempre mangiato... c'ho sempre.. come si dice? Spesso quel sapore in più eh... che le cose che fa la nonna anche se sono una pasta col pomodoro, ma c'è sempre quel qualcosa in più, infatti me lo ricordo e chiedevo sempre: “come mai quelli di mia mamma (ride) non erano uguali?”*»⁴⁰. Emanuela, talking about her mother, tells instead: «*a casa mia si è sempre mangiato rigorosamente primo, secondo, contorno, frutta.. [...]mia mamma era bravissima a far da mangiare, tutti i giorni mangiare diverso*»⁴¹.

Finally, also daughters enjoy preparing meat dishes, Diana tells she is more specialized on meat and Valentina recalls she prepared a *brasato* (braised meat) for the last Christmas lunch she attended. However, for those who cook more (most of them, in fact, are more likely to cook just the minimum for daily survival), their ability in cooking meat seems to be linked

³⁹“*in the wintertime we make casoeùla with polenta [...] pork ribs, then I put in small pork loin pieces that are.. tender, like in a stew [...] and one needs sausage too [...] you must brown them, so you do them and then, last, you add the savoy cabbage, always in the pressure cooker, ten minutes, and you get a watery gravy, a sauce. And then you make polenta (thick maize porridge)[...] either we do this or marrowbone with mushrooms or stew and peas*”

⁴⁰“*for lunch she made things, I mean traditional ones, what can I say, dumplings that she made herself, roasts that took hours to cook and ...but, yeah, I always had... always... how do you say? Often that extra flavor, eh that things Grandma makes have, even if it is pasta with tomato sauce, they always have something special, and indeed I recall it and I always asked [myself] “how is it that those Mom makes (she laughs) do not taste the same?”*”

⁴¹“*at home, we always rigorously had first and second course, side dish and fruit [...] Mom was a great cook, every day we had something different*”

more to occasional events than to strongly established skills. They are more likely to mention desserts as their strong points (Diana or Valentina) or pizza (Elena). The only exception is Simona. In fact, she likes to cook meat for her friends and in this occasions she prepares her masterpieces *«mi viene benissimo il pollo in agrodolce o il maiale in agrodolce... quel che l'è... però è un po' di anni che non lo faccio.. perché ho cominciato a cucinare molto di più i curry.. quindi mi sono un po' persa via.. ah, mi viene fantastico il.. pollo alle... agli anacardi, quello Thai... quello mi viene bene! [...] Guarda ogni tanto faccio le cene thailandesi... [...] la cucina Thai mi piace un sacco per cui magari invito degli amici... [...] pollo con gli anacardi, se è inverno, perché se è estate, dato che ci vogliono tre ore per cucinarlo, anche no..»*⁴².

Subjective Interpretations

The way in which mothers and daughters show off their abilities with meat dishes, the role that food serves as a catalyst for social relationship and the health related aspects mentioned so far, touched upon some of the subjective interpretations and meanings of meat.

There are different ways in which respondents interpreted meat and its consumption. Mainly, meat is related to tradition, as it has been shown, but its meanings are also related to ethical issues and differ somehow across the generations. Ethic and Generational differences in meat consumption will be examined in the next paragraphs.

Generational differences in meat consumption

When coupled, mother and daughter interviews show a good match of responses and offer interesting insights about how meat consumption has changed over time. However, compared to the English women interviewed by White and colleagues (2011), this group of Italian mothers did not exhibit remarkable differences in the present consumption patterns and food

⁴²“*I make an excellent sweet-and-sour chicken or sweet-and-sour pork... whatever..but it's been a few years now I do not do it... because now I started to make more curries... then I've lost my way, somehow...ah, I make a wonderful chicken with cashews, the Thai style, I make it great! [...] You see, now and then I do Thai dinners...[...] I love Thai cuisine so much so I have friends for dinner...[...] cashew chicken, if it's wintertime, because in the summer, as it takes three hours to do it, I rather not*”

practices compared to the time of their childhood. In fact, the classical *primo* and *secondo* food pattern is still present.

The main difference that immediately emerges is the systematic reduction of the time dedicated to cooking throughout the two generations. Only a minimal part of the mothers' mothers in this group, in fact, had a paid job, so most of them entirely dedicated their time to housekeeping and cooking. As Carla C. comments: «*mia mamma non ha mai lavorato perché gestiva tutto*»⁴³.

At “their” time, the variety of commercial products was very little (and mostly limited to raw materials) and it was largely preferred to prepare food at home rather than buying it elsewhere. Carla T., talking about her grandmother and mother, says: «*le tagliatelle... mia nonna aveva un tavolo che si apriva, in cucina, e le tagliatelle erano.. era un cibo normale, con più o meno uova a seconda della stagione[...]erano cose di routine [...] conveniva farsela (la pasta)!Ancora adesso mia madre che ha ottanta.. ottantatre anni con acciacchi eccetera.. ha difficoltà a stare in piedi eccetera.. “eh sì sto facendo da mangiare” dico: “cosa fai?” “E sto facendo due tagliatelle” dico: “ma che caspita! (ride) Compra gli spaghetti!”..»⁴⁴. In a similar way Onorina recalls: «*spesso facevano pasta fatta in casa, tagliatelle me lo ricordo, a volte gli gnocchi [...] carne anche si mangiava: coniglio, pollo, a volte anche magari carne tritata che si acquistava, però*»⁴⁵.*

Instead, only two out of seven of the interviewed mothers kept this habit and mental attitude. Not surprisingly, however, those two enjoyed flexible working times and one of them, the vegetarian one, has even retired at a relatively young age by adhering to an early pension scheme. Onorina gets the point clearly: «*se lavori tutto il giorno non è che hai tempo, io lo potevo fare nel senso che avevo un orario part-time [...] con l'insegnamento avevo delle... un giorno libero a settimana, qualche mattina magari avevo solo due ore, due o tre ore... [...]*

⁴³ “mom never had a job, because she managed everything”

⁴⁴ “*tagliatelle...Grandma had a folding table in her kitchen and tagliatelle were an usual kind of food, with fewer or more eggs depending on the season [...] they were routine...[...] it was cheaper to make them ourselves! Now that Mom is eighty, eighty-three and she’s aches, troubles to stand up, and so forth (she says) “oh, yeah, I’m cooking” and I say: “what are you making?” “I’m making a few tagliatelle” and I say: “oh my (she laughs) Buy spaghetti!”*

⁴⁵ “*we often had home-made pasta, tagliatelle, I remember, sometimes dumplings [...] we had meat too: rabbit, chicken, sometimes even minced meat, that we had to buy, though.*”

mia sorella che era impiegata alla Ferrero che faceva tutto il giorno e non aveva già tempo a fare... così perché lei non veniva a casa quindi...»⁴⁶.

According to the mothers' interviews, at "their" times, especially in the countryside, it was unusual to dine out and most of celebrations took place within domestic walls. Tiziana's comments confirm it: *«i compleanni, da bambini, festeggiavamo in casa. Perché a quei tempi non è che c'era molto ... non si usava molto... primo non c'era proprio l'usanza di andare a mangiare al ristorante piuttosto che... [...] da McDonald, si va a bowling ... si va ... cioè adesso le feste al ristorante ... cioè si festeggiano sempre fuori, no?»⁴⁷.*

In the mid-late sixties, as women started to massively enter the world of work and welfare started to boom over Italian society. With reference to that time, the interviewees implied that they started to spend less and less time in the kitchen. Silvia, talking about her past, says: *«a me piace cucinare, piace cambiare, e sperimentare cose ... nuove anche, cioè, quindi provavo[...] che cioè mi ricordo quando lavoravamo la cena poteva essere anche passare a prendere la bistecca da fare ai ferri e un po' di insalata»⁴⁸.* Similarly, Tiziana tells: *«quando mi sono sposata che lavoravo, .. tornavi a casa la sera non è che avevi troppo tempo, troppa voglia.. perciò magari la bistecca con contorno era il piatto più veloce che c'era da fare, adesso lo faccio ben poco cioè proprio quando non ho voglia di cucinare oppure non ho proprio il tempo»⁴⁹.* Also Emanuela complains that she has no time for cooking and for this reason she has a collection of cooking tools in order to save as much time as possible: *«i miei*

⁴⁶ "If you work all day, you do not have that much time, I could do it because had a part-time job [...] ... as a teacher I had a day off a week, some mornings I even had two hours only, two or three maybe ...[...] my sister had a job at Ferrero's and worked all day and she had no time to ... do so because she did not come back home[for lunch], then..."

⁴⁷ "when we were kids, we had birthday parties at home. Because in those times there was not so much... it was not done that often ...first of all it was not the custom to dine at the restaurant rather than ... [...] at Mc Donald's, or bowling...now people go... they party at the restaurant... so people always celebrate out, isn't it?"

⁴⁸ "I enjoy cooking, I enjoy changing and experiment with new... things too, hence I tried [...] and then I recall that when we worked, for dinner I would have bought a steak to do on the grill and a little lettuce"

⁴⁹ "when I got married and worked, .. I was back home in the evening and I had no much time left, I did not feel like it...so maybe a steak and a side dish were the fastest things I could do, now I quite rarely do it, I mean I do it when I really do not feel like cooking or when I really have no time"

regali di Natale sono sempre cose per la cucina... frullatori e... quest'anno ancora la pentola a pressione [...] io tutte le cose elettriche per fare in tre secondi le uso»⁵⁰.

At the same time, consumption styles changed accordingly and meat consumption and availability raised significantly. Onorina, for example, notices: *«mi ricordo quando ero bambina c'era un macellaio nel paese bon, adesso ce ne sono almeno due o tre»⁵¹*. The majority of them said that they did not have meat every day when they were children, but that they started to have it regularly when they had their own.

However, they also stated that they kept cooking traditional dishes, especially on Sundays and special occasions. Furthermore, quite a few of them commented that when they went to live on their own, they spontaneously started to replicate their mothers' dishes, although with a personal touch. For example, Carla C. says: *«quando sono mi sono sposata ho detto: “va beh, ok, cosa faceva? [...] Mi sono detta: “vediamo se mi ricordo cosa faceva, ah sì metteva l'acqua, poi faceva, non so, il soffritto, poi metteva il dado, poi mi faceva mettere ah il sale...” (ridono) e così pian pianino e molte volte chiamavo e dicevo: “aiuto mamma! Cosa devo fare?” [...] sì, e poi molte volte coi giornali o con questi libri di cucina»⁵²*. Similarly, Onorina tells: *«io ricordo sempre che, quando ho imparato che mi son sposata ho detto: “adesso voglio fare anch'io gli agnolotti come li faceva la mamma”.. perché io comunque prima non li facevo mai, doveva farli lei... perché io non ero brava abbastanza (ride) ho rifatto le stesse cose che vedevo fare, ricordando, come le facevano, ma non le avevo mai fatte prima»⁵³*.

⁵⁰“all my Christmas gifts are things for my kitchen ... blenders and ... this year another pressure cooker [...] I use all sorts of appliances to do things in three seconds”

⁵¹“I remember that when I was a child there was just one butcher in the village, well now there are at least two or three”

⁵²“when I got married I told myself: “well, ok, what did she do?” [...] I told myself “let me see if I remember how she did it, ah yeah, she poured water then she fried onions, then she added a soup cube, then she let me salt it”... (they laugh) and so slowly but surely and so many times I called her and I asked “Help me Mom! What shall I do?” [...] yes, and so many times with magazines or those cooking manuals”

⁵³“I remember that when I realized that I was married I said: ”now I too want to do the agnolotti like Mom did”... because before I never did them, she had to do them... because I was not good enough at it (she laughs) so, I did exactly the things I had to, just remembering what we used to do, but I never did them by myself before”

All of them, kept cooking in spite of the limited time available (no matter if only the simplest possible soup, plain pasta with butter or a steak) leaving little room to readymade products. None of them, in fact, uses microwaveable food. This trend is shared by the daughters' group that may rather have ham and salad, but still are reluctant to "open a tin". Someone admits to buy readymade products but more as a curiosity than as a habit. Carla C. says she seldom buys this kind of products and she negatively comments: *«li ho provati, perché sono curiosa, però poi quando li metti nel piatto dici: "eh.. eh va beh.. e allora? Non mi sono neanche divertita!"* (ride) [...] *c'è molta varietà però.. rubano posto alla creatività, secondo me»*⁵⁴.

The majority of them positively considers today's much larger food offer. In particular, Carla T., underlines that the vegetarian food offer has risen considerably since the seventies. She says: *«un cambiamento c'è stato sicuro, nel senso che non sei più la mosca bianca, cioè capita anche che tu vai in un ristorante intanto il termine vegetariano lo trovi [...] sono anche aumentati moltissimi prodotti e... su cui potrei anche avere molte riserve* (ride) *nel senso che e... soprattutto per i vegani, fanno queste cose... tipo il "formaggio vegano"»*⁵⁵.

Compared to the British sample of White and colleagues (2011), Italian women seem not to perceive so much the duality between complex/sophisticated modern versus simple old fashioned food. Carla T. and Onorina are the only two that bitterly criticized industrial food (but they are also the only ones that produce nearly all they eat on their own). Similarly, Tiziana complained about the disappearance of "old fashioned little grocers" around the corner that sold better quality food. Interestingly, she also quotes that today people would not be able to appreciate it any longer: *«C'erano tutti i negozietti del quartiere che, per me, mi mancano tanto perché [.. se ..] ho dimenticato il prosciutto.. non è che puoi andare al supermercato a due chilometri [...] pollo, il tacchino, che ne so io, i volatili erano più saporiti! Cioè se tu mangi adesso un pollo.. se dovessi trovare ancora il contadino che te lo da quasi dici: "cos'è sto schifo?" Perché non siamo abituati. Cioè, è come quando tu mangi*

⁵⁴ "I tried them because I'm pretty curious but then, when you put them in the plate you say "uh, all right, and then? I did not have fun either" (she laughs)[...] but there is quite a variety although they leave little room for creativity, "in my opinion"

⁵⁵ "there has been quite a change for sure, I mean that you are no longer the only one, I mean that it may now happen that you sit at the restaurant and you find "vegetarian" on the menu [...] there are far more products around too ... which I may have quite a few reservations about (she laughs), I mean that for vegans especially, they do such things ... as "vegan cheese"

il pesce. Il pesce adesso è tutto d'allevamento, se tu mangi un pesce veramente di mare tante volte quasi non ti piace perché non sei abituata»⁵⁶.

The new generation seems to pay more attention to food quality, that was instead given for granted by most of their mothers, especially those who lived in the countryside. Elena, Simona, Paola e Giulia highly value the quality of their food, even if sometimes it clashes with their budgets. Paola, comments: *«se devo comprare la frutta e la verdura, se riesco a andare al mercato preferisco rispetto al supermercato perché cioè a parte che due pomodori li paghi uno sproposito rispetto al contadino, comunque al mercato e poi non sanno veramente di niente [...] la frutta quindi è rimasta molto legata al mercato, frutta e verdura, e... carne in effetti ne prendo molto poca però.. quella invece più al supermercato»⁵⁷.* Also Elena looks for food quality: *«qua c'è il Carrefour che è comodo o, se no, vado da Eataly, se... perché, costa un po' di più.. ma la verdura non riesco a comprarla da Carrefour»⁵⁸.*

Compared to their mothers, the daughters' group seem to have even less time for the kitchen and for them adhering to the “first and the second scheme” is increasingly difficult. A split appears to be occurring in the traditional pattern to the advantage of two “single” courses to be consumed at different times (e.g., lunch vs dinner). Clearly, Paola says: *«una delle libertà che a Torino io e mia sorella così cioè ci siamo prese a livello di cucina [...] è quello di non essere proprio tassativamente legati al primo, secondo, anzi, pranzi magari con un piatto di pasta una volta, bistecca e verdura un'altra cioè non necessariamente un po' di pasta, un po' di secondo, invece mio papà su quello è rimasto.. sì e mia mamma invece no però alla fine lo*

⁵⁶“there were so many of those little shops around the block, that I miss so much because [.. if ..]I have forgotten about ham...you can't go to the supermarket a couple of miles away [...] chicken, turkey, what else, poultry tasted better! I mean that if you have a chicken today, if you would find a farmer to buy one from, you'd say “what's this mess?” ‘cause we are not used to it any more. I mean it's like when you have fish: fish is all from farms nowadays, if you now have a real sea fish you nearly don't like it because we are not used to it anymore”

⁵⁷“if I need to buy fruit or veggies, if I can, I do it at the market rather than at the department store [...] 'cause a pair of tomatoes cost many times more at the supermarket than the production cost at farmer's and also they have no flavor [...] fruit is still very tied to the market, fruit and vegetables, and... actually, I buy very little meat but ... I buy that at the department store”

⁵⁸“here we have Carrefour, that is very handy but, otherwise I go to Eataly, if ... because it is a bit more expensive ... but I really hate buying veggies at Carrefour”

fa perché.. lui è abituato così quindi alla fine gli fa anche la pasta, però i miei sono legati, primo, secondo e frutta»⁵⁹.

This change may have been promoted by the shorter time it takes to prepare just a more abundant dish rather than two.

Different to their mother, daughters are more likely to dine out and to distance themselves from traditional cuisine to the advantage of exotic dishes. Dining out is a habit that is confirmed by the analysis their food diaries. All of them, dine out not less than once a week. Simona says it explicitly: *«nell'ultimo paio di anni un po' con il lavoro, un po' secondo me, crescendo ci siamo imborghesite per cui magari invece di fare le cene a casa ogni tanto diciamo: "andiamo a mangiare al ristorante asiatico, andiamo a mangiare il sushi, andiamo a mangiare qualcosa un po' così".. almeno non hai poi da gestire tutta la casa»⁶⁰.*

Some of them (e.g., Simona e Diana) enjoy cooking curry, something that in Italy was hardly heard of fifty years ago. In general, daughters are more likely to try and cook food that they never had at their parents' home. For example, Paola, never had broccoli, which are not part of their Northern homeland tradition. Similarly, Anna tried soy sprouts that only rather recently became available in Italian food stores. In an interesting way, Diana quotes: *«mia madre sul pesce[...] io mi sono specializzata un pochino sulla carne, piuttosto che anche le verdure»⁶¹.*

However, compared to their mothers, daughters seem to avoid cooking fish. It can be reasonably assumed that economical considerations and the time required to prepare a decent fish dish stand behind this behavior. Mothers, instead, reported that they increased fish consumption compared to their childhood times. In their case, the reasons for this choice can be searched in the fact that, in the Northern Italy inland regions, where the sample comes from, fresh seafood was seldom available, mostly due to transport and preservation issues.

⁵⁹ *“one liberty my sister and I took when in Turin, in the kitchen, [...] was to get rid of that mandatory first-and- second-course rule, so we can have a little pasta for lunch one time and steak and vegetables another one and not necessarily a little pasta and a little of a second course, dad instead is bound to that idea... yes he is and Mom that would not, at the end does so because ... he is used to that, and so, at the end, she cooks pasta as well, so they stick to that, first, second and fruit”*

⁶⁰ *“in the last two years, in part because we work and on the other hand, in my opinion, because growing up we became bourgeois, maybe, instead of dining at home, once in a while, we say: “let's go and have dinner at the Asian restaurant, let's have sushi, let's go and have something like that” ... then, at least, we do not have to manage it all”*

⁶¹ *“mom in fish [...] I specialized a bit in meat, but also in vegetables”*

As White and colleagues (2011) also reported, a small number of Italian interviewees has raised the importance of consuming meat which has been ethically and responsibly sourced. Simona, Elena, Carla T. and, to a lower extent, Silvia, Paola and Onorina prefer to buy ethically sourced meat and this also influence their cooking behaviors, in that they are more likely to find suitable alternatives or spend more time for grocery shopping. Simona, Elena and Carla T. are the more involved in this issue and they reveal to be quite knowledgeable about the matter. Simona, for example, tells of her attitudes towards low meat consumption and how organic food came out after reading an article about intensive animal farming. She says: *«è una cosa che ho deciso ... mi ricordo, credo che tanta parte di questa cosa del bio devo averla presa perché ho letto un articolo sugli antibiotici dati agli animali... e questa cosa mi aveva fatto [...] abbastanza rabbia legata al fatto che noi abusiamo di antibiotici e poi ci lamentiamo che i batteri sono resistenti. Quindi l'idea di prenderli anche attraverso la carne mi sembrava un po'.. per cui ho iniziato a mangiare... [...] carne... sicuramente mai OGM. Non mangio carne OGM da secoli»*⁶².

However, good quality food, organic and free-range meat are more expensive. Simona, however, doesn't seem to compromise with food even if it is not easy. In fact, she says: *«abbastanza impegnativo. Poi devo dire, tipo, se uno impara, che ne so, la linea bio della Coop piuttosto che dell'Esselunga hanno dei prezzi un pochettino rag... più ragionevoli[...] mi piace l'idea di non avvelenarmi più del dovuto in qualche modo, di cercare di ... anche... preferisco spendere un po' di più [...] sul cibo e magari privarmi, che ne so, di un gelato oppure... di una serata fuori... però se devo risparmiare, non risparmio*

⁶²*“it is something I decided...I remember, I must have got involved into this bio thing because I read an article on antibiotics given to livestock..and this [...] drove me mad enough due to the fact the we abuse of antibiotics and then we complain that bacteria are resistant. Then the idea of taking them also with the meat was a little.. I have started eating..[...] meat, for sure, never GMO. I haven't had GMO meat for centuries”*

[...]sull'alimentazione»⁶³. It is interesting that the analysis of her food diary raises some doubts about her food habits because she eats *coppa*, a type of ham which, normally, is never organic. Anyway, that reminds of previous paragraphs comments which explain how hams and salami are very functional foods which are not perceived as meat.

For Elena ethical meat is instead a key issue that incites her to shift towards a vegetarian diet. She states: *«perché io sono stata vegetariana non perché mi dispiacesse per la fine degli animali, per la loro sorte, ma per più il fatto ecologista contro gli allevamenti... e quindi l'inquinamento eccetera.. quindi il pesce quello pescato, posso mangiarlo»*⁶⁴. Even now that she is not a vegetarian any longer, she still maintains a low meat consumption profile and she is interested in ethically sourced meat: *«adesso ragionando, mia mamma compra il coniglio da un suo amico che li alleva lui e quindi quello sì, assolutamente sì, o anche e... il manzo.. tipo lo compriamo da un signore cioè, il più delle volte, da un signore che... tipo macella le due mucche all'anno..»*⁶⁵. The importance of locally grown meat is also explicitly underlined by her mother, Silvia, and Onorina. Silvia, who pays more and more attention to the origin of products, and meat in particular, tells that: *«a volte il pollo, il coniglio, lo trovo ancora da persone che conosco e quindi... magari allevato un po' meglio, poi a volte le prendo anche al mercato, cercando chiaramente eh.. non quello allevato in.. in.. trenta giorni...»*⁶⁶. Whilst stressing that ethical eating is something which she is committed to, Silvia also reports that it is not easy to achieve that goal. Her shift to more ethical meat has been a process that required many years and dedicated time. She comments: *«probabilmente anche legata all'orario di*

⁶³“it is rather challenging. Then, I must admit, if one learns, for instance, about the bio food line by Coop rather than that by Esselunga (popular Italian supermarkets) that is slightly more affordable [...] I like the idea of not poisoning myself more than due, of somehow trying to...even if I'd rather spend a little more [...] for food and instead give up an ice cream or... an evening out... but if I must save, I do not save [...] on food”

⁶⁴“Why I've been a vegetarian, not because of I felt bad about animals dying, or about their fate but rather due to the ecological deal against the breeding business and hence pollution, etcetera ... hence I can have fish, the fished one”

⁶⁵“Now, if I think about it, Mom buys rabbit from a friend of hers who rears them himself and hence that's ok, absolutely ok and ... even beef ...we buy it from a man, I mean, most of the times, from a man that slaughters kind of a couple of cows a year”

⁶⁶“sometimes I get chicken, rabbit from people I know and therefore ... possibly reared a little better, then sometimes I get them at the market but I clearly look for hey ... not those reared in... in thirty days”

lavoro [...] prima facevo i turni e [...] ero impegnata più ore, eh.. probabilmente è più.. cioè, prendevo sotto, la macelleria più vicina all'ultimo minuto, mentre... potendo programmare un po' meglio le cose...»⁶⁷. In fact, among the Italian interviewees those who spend more time for shopping and cooking are Onorina and Carla T. Both of them have been teachers in elementary schools and now, also Silvia is a teacher. In Italy, teachers and pupils follow very similar time schedules. Until recently, most schools were closed at lunch time until the next morning. So teachers had an official working schedule that was in a sense close to present part-time jobs, with a long summer break. This allowed them to invest comparatively more time in the care of their children and homes, if they were interested in such activities. Last but not least, Carla T., Onorina e Silvia live in small hamlets of Piemonte where the Slow Food Movement was born and is very strong and where traditional farming is still a pillar of economy and large properties are dedicated to grazing. Undoubtedly, this helps in finding local ethically grown meat more easily than in other areas of the North.

Finally, also Carla T., spontaneously mentioned ethical meat. As a vegetarian, she cares about animal welfare and the environmental impact of food. She says: *«ecco, non mi sembra giusto mangiare tre volte al giorno carne per un discorso, proprio anche di economia globale, oltre che di salute personale, poi son dell'idea che ognuno si suicida come può e vuole, però eh.. non è giusto ecco che tu ti ingozzi e non è neanche giusto che tu avveleni la gente facendo della carne che, che... che fa schifo insomma, hai avvelenato degli animali per avvelenare degli uomini»⁶⁸. She tries to self-produce everything she can or she buys from sustainable purchasing groups. She appears to have much knowledge about this subject, and her motivation seems to be largely backed by animal welfare.*

Moreover, she believes that eating ethically grown meat is far better and healthier than having other modern meat surrogates for vegetarians and vegans. She bitterly comments: *«formaggio vegano”, la mozzarella [...] sono delle cose a mio parere... assurde! Perché sono o oli, grassi vegetali e... fatti in modo che rimangono solidi che poi... e hanno un gusto.. [...]*

⁶⁷*“probably, I was also bound by my working hours [...] I was on a shift and [...]I was busy for longer hours, ah.. I mean I bought it downstairs, at the nearest butcher at the last minute, whereas... if one can plan things a little better...”*

⁶⁸*“now, it does not look right to me to have meat three times a day for, exactly, also a reason of global economy, besides of personal healthcare; then I am also of the idea that everyone can commit suicide the way they can and like, but, hey, it's not right, really, that you stuff yourself nor that you poison people rearing meat which, ... that is disgusting altogether, that you had poisoned animals to poison people”*

tremendo(ride) [...]l'altra cosa che a me fa impressione... come il muscolo di grano, chissà perché devi chiamarlo "muscolo di grano" cioè (ride) chiamalo glutine con lenticchie[...] mi sembra che se tu hai proprio bisogno di quell'idea, quel gusto che assomiglia alla carne, che si avvicini il più possibile alla carne... e comprati un pezzetto di carne... e... che sia, non so, allevato bene»⁶⁹.

Instead, her daughter, Giulia, who is active in pursuing a vegetarian diet, is not particularly involved in environmental issues, even if she is aware of the way things are done.

In conclusion, it is interesting to stress that the concept of ethics has not saturated all categories yet. Indeed, the remaining interviewees did not comment on the ethical issues implied in meat consumption even if those were explicitly presented as one of the reasons behind this project. A long silence was the only general outcome, even in the case of Giusy and Giulia, the self-defined "vegetarians". This may lead to think that electing to avoid meat is not necessarily linked to environmental conservation and that those who do so for health reasons may do it for just that.

Changes in meat consumption: The effects of structural conditions

Both Italian and British interviews narrate about several ways in which food and eating patterns have changed across the interviewees' life spans. In particular, some patterns did not depend on the person only, but rather were linked to different structural conditions, such as societal, economic and/or physical factors that are beyond the control of the individual. For example, breeding animals, having a vegetable garden, the introduction of new food products or cooking methods have influenced the way in which the interviewees consumed food, meat included. In the Italian sample, that did not happen in the stories of the mothers only. Daughters also, in fact, reported relevant changes due to external factors. Some societal factors have previously emerged describing the role of generational differences. However,

⁶⁹ "vegan "cheese", [vegan] mozzarella [...]those are, in my opinion, ... absurd things! Because they are either oils, or vegetal fats... and made in such a way that they can stay solid... and then they taste [...] awful (she laughs) [...] the other thing that impresses me... like grain loin, who knows why you have to call it "grain loin" I mean (she laughs) call it gluten with lentils [...] it looks to me that you really need that idea, that flavor that tastes like meat, as close as possible to it...come' on buy yourself a small piece of meat, but, what should I say, a properly reared one"

other influential structural conditions for meat consumption refer to territorial influences, travel and weekly routines, as discussed in the next paragraphs.

Interestingly, contrary to the British sample of White and colleagues (2011), financial motivations never explicitly emerged in the Italian sample, notwithstanding the current crisis. Certainly, economic constraints to food choices existed for mothers in their childhood (see Carla t. and her “half egg” story on page 90) but none ever connected food shortage or food choices to lack of money. It must be said that, by common experience, Italians seem to be very reluctant to speak about their incomes, no matter the context of the conversation.

Territorial influences: resource availability

The physical location in which a person lives has a strong influence on food consumption and eating practices, as discussed above. This is particularly apparent within this study. In fact, the environmental richness and geographic diversity of Italy have prompted the development of a wide variety of products and eating habits. In Italy, there are twenty regions and most of them have their own cuisine, along with typical dishes and products. For this reason, the region in which one is born or lives has a great impact on eating habits and food availability. All the Italian women live in Northwestern Italy, in two regions (Piedmont and Lombardy) that are not touched by the sea and that are quite close to Alps. In this way, compared to other regions, whose products contribute to the famous Mediterranean diet, those ones are characterized by a more continental “Central European” kind of diet, rich in butter and meat. All the interviewees, in fact, reported they had very little fish in their lives. Onorina, for example, remembers the lack of fish availability: *«di pesce mangiavamo il merluzzo[...] perché altri pesci... ecco acciughe, si trovavano anche le acciughe... però non ricordo nei primi anni, poi dopo sì quando ero un po'più grande che c'erano poi i supermercati che andavo ad Alba li potevo trovare»*⁷⁰. In a similar way, Tiziana tells: *«Noi il pesce, a Milano, non è che... adesso sì, lo mangiamo, così. Però quando ero bambina.. no, il pesce proprio.. Sì, ogni tanto c'erano.. non so, i pesciolini fritti però non era una cosa che [...] nel milanese si mangiasse*

⁷⁰ “as fish we had cod [...] ‘cause other fish, now yes, anchovies, there were anchovies too, but I do not recall if they were there in my early years, then, when I grew up a little and supermarkets came, I could go to Alba and I could find them there”

molto.. si mangiasse molto il pesce. C'erano ecco, per esempio, lì a Crescenzago passa il Naviglio, e il Naviglio a quei tempi era molto pulito, cioè calcoliamo che quando i miei genitori erano giovani, lì ci si faceva il bagno e... le mamme andavano a lavare [...] nel Naviglio.. perciò era pulito come... come acqua. Una volta all'anno lo chiudevano, per pulirlo[...] il fondo [...]... e lì c'erano le anguille e alla notte [...] gli uomini, bene o male, entravano e catturavano anche le anguille e allora, quando c'era quella cosa lì, i miei nonni cucinavano l'anguilla, [...] quella lì era [...] una cosa.. che ogni tanto, una volta all'anno, avveniva, ecco, di strano»⁷¹.

In Italy, the tradition of eating fish was dictated by religious precepts, even in those regions where its availability was poor, Catholics were not to eat meat on Fridays. More specifically, meat abstinence is still referred to as “fasting” although it does not any longer require actual food abstinence since the Second Vatican Council. Given that Italian meals (mostly lunches) are composed by a *primo* and a *secondo*, the alternatives to meat for the latter one were only fish and cheese. Fish however was recommended by the Church as one of the symbols representing Jesus. Meat abstinence, instead, was (and still is) not optional on Fridays during Lent. However, only the deeply Catholic interviewees, such as Emanuela and Carla C., reported they practice it. None of the girls, instead, seem to follow such rules now that they live by themselves, as confirmed by their diaries.

In the past, lack of fish did not mean meat abundance. Most of the mothers, especially those who lived in the rural areas, told they had very little meat in their childhood. For some of them, like Onorina, Carla C., Carla T. and Giusy, their diet depended on seasonal products from their own fields or their livestock. Giusy, for example, describing her mother's cooking habits, tells: *«primi piatti sicuramente... poi va beh, polenta, pizzocheri... polenta, pizzocheri... e come carne così va beh le salsicce perché noi avevamo.. allevavamo i maiali ma per uso nostro eh.. non.. e quindi avevamo questo tipo di carne ... e poi... carne due o tre volte alla settimana, non di più, però tanto formaggio anche... noi avevamo le mucche e*

⁷¹ “fish, in Milan, we don't... now yes, we have it, so. But when I was a little girl, fish, not really. Well, once in a while, yeah, we had fried little fishes but it was not that usual [...] to have it around Milan, we did not have that much fish at all. But, for example, take the Naviglio shipway: at Crescenzago, it was very clean in those times, think that, when my parents were young, people swam in it and mothers went there to wash clothes [...] in the Naviglio... hence it was as clean as... as water. Once a year they drained it out to clean [...] the bottom [...] ... and there were eels and at night [...] men, somehow, went in to catch them too and then, when they drained it, my grandparents had eel, [...] that was [...] a thing ... that once in a while, once a year, happened, a strange one”

quindi avevamo anche la possibilità di avere il formaggio e poi in Valtellina il pesce non si usa molto, ecco.. (ridono), per cui era più che altro un'alimentazione così, abbastanza.. non proprio varia però insomma erano quelli gli elementi che più spesso mangiavamo, ecco»⁷².

Instead, for younger mothers, who lived in big towns or cities, i.e. Silvia, Emanuela, and Tiziana, seem to have had more meat. Their diets are characterized by products purchased at the markets or supermarkets. Most of their mothers used to work and they used new cooking tools, like the pressure cooker, to cook traditional food in a shorter time. Emanuela, for example, referring to her mother's cooking, tells: *«alla una, una e mezza, si mangiava tutti insieme, lei veniva su dal negozio, preparava.. con la pentola a pressione dei mangiarini buonissimi [...] tutti i giorni mangiare diverso e... e faceva di tutto, faceva la pasta in casa, [...] con la pentola a pressione [...] È stata una delle prime...»⁷³.*

Finally, unlike the daughters', mothers' cooking styles have been strongly influenced by their regional cuisines. All of them are strongly attached to traditions and like to cook or have seasonal and local products. Onorina, Cara T. and Silvia affirmed they cook *Piemontese* style, whereas Tiziana is proud of her Milanese cuisine: *«io cucinavo quello che diciamo era milanese»⁷⁴*. The same applies to Emanuela and Carla. C.. Instead, Giusy's cuisine seems to be less attached to the tradition. Sometimes she prepares some vegetarian dishes from Valtellina (a long valley in the Central Alps), but she never defined her cooking style as "Valtellinese".

Instead, it seems that the culinary styles of the daughters are less likely to be attached to the region. It is reasonable to presume that, the lack of territory-specific resources that affect

⁷²*“first dishes, certainly, and then, well, polenta, pizzocheri (buckwheat pasta with cheese and cabbage) polenta, pizzocheri and, well, sausage as meat because we had, we reared pigs, but just to our own use you see, not for... and so we had that kind of meat... and then ... meat twice or three times a week, no more, but lots of cheese too... because we had cows and so we could also afford cheese and then in Valtellina we do not use fish that much, isn't that (they laugh), hence it was more a kind of diet, rather...not really a varied one but, at the end, those were the things we more often had, that's it”*

⁷³*“at one, one-thirty p.m. we had lunch all together, she came upstairs from the shop, she made excellent things, in the pressure cooker [...] everyday something different and... and she could cook everything, she made pasta herself, [...] with the pressure cooker [...] She's been among the first ones ...”*

⁷⁴*“I used to cook all that can be called Milanese”*

people living in large urban areas and shopping in supermarkets leads to a gradual mix of different cooking styles.

Travel

The physical location in which a person lives has a strong influence on food availability and eating practices but also travelling experiences can have an impact on food consumption. A few Italian interviewees, especially the youngest, reported how traveling affected their eating practices, meat consumption included.

Silvia enjoys travelling and cooks dishes she had in her journeys. Giusy, instead, talking about her father, who lived in England for a while, says: *«a lui piaceva cucinare per cui a volte faceva anche dei pranzettini un pochino diversi... [...] aveva lavorato tanti anni in Inghilterra per cui ad esempio già al mattino si faceva magari le uova con il bacon [...] e ci aveva coinvolti un po' in questa cosa»*⁷⁵.

As far as changes in meat consumption are concerned, traveling experiences have been particularly meaningful for Simona and Giulia. Both of them spent six months abroad, in Belgium. Simona had a post graduate training experience, whereas Giulia joined the European Union Student exchange program. Although they had different backgrounds, for both of them, it was the first time they had to live far away, without the support of their families. They had to face different and new shopping, food and eating practices and that had major consequences on their food choice, especially about meat. It was at that time that Giulia reached her attitudes about meat consumption that finally led her to vegetarianism. She explicitly says: *«e lì ho iniziato veramente, dovendo andare alla ricerca di altri posti dove fare la spesa.. mi sono dovuta un attimo fermare e dire: “bene adesso, come...?” Poi all'estero il cibo non è lo stesso, le abitudini alimentari son diverse, ho detto: “mah..” ci ho riflettuto, da lì è partita la cosa, poi ci ho messo appunto un bel po', un anno e mezzo»*⁷⁶.

⁷⁵“he enjoyed cooking and sometimes he made also a bit different, delicious meals for us [...] he had worked in England for years, and so, for example, he would do bacon and eggs even in the morning [...] and he had us all involved”

⁷⁶“it's there that I really started, as I had to go and search for other places to do my shopping... I had to stop for a moment and ask myself “well, now, how should I... ?” Then, overseas food is not the same,

Simona also faced many problems living far away from her eating habits. She tells: *«mangiavo malissimissimo a pranzo perché non mi portavo quasi mai da mangiare [...] è anche per quello che quando sono tornata è stata tutta un “solo cose integrali”, “solo cose biologiche” (ride).. no, non è vero, già ne mangiavo tanto biologico[...] in Belgio in generale [...] ci sono i reparti cioè proprio i reparti... i... filari vegetariani nei supermercati per cui ad esempio tipo, mangiavo tantissimo.. cercavo di compensare le schifezze del pranzo e magari prendevo gli hamburger di soia.. quello è vero, quello era molto.. era bello»⁷⁷. For both of them, Belgium triggered a healthier lower meat diet. That suggests that traveling may have a significant impact on food choice and, consequently, on the amount of meat consumed. Interestingly, it seems that living away from home leads to valuing native products higher, as they are perceived as healthier and more nutritious.*

The set of weekly diet: The role of routine in Italian food practices.

Despite the differences in residence and food availability, mothers and daughters experienced a very similar set of weekly diet and meal patterns till recent times. Meat on Sunday lunch and fish on Friday have been previously examined. Mothers and daughters also reported to link some food or dishes to specific days, like pizza Saturday dinner for Silvia, Elena and Anna or Diana.

The pervasive role of the Italian meal pattern has already emerged in the previous paragraphs. At the table, Italians usually have menus composed of at least a *primo* (first course) and a *secondo* (main course). Traditionally, the latter usually includes animal proteins, such as meat, fish, cheese or egg. This is an important structural condition that affects mostly mothers, who considered that as a rule to be followed. Interestingly, this meal pattern is also considered as synonymous of complete, hence healthy meal. Emanuela comments: *«a casa mia si è*

eating habits are different, I said: “who knows?” I thought about it and there it started from. Then it took me quite a while, one and a half year”

⁷⁷*“I had terribly awful lunches because I did nearly ever-never take anything to eat with me [...] that is also why, when I came back, I was all after “only whole thing”, “only organic” (she laughs) ... well, it’s not true, I already had plenty organic stuff [...] in Belgium, in general, [...] there are sections, real sections, vegetarian shelf rows in the supermarkets and so I kind of ate a lot, I tried to offset the garbage I had for lunch and I bought, say, soy burgers... that’s true, that was very ...it was nice”*

*sempre mangiato rigorosamente primo, secondo, contorno, frutta [...] quindi noi mangiavamo sempre molto bene*⁷⁸. Echoed Carla C.: «Sì, dico: “tutto, poco”.. cioè, allora primo, secondo e la frutta e l’acqua, sì»⁷⁹.

Moreover, if there is a guest, a proper menu should include an *antipasto* (entrée) and a *contorno* (side dish). Tiziana, for example, says: «*il primo e il secondo è stato sempre fisso [...] if there is a guest ...] facciamo un po’ più.. come posso dirti.. non faccio un primo o un secondo, lì facciamo un po’ di antipasti e poi facciamo un primo e un secondo che poi dopo magari se avanza pazienza, nel senso però.. giustamente non è che posso dire vieni a casa mia a mangiare e devi stare a dieta, insomma*»⁸⁰.

Simona seems to have inherited this “rule”, since she cooks meat for her guests. During the interview she realized: «*invito qualcuno.. dai l’occasione: la carne!*” *Un po’ anni venti come cosa ma.. [...] che è strano perché io mangio quasi sempre soltanto cereali o verdure, più o meno..*»⁸¹.

What is also interesting in this meal pattern is the presence of a strong social norm. *Primo* and *secondo* are not only part of structural conditions, but they are also an expression of habit and norm, widely shared among the members of a community. Within this meal pattern, meat has a strong visibility. Hence, attempts to reduce its consumption interfere with this strong structural condition and go against the social norm. However, this social norm seems to be more relevant to the group of mothers, since daughters are less likely to prepare and follow traditional meal patterns. That may be due to lack of time or desire to cook/impress, but also to economical restraints. Nevertheless, none of these hypothesis has been explicitly mentioned by daughter and further insights are needed.

⁷⁸“at my parents’ , as a rule, we always had first and second course, side dish and fruit [...] so we always ate very well”

⁷⁹“yes! I say: “everything, a little bit”... and so, then, first and second course, and fruit and water, yes of course”

⁸⁰“first and second course have always been a rule [...if there is a guest...] we have something more ... what can I tell you ...we do not do either a first or a second, we do a small starter and then a first and a second and if something is left over, never mind, I mean, rightly, I cannot tell someone “come for dinner” and then put them on a diet, after all”

⁸¹“when I invite someone ... that’s the occasion: meat! It sounds somewhat 1920’s fashioned but .. [...] that’s weird because I nearly always have cereals or vegetables only, more or less”

Cultural conditions

The previous section has shown how societal, economic and physical factors can affect meat consumption and, generally, eating practices across one's lifespan. However, cultural conditions also play a role in this context, in agreement with White and colleagues (2011) for their British study. Attitudes towards vegetarianism and low meat consumption and gender differences in the Italian sample are described hereunder.

Attitudes towards vegetarianism and low meat consumption

In Italy, as in England (White et al., 2011), meat is part of the traditional diet. However, if meat consumption was on the rise when the mothers' group was young, today it seems to be on a decline. In fact, at present, strong attitudes towards low meat consumption are recorded in both mothers and daughters who state that they have very little meat and far more vegetables. Paola, for example, tells: *«ultimamente ho proprio tolto.. la carne [...] non mi manca più di tanto quindi una cosa che proprio non riesco a non mangiare né a pranzo né a cena è la verdura proprio e sono dosi industriali che infatti anche in studio mi prendono in giro perché proprio.. è solo quasi sempre verdura, e poi accompagno con.. magari un pugno di carne, ma proprio poca, poca perché non.. non è che ho una grande passione però.. un piatto proprio..»*⁸². Her mother, Onorina, echoes: *«carne ne mangiamo, ma non è che siamo proprio carnivori, alla fine se cucino tanto.. fa una brutta fine... [...] mi sono ridotta di nuovo a fare un po'.. un po' alla spartana a fare le solite bistecche, a volte faccio l'arrosto, ma poi ne ritiro un po' in freezer perché se faccio un arrosto e anche solo.. non tanto grande, e... dura una vita e allora... [...] anche mio marito, la carne la mangiamo, ma voglio dire, non è che ci manca particolarmente se non la mangiamo, viviamo anche senza»*⁸³.

⁸²“lately, I actually removed... meat [...] I do not miss it that much, then, a thing I cannot really do without, both at lunch and dinner, are veggies and I have industrial doses of those, so that they tease me at the office because it's nearly always vegetables... and then, as a side, I possibly have a little tiny bit of meat, but just a tiny one because I'm not that much after it, but...a real serving...”

⁸³“we do eat meat, but we are not real carnivores, if I cook too much.. [meat] goes down the tube[...]I reduced myself to have some again...the Spartan way, I do the same old steaks, sometimes roast, but then I

Except for Elena, Giulia, Giusy and Carla T. who are or aim at being vegetarians, none of the interviewees seems to be interested in engaging a meat free diet. However, all them pointed out they do not eat too much meat. Even those who declare to like meat emphasize that eating meat is not something they engage with daily. For example, Simona underlies: *«io mangio veramente poca carne»*⁸⁴. Anna, instead, reports she avoids meat during the working days because she knows she will have it in the weekend. So, she eats meat surrogates even if she seems not to enjoy them so much: *«tanto quando torno a casa tutto il weekend continuo a mangiare carne, non la mangio durante la settimana e quindi magari mangio qualcosa di alternativo..»* appunto, tutti 'sti hamburger di seitan, tutte 'ste robe qua un po' .. un po' così.. [...] *in realtà, appunto mangio un po' di tutto poi... nel senso, cioè, magari va un po' a periodi, tipo, adesso sto cercando di impegnarmi a mangiare un po' più di verdure e quindi.. cioè, faccio sempre anche sia la pasta, qualsiasi cosa, però.. con una verdura»*⁸⁵.

All the interviewees praise a diet with a high vegetable content and they affirm to eat lot of them. Even Carla C., who explicitly says she dislikes vegetables, forces herself to eat them for health reason: *«la devo mangiare (ride) è chiaro, però per scelta non lo farei»*⁸⁶.

From interviews, it appears that today eating less meat and many vegetables is socially more acceptable than when mothers and daughters were young. Mothers report to have meat two or three times a week and that they try to cook suitable alternative, like fish, whereas daughters are more likely to test meat surrogates (probably because they are easier/quicker to cook than fish and much cheaper, too).

However, in actual facts, food diaries reveal that they eat far more meat and less vegetables than they claim and that working women and those who are the least interested in cooking are those who eat most in absolute terms. Indeed, eating vegetables seems to be considered as a key part of present diets and attitudes towards low meat consumption are praised.

keep some in the deep freezer because if I do one, even not a big one, it lasts forever and then [...] even my husband, we do eat meat, but, I mean, we do not really miss it if we do not, we can live without it”

⁸⁴ “I really have very little meat”

⁸⁵ “so what, when I’m back home I keep eating meat for the whole weekend, I do not have it during the rest of the week, so, then, I have other choices... all those seitan burgers, exactly, all that kind of stuff [...] in actual fact, I really eat a bit of everything though, ... I mean, I kind of have trends, now I’m trying to commit myself in having more veggies, that is anything I have, even pasta, I have it with some vegetables”

⁸⁶ “I have to eat it (she laughs), that’s clear, but I would not chose to”

Interviewees seem to comply with this cultural trend and “being a person who cares about her health” appears to be an identity they wish to project. Instead, being a vegetarian in Italy, seems to not be socially accepted, yet. Carla T. underlies the difficulties she still faces when she wants to eat out. However, the story of Silvia is of particular interest, as she did not spend a single word about her daughter’s Elena attempts to follow a vegetarian diet. At the same time, Diana tries to convince her mother to give up her no meat diet. Apparently, Italians consider vegetarianism a radical choice. Not surprisingly, in fact, if Giulia describes her brother (who is a meat eater) as the only “normal” person of her otherwise vegetarian family. Thus, being vegetarian breaks up with the Italian cultural condition, even if people seem to enjoy some vegetarian practices.

Gender differences

Italian stories reveal the indisputable role of women in the kitchen, also among daughters. In line with literature review (see page 42) findings, cooking and grocery shopping are still typically feminine activities. Mothers, in particular, provide their families with meals also on holidays, even if they do not like cooking, as in the case of Emanuela or Tiziana. In this sense, Anna, referring to her mother, naturally comments: «*mia mamma faceva sempre da mangiare*»⁸⁷. At the same time, and significantly, mothers are more likely to involve their daughters rather than their sons in such kind of activities. For example, Emanuela admitted she forced in them Anna more than her brothers. However, compared to the times when mothers were young, men seem to be somewhat better at cooking. Silvia, remembers her father could not cook at all. Similarly, Tiziana, who untimely lost her mother, says: «*io mi ero organizzata, che io sia il Sabato che la Domenica cucinavo anche per la sera in modo che, dato che mio papà manco l’uovo si faceva, [...] perché mio papà non ha niente da mangiare [...] certo, non facevo la pasta asciutta, per dire, però magari un secondo.. se facevo, che ne so, lo spezzatino lo facevo di più in modo che un piatto per la sera, per lui, c’era sempre*»⁸⁸.

⁸⁷“mom always did the cooking”

⁸⁸“I organized myself, I did the cooking on Saturday and Sunday for the evening too so that, since my father couldn’t even boil an egg, [...] because my father doesn’t have anything to eat [...] obviously I did

Instead, nowadays, according to interviews, husbands or boyfriends can cook a little and, in particular, they seem to be more keen in cooking meat. Carla C. tells: «*mio marito non cucina tantissimo però le poche cose che fa, le fa.. con cognizione di causa [...] a lui piace cucinare la carne...*»⁸⁹.

However, meat is not only something men cook but it is also what women expect men to eat. There is a general idea that meat is a “manly thing”. Paola, in describing a dinner in a soup-only restaurant with her boyfriend, says: «*lui ha preso quella di carne ovviamente (ride)*»⁹⁰. Instead, Silvia who usually cooks for three girls, meets their tastes cooking more *primi* (first courses).

As widely shown by literature (see page 42), meat consumption is directly associated to men and masculinity. All the interviewees, except for Carla C. and Giulia, cook meat dishes for their men. In particular, the majority of fathers seems to be more attached to the previously described “*primo and secondo scheme*”, which implies a meat or fish dish by default. Onorina quotes: «*capita adesso di fare più.. di fare un primo, piatto unico, però mio marito lui non ama.. lui preferisce primo, secondo, lui è ancora.. se voglio accontentarlo devo fare ancora di questo genere*»⁹¹. In a similar way, Emauela says: «*con loro, con i due uomini [...] spesso alla sera faccio magari anche la carne [...] [mio figlio] ha molta fame quando torna, mio marito no [...] mangia molta meno pasta, e mangia di più secondo*»⁹². Interestingly, also Giusy cooks meat for her daughter’s boyfriend. Diana tells: «*polenta con la salsiccia non l’ha fatta per me, l’ha fatta per il mio ragazzo perché io non è che vada matta per la salsiccia*

not make pasta but rather a second ...if I did a stew, for example, I do plenty, so that there would be something for him in the evening, ever”

⁸⁹“*my husband does not do the cooking that often, but those few things he does he does in full cognition [...] he enjoys cooking meat”*

⁹⁰“*he had the meat soup, obviously (she laughs)”*

⁹¹“*now more often I happen to do ... to cook a first course only, but my husband does not like the idea... he’d rather have first and second course, he still is... if I want to make him happy, I still have to do it that way”*

⁹²“*for them, the two guys [...] in the evening I possibly do meat too [...] [my son] he is very hungry when he’s back, my husband isn’t [...] he has much less pasta and a larger bit of second”*

*comunque, quindi... però quando c'è lì a pranzo anche lui fa un po' di tutto»*⁹³. That suggests that meat is strongly associated to men, who also seem to be more attached to a traditional diet. In fact, whilst eating little meat appears to be the norm for mothers and daughters, it is generally perceived that men need meat and/or that they would find a more “vegetarian” diet unacceptable. Interestingly, in Carla T.’s family, the only non vegetarian is her son. Giulia, in fact, comments: *«mio fratello non è ancora vegetariano[...]a lui piace e non ha nessuna intenzione di [diventarlo]»*⁹⁴.

Taste

Last, but not least, taste strongly emerges as an independent theme within the Italian sample. Meat taste is strongly appreciated by the majority of the interviewees. Emanuela says: *«a me piacciono le costine (ride), le costine mi piacciono da morire»*⁹⁵. Carla C. complains she cannot have the meat she likes during the week because she is at work: *«mia mamma cominciava a dire a mia sorella: “allora domani cosa cuciniamo?” Perché mia sorella va ancora da mia mamma tutti i giorni a mangiare, allora dicevano: “domani possiamo fare l’arrosto..” “no scusate, io vado in mensa e voi fate l’arrosto!”»*⁹⁶. Instead, Anna states she does not particularly like meat; however, the dishes she likes the most are *lasagna* and *carbonara* and both of them contain meat. Interestingly, also Diana does not report a particular love for meat but she eats it because she strongly dislikes vegetables.

The role of taste clearly emerges in the vegetarian stories. Except for Giusy who states she did not like meat, giving it up hasn’t been easy for the interviewees. Carla T. admits: *«quando son diventata vegetariana, la cosa che mi è costata più fatica rinunciare era la carne di*

⁹³ “she did not do polenta and sausage for me, she did it for my boyfriend because I do not like sausage that much anyway, then ... but when he too is in for lunch she does a bit of everything”

⁹⁴ “my brother is not a vegetarian yet [...] he likes it [meat] and has no intention[to become]”

⁹⁵ “I love pork ribs (she laughs), I love pork ribs”

⁹⁶ “mom would have said to my sister “so, what do we have tomorrow?” Because my sister still has lunch at my mother’s, so they’d say “tomorrow we can do roast” “No, sorry, you have roast and I have lunch at the canteen”

coniglio»⁹⁷. Instead, for Elena taste is the reason that made her to quit being vegetarian. She explicitly says: «*a me è sempre piaciuta la carne, a parte gli affettati che non mi hanno mai fatto.. impazzire, però la carne sì, cioè, io entro in casa riconosco dall'odore se mia mamma ha cucinato il pollo piuttosto che il coniglio quello.. e quindi boh se, se... una sera si fa il bollito misto io lo mangio e mi piace e buonanotte [...] non volevo farmi del male... perché comunque era non dico una sofferenza, perché alla fine ero molto convinta della mia scelta e lo sono tutt'ora, di cercar di non mangiare... di non mangiare carne, però ho deciso che se una volta al mese la mangiavo non crollava il mondo*»⁹⁸. Also Giulia told she likes meat and she succumbed to taste temptation. That suggests that being a proper vegetarian requires a strong will power and involves solid moral principles that go beyond mere health issues.

3.5. Summary and conclusions

In this chapter meat consumption and practices amongst seven couples of mothers and daughters living in Northwestern Italy have been examined. Five main themes were identified: 1) the functions of meat; 2) the subjective interpretations of meat; 3) the influence of external conditions related to the origins and changes in meat consumption; 4) the role of past and present cultural conditions; and 5) the role of taste. The relevant results are similar to those of White and colleagues (2011) in their life histories study on thirteen women living in the UK.

In Italy food has a leading role at very many levels. The food sector is very important to the Italian economy and pervades everyday life. From past to present meat holds a central position. For the interviewed women, it serves several different functions. It acts as a catalyst for social relations, where family members are brought together around traditional meat meals, such as those on Sunday, Christmas, Easter, Easter Monday and wedding parties For

⁹⁷“*when I became a vegetarian, the hardest thing has been giving up rabbit meat*”

⁹⁸“*I always liked meat, but affettati, I've never been crazy about it ... but I love it. I mean that, when I come home I can tell what mother's doing from the very smell, whether it's chicken or rabbit... and, what, if one night she does boiled beef, veal and capon I have it and enjoy it, who cares! [...] I did not intend to do me any harm, because, anyway, I'm not saying it was a pain, 'cause at the end I was thoroughly convinced of my choice, and I still am, of quitting ... meat, but I resolved that, if I have it once a month it is not the end of the world*”

the majority of the interviewees, especially mothers, meat is essential to health and, in particular, to the children's diet. Stories tell how these beliefs are deeply rooted in the society, despite the idea that meat might have negative consequences upon health. For mothers, meat seems to be far more than nutrition. It symbolizes maternal love and care. By providing their children with meat, most mothers, but the vegetarian one, felt to have achieved their duties in raising them healthy and well nourished. Additionally, meat is perceived as a necessity, since it is considered the most practical food that permits to have a nourishing meal in the shortest time. Finally, meat serves also as a display of capabilities, that is used to impress family members, friends or partners.

On the subjective interpretations of food that have been identified across the interviews, three main interpretations have emerged related to meat consumption. The first regards the way in which meat plays a central role in representing traditional meals. The second is concerned with generational differences. Mother and daughter interviews have shown a good match of responses and offered interesting insights about how meat and food practices changed overtime. There is an apparent reduction of the time dedicated to cooking throughout the generations and an exponential increase in welfare which led to a significant enhancement of meat consumption. At present, the younger generation is taking distance from the classic "first-and-second-course meal scheme" to the advantage of two "single" courses to be consumed at different times. However, meat is still nearly always present in either of the two. Mothers and daughters seems to enjoy the present variety of available products which may have led to a new kind of diet which is mainly *perceived* as being lower in meat consumption and more modern. The third interpretation regards the idea of ethical meat. Few interviewees praise the idea of consuming ethically and responsibly sourced meat, in relation to both their health and the environment.

Generational differences highlight the presence of several different structural conditions, such as societal, economic, and/or physical factors that are beyond the control of individuals. From past to present, in fact, meat and food consumption greatly changed throughout the lives of the interviewees. Specifically, the most influential structural conditions for meat consumption may be related to territorial influences (e.g., food availability), travel and the weekly diet setting (e.g., the "*primo-secondo* scheme" for Sunday lunches). The analysis of these factors highlights the importance of accounting for more than one facet of meat consumption and considering the historical, social and individual influences over time, rather than limiting investigations to the present only. Interestingly, turning points in the lives of the interviewees

can offer key points to target tailored interventions aiming at reducing meat consumption. In fact, taking into account all the stories, changes in meat consumption are more likely to be associated to specific moments in life, although the reasons behind them may differ within the sample. Similar to what White and colleagues (2011) found out, there have been three key moments when the women of this sample were particularly sensitive to change or when outside factors considerably changed their lives. First of all, when they left home for the first time, either to go to university or to get married: then, women are wishful to try new products and develop a personal cooking style but also take the burden of housekeeping. Secondly, the moment when women have children and have to nourish and care them. Lastly, when they retire and children leave home, being so finally enabled to manage their time largely according to their will. It is reasonable to think that these moments should also imply the management of different budgets. Although it is beyond the scope of this study, investigations about the role of money in these context may shed further light about meat consumption changes.

At present, the Italian cultural context promotes positive attitudes towards healthy diets, leaner in meat consumption. All the interviewees affirm to pay attention to what they eat and eating less meat seems to be more socially acceptable than in the past. Mothers and daughters report to try suitable alternatives, like fish or meat substitutes. However, in actual fact, food diaries reveal that they eat far more meat than they declare. That may be due to the presence of other people in their lives. Their men, in fact, seem to demand more meat or cook it, in line with many findings in the literature.

Despite their positive attitudes towards low-meat diets, vegetarians may not perceive meat abstinence as a demanding obligation. Interestingly, four women said claimed to be vegetarian but only one can be defined a proper one. As Ruby (2012) commented, people do not share the same idea of vegetarianism and there is a wide number of motivations behind the at choice. That also suggest that being a vegetarian is not something defined and static but something that may change overtime (Beardsworth & Keil, 1992). Hence, the importance of using an historical approach that takes into account not just personal facts but also social structures and social dynamics, as the life histories methodology allows.

In conclusion, meat consumption and related practices are incredibly complex and intertwined. There is no single factor that, alone, can explain and understand meat consumption in this mother-daughter sample. Individuals, society, cultures and rituals have an

influential role. Interestingly, on the personal side, two psychological factors slowly emerged during the analysis, i.e. Self-identity and social norm. They did not stand out as isolated themes but they played a role in association with different conditions. Low meat consumption and being a healthy-eater have been consciously used to present themselves. Instead strong social norms are associated to meat consumption. Further investigation on these variables will be presented in the next chapters.

The life histories approach collects much deeply seated information and allows subjective interpretations about one's life. Data collected are rich and valuable, and those presented in this study hopefully are. However, it would be difficult to use this method on a much wider sample. For this reason, in order to extend the collection of larger amounts of data about the psychological drives of meat consumption, the next studies hereinafter are based on a quantitative approach.

CHAPTER 4

MEAT CONSUMPTION IN ITALIAN YOUNG ADULTS: THE ROLE OF IDENTITY AND NORMS IN THE FRAME OF THE THEORY OF PLANNED BEHAVIOUR

«You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete» (Buckminster Fuller quoted in Sarkissian, Hofer, Shore, Vajda, & Wilkinson, 2009, p. 139)

4.1. Introduction

We are living in a historical moment in which food appears to have gained an unprecedented level of public attention and visibility prompted by media and, possibly, spurred by large economic interests. Food is everywhere and “around the clock” (Franchi, 2009). So, opposite to the ancient problem of shortage or scarce availability, that younger generations massively ignore, developed Countries have now to deal with a growing number of people suffering from the consequences of excess of nutrition. In particular, fats, sugars, salt and excessive animal proteins are responsible for the alarming diffusion of deadly metabolic diseases (e.g. diabetes, cardiovascular diseases) and obesity (WCRF, 2007). In face of that, more than a billion people suffer from hunger while one third of the global food production is allocated to the livestock sector. It has been estimated that there are roughly three billion heads of livestock on the globe, which largely contribute to global climate changes and pollution (BCFN, 2012). Hence, a massive consumption of meat and animal proteins is responsible for a number of priority issues that need to be properly addressed.

People can be reluctant in engaging in health and pro-environmental behaviors. Benefits may not be clearly understood and immediately visible, whilst risks may not be considered or perceived as too distant in time and space (Vlek & Keren, 1992). This tendency to underestimate the probability that negative events may happen to oneself rather to others (“it

won't happen to me”) is well known in the literature as illusory invulnerability or optimism bias (Weinstein, 1980) and unrealistic optimism (Lee & Job, 1995). Optimism bias has been reported in a wide range of health and environmental behaviors (see, for example, Caponecchia, 2010; Hatfield & Soames Job, 2001). This type of attitude also emerged in the sample of the first study of this project (see chapter 3, page 72). Mothers and daughters, in fact, do not seem to consider/see the consequences of a meat rich diet. On the contrary, they still perceive meat as an essential part of a balanced diet and a healthy food, underestimating or ignoring WCRF recommendations (2007) or environmental threats.

Literature suggests that young people are more likely to underestimate negative consequences associated to risky behaviors (Reyna & Farley, 2006), unhealthy food choices included (Stead, McDermott, MacKintosh, & Adamson, 2011). A recent systematic review by Shepherd and colleagues (2006), highlighted the presence of a wide range of factors that hamper healthy eating, such the easy availability of unhealthy food, restricted access to adequate healthy alternatives, preference for the “fast food” taste, but also the systematic tendency to associate “unhealthy food” with enjoyable and desirable things such as friendship, pleasure and relax (Stead et al., 2011). Previous chapters have analyzed the way in which food is a socio-cultural product and why its meanings are far beyond its nutritional value (SyLOW & Holm, 2009). The simple idea of food itself is a cultural product (see chapter one, page 28). In fact, in both developed and rural societies, acceptance or rejection towards certain foods mostly depend on mental representations and do not necessarily depend on taste, but rather on cultural contexts. Fischler (1988) clearly stated: «the way any given human group eats helps it assert its diversity, hierarchy and organization, and at the same time, both its oneness and the otherness of whoever eats differently» (p. 275). In this way, choosing a specific food over another is a communicative act and an expression of Self, concerns over identity, image, social belonging and status (e.g., Fox & Ward, 2008b; Tivadar & Luthar, 2005). In particular, the role of identity and norms also appeared in the narratives of the first study (see chapter 3, page 122). Social norms were strongly associated to meat consumption; whereas low meat consumption and being a healthy-eater were consciously used as Self-expressions.

For young people, deviating behaviors from acceptable norms or from peer group's values may have severe critical consequences that may ultimately cause stigma or exclusion (Valentine, 2000). Literature on consumer behaviors suggests that consumption of certain items or adopting particular styles represent strategies to cope with possible forms of exclusion and dealing with self-image and social status (e.g., Chaplin & John, 2005; Hogg, Bruce, & Hill, 1998; Piacentini & Mailer, 2004). For young people too, buying and

consuming particular goods are strategies for sending out the right message about one's image and gaining prestige among one's peers (Belk, 1988). This is more likely to happen where products are well recognizable or noticeably consumed, worn or used within the social environment, such as clothing or mobile phones (Bachmann, John & Rao, 1993; Hogg et al., 1998; Piacentini & Mailer, 2004; Wilska, 2003). Less attention has been paid to food consumption (probably because of its lower visibility), but some studies suggest that young people's food preferences are influenced by the social context and the peers' group and that they involve Self-image (e.g., Ludvigsen & Sharma, 2004; Lv & Brown, 2010; Stead et al., 2011; Wills, 2005).

Much psychological research has addressed to several aspects of meat consumption, such as ambivalence toward meat (e.g., Berndsen, & Van der Pligt, 2004; Povey, et al., 2001), vegetarians behaviors (e.g., Bastian, Loughnan, Haslam, & Radke, 2012; de Houwera, & de Bruyckera, 2007; Fessler, Arguello, Mekdara, & Macias, 2003b; Fox & Ward, 2008a; Ruby, 2012), health (e.g., Allen & Baines, 2002; Elzerman, Hoek, Van Boekel, & Luning, 2011), environmental issues (e.g., de Boer, Boersema, & Aiking, 2009), consumer's attitudes towards livestock epidemics (e.g., Verbeke et al., 2010) and, obviously, related psychological factors (e.g., Abrahamse et al., 2009; Adams, Hoover, Arnett, & Thompson, 2000; Allen & Ng, 2003; Gossard & York, 2003) (see also chapter 2, page 67 for further details). However, in Italy, studies investigating the way individual and social variables act together in driving meat consumption are rare. In this case also, much attention has been paid to the analysis of "deviant behaviors", such as veganism or vegetarianism, but little seem to have been paid to everyday factors which may be the key for developing targeted campaigns. The work presented in the following section aims at investigating the role of identity and norms in meat consumption in young Italians in an attempt to fill such gaps. With this goal in mind, after a review of all possible alternative approaches, such as Value-Belief-Norm Theory (Stern, Dietz, Abel, Guagagno, & Kalof, 1999), it has been decided to structure this study within an extended version of the Theory of Planned Behaviour (TPB), which has the advantage of being a well-known, thoroughly tested and largely accepted theoretical framework.

4.1.1 An extend Theory of Planned Behaviour

The origins and development of the classical model of the Theory of Planned Behaviour (TPB) by Ajzen (1985; 1991; 2002) have been presented in the first area, chapter 2 (page 62). Briefly, the TPB postulates that the relationship between attitude and behavior is not a direct one, but rather is mediated by behavioral intention. Intention is the most important predictor of behavior, in that the stronger the intention to engage in a certain action, the more likely its performance should be. The classical model is composed by three determinants of intention, i.e. attitude, subjective norm and perceived behavioral control, which are supported by salient information, or beliefs, about the behavior (Verbeke & Vackier, 2005). The first concerns the degree to which a subject holds a favorable or unfavorable evaluation/appraisal of a given behavior. The second deals with the influences of social norms on human behavior. Specifically, subjective norms are defined as the personal estimation of the social pressure to perform, or not to perform, a given behavior. Finally, the third measure is the willingness to perform a given behavior, that is the perceived behavioral control. The degree of confidence is demanded by both internal and external factors. The former is concerned with abilities, knowledge and skills, whilst the latter consists of anticipated difficulties and facilitating conditions. For this reason, along with the intention, perceived behavioral control is considered the best component to predict a behavior (Bonnes et al., 2004).

The TPB is a very popular theory worldwide, above all in social sciences, and it has been successfully applied to a wide range of health contexts, including dietary choices (see, for example, Blanchard et al., 2009; Conner, Norman & Bell, 2002; Hardeman et al., 2002; Sparks & Shepherd, 1992; Sparks & Guthrie, 1998). This model has been used also to investigate meat consumption, for example in relation to religious issues (e.g., Alam, & Sayuti, 2011; Bonne, et al., 2007), psychological determinants (e.g., Povey, et al., 2001; Conner et al, 2003) or medical aspects (e.g., Guàrdia et al., 2006; Maria, et al., 2012).

Research on the TPB model has shown that behavioral intention can be predicted by its three components (see, for example, reviews by Armitage & Conner, 2001a; Godin & Kok, 1996; Sheeran & Taylor, 1999). However, the TPB model is not always effective (Armitage & Conner, 1999; Rise et al., 2010). In order to enhance the amount of variance in behavioral intentions and behaviors other variables have been added to the model. In particular, some interesting results came from adding group and self-identity (Chatzisarantis et al., 2009; Rise et al., 2010; Sparks & Guthrie, 1998) and descriptive norms (Rivis, & Sheeran, 2003). These

variables are also of interest to the purpose of this study, since both identity and norms have risen from narratives of the previous study.

Self-identity is related to the salient and enduring characteristics of one's self-perception (e.g., "I think of myself as a "green consumer"; see Sparks, 2000). According to the identity theory literature (e.g., Thoits & Virshup, 1997), individuals use socially meaningful categories to describe themselves when they are asked who they are. For example, they can reply in terms of social roles (e.g., "I am a mother", "I am a daughter"), socio-demographic aspects (e.g., gender: "I am a woman"), social types (e.g., "I am an healthy eater", "I am a vegetarian", "I am a blood donor") or personality traits (e.g., "I am a good man", "I am honest") (Rise et al., 2010). In this sense, self-identities refer to the perspectives that a person takes toward him/herself when asked to take a specific or generalized role. As Stets and Burke, (2000) underlie, this process implies that the "me identification" incorporates the expectations and the meanings related to a certain categorization into the Self and that leads to creating a set of identity standards that guide the identity-relevant behaviors of the individuals (Rise et al., 2010). In terms of the TPB model, people are motivated to plan behavioral intentions in order to confirm and coherently act with their sense of Self (see Stets & Burke, 2000). A recent meta-analysis by Rise and colleagues (2010) affirmed that self-identity adds 6% in intention above and beyond the variance captured by the three TPB components. This meta-analysis provides strong evidence that the concept of self-identity is conceptually and empirically independent from attitude, perceived behavioral control and, above all, from normative influences, although Self-identity may be interpreted in terms of social influences, because it derives from socially constructed categories (see also Åstrøm & Rise, 2001; Hagger & Chatzisarantis, 2006). Moreover, Self-identity differs from group identity. Both are social identities (Stets & Burke, 2000; Thoits & Virshup, 1997) but the former refers to a "me identification" (e.g., the identification as a "healthy eater" involves activities, expectations and meanings associated with being a healthy eater), whilst the latter refers to "we-identification" of the Self with a group (e.g., identification as a "healthy eater" involves acting on the behalf of the group of healthy eaters). This distinction may provide a loosely constrained concept, but evidence suggests that Self-identity and group identification predict intention independently (see for example, Rise & Ommundsen, 2011).

Much research about food choices and eating behaviors (meat included) has already successfully included self-identity as an additional predicting variable in the TPB model (see Rise et al., 2010 for an extended review) and for this reason it has been used also in this study.

Social identification has also been here added to the classical TPB model, given the fact that people's food preferences are influenced by social contexts and peers' groups, as discussed in the previous paragraph. Furthermore, some studies affirm that being a healthy-eater can represent a personal goal and thus considered a form of Self-identity (e.g., Strachan & Brawley, 2009). Since the health theme strongly emerged from the narratives of the first study (see chapter 3), a healthy-eater measure has been included in the extended TPB model.

Finally, evidence confirms the weakest component of the TPB model are subjective norms (Godin & Kok, 1996; Sheppard, Hartwick, & Warshaw, 1988). In fact, this component simply refers to the perception of the expectations of relevant others, and the consequent motivations to comply with them. Subjective norms do not capture the social aspects and interactions that may take place in joint decision-making, or in individual decision-making that may affect others (Olsen & Grunert, 2010). Indeed behaviors are influenced by the norms of salient reference groups (group norms) when the group is behaviorally relevant (see for example, Johnston & White, 2003; Terry & Hogg, 1996; Terry et al., 1999; White et al., 1994). The idea of group norms is based on both the social identity (Tajfel & Turner, 1986) and the self-categorization theory (Turner et al., 1987) and it considers whether important group members perform a given behavior (i.e., behavioral norm) along with the evaluation of that behavior by the group (i.e., group attitude). White and colleagues (2008) clearly stated: «group norms differ from traditional measures of subjective norm (i.e., injunctive normative influences) in that norms are intrinsically tied to contextually salient membership in specific social groups, with norms prescribing the context-specific attitudes and behavior appropriate for group members rather than social pressure being additive across all referents and referent groups that participants define as important to them» (p. 437). In general, that means group norms do not concern the group's approval of a given behavior of a group member, but rather they refer to the perception that a person holds about the group approving a given action. In particular, the concept of group norm also differs from the idea of descriptive norms, which reflect what is perceived as what most people do (Moan & Rise, 2011). Group norms, in fact, are intrinsically related to group membership and involve both group attitudes and behaviors (White et al., 2008).

Thus, in order to reinforce the TPB model, group norms have been introduced in this study. Looking at the current scenario, this study attempts to provide a more holistic view of the relationship between individual and social variables that may affect meat consumption.

4.2 Aims and hypotheses

This study aims at investigating psychological factors underlying meat consumption in a sample of young Italians (18-31), autonomous in their consumer behaviors. In particular, two general aims have been set: 1) investigating the predictive power of an extended model of the TPB; 2) identifying the variables that should positively predict behavioral intentions and/or self-reported behavior (meat consumption).

Literature review presented above led to the following research questions and hypothesis:

Research question 1: What is the predictive power of the classical components of TPB model on intention to eat meat and meat eating behaviors?

- H1.1: According to classical literature findings (e.g., Armitage & Conner, 2001a; Godin & Kok, 1996; Sheeran & Taylor, 1999), it is expected that attitude and perceived behavioral control (PBC) would predict the intention of young Italians to eat meat. Additionally intention and PBC would predict performance of the behavior (eating meat).
- H1.2: Data emerged from recent studies (Olsen & Grunert, 2010) claim that subjective norms are the weakest component of the TPB model, thus it is expected that subjective norms would not predict the intentions of young Italians to eat meat.

Research question 2: What is the predictive power of the individual variables (i.e., Self-identity and healthy-eater identity) added to the classical TPB model?

- H2.1: According to literature (Rise et al., 2010; Stets & Burke, 2000), it is expected that Self-identity would be a significant additional predictor of both intention to eat meat and meat eating behavior.
- H2.2: It is also expected that healthy-eater identity would be a negative predictor of intention to eat meat, that is the less people consider themselves as being a healthy eating person the more meat they would eat.

Research question 3: What is the predictive power of social variables (i.e., social identification, group norm and norm reference group) added to the classical TPB model?

- H3.1: According to findings in literature (e.g., Chatzisarantis et al., 2009), social identification would be a positive predictor of young Italians' intentions to eat meat.
- H3.2: As suggested by literature about the norms of salient reference groups (e.g., Johnston & White, 2003; Terry & Hogg, 1996; Terry et al., 1999; White et al., 1994), perceived group norm would be an additional predictor of young Italians' intentions to eat meat.
- H3.3: Finally, the norm strength (norm reference group), that is the estimate of how much meat others are believed to eat and how much a person cares about it, would be a positive predictor of young Italians' intentions to eat meat.

In conclusion, this study attempts to address some issues concerning the Theory of Planned Behaviour (TPB) by offering a more social-psychological perspective on the concepts of identification and norm, in order to test the predictive power of the TPB model in relation to meat consumption, intentions and behaviors (see figure 7)

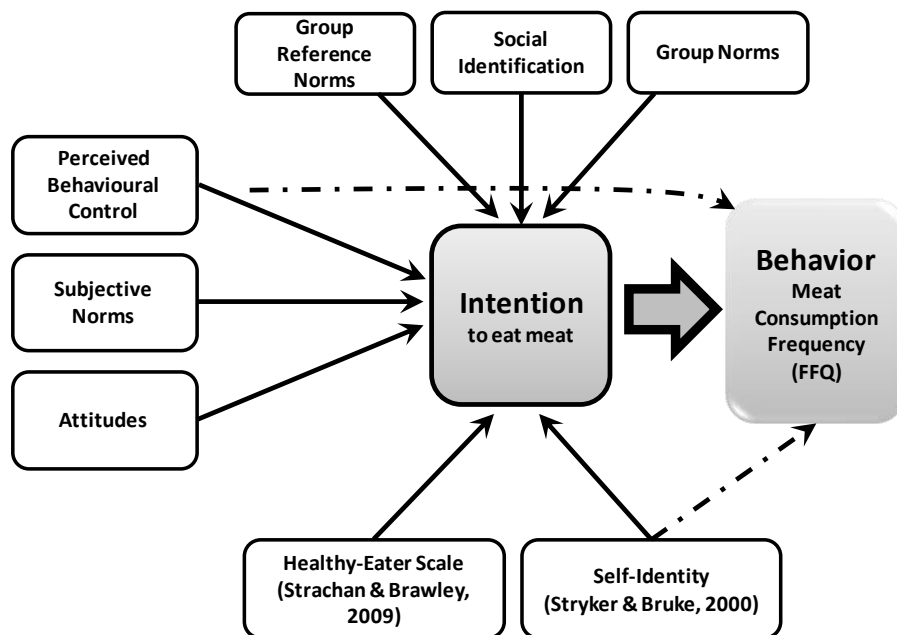


Figure 7. Adopted extended model of the Theory of Planned Behaviour, including individual and social variables

4.3 Method

4.3.1 Participants

The sample of interest on this study was composed of 264 young Italians, aged 21 to 31 ($M=24.2$; $DS = 3.6$), equally distributed between male and female. In order to be included in the study, at the time the data were collected, all participants had to be living on their own, cook for themselves, be autonomous in their shopping decisions and consumer behaviors, in order to ensure that they had experienced enough responsibility in cooking and purchasing. 200 subjects (75.9%) shared the house with other people, while 64 (24.2%) lived on their own. 116 subjects (43.9%) had a High School Diploma, 74 (28.4%) held a Bachelor Degree and 74 (27.7%) a Postgraduate Diploma.

Participants' average BMI (Body Mass Index, a measure of body fat based on height and weight) was 23.1 ± 8.03 . All of them were meat eaters.

4.3.2 Demographics information

Participants were asked to provide some demographic information concerning age, gender, nationality, education, current living status, height and weight. The latter two variables were later used to calculate the Body Mass Index, BMI, using the following equation: weight divided by the square of their height, expressed in metric units (kg/m^2).

4.3.3 Measures

An ad hoc self-report questionnaire was prepared to the purpose of data collection (appendix D, page 191), according to the guidelines provided by Ajzen (2001) and using measures and scales proposed by the literature, as recommended by Ajzen and Fishbein (1980; see also Perugini & Bagozzi, 2001; Staats, 2003; Francis et al., 2004). The following measures have been selected and used in this study:

- *Meat eating behaviour*: Meat consumption has been measured using a modified version of the Italian Food Intake Frequency model (Food Frequency Questionnaire, FFQ - Decarli et al., 1996). A total of 18 food items were obtained through a literature review and the narratives of study 1 and tested with a pilot questionnaire submitted to a sample of the desired population. Sample items include: *hamburger* (burgers), *cotoletta di manzo/vitello* (beef or veal cutlet), *prosciutto cotto* (ham), *pasta*, *riso al ragù* (pasta, rice bolognese). The scale used is a six-point rating scale from 1 (never) to 6 (more than six time per week) ($\alpha = .83$; N item 18).
- *Intention*: Intention was assessed following standard TPB measures by Francis and colleagues (2004), measures include 3 items using the stem: “*I expect to eat meat this week*”, “*I want to eat meat this week*”, and “*I intend to eat meat this week*”; using a seven-point rating scale (1 strongly disagree - 7 strongly agree) ($\alpha = .90$; N item 3).
- *Attitudes*: Attitudes were assessed using 10 items, such as “*I think eating meat is a primary source of protein, iron and other essential nutrients*”, “*I think eating meat is bad for my health*”, “*I think eating meat is essential to a healthy and balanced diet*”, and rated with a seven-point scale (1 strongly disagree - 7 strongly agree). Due to poor inter-item reliability, only 5 items were used ($\alpha = .80$; N item 5).
- *Subjective norms*: Subjective norms were assessed following standard TPB measures by Francis and colleagues (2004). Measures in the questionnaire included 3 items, such as “*Most people who are important to me think that I should not eat meat*” (Reverse Scaled), “*It is expected of me that I eat meat*”, using a seven-point rating scale (1 strongly disagree - 7 strongly agree). Due to poor inter-item reliability, only 2 items were finally used ($\alpha = .85$; N item 2).
- *Perceived Behavioral Control (PBC)*: PBC was assessed using the 5 items, following standard TPB measures by Francis and colleagues (2004). These items are meant to assess both external and internal factors that may influence the performance (Ajzen,

1991), using seven-point rating scales (e.g. “*It would be difficult for me giving up on eating meat*” - Reverse Scaled -, “*Meat is easily available for me*”). Due to poor inter-item reliability, only 4 items were used ($\alpha = .60$; N item 4).

- *Self-identity*: Self-identity was assessed using 3 items, rated on a seven-point scale (1 strongly disagree - 7 strongly agree) according to Terry and colleagues (1999), such as “I am the type of person who eats meat”, “I see myself as a meat eater” ($\alpha = .85$; N item 3).
- *Healthy Eater Identity*: Healthy eater identity was assessed with the healthy eater 9 item scale by Strachan and Brawley (2009), e.g. “I consider myself to be a healthy-eater”, “When I describe myself to others”, “I usually mention my efforts to practice healthy eating” and rated on a seven-point rating scale (1 strongly disagree - 7 strongly agree) ($\alpha = .89$; N item 9).
- *Social identification (SID)*: Social identification was assessed with 9 items, using a seven-point rating scale (1 strongly disagree - 7 strongly agree) with the addition of a “not applicable” option at the end of the scale. Items were obtained through literature review and narratives from study 1 and tested via the aforementioned pilot questionnaire. They include: “The people you live with”, “The people you work with”, “The people you study with” ($\alpha = .75$; N item 9).
- *Group norms*: Group norms were assessed with 9 items, using a seven-point rating scale (1 strongly disagree - 7 strongly agree), with a “not applicable” option, as above. Items were obtained through literature review and narratives from study 1 and tested in a pilot questionnaire. They include: “The people you live with”, “The people you work with”, “The people you study with” ($\alpha = .77$; N item 9).

Finally, the norm strength (*norm reference group*), that is a measure of how much meat others are believed to eat and how much a person cares about it, has been calculated as the product of group norms \times group identification (i.e., meat-norm reference group).

4.3.4 Procedure

A web-based platform was build and implemented at the School of Psychology of the University of Surrey and randomly distributed using the official Italian university email system, forums and student websites from September 2013 till October 2013. However, in order to ensure a sufficiently large number of respondents, paper versions of the same questionnaire were distributed to students. 100 paper and 390 online anonymous responses to the questionnaire were collected. However, only the 264 questionnaires (53.9%) that fully met the sample requirements were used for the analysis.

A first questionnaire version was tested for its understandability, clarity and level of language by a sample of 30 people who had similar characteristics to the study's sample candidates.

In view of further uses (study 3) and due to the reference literature used, the questionnaire was originally written in English and then translated in Italian, by 3 independent translators, blind to the original questionnaire, according to Brislin's recommendations (1970).

4.3.5 Statistical analyses

Analyses were performed using the SPSS Version 17.0 for PC.

Following standard quality control and statistical processing of the collected data (e.g. missing analysis), correlation tests were used in order to verify the relationship between the mean eating variables of this study. Regression analyses have been used to examine the initial hypothesis, consistent with other studies that had previously used the TPB model (e.g., Enker, 1987; Kurland, 1995; Leonard & Cronan, 2001). Specifically, two multiple regression analysis have been performed with meat eating behavior and intention to eat meat as dependent variables in each respective set.

4.4 Results

4.4.1 Preliminary analyses

Table 3, hereunder, lists the descriptive statistics and reliability information of all psychological variables. All but one the internal coefficients of consistency reliability of variables (Cronbach's alpha coefficient) resulted much greater than .60 (only the perceived behavioral control α being = .60)

Measure	α	Mean	S.D.	<i>n</i>
Meat eating behavior	.83	2.26	.508	264
Intention	.90	5.38	1.45	264
Attitude	.80	4.14	.681	264
Subjective norms	.85	3.42	1.15	264
Perceived behavioral control	.60	5.26	.841	264
Self-identity	.85	4.84	1.52	264
Healthy eater identity	.89	4.37	1.15	264
Social identification	.75	5.69	1.26	264
Group norms	.77	5.1	1.26	264
Norm reference group		29.8	11.32	264

Table 3. Cronbach's alpha coefficients, Means and Standard Deviation of main Italians psychological variables

4.4.2 Correlation between meat eating behavior, intention and the other psychological measures

Table 4 shows the correlations between the central variables of interest. As predicted by literature, the meat eating behavior and the intention variables are correlated with subjective norms, perceived behavioral control, Self-identity, healthy-eater identity, social identification, group norm and norm reference group.

Firstly, meat eating behavior is positively correlated with intention, Pearson's $r(264) = .412$, $p < .01$, and Self-identity, Pearson's $r(264) = .402$, $p < .01$.

The variable intention is positively correlated with subjective norm Pearson's $r(264) = .161$, $p < .01$, Self-identity, Pearson's $r(264) = .608$, $p < .01$, perceived behavioral control, Pearson's $r(264) = .15$, $p < .05$, social identification, Pearson's $r(264) = .15$, $p < .05$, group norm Pearson's $r(264) = .123$, $p < .05$ and with the variable norm reference group, Pearson's $r(264) = .168$, $p < .05$. Moreover, intention is negatively correlated with healthy eater identity, Pearson's $r(264) = -.167$, $p < .01$.

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
1. Meat eating behavior	-									
2. Intention	.412**	-								
3. Attitudes	-.089	.054	-							
4. Subjective norms	.098	.161**	.081	-						
5. Perceived behavioral control	-.107	.150*	.075	-.035	-					
6. Self-identity	.402**	.608**	-.062	.256**	.047	-				
7. Healthy-eater identity	-.081	-.167**	.182**	.010	.089	-.219**	-			
8. Social identification	.043	.150*	.033	.072	.194**	.118	.111	-		
9. Group norm	.10	.123*	.047	.123*	.123*	.167**	.032	.325**	-	.
10. Norm reference group	.09	.168**	.030	.133*	.192**	.177**	.081	.788**	.819**	-

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

Table 4. Correlation matrix between meat eating behavior, intention and the other psychological measures (Italian sample)

4.4.3 Correlation between meat eating behavior, intention and group identification measures

Correlation analyses between meat eating behavior, intention and group identification variables are summarized in Table 5.

Meat eating behavior is positively correlated with ones' neighborhood, Pearson's $r(264) = .159$, $p < .05$ and the people you work with Pearson's $r(264) = .185$, $p < .01$. Instead, the variable intention, is positively correlated with the people in ones' family, Pearson's $r(264) = .154$, $p < .05$, and ones' neighborhood, Pearson's $r(264) = .181$, $p < .01$.

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Meat eating behavior	-										
2. Intention	.412**	-									
3. The people you live with	.027	.097	-								
4. The people you work with	.185**	.106	.148*	-							
5. The people you study with	.024	.049	.254***	.325***	-						
6. The people in your sport club	.1	.074	.146*	.385***	.396***	-					
7. The people in your religious group	-.114	-.076	.153*	.369***	.358***	.55***	-				
8. Your family	.046	.154*	.272***	.189**	.086	.072	-.05	-			
9. Your neighborhood	.159*	.181**	.173**	.3***	.161**	.2***	.177**	.253***	-		
10. Your favorite group on Facebook	.091	.033	.088	.09	.222***	.279***	.319***	.029	.351***	-	
11. The people you follow in Twitter	-.009	-.04	.075	.239***	.288***	.414***	.549***	-.101	.249***	.619***	-

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

Table 5. Correlation matrix between meat eating behavior, intention and group identification measures (Italian sample)

4.4.4 Prediction of meat eating behavior

A multiple regression was performed to investigate the extent to which intention to eat meat and the other eight psychological variables (attitudes, subjective norms, perceived behavioral control, Self-identity, healthy eater identity, social identification, group norm and meat-norm reference group) predict meat eating behaviors. The adjusted R^2 for this model is significant .217 ($F_{9, 254} = 8.775, p < .001$), as shown in Table 6. Intention has the highest standardized co-efficient ($\beta = .315, p < .001$), followed by Self-identity ($\beta = .220, p < .005$). Finally, perceived behavioral control is the last significant measure ($\beta = -.166, p < .005$).

Variable	B	SE B	β
Intention	.110	.025	.315***
Attitude	-.068	.042	-.091
Subjective norms	-.004	.018	-.012
Perceived behavioural control	-.175	.060	-.166**
Self-identity	.074	.024	.220**
Healthy-eater identity	.022	.025	.051
Social identification	.009	.087	.021
Group norm	.039	.093	.096
Norm reference group	-.003	.016	-.065

$R^2 = .217$ (* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$)

Table 6. Multiple regression of meat eating behavior (Italian sample)

4.4.5 Prediction of intention to eat meat

A multiple regression was performed to investigate the extent to which attitudes, subjective norms, perceived behavioral control, Self-identity, healthy eater identity, social identification, group norm and meat-norm reference group predict the intention to eat meat. The regression of actual intention to eat meat onto such eight psychological variables was found to be significant ($R^2 = .380$; $F_{8, 255} = 21.189$, $p < .001$), as shown in Table 7. Table 7 also shows that only two measures are significant. Self-identity has the highest standardized co-efficient ($\beta = .586$, $p < .001$), followed by perceived behavioral control ($\beta = .110$, $p < .05$). Meat-norm reference group has a high standardized co-efficient ($\beta = .111$) but it is not significant. Interestingly, in this case, attitudes do not predict intention to eat meat because the beta coefficient is very small ($\beta = .095$) and, strictly speaking, not significant ($p = .058$), albeit very marginally so.

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>β</i>
Attitude	.204	.107	.095
Subjective norms	.003	.045	.003
Perceived behavioural control	.332	.151	.110*
Self-identity	.562	.050	.586***
Healthy-eater identity	-.091	.065	-.072
Social identification	.004	.221	.004
Group norm	-.096	.238	-.083
Norm reference group	.014	.041	.111

$R^2 = .380$ (* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$)

Table 7. Multiple regression of intention to eat meat (Italian sample)

4.5 Discussion

Using an extended version of the Theory of Planned Behaviour, incorporating both individual (i.e., Self-identity and healthy eater identity) and social influences (social identification, group norms and meat-norm reference group), this study examined intention and current meat eating behavior of young Italians (aged 18 to 31), autonomous in their shopping decisions and consumer behaviors. Each hypothesis (see paragraph 4.2, page 132) was tested using the multiple regression technique.

Multiple regressions of behavior and intentions generally supported hypotheses H1.1 and H1.2. As expected, intention and perceived behavioral control (PBC) predicted the performance. Equally, subjective norms did not predict the intention and perceived behavioral control (PBC) did it. However, unexpectedly, attitudes did not emerge as significant predictors of the intention to eat meat ($p = .058$). This observation could also be supported by the correlation matrix (table 4), which exhibits a non correlation between these two variables. As shown in table 7, the results of this study seem to provide only partial support to the original TPB model because attitudes and subjective norms did not behavioral intentions. The measure of subjective norm is known in literature as being the weakest component of the TPB model (Godin & Kok, 1996; Sheppard, Hartwick, & Warshaw, 1988); moreover, there was a poor correlation between intention and subjective norms Pearson's $r(264) = .161, p < .01$. In this case, the perception of the expectations of relevant others may not be seen as an obstacle to intention for people living by themselves. As an old Italian proverb says "*occhio non vede cuore non duole*" ("eye does not see, heart does not hurt"). Instead, the result about attitudes in this Italian sample were unexpectedly inconsistent with most findings in TPB literature (e.g., Armitage & Conner, 2001a; Godin & Kok, 1996; Sheeran & Taylor, 1999), which however refer to attitudes in samples from different cultural provenance (mostly North America, UK and Northern Europe) and different kinds of intentions. Provided that, in this case, the absolute value of the difference between significant and non significant was very small (.008), and that there was no correlation between intention and attitudes, there are two possible explanations to this. The first and simplest is that the items used to assess attitudes toward meat were not appropriate for the sample. In fact, all the items were rather selected to measure the attitude towards meat consumption in relation to personal health and the health theme also strongly emerged from the narratives of first study (see chapter 3). The importance of eating meat for health was felt more intensively by the mothers' group and it could be put forward that the concept of the importance of health matures at a later stage in life and is probably enhanced by child caring practices and responsibility. So, in this view, it may not surprise that the sample of Italian youths studied did not respond as expected, if it is true that youths do not care that much yet about health maintenance. In fact, also the healthy eater identity was not similarly found to be a significant predictor of intention (hence, H2.2 was not supported).

Multiple regression analysis of behavior and attitudes greatly supported the second hypothesis (H2.1), which expected Self-identity as meat eater to be a significant additional predictor of

both intention to eat meat and meat eating behavior. This finding reinforces existing evidence for the importance of Self-identity in predicting food behaviors. According to literature (e.g., Sparks & Guthrie, 1998; Åstrøm & Rise, 2001; Verbeke, Vackier, 2005), in fact, behavior-specific Self-identity (such as being a meat eater) exerts the strongest influence on intention. In this case, the more one feels to be a meat eater the more meat one intends to eat and actually eats. This also emerged from narratives of the first study (chapter 3). The interviewees of that group that defined themselves as meat eaters admitted that for them, giving up meat would be unthinkable. Similarly, for those that tried to diminish meat from their diets, feeling to be meat eaters had been a very strong obstacle to change, because that would have meant a change towards an identity (being vegetarian), which they could not feel to be theirs. This observation, if proven true, may help in designing better information campaigns by switching from the emphasis from health (as done at present) to Self-identity.

The regression analysis showed that social identification and group norm did not influence the intention to eat meat, at least in this sample of young Italians. The norm strength (i.e., norm reference group) did not predict intention too. Hence, H3.1, H3.2 and H3.3 were not supported. Even if the Cronbach's alpha for social identification and group norms is greater than .70, and hence acceptable (Nunnally, 1970), it is possible to suppose that these items may not be fully appropriate for the sample. Moreover, these items were left at the end of the questionnaire and it is possible that drops in attention may have influenced the performance of the participants. Correlation analysis (see table 5) showed that such variables were positively correlated with intention and that there are some groups (i.e., workmate and neighborhood) that were also positively correlated with meat eating behaviors. This allows to suppose that, also in relation to meat consumption and intention to eat meat, there is a link between group norms and social/group identification. Moreover, regression analysis of intention showed that the norm strength (i.e., norm reference group) had an interesting, although not significant, standardized co-efficient ($\beta = .111$). However, the most important remaining question is about the importance of effective social influence on very private actions performed "behind closed doors" such as cooking for themselves in situations that do not necessarily involve social contacts (e.g., having dinner alone at home). Narratives of chapter 3 suggested that the importance of the social context to meat consumption may develop at a later stage in life when formal relationships become an important part of life and/or that it may derive from cultural food heritage of past generations (e.g., social control, hierarchy) that, today, are less

important to the young. The material collected in this study was not enough to properly address this particular aspect and further work is needed.

In conclusion, multiple regression analysis predicting meat eating behavior revealed that intention and the other eight psychological variables contribute to the prediction of eating behavior and intention to eat meat. The level of prediction of intention ($R^2 = .380$) is significant but rather low when compared to that reported in other applications of the TPB (Godin & Kok, 1996). This may be due to limitations of the questionnaire. A first one is that a few items of the measures of the classical components of TPB model (i.e., attitudes, subjective norms and perceived behavioral control) had to be removed due to low internal reliability, as however previously done by other researches (see, for example, Picazo-Vela, Chou, Melcher, & Pearson, 2010) So, future research may need to better focus on the development of more robust scales to measure the aforementioned components.

Secondarily, the findings hold specifically within the characteristics of the sample. All the participants, in fact, were required to live on their own, being autonomous in their shopping decisions and consumer behaviors, in order to ensure that they had experienced enough responsibility in cooking and purchasing. That may have influenced the normative variables of the model and investigation on a broader sample of the population may deliver different results.

The next chapter describes a similar test performed on young Britons with the same aims, same psychological variables and using a identically structured questionnaire adapted to local food habits and cooking styles.

4.6 Conclusions

This study has proposed and tested an extended model of the Theory of Planned Behavior (TPB), examining psychological factors that influence both intention to eat meat and actual meat consumption in a sample of young Italians, autonomous in their shopping decisions and consumer behaviors. Taken as a whole, the model explains 20% of the proportion of the variance of a meat eating behavior. Specifically, these results provide support for intention, perceived behavioral control (H1.1) and Self-Identity (H2.1) as statistically significant predictors of meat eating behavior. As far as intention is concerned, the whole model explains nearly 40% of the proportion of the variance of an individual's intention to eat meat. In this

case, results provide support for perceived behavioral control (H1.1) and Self-Identity (H2.2) as statistically significant predictors of intention to eat meat. On the other end, the role of norm reference group and attitudes are not significant for the studied sample that possibly revealed to be too restricted. However, results suggest that applying the model to a sample representing a broader spectrum of ages of the Italian population may deliver more meaningful results, warranting further investigations. Most important, this study provides new insights in the field of meat consumption in Italy, by demonstrating that young people are more likely to be influenced by Self-identity as meat eaters rather than healthy eaters, regardless their attitudes and social influences. In terms of practical applications, these findings have identified a potentially useful key cognitive target for new information campaigns aiming at reducing meat consumption of young Italians.

CHAPTER 5

DO THE BRITS DO IT BETTER? INFLUENCES ON MEAT CONSUMPTION

«Cuisines can have a purely cultural functions; they're one of the way a society express its identity and underscores its differences with other societies» (Pollan, M., 2008, p. 174)

5.1 Introduction

Traditionally, meat has a dominant position in Western food cultures. In the collective imagination, Italians are not great meat-eaters, especially if compared to Northern Europeans, such as the Britons. However, if statistics are analyzed or simply browsed, it becomes apparent that reality should be quite different (for the relevant data, see page 20).

Even if it may not be representative, the sample of White and colleagues (2011) clearly indicates that in recent years, younger British generations have started to hold positive attitudes towards the use of ethical meat and lower meat consumption levels (see chapter 3, page 107). This may have been prompted by high impact information campaigns, such as “meat free on Monday”⁹⁹, which have no equivalent in other Countries, including Italy. Additionally, annual national surveys by the British Department of Health and Food Standards Agency (FSA) show that the number of vegetarians in the UK is growing (Vegetarian society, 2012).

These facts, alone, suggested that the exploration on a British sample have revealed interesting insights. Thus, an English version of the TPB questionnaire used in chapter 4 (see page 135) has been proposed to an equivalent sample of young UK residents in order to

⁹⁹Meat free on Monday is part of an international campaign that proposes people to refrain from eating meat on Mondays (Meatless Monday) in order to improve their health and to the benefit of the environment (www.meatfreemondays.co.uk/)

collect and study, with the same technique, the same psychological aspects of meat consumption. The relevant aims, hypotheses and methods are described in the next paragraphs.

5.2 Aims and hypothesis

This study parallels the one described in chapter 4. Again, it aims at investigating psychological factors underlying meat consumption in a sample of young Britons (18-31), autonomous in their consumer behaviors.

In particular, two general aims have been set: 1) investigating the predictive power of an extended model of the TPB; 2) identifying the variables that should positively predict behavioral intentions and/or self-reported behavior (meat consumption).

Literature review presented above led to the following research questions and hypothesis:

Research question 1: What is the predictive power of the classical components of TPB model on intention to eat meat and meat eating behaviors?

- H1.1: According to classical literature findings (e.g., Armitage & Conner, 2001a; Godin & Kok, 1996; Sheeran & Taylor, 1999), it is expected that attitude and perceived behavioral control (PBC) would predict the intention of young Britons to eat meat. Additionally intention and PBC would predict performance of the behavior (eating meat).
- H1.2: Data emerged from recent studies (Olsen & Grunert, 2010) claim that subjective norms are the weakest component of the TPB model, thus it is expected that subjective norms would not predict the intentions of young Britons to eat meat.

Research question 2: What is the predictive power of the individual variables (i.e., Self-identity and healthy-eater identity) added to the classical TPB model?

- H2.1: According to literature (Rise et al., 2010; Stets & Burke, 2000), it is expected that Self-identity would be a significant additional predictor of both intention to eat meat and meat eating behavior.

- H2.2: It is also expected that healthy-eater identity would be a negative predictor of intention to eat meat, that is the less people consider themselves as being a healthy eating person the more meat they would eat.

Research question 3: What is the predictive power of social variables (i.e., social identification, group norm and norm reference group) added to the classical TPB model?

- H3.1: According to findings in literature (e.g., Chatzisarantis et al., 2009), social identification would be a positive predictor of young Britons' intentions to eat meat.
- H3.2: As suggested by literature about the norms of salient reference groups (e.g., Johnston & White, 2003; Terry & Hogg, 1996; Terry et al., 1999; White et al., 1994), perceived group norm would be an additional predictor of young Britons' intentions to eat meat.
- H3.3: Finally, the norm strength (norm reference group), that is the estimate of how much meat others are believed to eat and how much a person cares about it, would be a positive predictor of young Britons' intentions to eat meat.

In conclusion, this study attempts to address some issues concerning the Theory of Planned Behaviour (TPB) by offering a more social-psychological perspective on the concepts of identification and norm, in order to test the predictive power of the TPB model in relation to meat consumption, intentions and behaviors.

5.3 Method

5.3.1 Participants

The sample of interest of this study is composed of young Britons ($n= 237$), aged 21 to 31 ($M = 21.5$; $DS = 3.053$). 136 were female (57.4%) and 101 were male (42.6%). At the time the data were collected, all participants had to be living on their own, cook for themselves, be autonomous in their shopping decisions and consumer behaviors, in order to ensure that they had experienced enough responsibility in cooking and purchasing. 85,2% of the sample shared accommodation with other people (non family members) and 14,8% lived on their own. 152 participants (64%) had a High School/College Diploma, 47 subjects (19,8%) a Bachelor Degree and 38 (16.1%) held Postgraduate Degrees. The participants' average BMI (measure of body fat based on height and weight) was 23.08 ± 3.63 . 213 subjects (90%) were meat eaters while 24 of them(10%) were vegetarians.

5.3.2 Demographic information

Participants were asked to provide some demographic information concerning age, gender, nationality, education, current living status, height and weight. The latter two variables were later used to calculate the Body Mass Index, BMI, using the following equation: weight divided by the square of their height, expressed in metric units (kg/m^2).

5.3.3 Measures

The Italian questionnaire was adapted to British cultural food habits to the purpose of data collection (appendix E, page 203), according to the guidelines provided by Ajzen (2001) and using measures and scales proposed by the literature, as recommended by Ajzen and Fishbein (1980; see also Perugini & Bagozzi, 2001; Staats, 2003; Francis et al., 2004). The following measures have been so selected and used in this study:

- *Meat eating behavior*: Meat consumption has been measured using a modified version EPIC-Norfolk of the Food Frequency Questionnaire, FFQ v.6 (Welch, Luben, Khaw & Bingham, The CAFE computer program for nutritional analysis of the EPIC-Norfolk food frequency questionnaire and identification of extreme nutrient values, 2005), modified via pilot questionnaire. Sample items comprise: “*Beef burgers*”, “*Bacon*”, “*Ham, salami*”. The scale used is a six-point rating scale from 1 (never) to 6 (more than six time per week) ($\alpha = .88$; N item 14).
- *Intention*: Intention was assessed following standard TPB measures by Francis and colleagues (2004), measures include 3 items using the stem: “*I expect to eat meat this week*”, “*I want to eat meat this week*”, and “*I intend to eat meat this week*”; using a seven-point rating scale (1 strongly disagree - 7 strongly agree) ($\alpha = .90$; N item 3).
- *Attitudes*: Attitudes were assessed using 10 items, such as “*I think eating meat is a primary source of protein, iron and other essential nutrients*”, “*I think eating meat is bad for my health*”, “*I think eating meat is essential to a healthy and balanced diet*”, and rated with a seven-point scale (1 strongly disagree - 7 strongly agree). Due to poor inter-item reliability, only 5 items were used ($\alpha = .80$; N item 5).
- *Subjective norms*: Subjective norms were assessed following standard TPB measures by Francis and colleagues (2004). Measures in the questionnaire included 3 items, such as “*Most people who are important to me think that I should not eat meat*” (Reverse Scaled), “*It is expected of me that I eat meat*”, using a seven-point rating scale (1 strongly disagree - 7 strongly agree). Due to poor inter-item reliability, only 2 items were finally used ($\alpha = .85$; N item 2).
- *Perceived Behavioral Control (PBC)*: PBC was assessed using the 5 items, following standard TPB measures by Francis and colleagues (2004). These items are meant to assess both external and internal factors that may influence the performance (Ajzen, 1991), using seven-point rating scales (e.g. “*It would be difficult for me giving up on*

eating meat” - Reverse Scaled -, “*Meat is easily available for me*”). Due to poor inter-item reliability, only 4 items were used ($\alpha = .60$; N item 4).

- *Self-identity*: Self-identity was assessed using 3 items, rated on a seven-point scale (1 strongly disagree - 7 strongly agree) according to Terry and colleagues (1999), such as “*I am the type of person who eats meat*”, “*I see myself as a meat eater*” ($\alpha = .85$; N item 3).
- *Healthy Eater Identity*: Healthy eater identity was assessed with the healthy eater 9 item scale by Strachan and Brawley (2009), e.g. “*I consider myself to be a healthy-eater*”, “*When I describe myself to others*”, “*I usually mention my efforts to practice healthy eating*” and rated on a seven-point rating scale (1 strongly disagree - 7 strongly agree) ($\alpha = .89$; N item 9).
- *Social identification (SID)*: Social identification was assessed with 9 items, using a seven-point rating scale (1 strongly disagree - 7 strongly agree) with the addition of a “not applicable” option at the end of the scale. Items were obtained through literature review and narratives from study 1 and tested via the aforementioned pilot questionnaire. They include: “*The people you live with*”, “*The people you work with*”, “*The people you study with*” ($\alpha = .75$; N item 9).
- *Group norms*: Group norms were assessed with 9 items, using a seven-point rating scale (1 strongly disagree - 7 strongly agree), with a “not applicable” option, as above. Items were obtained through literature review and narratives from study 1 and tested in a pilot questionnaire. They include: “*The people you live with*”, “*The people you work with*”, “*The people you study with*” ($\alpha = .77$; N item 9).

Finally, the norm strength (*norm reference group*), that is a measure of how much meat others are believed to eat and how much a person cares about it, has been calculated as the product of group norms \times group identification (i.e., meat-norm reference group).

5.3.4 Procedure

A web-based platform was build and implemented at the School of Psychology of the University of Surrey and randomly sent using British mailing lists, forums and student websites from September 2013 till October 2013. However, in order to ensure a sufficiently large number of respondents, paper versions were distributed to students in the Surrey University campus. 188 paper and 116 online anonymous responses to the questionnaire were collected. Only 237 questionnaires met the sample requirements and were thus used for the analysis. A first questionnaire version was tested for its understandability, clarity and level of language by a sample of 30 people with the similar characteristics to the required sample population.

5.3.5 Statistical analyses

Analyses were performed using the SPSS Version 17.0 for PC.

Following standard quality control and statistical processing of the collected data (e.g. missing analysis), correlation tests were used in order to verify the relationship between the mean eating variables of this study. Regression analyses have been used to examine the initial hypothesis, consistent with other studies that had previously used the TPB model (e.g., Enker, 1987; Kurland, 1995; Leonard & Cronan, 2001). Again, two multiple regression analysis have been performed with meat eating behavior and intention to eat meat as dependent variables in each respective set.

5.4 Results

5.4.1 Preliminary analysis

Table 8 lists descriptive statistics and reliability information of all psychological variables involved. Internal consistency reliability of variables (Cronbach's alpha coefficients) were all greater than .70

Measure	α	Mean	S.D.	<i>n</i>
Meat eating behavior	.88	2.17	.606	237
Intention	.97	5.69	2.01	236
Attitude	.78	4.78	.723	237
Subjective norms	.80	3.89	1.81	237
Perceived behavioral control	.71	4.84	1.34	237
Self-identity	.87	4.96	.949	237
Healthy-eater identity	.92	4.39	1.31	237
Social identification	.83	4.96	.949	237
Group norm	.75	5.43	.744	237
Norm reference group		27.1	6.92	237

Table 8. Cronbach's alpha coefficients, Means and Standard Deviation of main psychological variables (British sample)

5.4.2 Correlation between meat eating behavior, intention and the other psychological variables

Table 9 shows the correlations between the central variables of interest. As expected, the meat eating behavior and intention variables are highly correlated with subjective norms, self-identity, healthy-eater identity and perceived behavioral control.

Firstly, meat eating behaviors positively correlated with intention, Pearson's $r(236) = .723$, $p < .01$, subjective norms, Pearson's $r(237) = .157$, $p < .05$, self-identity, Pearson's $r(237) = .671$, $p < .01$, perceived behavioral control, Pearson's $r(237) = .627$, $p < .01$, attitude, Pearson's $r(237) = .512$, $p < .01$, group norm, Pearson's $r(237) = .338$, $p < .01$, and norm reference group,

Pearson's $r(237) = .31, p < .01$. Moreover, meat eating behavior is negatively correlated with healthy eater identity, Pearson's $r(237) = -.255, p < .01$.

The intention variable is positively correlated with subjective norms, Pearson's $r(236) = .294, p < .01$, perceived behavioral control, Pearson's $r(236) = .79, p < .01$, attitude, Pearson's $r(236) = .79, p < .01$, social identification, Pearson's $r(236) = .27, p < .01$, and norm reference group, Pearson's $r(236) = .18, p < .01$. Moreover, intention is negatively correlated with healthy eater identity, Pearson's $r(236) = -.202, p < .01$.

Variable	1	2	3	4	5	6	7	8	9	10
1. Meat eating behavior	-									
2. Intention	.723**	-								
3. Attitudes	.512**	.702**	-							
4. Subjective norms	.157*	.294**	.215**	-						
5. Perceived behavioral control	.627**	.790**	.664**	.240**	-					
6. Self-identity	.671**	.851**	.682**	.330**	.824**	-				
7. Healthy-eater identity	-.255**	-.202**	-.136*	.152*	-.240**	-.112	-			
8. Social identification	.159*	.040	.122	-.104	.024	.114	.085	-		
9. Group norm	.338**	.270**	.288**	.270**	.379**	.355**	-.033	.198**	-	
10. Norm reference group	.310**	.180**	.256**	.067	.232**	.283**	.047	.198**	.680**	-

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 9. Correlation matrix between meat eating behavior, intention and the other psychological measures (British sample)

5.4.3 Correlation between meat eating behavior, intention and group identification

Correlation analyses between meat eating behavior, intention and group identification variables are summarized in Table 10.

Meat eating behaviors are positively correlated with intention, Pearson's $r(236) = .723, p < .01$, the people you live with, Pearson's $r(221) = .167, p < .05$, the people you work with, Pearson's $r(194) = .165, p < .05$, the people you study with, Pearson's $r(223) = .172, p < .01$.

Instead, intention, does not exhibit any significant correlation with the group identification items

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
1. Meat eating behavior	-										
2. Intention	.723**	-									
3. The people you live with	.167*	.083	-								
4. The people you work with	.165*	.075	.267***	-							
5. The people you study with	.172**	.123	.213**	.57***	-						
6. The people in your sport club	.07	-.041	.198**	.36***	.274***	-					
7. The people in your religious group	.036	.078	.033	.112	.093	.09	-				
8. Your family	.048	.049	.196**	.277***	.28***	.153*	.285*	-			
9. Your neighborhood	.081	-.005	.271***	.362***	.229**	.441***	.219	.317***	-		
10. Your favorite group on Facebook	.033	-.141	.188*	.18*	.203**	.432***	.112	.201**	.354***	-	
11. The people you follow in Twitter	.094	-.044	.259**	.328***	.154	.386***	.286*	.066	.378***	.621***	-

P < 0.05 **P < 0.01 *P < 0.001*

Table 10. Correlation matrix between meat eating behavior, intention and group identification measures (British sample)

5.4.4 Prediction of meat eating behavior

A multiple regression was performed to investigate the extent to which intention to eat meat and the other eight psychological variables (attitudes, subjective norms, perceived behavioral control, Self-identity, healthy eater identity, social identification, group norm and meat-norm reference group) predict meat eating behavior. The adjusted R^2 for this model is significant .57 ($F_{9, 226} = 35.667, p < .001$), as shown in table 11. Table 11 also shows that intention has the highest standardized co-efficient ($\beta = .578, p < .001$), followed by healthy-eater identity ($\beta = -.126, p < .05$). Perceived behavioral control is not a significant predictor.

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>β</i>
Intention	.175	.027	.578***
Attitude	-.060	.053	-.072
Subjective norms	-.020	.016	-.059
Perceived behavioural control	.003	.038	.007
Self-identity	.054	.032	.162
Healthy-eater identity	-.058	.021	-.126**
Social identification	-.258	.198	-.403
Group norm	-.189	.182	-.231
Norm reference group	.060	.036	.682

$R^2 = .570$ (* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$)

Table 11. Multiple regression of meat eating behavior (British sample)

5.4.5 Prediction of intention to eat meat

A multiple regression was performed to investigate the extent to which attitudes, subjective norms, perceived behavioral control, Self-identity, healthy-eater identity, social identification, group norm and meat-norm reference group predict the intention to eat meat. The regression of actual intention to eat meat onto such eight psychological variables was found to be greatly significant ($R^2 = .77$; $F_{8, 227} = 99.371$, $p < .001$), as shown in table 12. Table 12 also shows that four measures are significant. First of all, Self-identity has the highest standardized coefficient ($\beta = .589$, $p < .001$), followed by perceived behavioral control ($\beta = .206$, $p < .001$). Attitudes have a standardized positive co-efficient ($\beta = .191$, $p < .001$), whilst healthy-eater identity has a negative one ($\beta = -.066$, $p < .05$). Again, no social variables are significant predictors for this sample.

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>β</i>
Attitude	.532	.124	.191***
Subjective norms	.052	.039	.046
Perceived behavioural control	.307	.091	.206***
Self-identity	.617	.067	.559***
Healthy-eater identity	-.101	.051	-.066*
Social identification	.447	.478	.211
Group norm	.274	.441	.101
Norm reference group	-.093	.088	-.319

$R^2 = .570$ (* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$)

Table 12. Multiple regression of intention to eat meat (British sample)

5.5 Discussion

This study examined intention and current meat eating behavior of young Britons (aged 18 to 31), autonomous in their shopping decisions and consumer behaviors. This study used the same extended version of the Theory of Planned Behavior as the study described in chapter 4, incorporating both individual (i.e., Self-identity and healthy-eater identity) and social influences (social identification, group norms and meat-norm reference group). Each hypothesis (see paragraph 5.2, page 147) was tested with the multiple regression technique, as in the previous case (study 2, chapter 4).

Multiple regressions of behavior and intentions positively support the first hypotheses (H1.1 and H1.2). This supports the classical findings of literature, according to which (e.g., Armitage & Conner, 2001a; Godin & Kok, 1996; Sheeran & Taylor, 1999) attitude and perceived behavioral control (PBC) should predict the intention of those young Britons to eat meat. Additionally, intention (but not PBC) also predicted performance of the behavior (eating meat). The reason why PBC instead failed in predicting eating meat is not clear, as literature has shown in other cases that it is directly related to performance. Moreover, the correlation between PBC and meat eating behavior was not low ($r = .627$). This created a conflict that for the time being remains unsolvable and certainly needs further investigation.

Despite its high reliability coefficient, the measure of subjective norm remained the weakest component of the TPB model, as expected (Godin & Kok, 1996; Sheppard et al., 1988). In this particular case, the perception of the expectations of relevant others may not be seen as an obstacle to intention for people living by themselves. Moreover, the relative correlation between intention and subjective norms was low ($r = .157$).

Multiple regression analysis on attitudes also supported the hypothesis of the second research questions (H2.1 and H2.2). Self-identity as meat eater and healthy-eater identity were significant further predictors of intention to eat meat. That means that the more strongly a person self-identifies as a meat-eater and negatively self-identifies as a healthy-eater, the greater his/her intention to eat meat will be. According to literature (e.g., Sparks & Guthrie, 1998; Åstrøm & Rise, 2001; Verbeke & Vackier, 2005), in fact, behavior-specific Self-identity (such as being a meat eater) exerts the strongest influence on intention. However, in contrast with previous findings, Self-identity did not predict meat eating behavior but, surprisingly, healthy-eater identity did. That may mean that the less one feels to be a healthy-eater the more meat one eats. This may be the result of very direct and massive information campaigns promoted by British agencies to improve public health also by explicitly inviting people to reduce individual meat consumption. As far as Self-identity is concerned, instead, correlation matrix showed good results for both intention and meat eating behavior, thus further investigation may offers new insights.

The regression analysis showed that social identification and group norm did not influence the intention to eat meat, at least in this sample of young Britons. The norm strength (i.e., norm reference group) did not predict intention too. Hence, H3.1, H3.2 and H3.3 were not supported. Even if the Cronbach's alpha for social identification and group norms is greater than .70, and hence acceptable (Nunnally, 1970), it possible to suppose that these items may not be fully appropriate for the sample. Moreover, these items were left at the end of the questionnaire and it is possible that drops in attention may have influenced the performance of the participants. Anyway, regression analysis of intention showed that the norm strength (i.e., norm reference group) had an interesting, although not significant, standardized co-efficient ($\beta = - .319$). Moreover, correlation analysis (see table 9) showed that such variables were significantly correlated with meat eating behavior and intention correlated with group norm and norm reference group. Moreover, there were some groups (i.e., people one's live, study and work with) that were also positively correlated with meat eating behaviors. Such

correlation values were low but they allow to suppose that there may be a link among social influences, intention to eat meat and consequent behavior.

However, the most important remaining question is about the importance of effective social influence on very private actions performed “behind closed doors” such as cooking for themselves in situations that do not necessarily involve social contacts (e.g., having dinner alone at home). A qualitative life histories study, by White and colleagues (2011), on a cross-generational British sample, also suggested that the importance of social context to meat consumption may develop at a later stage in life, and/or that it may derive from social/income class (not tested in this sample) and cultural food heritage of past generations that, today, may be of lesser importance to the young. However, the material collected in this study is not enough to properly address this particular aspect and further work is needed.

In conclusion, multiple regression analysis predicting meat eating behavior revealed that intention and the other eight psychological variables contributed to the prediction of eating behavior and intention to eat meat. The level of prediction of intention ($R^2 = .77$) was significant and higher compared to that reported in other applications of the TPB (Godin & Kok, 1996). Also the prediction of behavior was interestingly significant ($R^2 = .57$), suggesting that the variables added in this extended model of TPB actually increased the variance explained compared to the original model.

Despite these positive results this research is not exempt from limits. A first one is that a few of the classical components TPB model (i.e., attitudes, subjective norms and perceived behavioral control) had to be removed due to low internal reliability, as however previously done by other researches (see, for example, Picazo-Vela et al., 2010). So, future research may need to better focus on the development of more robust scales to measure the aforementioned components.

Secondarily, the findings held specifically within the characteristics of the sample. All the participants, in fact, as in the previous case, were required to live on their own and be autonomous in their shopping and consumer behaviors, to ensure enough responsibility in cooking and purchasing. That may have influenced the normative variables of the model and an investigation on a broader sample of the population may deliver different results.

5.6 Conclusions

This study has proposed and tested an extended model of the Theory of Planned Behavior (TPB), examining psychological factors that influence both intention to eat meat and actual meat consumption in a sample of young Britons, autonomous in their shopping decisions and consumer behaviors. Taken as a whole, the model explains nearly 60% of the proportion of the variance of a meat eating behavior and almost 80% of the variance of intention to eat meat. Specifically, these results provide support for intention (H1.1) and healthy-eater identity as predictors of meat eating behavior, whilst attitudes, perceived behavioral control, healthy-eater identity and Self-identity as meat eater (H2.2) are statistically significant predictors of intention to eat meat. Again, the role of norm reference group is not significant for this sample that is likely too small in terms of number and possibly too “wide” in terms of age range. So, results suggest that applying the model to a sample representing a broader spectrum of ages of the British population may deliver more meaningful results, warranting further investigations. In terms of practical applications, these findings provide new insights in the field of extended TPB and meat consumption in the UK, by highlighting that young people may be influenced by campaigns targeting not only healthy-eater identity but also Self-identity as meat eaters.

CONCLUSIONS

«Plenty of people are working on tools for change, but the fields in which they work remain unconnected. That the motive, means and opportunities for profound positive change are already present. That another world is not just possible, it's here. We only need to put pieces together» (Worldchanging 2008, quoted in Sarkissian et al, 2009, p. 3)

Eating is an essential activity for any living organism and it is necessary to survival and well-being but, for mankind, is not only a matter of nutrition. Food decision making is a complex psychological process that can be charged with a multifaceted set of stratified meanings, as described in the first part of this thesis. In times of prosperity and overabundance, people can experience many and different eating opportunities and at present, especially in rich developed societies, food choice may have reached a level of complexity never attained throughout history. Among universally or nearly accepted foods, meat seems the one to be the most invested with symbolic meanings and so it offers interesting perspectives for the psychology of food, investing health and environmental implications. Meat production in highly industrialized settings is one of the most environmentally harmful activities, due the enormous volumes of vegetal byproducts required and, consequently, the appalling amounts of land, water and polluting materials (ranging from fertilizers to antibiotics) involved (de Bakker & Dagevos, 2012) and the greenhouse emissions released in the atmosphere. Moreover, animal fat and protein (i.e., meat) based diets have been proven to be associated with or to cause several serious health problems (WCRF, 2007). It may be then concluded that increasing our knowledge of the meat consumption psychological drivers may ultimately help in achieving better global nutritional and health standards and meeting the Expo 2015 goals.

Literature suggests that meat consumption is deeply rooted in our society and holds a central position in the diets of a large number of people (Abrahamse et al., 2009). A vast literature and a large number of studies confirm that its choice does not depend on a single variable

(e.g., nutritional values) but also depends on many other factors, such as value for money (Richardson et al., 1993), taste and health (Kenyon & Barker, 1998) and social influences, like family and friends (Lea & Worsley, 2001). However, despite all the benefits of eating meat, a growing number of people reports strong feelings of ambivalence towards it, especially after a long sequence of meat-related scandals and the growing awareness of many environmental and health related issues. Research investigating these contrasting attitudes reports of conflicts between pleasure and health (Povey, et al., 2001; Sparks, et al., & Povey, 2001), but also of the moral and ecological aspects of meat consumption (Beardsworth & Keil, 1991; Povey et al., 2001).

At present, very little is known about the perception Italians have of meat. Official statistics show that the meat sector is very important to the Italian economy (Camera di Commercio di Milano, 2010) but they do not explain social and psychological variables related to its consumption. Thus, a quali-quantitative approach has been used to perform the studies of this PhD dissertation, which may offer interesting and useful insights on this topic, especially for what relates to young, post-teen generations.

The first study presented here (chapter 3), which is a qualitative investigation conducted with the Life Histories methodology, confirmed the central role played by meat not only in dietary habits. The thematic analysis of the fourteen (mother-daughter) narratives revealed how its consumption has deep roots in Italian costumes and practices, as it represents the backbone of eating traditions. From the analysis of the studied mother-daughter sample, no factor (such as taste, for instance) has however emerged as the one that, alone, could explain or allow to understand why meat is consumed. Individuals, society, culture, tradition, consolidated habits and rituals appear to act together, highlighting the complex and articulate structure that lies behind food choices.

First of all, meat serves several different functions and many go beyond nutrition. In fact, meat mostly acts as a catalyst for social relations, where family members are brought together around traditional meat-based meals (e.g., on Sunday, Christmas, Easter or Easter Monday) and as an opportunity to display capabilities, in the attempt to impress family members, friends or partners with praised recipes. To the majority of the interviewees, especially mothers, meat is essential to health and, in particular, to children's diet. But meat is also a deemed necessity, since it is believed to be the most practical food allowing to have a nourishing meal in the shortest possible time.

Generational differences highlight the presence of several diverse structural conditions, such as societal, economic, and/or physical factors that are beyond the control of individuals. From past to present, in fact, meat and food consumption greatly changed throughout the lives of the interviewees. Specifically, the most influential structural conditions for meat consumption may be related to territorial influences (e.g., food availability), travel and the daily or weekly diet setting (e.g., the “*primo-secondo* scheme” for Sunday lunches). The analysis of these factors highlights the importance of accounting for more than one facet of meat consumption at a time and of considering the historical, social and individual influences over time, rather than limiting investigations to the present. Interestingly, turning points in the lives of the interviewees could offer key points to target tailored interventions aiming at reducing meat consumption. In fact, taking into account all the stories, changes in meat consumption are more likely to be associated to specific moments in life, such as when one leaves home for the first time or the birth of children, although the reasons behind them may differ within the sample. It is also apparent that meat and food practices changed overtime. There has been a remarkable reduction of the time dedicated to cooking throughout the generations with an exponential escalation of welfare, which led to a significant increase of meat consumption. At present, the younger generations are taking distance from the classic Italian “*first-and-second-course meal scheme*” to the advantage of two “single” courses to be consumed at different times. However, meat is still nearly always present in either of the two. Mothers and daughters seems to enjoy the present variety of available products which in several cases lead to new kinds of diets which are mainly *perceived* as being lower in meat content and more “modern”. In fact, food diaries reveal that interviewees eat far more meat than they declare. A possible explanation for this may be due to the presence of other people in their lives. Male partners, in fact, seem to demand more meat or seem to enjoy cooking it, in line with many findings in the literature (see for example, Adams, 1994; Bourdieu, 1989; Charles & Kerr, 1986; Fiddes, 1991; Holm & Mùhl, 2000; Jensen & Holm, 1999).

From a psychological point of view, and according to literature, the concepts of ethical and moral meat seem to be critical turning points to switch to more sustainable diets. A few of the interviewees praised the idea of consuming ethically and responsibly sourced meat, in relation to both their health and the environment but, despite their positive attitudes, a largely vegetarian diet is perceived as a troublesome obligation and, for most of the them, it neither is an attractive goal.

The recorded narratives highlight a widespread resistance to change due to the feeling that changes are not needed but also suggest psychological factors that could be leveraged to induce changes in dietary habits. Those are Self-identity and social norms.

New generations may only seem to provide an easier ground to promote changes, because they allow to work on a more personal basis, in that youths are usually responsible towards others to a much lesser extent than older adults (e.g., those with families). Understanding the psychological drivers behind meat choice of young men and women is then of outmost importance to conceive effective tailored strategies to promote a future durable reduction of meat use. The life histories approach is an excellent method to collect rich and valuable data about habits in general and, in this case, it proved to deliver information beyond expectations. However, it would be difficult to use this method on large/representative samples, for the time and resources required, not to mention coordination efforts needed to involve large research teams. Thus, it was resolved to couple this life histories study to a quantitative research based on the analysis of data collected with a survey.

In order to focus on personal choices, the Theory of Planned Behaviour (TPB) has been used to investigate the relevant psychological aspects of meat consumption of two samples of young Italians and Britons, aged 21 to 31, autonomous in their shopping decisions and cooking behaviors. The theory has the advantage of being well-known, thoroughly tested and largely accepted. Briefly, the TPB (Ajzen, 1985; 1991; 2002) affirms that the relationship between attitude and behavior is not a direct one, but rather is mediated by behavioral intention. Intention is the most important predictor of behavior, in that the stronger the intention to engage in a certain action, the more likely its performance should be. The classical model is composed by three determinants of intention, i.e. attitude, subjective norm and perceived behavioral control. Recently, in order to improve the predictive power of the model, additional predictors are included. Literature strongly suggests the inclusion of Self-identity (Rise et al., 2010). However, narratives from this life histories study highlighted the importance of healthy eating. Interestingly, mothers and daughters do not seem to consider/see the consequences of meat rich diets. On the contrary, they still perceive meat as an essential part of a balanced diet and a healthy food, underestimating or simply ignoring WCRF recommendations (2007) and environmental threats. Thus, an healthy-eater identity measure has been added to the questionnaire. Norms also play an important role in food and meat consumption. Therefore, considering the young age of the sample, measures of group norm and social identification have been finally added to the model.

Regression analysis of the data from the Italian and the British samples confirms the predictive power of this extended model of the TPB.

In the Italians, the model explains 20% of the proportion of the variance of a meat eating behavior and nearly 40% of the proportion of the variance of an individual's intention to eat meat (table 13 and table 14). Classical TPB variables were partially supported, but the most interesting results came from Self-identity, as a statistically significant predictor of both intention and meat eating behavior. In this case, the more one feels to be a meat eater the more meat one intends to eat and actually eats. This also emerged from the narratives of the first study (chapter 3). In fact, the interviewees of that group that defined themselves as meat eaters allow to suppose that giving up meat would be unthinkable for them. Similarly, for those that tried to diminish meat from their diets, feeling to be meat eaters had been a very strong obstacle to change, because that would have meant a change towards an identity (being vegetarian), which they could not feel to be theirs. This observation, if proven true, may help in designing better information campaigns switching from the present emphasis on health to Self-identity.

On the other end, the role of norm reference group and attitudes were not significant for the studied sample, which possibly revealed to be too restricted, too small in terms of number and possibly too "wide" in terms of age range. The requirement for the subject to be living without a partner/family probably narrowed the range of applicable norms but, more important, the age between 21 and 31 is a one in which attitudes, habits and life styles are still in a dramatic evolution, in which transition between study and work usually takes place and time availability evolves significantly, affecting cooking and purchasing practices. Future works could investigate in greater detail such particular aspects.

<i>Variable</i>	Italians			Britons		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Intention	.110	.025	.315***	.175	.027	.578***
Perceived behavioural control	.332	.151	.110*	-	-	-
Self-identity	.562	.050	.586***	-	-	-
Healthy-eater identity	-	-	-	-.058	.021	-.126**
R2		.217			.570	
F		9.092***			35.667***	

*p < .05. **p < .01. ***p < .001.

Table 13. Regression of behavior in the Italian and British sample summary

Instead, in the Britons, the whole model explained nearly 60% of the proportion of the variance of a meat eating behavior and almost 80% of the variance of intention to eat meat (see table 13 and table 14). Specifically, these results provide support for intention and healthy-eater identity as predictors of meat eating behavior, whilst attitudes, perceived behavioral control, healthy-eater identity and Self-identity as meat eater are statistically significant predictors of intention to eat meat. Again, the role of norm reference group was not significant for this sample. The importance of norms strongly emerged in the Life Histories of the first study but, once entered in the TPB model, norm measures and social identification essentially failed to predict the intention to eat meat. The pending question, then, is about the importance of effective social influence on a very private actions performed “behind closed doors” such as cooking for themselves in situations that do not necessarily involve social contacts (e.g., having dinner at home without company). Narratives of chapter 3 suggest that the importance of the social context to meat consumption may develop at a later stage in life, when formal relationships become an important part of life and/or that it may derive from cultural food heritage of past generations (e.g., social control, hierarchy) that, today, are less important to the young. However, the material collected in this study is not enough to properly address this particular aspect and further work is needed.

<i>Variable</i>	Italians			Britons		
	<i>B</i>	<i>SE B</i>	<i>β</i>	<i>B</i>	<i>SE B</i>	<i>β</i>
Attitude	-	-	-	.532	.124	.191***
Perceived behavioural control	.332	.151	.110*	.307	.091	.206***
Self-identity	.562	.050	.586***	.617	.067	.559***
Healthy-eater identity	-	-	-	-.101	.051	-.066*
R ²	.380			.770		
F	21.189***			99.371***		

*p < .05. **p < .01. ***p < .001.

Table 14. *Regression of behavior in the Italian and British sample summary*

Generally, these results suggest that applying the model to a sample representing a broader spectrum of ages of the Italian and British population may deliver more meaningful results, warranting further investigations. Most important, in an Italian context, this study provides new insights in the field of meat consumption by demonstrating that young people are more likely to be influenced by a “meat eater” Self-identity rather than a “healthy eater” one,

regardless their attitudes and social influences. So, in terms of practical applications, these findings may have identified a potentially useful key cognitive target for new information campaigns aiming at reducing meat consumption of young Italians. As far as the British sample is concerned, instead, findings suggest that behavior-specific Self-identity (such as, being a meat eater or a healthy-eater) exerts the strongest influence on intention, as confirmed by literature (e.g., Sparks & Guthrie, 1998; Åström & Rise, 2001; Verbeke, Vackier, 2005). However, in contrast with previous findings, Self-identity does not predict meat eating behavior but, surprisingly, healthy-eater identity does. That may mean that the less one feels to be a healthy-eater the more meat one eats. This may be the result of very direct and massive information campaigns promoted by British agencies to improve public health also by explicitly inviting people to reduce individual meat consumption. These findings provide new insights in the field of the extended TPB and meat consumption in the UK, and suggest that young people may be influenced by campaigns targeting not only healthy-eater identity but also Self-identity as meat eaters. Anyway, also in this case, the extended model of the TPB should be applied to a sample representing a broader spectrum of ages of the British population in order to gain better focused and more meaningful results.

The extended model of the TPB worked for both samples with different levels of accuracy and, in particular, very well for the British one (see table 13 and table 14). Self-identity as a meat eater plays a prominent role as a predictor of both actions and intentions, albeit with differences in the two groups. So, it may be suggested that promoting the image of moderate meat-eater, making it appealing to such young but self-responsible targets, may be a strategic lever to sustainably reduce meat intakes of standard daily diets.

Also healthy-eater identity proved effective but its role emerges much better in the British sample. Unexpectedly, in the British sample, healthy-eater identity went beyond predicting intention and directly affected meat eating behavior. This may be due to the effects of capillary information campaigns recently conducted in the UK, which directly discouraged meat consumption, different to equally pervasive Italian food adverts that leverage on food quality, as main healthy food indicator, or, secondarily, on moderation as the recipe to a healthy and long life (WCRF, 2007). Furthermore, 10% of the British sample was vegetarian against 0% of the Italian one. Last but probably not least, the Italians' average age was 3 years greater than the Britons'. That means that the young Britons in the sample became independent earlier than the corresponding Italians and therefore that the former may have

been less influenced by external factors such as inherited family habits. Despite that, the social variables did not prove to be significant predictors of intentions in both samples. This may be due to the combination of the sample requirements, which may have been too restrictive (young age, autonomy in purchasing and cooking, no family members or partners to live with) and the age range selected that may have been too wide. Life histories, in fact, suggest that some behaviors develop later in life and that are influenced by caring experiences.

In conclusion, this research has produced two different lines of results: one relevant to the psychological aspects of meat consumption (i.e., attitudes, identity, norms) and one relevant to the frameworks to be used, whereas the combination of qualitative and quantitative approaches has revealed to be particularly effective in this case (i.e., Life Histories and Theory of Planned Behaviour).

First of all, narratives from the first study revealed that Italians still hold positive attitudes towards meat. Meat is considered an essential part of a healthy diet and a primary source of important nutrients, such as iron and proteins. Information about health risks related to excesses in meat consumption, however important, do not seem to achieve the best results based on a simple “the more the better” strategy. Optimism bias has been reported in literature in a wide range of health and environmental behaviors (see, for example, Caponecchia, 2010; Hatfield & Soames Job, 2001) and this type of attitude also emerged in the sample of the first study of this project, as described above. New strategies would take benefit by targeting psychological variables as Self-identity, which worked very well in both samples as predictors of intentions and behavior. In terms of practical implications, low meat-eater identities may have an appealing influence on the young, whereas being vegetarian seems to be considered demanding. However, further investigation on their effects, on a larger sample, is needed.

Finally, the normative aspects did not emerge in the quantitative studies, although their role clearly appeared in the qualitative one. It may be concluded from interviews that, today, eating less meat and many vegetables is socially more acceptable than when mothers and daughters were young. However, several social norms, such as the Italian meal pattern (“*primo and secondo*” scheme), seem to hamper efforts in reducing meat consumption. In particular, for the Italian context, *primo* and *secondo* are not only part of structural conditions, but they are an expression of habit and norm, widely shared among the members of a community. Within this meal pattern, meat has a strong visibility. Hence, attempts to reduce its consumption interfere with this strong structural condition and go against the social norm.

However, this social norm seems to be more relevant to the group of mothers, since daughters are less likely to prepare and follow traditional meal patterns. That may be due to lack of time or a lesser desire to cook/impress, but also to economical restraints. Since the TPB study failed in explaining the role of norms, deeper investigation is clearly needed. For instance, a much larger sample, embracing a wider range of ages, may allow to identify at what age and/or at what moment in life social norms begin to play a prominent role and to what events it may be more likely to be linked (e.g., marriage, moving, birth of child, change of social status).

From a methodological point of view, the use of an unusual approach to food investigation, i.e. the Life Histories methodology, elicited detailed information and understanding about meat consumption, within social sciences. The Life Histories approach collects much deeply seated information and allows subjective interpretations about one's eating behaviors. Data collected are rich and valuable and, in particular, the combination of mother and daughter narratives shed new light about origins and changes in meat consumption, but also interesting clues for tailored interventions, aiming at reducing its use.

The TPB model is an effective framework based on the acceptance of individual responsibilities, possibly better reflecting the Anglo-Saxon cultural environment dynamics. Although it has been successfully applied worldwide, most of the studies conducted according to this model have taken place in the US and Northern Europe. Comparing the results of regression analysis of the British and Italian sample, it appears that, notwithstanding the identical measures used, intention and behavior are predicted at different levels. In particular, if in the British sample the whole model explained nearly 60% of the proportion of the variance of a meat eating behavior and almost 80% of the variance of intention to eat meat, in Italy the same model explained 20% of the behavior and nearly 40% of the intention (table 13 and table 14). This may imply or suggest that the theory may be more predictive in those cultural environments where intentions and actions are given a similar importance or an equivalent moral value (Anolli, 2004).

It is also likely, however, that young Italians and Britons, and students in particular, have different approaches to "living by themselves". Italians, if compared to the Britons are more likely to return home during weekends, as per Life Histories, and start living on their own slightly later, as the school system dictates and the samples show. So, full autonomy in consuming behavior may be attained later by Italians, creating a bias in the study outcomes.

Given the data relevance, however, further investigation is warranted, possibly starting from a revised set of sample selection criteria.

In conclusion, this work produced new insights on the psychology of meat consumption and successfully tested a quali-quantitative research approach, suggesting at the same time the opportunity of deepening investigation on particular relevant aspect such as Self-identity, attitudes and norms. Experience matured on the data suggest that more sophisticated statistical analysis (e.g., structural equations) could be performed to reveal subtler aspects of and relationships between involved variables. Such analysis would benefit from a much larger sample, possibly including a wider range of subjects to be selected aiming at capturing all factors and norms determining meat choice.

Since meat consumption seem to change after particular events or during particular periods of life, such as pregnancy and parenthood, specific investigation should be dedicated to young parents. Male subjects were not present in the qualitative study, which was intended to focus on particular mother-daughter relation, which literature has it as a very special one. The qualitative analysis confirmed that meat is still a manly food, hence extending the Life Histories approach to male subjects is expected to provide very interesting insights.

Finally, since collected data allow to suppose that cultural factors and geographical differences influence diets, it would be interesting to extend the research with a cross-cultural approach to Countries or regions where meat is differently available and may hold different significance.

APPENDIX A

GLOSSARY OF ITALIAN CULINARY TERMS

In most of the interviews, reference is made to popular Italian dishes or to the structure of Italian meals. To Italian readers such names have an obvious meaning and the relevant ingredients are quite likely to be well known. This may not be true for other readers and, for their convenience, a small glossary of Italian culinary terms is listed hereunder. In the study text, such terms are highlighted in *italics*.

Affettato (pl.-i): a collective term to indicate thinly sliced preserved meat (either dried, salted, smoked or differently spice-flavored), usually pork (salami, ham, bacon) but also beef, game, duck, used as sandwich filling but also as component of typical Italian *antipasti* (see).

Agnolotto (pl.-i): a small meatball wrapped in thin *pasta all'uovo* (see), one inch square in size, cooked in salty water or broth, to be topped either with butter or a sauce and parmesan cheese or served as a soup. Differs from *cappelletto*, *tortellino* or *raviolo* mainly for its shape but also for slight differences in the filling recipe.

Agnolotto (pl.-i) di magro: a small lump of *ricotta* cheese, herbs and other ingredients wrapped in thin *pasta all'uovo* (see), one inch square in size, cooked in salty water or broth, to be topped either with butter or a sauce and parmesan cheese or served as a soup. Differs from *cappelletto*, *tortellino* or *raviolo di magro* mainly for its shape but also for slight differences in the filling recipe.

Antipasto (pl.-i): hors d'oeuvres, appetizer. A dish to be served ahead of other courses. It can be made of anything, although traditionally based on *affettato*.

Arrosto (pl.-i): roast

Bagna cauda: a dense sauce made with garlic, olive oil, butter, milk and salted anchovies. It is the most typical convivial dish of Piedmont. It is left gently boiling at the center of the table and guests dip in raw vegetables (celery, cardoons, and others).

Bistecca (pl. *-he*): steak (of any origin), a fine cut of meat, usually boneless. Usually grilled or fried in very little oil or butter, it is rarely topped with sauces.

Bollito (pl. *-i*): boiled meat; if not otherwise specified, beef.

Bollito misto (pl. *-i*): a selection of different cuts of meat from different animals (normally beef, veal, and capon or hen) all boiled together with herbs and spices, to be served with parsley sauce, horseradish and *mostarda*.

Brasato (pl. *-i*): braised meat (beef) slowly cooked after having been marinated overnight in strong red wine (e.g. *Barolo*), with spices (clover) and vegetables (onion, carrot, celery and others).

Bresaola: selected beef cuts, gently salted, spiced and dried to the point they still keep a level of tenderness similar to *prosciutto crudo* (raw ham). A typical product of some central alpine valleys, to be eaten alone or as *antipasto* with other *affettati*.

Cannellone (pl. *-i*): large kind of tube-shaped pasta (3' to 4' long, 1 to 1.5' inch in diameter). It is usually boiled until moderately soft and then filled with minced meat, grated bread, cheese or vegetables and finally finished in the oven in a *ragu* sauce to obtain something similar to *lasagna*, referred to as *cannelloni ripieni* (stuffed cannelloni). Rarely, it may be cooked as normal *pasta*.

Cappelletto (pl. *-i*): see *agnolotto*.

Cappone (pl. *-i*): Capon

Capretto (pl. *-i*): kid (baby goat), in northern Italy, different to Southern and Central, it is usually eaten at Easter.

Carbonara (pasta, *spaghetti*): *pasta* (usually *spaghetti*) enriched with a sauce made of fresh eggs, bacon, pepper and cheese (optional).

Casoeula: a traditional, dense, winter soup made of cabbage and various cheap cuts of pork, mainly rind. It is a traditional and once very popular, nutritious, lower class dish in Lombardy.

Contorno (pl. *-i*): side dish, to be served with *secondo*. It is always made of vegetables, either raw or differently cooked.

Coppa (pl.-e): a tightly rolled thick salted slice of pork neck, flavored with pepper and herbs and let dry for months in a cellar. Usually eaten as *affettato*.

Costina (pl.-e): pork ribs; they are prepared in many different ways.

Cotechino (pl.-i): a large peppery sausage made with minced pork head meat and pork rind, typical of the northern and central Italian regions. It is usually boiled and eaten with lentils and *polenta*.

Cotoletta (pl. -e): cutlet.

Cotoletta Milanese (pl. -e,): bread-and-egg coated, deep fried (beef or veal) cutlet.

Costoletta (pl. -e): pork T-bone steak; in some regions it may refer to beef T-bone steak.

Crespella (pl.-e): thin *omelettes* made with eggs and wheat flour, rolled around a minced meat and/or cheese stuffing, dispersed with *béchamel* (white sauce) and oven cooked.

Fettuccina (pl.-e): A kind of ribbon shaped *pasta* or *pasta all'uovo* (see)

Filetto: fillet. It is considered the finest meat cut, usually cooked as a steak, with or without sauce (e.g., green pepper).

Focaccia (pl. -e): a flat round olive oil bread (olive oil is added to dough) flavored with rosemary, sage, olives, onion, or other vegetables)

Friciculata: deep fried ham, cheese and bread, similar to *gnocco fritto*.

Gnocco (pl.-hi): dumpling. Usually made either of wheat flour, semolina, potatoes or dry bread, mixed with milk, eggs and, sometimes, bacon. They are boiled in broth or salted water and eaten either strained (topped with a sauce) or as a soup with their cooking broth.

Gnocco fritto (pl.-hi -i): large deep fried wheat flour dumpling. It may have a cheese core.

Gnocco alla romana (pl.-hi): Baked dumplings made of semolina, milk, eggs and *pecorino* (sheep milk) cheese.

Insalata (pl.-e): literally, salad, but if otherwise unspecified, the term refers to lettuce. To be dressed with olive oil, salt and, based on personal tastes, pepper and vinegar.

Insalata russa: “Russian salad”. Boiled vegetables (carrots, peas, potato and others) mixed with mayonnaise (egg and oil) sauce.

Lasagna (pl.-e): layers of large *pasta* stripes interspersed with minced meat, tomato sauce and *béchamel* (white sauce), oven cooked.

Mascarpone: very soft, buttery cheese used in the preparation of cakes and stuffing.

Minestra (pl.-i): soup.

Mortadella : Bologna. A very large cooked sausage made with very finely minced pork meat enriched with coarsely cut lard, pepper grains, pistachios and fine herbs. It is a typical product of the region of Bologna, where it was invented (hence it’s English name).

Mostarda: sweet fruit pickles.

Ossobuco (pl.-hi): stewed marrow bones.

Pancetta: bacon.

Pandoro (pl. -i): typical Christmas cake from Verona. Similar to *panettone* but more buttery and devoid of sultanas and candied citrus skin.

Panettone (pl. -i): typical Milanese Christmas cake. A sort of soft spongy sweet bread enriched with egg yolk, butter, milk, sultanas and candied fruit (citrus and orange skin).

Panino (pl.-i): sandwich. Traditionally made with local bread and a plain filling (cheese or *affettato*). Recently, *panini* have become a fashionable fast food and fillings may be very complex, although still based on cheese or *affettato*, with or without lettuce or tomato.

Pasta: Air dried flour and water paste, made in innumerable shapes, to be boiled in water. Served as such (*pastasciutta*) with a large variety of sauces (*sugo*) or as soup (*pasta in brodo*).

Pasta all’uovo: air dried flour, eggs (5/kilo) and water paste, made in many shapes, to be boiled in water. It is served as *pastasciutta* with a large variety of sauces (*sugo*) or as soup (*in brodo*). This variety of pasta is often made at home and used to prepare *agnolotti* and the like.

Pasta in brodo: also commonly referred to as *pastina*, see *pasta*.

Pastasciutta: see *pasta*.

Peperonata: stewed peppers, (onions) and tomato. To be cooked with olive oil.

Pesto: typical *pasta* sauce of Genoa, made with olive oil, salt, basil leaves, pine seeds, garlic and parmesan or *pecorino* (sheep) cheese.

Piadina (*pl. -e*): a thin wheat flour tortilla cooked on a hot iron pan. To be wrapped around a filling (cheese, meat).

Pizza: pizza. It is a “poor” dish typical of Southern Italy that successfully spread across the world. Old fashioned pizzas were very poor in meat content (possibly a few slices of *salame* or *prosciutto*) and fully “Mediterranean” in style, different to modern ones that, especially out of their original area, may now be topped with anything.

Pizzochero (*pl.-i*): thick *fettuccine* made with buckwheat flour, boiled with potatoes and served with melted cheese and butter. Typical central alpine dish from Valtellina.

Polenta: lightly salted maize porridge made soft or stiff, according to local use or personal taste. It is the most traditional northern Italian lower class dish (in harsh times the main or only food available). It is eaten hot or cold with sauces (*sugo*) or, as a substitute of bread, as a side dish. Northern Italians are dubbed “*polentoni*”, i.e. *polenta* eaters.

Polpetta (*pl.-e*): meat ball.

Pomodoro (*pl.-i*): popular side dish (*contorno*) and main or base ingredient of many pasta sauces (*sugo*).

Primo (*pl.-i*): first course or entrée, usually with a strong vegetable base (e.g., *pasta*, *soup*) which may be enriched with meat products (e.g., *lasagna*, *agnolotti*).

Prosciutto cotto (*pl.-i*): cooked (steamed) ham. Usually cheaper than *prosciutto crudo*.

Prosciutto crudo (*pl.-i*): raw ham, the most praised and costly variety.

Puccia (*pl.-e*): any rather watery sauce (*sugo*) in which to dip bread, vegetables or *polenta*.

Ragu (*Bolognese*): minced meat, vegetable flavored sauce (*sugo*) for pasta and *lasagna*.

Raviolo (*pl.-i*): see *agnolotto*.

Risotto (*pl.-i*): rice meal, slowly cooked in pan with a limited amount of water and/or wine and different mixes of ingredients (vegetables and/or meat). Frequently added or topped with

grated cheese (parmesan or other local types). Typical dish of the northwestern Italian regions.

Salame (pl.-i): salted and spiced minced pork meat (a large sausage) left to mature and slowly dry in cellars. Originally, an ingenious way of preserving pork for long times. In some regions pork meat may be added with that of other animals.

Salamella (pl.-e): Small fresh pork sausage, to be cooked.

Salsiccia (pl.-e): fresh pork sausage, to be cooked.

Secondo (pl.-i): second serving (or main course) of a full traditional Italian meal, usually meat based, to be accompanied by a side dish (*contorno*).

Spaghetto (pl.-i): string shaped pasta, to be eaten *asciutta*, possibly the most popular pasta format. Originally created in Naples and largely used in the South, after the Italian unity (1860), *spaghetti* successfully spread in the North where it became one of the most popular dishes after WW1.

Spek (pl.-i): smoked, rather dry and salty bacon variety typical of the central eastern alpine region.

Spezzatino (pl.-i): stew, cooked in many styles with different varieties and proportions of sauces, often used in many homes as *sugo* for *pasta* during the same meal.

Sugo (pl.-hi): oil or butter, meat and/or vegetable based sauce for *pasta*, *polenta* or meat seasoning.

Tagliatella (pl.-e): ribbon-shaped or flat *spaghetto*.

Tortellino (pl.-i): see *agnolotto*

Verza (pl.-e): savoy, cabbage

Vitello tonnato (pl.-i): thin slices of braised veal or tender beef, covered with a thick tuna and caper sauce.

Wurstel (pl.-i): thin German boiled and smoked sausage, very popular in Italy (usually sold in its industrial preserved ready-to eat version, in packages of 5 pieces each).

APPENDIX B

FOOD DIARIES OF MOTHERS AND DAUGHTERS (STUDY 1)

A qualitative study was carried out to examine in depth psychological drivers and social contexts of meat in diet and lifestyle, focusing on their evolution and changes over lifetime (see study 1, chapter 3, page 72). Before the interview, mothers and daughters have been asked to keep a seven days food diary in order to better monitor meat intakes in order to reduce social desirability bias and under-reporting answers. In the next pages mother and daughters diaries will be presented. Meat and meat dishes are in bold. Most popular Italian dishes are briefly described in the food glossary (appendix A).

Daughters' diaries

Simona - July 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Cereals, Milk, Coffee	Watermelon		Fruits, Coffee	Rusks, Coffee	Cereals, Milk, Coffee	Cereals, Milk, Green Tea
Morning Snack							
Lunch	Kepab	Mozzarella cheese, Tomatoes, Salmon, Little cake		Mixed salad	Mozzarella cheese, Tomatoes, Salad	Couscous with vegetables	Whole grain pasta with cherry tomatoes
Afternoon Snack							
Dinner	Coppa , Fontina cheese and olive patè wrap	Coppa , Fontina cheese and olive patè wrap		Pizza	Turkey burger , Vegetables	Curry chicken , Indian rice	Mozzarella cheese and tomatoes

Paola - September/October 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Barley Capuccino, Homemade cake	Barley Capuccino, 3 Rusks	Barley Capuccino, Homemade cake	Barley Capuccino, Tarte	Barley Capuccino, Rusks, Jam	Barley Capuccino, 3/4 (bought) Biscuits	
Morning Snack		6/7 Low-calorie biscuits					
Lunch	Pasta with tomato sauce, Tomatoes, Peppers	Homemade minestrone soup, Turkey roast , Tomatoes salad	Pizza with ham	Ricotta cheese and spinach quiche, A packet of rice crackers, Peperonata	Codfish steak, Mix of vegetables, Capuccino	Sandwich with ham and mozzarella cheese, Sweet snack	Grilled steak , Mix of vegetables, Rice cracker
Afternoon Snack	Grapes, 2 Apples, A packet of crackers	1 Peach, Grapes, 1 Pear	2 Peaches, 1 Pear	1 Apple, 1 Pear, A packet of crackers			Little squares of chocolate
Dinner			Soup, Grilled veal steak		Scamorza cheese, Green salad, Bread sticks	Friciulata (deep fried bread with hams)	Squash soup, Croutons

Elena - November 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Blueberry Yogurt, Wholegrain cereals, A spoon of honey	Blueberry Yogurt, Wholegrain cereals, A spoon of honey	Blueberry Yogurt, Wholegrain cereals, A spoon of honey	Tea, Pastry with Nutella	Blueberry Yogurt, Wholegrain cereals, A spoon of honey		Blueberry Yogurt, Wholegrain cereals, A spoon of honey
Morning Snack	Orange snack bar, A vanilla Ringo biscuit	Little tarte snack, Apple			Camilla (carrot cake stack)	Bread sticks	
Lunch	Little tirolesi gnocchi (spatzle) with squash, spinach, dairy cream and parmigiano cheese, Pear	Rice salad, Apple	Ricotta cheese and spinach tortelli with oil and parmigiano cheese, Drinkable yogurt, Mandarins	Rice salad, Mandarins	Gnocchi with tomatoes, Coldfish, String beans, Orange	Squash soup, Salad, Mandarins, Tarte	Pasta with broccoli, Valerian salad with tomatoes, Bread, Pineapple
Afternoon Snack	Drinkable yogurt	Tea	Mint tea	Focaccia with aubergines and chees	Banana	Tea, Biscuits and tarte	
Dinner	Green salad with tomatoes and rocket, Cheese, Bread, Mandarin	Fennel salad with parmigiano cheese, Beans with onions, Banana	Whole grain pasta with pesto sauce, Cabbage salad with carrots, Little artichokes, Mandarins, 2 Biscuits, A sip of Baileys		Stir fried cauliflower, Little creramy goat cheese, Sesame bread, Apple	Oven baked fish, Roasted potatoes, Artichokes salad with parmigiano cheese, Pineapple	Gnocchi alla romana (baked semolina gnocchi), Oven baked anchovies, Stir fried carrots, Cooked pears with wine
Extra	Tisana			Infusion of linden and red berries	Cocktail		

Valentina - November 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Milk with coffee, 4 Biscuits	Milk with coffee, 5 Biscuits	Milk with coffee, 10 Biscuits	Milk with coffee, Biscuits	Milk with coffee, 7 Biscuits	Milk with coffee, 5 Biscuits	
Morning Snack	Hot tea						
Lunch	Soup and pasta, A aubergine, A glass of wine, Coffee	Pasta alla norma (with aubergines and tomato sauce), Bread with Nutella, Biscuits, Coffee	Soup pasta with baby food	Pasta with dairy cream and cherry tomatoes, A glass of wine, Coffee	Ravioli with mushrooms and sauce, Apple, Half of a bread, Coffee	Pizza, Coffee	Pasta with roast sauce , Potatoes, Apple pie, Coffee
Afternoon Snack			Biscuit with chocolate		Crisps	Vanilla pastry, Coffee	Tea
Dinner	Pasta with dairy cream, courgettes and bacon , A pastry, A glass of wine, Coffee	Happy hour , Coffee	Liver with courgettes, Bread	Chicken roll, Bread, Salad, Apple cake, Coffee	Homemade Pizza, Coffee	Ravioli with sauce, Pizza, Coffe	Half pizza, Half apple

Anna - November 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Croissant, Coffee	Tea with honey, Rusks, Jam	Tea with honey, Rusks, Jam	Tea with honey, Rusks, Jam	Tea with honey, Rusks, Jam	Tea with honey, Rusks, Jam	Tea with honey, Rusks, Jam
Morning Snack		Coffee	Coffee	Coffee	Coffee	Coffee	Coffee
Lunch	Pasta Bolognese , Feta cheese	Rice/Squash soup, Apple	Risotto with squash, Feta cheese, Courgettes, Mandarin	Pasta, Cooked vegetables, Ricotta cheese, Mandarins, Chocolate salami	Pizza with vegetables, Orange	Lasagna with pesto sauce, Savoury pie with squash, Banana	Risotto, Ossobuchi (sliced veal shanks), Mandarins
Afternoon Snack	Tea with honey	Peach juice	Tea with honey	Mandarins	Tea with honey	Tea with honey	Tea with honey
Dinner	Vegetable soup with rice, Seitan burger, Apple	Happy hour	Seitan burger, Aubergines and courgettes, Chocolate salami, Mandarins	Spaghetti with tomatoes soup, Codfish, Apple	Ravioli with melted butter and sage, Tomatoes, Banana	Risotto with bacon , Cake	Broth, Apple

Diana - January 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Mint tea	Tea	Mint tea, Plum cake	Mint tea, Plum cake			
Morning Snack							
Lunch	Tomino cheese, Spek , Baked potatoes	Welsh rarebit with cheese and ham	Little gnocchi Bolognese	Ham , Carrot, Rice cracker	Salad with tuna, olives and sweet corn, 2 Slices of bread	Penne with fish sauce, Deep fried crab claw	Linguine with salmon
Afternoon Snack	2 Mandarins	2 Mandarins	2 Mandarins				
Dinner	Sushi	Rice, Curry chicken	Oven baked salmon, Mash potatoes	Spaghetti with robiola cheese	Chicken , Cougettes	Pizza with four cheeses	Grilled steak , Fries

Giulia - December 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Homemade cake	Soy hot chocolate	Soy yogurt, Homemade jam	Soy yogurt, Homemade jam	Soy yogurt, Homemade jam	Soy yogurt, Homemade jam	Croissant (at coffee shop)
Morning Snack							
Lunch	Bagna caoda (hot garlic sauce), Peppers and beetroots, Pasta with sauce, Persimmon	Pasta with sauce, Omelette with mixed vegetables, Salad, Persimmon	Pasta with sauce, Smoked seitan with olive pate	Rice with peas, Peppers, olives and capers, Stir-fry cabbage, Mandarin	Falafel	Spaghetti with vegetables, Sushi, Fruit salad	Pea soup, Savoury pie with carrots, Mandarin
Afternoon Snack							
Dinner	Wrap with cooked green vegetables, tomato and buffalo mozzarella cheese	Polenta, sauce and cheese, Green salad	Tagliatelle with walnut sauce, Boiled cauliflower, Hummus	Soup, Seitan with olive patè, Salad, Hard boiled egg	Olives, Peppers, Pasta with aubergines, Savoury pie with spinach, Stir-fry potatoes and leek	Rice and squash, green salad, Betroots	Soup with spelt and beans, Steamed broccoli, Sweet semolina

Mothers' diaries

Tiziana - July 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Green tea, Biscuits	Milk and coffee, Biscuits	Green tea, Toast, Jam	Milk and coffee, Wholemeal toast (2 pieces), Jam, Grapefruit juice	Green tea, Toast, Jam	Milk and coffee, Biscuits	Milk and coffee, Toast, Jam
Morning Snack							
Lunch	Buffalo <i>mozzarella</i> cheese, Tomato salad, Watermelon	Large pistachio and cream ice-cream	<i>Focaccia</i> , Salami sandwich	Turkey cutlet, Tomato salad, Watermelon	Asparagus <i>Risotto</i> , Lettuce, Watermelon	Pesto Pasta, Watermelon	Chicken legs, Roast potatoes, Watermelon
Afternoon Snack							
Dinner	<i>Risotto milanese</i> , Peach, Apple	Ham , Melon, Cherries, Apricots	<i>Pesto</i> Pasta, Peaches	Ham and Cheese <i>focaccia</i> , Coca-cola	Raw ham <i>ravioli</i> soup, Mixed cheese plate (small), Tomato salad, Peaches	Baked sea bass, Boiled potatoes, Grapes, Apricots	Pasta and beans soup, Left over chicken legs

Onorina - October 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Tea, Toast, Jam, Coffee	Tea, Toast and cereals, Jam, Coffee	Tea, Toast, Jam, Coffee	Tea, Biscuits, Cake, Coffee	Tea, Cake, Coffee	Tea, Toast, Jam, Coffee	Tea, Biscuits
Morning Snack							
Lunch	Tomato <i>Risotto</i> , Boiled vegetables, Fresh fruit, Coffee	Tomato <i>pasta</i> , Cutlet milanese , Raw peppers, Pudding, Coffee	Oil and parmesan <i>spaghetti</i> , Stewed anchovies, Fresh fruit, Coffee	Escalope , Peppers and courgettes, Pudding, Grapes, Coffee	Vegetable soup, Baked fish with gravy, Fresh fruit	Tomato and basil <i>risotto</i> , Yogurt, Coffee	Tomato <i>tagliatelle</i> , Boiled carrots, Fried courgettes, Fresh fruit, Coffee
Afternoon Snack							
Dinner	Vegetable soup, Lettuce, Ham , Fresh fruit	<i>Pasta</i> with legumes, Lettuce, Fresh fruit	Grilled aubergines, Cheese, Fresh fruit	Vegetable soup, Fennel and tomato salad, Fresh fruit	Milk, Mixed salad and boiled vegetables, Ham , Fresh fruit	Milk, Mixed salad, Fresh fruit	

Silvia - October 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Milk tea, Toast, Jam	Milk tea, Toast, Jam	Milk tea, Toast, Jam	Milk tea, Toast, Jam	Milk tea, Toast, Jam	Milk tea, Toast, Jam	Milk tea, Toast, Jam
Morning Snack	Crackers (packet), Barley coffee	Packed sweet snack, Barley coffee	Packed sweet snack, Barley coffee	Crackers (packet), Barley coffee	Crackers (packet), Barley coffee	Rice cracker, Apple	
Lunch	Whole rice salad, Tangerine, Apple, Barley coffee, Biscuit (1)	Vegetable soup, Bread slice (1), Anchovies canape, Apple and tangerine, Barley coffee, Biscuit (1)	Grilled steak , Lettuce, Orange, Barley coffee	Pumpkin cream, Raw vegetables in olive oil, Banana, Barley coffee, Biscuit (1)	Artichoke and prawn rice, Cauliflower salad, Barley coffee, Biscuit (1)	Baked fish	Vegetable soup, Cheese, Chocolate (1 square), Almonds (a few)
Afternoon Snack	Tortilla (1 bite)						
Dinner	<i>Pesto pasta</i> , Cauliflower salad, Bread, Persimmon (1), Barley coffee, <i>Panettone</i>	Grilled steak , Olives, Bread, Lettuce, Banana, Barley coffee, <i>Panettone</i>	Artichoke and prawn rice, Cardoon flan, Beet salad, Persimmon, Barley coffee, Biscuit (1)	<i>Pasta</i> with broccoli, Lettuce, Cheese, Apple (1), Barley coffee, Biscuit (1)		<i>Pasta</i> with cream and mushroom sauce, Lettuce, Cheese, Persimmon (1), Barley coffee, Biscuit (1)	Vegetables <i>risotto</i> , Lamb , Lettuce, Apple (1/2), Barley coffee, Biscuit (1)

Carla C. - January 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast		Milk and coffee, Biscuits (3)	Milk and coffee, Brioche	Milk and coffee, Biscuits (3)	<i>Cappuccino</i> , Biscuits (3)	Milk and coffee, Brioche	Milk and coffee, Biscuits (3)
Morning Snack		Coffee	Coffee	Coffee			
Lunch	<i>Risotto</i> , Yogurt, Peanuts (3), Coffee	Steamed rice, Cheese, String beans, Banana	Roast chicken , Roast potatoes, Banana, Coffee	<i>Affettati</i> , Fried dumplings, Red chicory <i>ravioli</i>	Pizza, Yogurt, Bread sticks, Coffee	<i>Pasta Bolognese</i> , Parmesan cheese, Orange, bread, Coffee	<i>Polenta</i> and cheese, Cotechino , Dry fruit, Fresh fruit, Cake, Coffee
Afternoon Snack	Danacol	Tea		Tangerines (2)	Tangerine		Lemon tea
Dinner	<i>Pasta</i> soup, Soft cheese, Raw ham , Sausage, Tangerine	<i>Pasta Bolognese</i> , Parmesan cheese, Dry fruit, Tangerine	<i>Pizzocheri</i> , Bresaola with goat cheese, Tangerine, Dry fruit, <i>Pandoro</i> with <i>mascarpone</i> topping, Coffee, Liqueur	Tea	Cotechino , Mashed potatoes, Kivis (2), Coffee	Hamburger , Lettuce, <i>Focaccia</i> , Kiwi, Peanuts (5), Chocolate (3 squares), Coffee	Salmon <i>risotto</i> , Tuna <i>antipasto</i> , Tangerine, Dry fruit, <i>Pandoro</i> with chestnut jam topping, Coffee

Emanuela - January 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Orange juice, Coffee	Orange juice, Coffee	Orange juice, Coffee	Orange juice, Coffee	Orange juice, Coffee	Coffee	Coffee
Morning Snack							
Lunch	Sausage, Grilled peppers	Apple, Orange	<i>Pizza "mari e monti"</i> , Beer	<i>Mozzarella</i> cheese, Boiled potatoes, Orange	<i>Bresaola</i> (dry beef), Krauts	Vegetable soup, Beef steak , Lettuce	Pork roast , Roast potatoes, Cake, Wine
Afternoon Snack							
Dinner	Pumpkin <i>risotto</i>	<i>Pesto spaghetti</i> with string beans and potatoes	Rice soup, Boiled potatoes, Boiled courgettes		Vegetable soup, Boiled codfish fillets, Lettuce	Salami, Risotto , Grilled vegetable pizza, Beer	<i>Risotto</i> with Castelmagno cheese and walnuts

Giusy - January 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Brioche, Coffee	Biscuits, Coffee	Brioche, Coffee	Brioche, Coffee	Biscuits, Coffee	Biscuits, Coffee	Brioche, Coffee
Morning Snack	Pineapple	Orange	Tangerines	Banana	Pineapple	Banana	Banana
Lunch	<i>Polenta</i> and cheese	Boiled fennels, Eggs	Rice and seitan	Boiled rice and parmesan cheese	Vegetable soup, Tuna steak, Tangerines	Rice, Vegetables, Orange	Rice and seitan, Tangerines
Afternoon Snack							
Dinner	Vegetable soup	Seafood <i>antipasto</i> , Grilled vegetables, Glass of wine	Fennels, Cheese, Tangerines	Fish, String beans, Banana	Carrots, Philadelphia cheese	Seafood salad, Glass of wine	Peppers and aubergines, Eggs

Carla T. - January 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Oats milk, Biscuits, Slice of bread, Coffee	Oats milk, Slice of bread, Jam, Coffee	Oats milk, Biscuits, Bread sticks, Coffee	Oats milk, Biscuits, Bread sticks, Coffee	Oats milk, Biscuits, Bread sticks, Coffee	Oats milk, Biscuits, Jam, Coffee	Oats milk, Biscuits, Coffee
Morning Snack		Orange juice					
Lunch	Citrus and carrot salad, Shoyo cauliflower, Kiwis (2), Pastries (2), Coffee	Home made <i>pasta</i> , Artichoke and walnut salad, Chocolate bar, Kiwi, Apple, Coffee	Home made <i>pasta</i> , Steamed cabbage, Chocolate bar, Kiwi, Apple, Coffee	Tofu, Steamed cabbage, Kiwi, Coffee	Sauté wheat, Chocolate, Kiwi, Apple, Coffee	Cardoons gratin, Walnuts, Apples, Kiwis (2), Chocolate bar, Coffee	Cabbage rolls with soy and amaranth, Chicory and walnut salad, Apples (2), Kiwis (2), Chocolate bar, Coffee
Afternoon Snack	Pastries (4)			Almonds, Orange		Tea and almonds, Biscuits	Peanuts (10)
Dinner	Pumpkin and rice, Carrot salad, Apples (2), Walnuts (3), Jam (2 spoonfuls)	Spelt and lentils, Artichoke and walnut salad, Kiwi	Rice and chicory, Kiwis (2), Walnuts, Peanuts	Minestrone vegetable soup, Apple, Kiwi	Vegetable soup, Cardoons gratin, Apples (2), Kiwi	Cardoons gratin, Vegetable soup, Apples (2), Kiwi	Baked amaranth, Stewed ginger cauliflower
Extras					Fennel tea		

APPENDIX C

LIFE HISTORIES INTERVIEW SCHEDULE (STUDY 1)

The interview schedule for the qualitative study (study 1) was built on the schedule used by White and colleagues (2011), which was in turn based on a schedule developed by Thompson (2009) for the Edwardians Project. The interview schedule includes fourteen macro-areas of investigation. Questions are listed hereunder.

1. Family Background

I'd like to ask you about your origin and your family:

- a) What is your full name? Where were you born? When?
- b) How many years did you live in the house where you were born? Where did you live then? (continue for all) Do you remember why the family made these moves?
- c) How many brothers and sisters did you have?
- d) Where did your father come from? What was your father's occupation? (If employer: How many people did he employ?) Did he have another job before he became that? Did he also have any casual or part-time jobs? What did he do after that? (continue for all jobs)
- e) Where did your mother come from? Did she have any jobs before she married? (If employer: How many people did he employ?) Did she work after she was married? Did she have any casual or part-time jobs? How many hours did she work? What did she do after that? (continue for all jobs) If your mother worked after she had children, who looked after the children while she was at work?
- f) What type of schools did you go to? When did you start? How long were you there for/at what age did you finish school? What school did you go to after that?

2. Domestic Routine

I'd like to ask you about your life at home when you were a child; the time up to when you left school:

- a) What kind of upbringing did you have? What kind of kid were you when you were growing up? Were you a troublemaker?
- b) Thinking of the house you lived in for the longest, can you describe that house? What did it look like? How many rooms were there? How were the rooms used?
- c) Did your mother pay anyone to help in the house? (If daily or irregular help: What were her duties: cleaning, cooking; hours)
- d) How was the washing done?
- e) Did your mother or father make the family's clothes? Were any clothes bought new or secondhand? Where were they bought?
- f) Who mended clothes?
- g) Did your father help your mother with any of the jobs in the house? Cleaning; cooking; washing up; fires; decorating; repairs; improvements to the house?
- h) Did you ever help with the cooking? Did you watch your mother cook? Did any siblings help?

3. Meals

I'd like to ask you about your meals when you lived with your family:

- a) Where did your mother cook? How did she cook? On a range, or on gas?
- b) Where did the family have their meals? Did all the family sit at the table for the meal?
- c) When was breakfast eaten? What members of the family were present? How did the others manage for their first meal of the day? What did you usually eat and drink?
- d) Did you have anything different on certain days (Sundays)?
REPEAT FOR MIDDAY AND EVENING MEALS.
- e) Did your mother or father bake bread; make jam; bottle fruit or vegetables; make pickles, wine, or any medicines for the family?
- f) Did your father or mother grow vegetables and fruit? Did they buy any?
- g) Did they keep any livestock for family (e.g., hens, pigs, goats)? Who looked after them?

- h) How many times a week did you eat meat? Tinned meat?
- i) A lot of people remember their mum making special foods? What do you remember about the foods she used to make?
- j) What did your mother/father, grandmother/grandfather like to eat?
- k) Could you choose what you wanted to eat from what was cooked or did you have to eat a bit of everything? What was your parents' attitude if you left some food uneaten on the plate? Could you ask for a second helping? Or some extra? (e.g., dessert)

4. Family Activities at Home

I'd like to ask you about celebratory moments in your family:

- a) When you had a birthday would it be different from any other day? Did you receive any presents; have anything special to eat; guests?
- b) How did you spend Christmas Day? (PROMPT: church, visiting relations, special meal). (REPEAT FOR New Year's Eve, First of Year, Easter and Easter Monday)

5. Family activities outside the home

I'd like to ask you about outdoor activities you had with your family:

- a) Did you ever go away for a holiday? For how long? Where? Did you all go (parents; siblings; nanny)? Activities. Did your parents cook or eat out?

6. Weekends and Religion

I'd like to ask you about religion:

- a) Could you tell me how you spent Saturdays in those days? How about Sundays?
- b) Were they religious people? What denomination were they?
- c) How much would you say religion meant to you as a child? Why?
- d) Did you follow religious precepts? (e.g., fish on Friday, fasting)

7. Work

I should like to ask you about your first working experiences:

- a) While you were at school, did you have a part-time job or any means of earning a little regular money? (IF YES: What exactly did you do in this job? What hours did you work? Were there breaks for meals? What sort of things did you eat? Did you feel that was a fair wage? How did you feel about the work? Did you like it or dislike it? Why did you give it up? Did you do any other part-time jobs before you left school?)

NEXT and IF NO:

- b) What was your first job? What hours did you work? Were there breaks for meals? What sort of things did you eat? Did you feel that was a fair wage? How did you feel about the work? Did you like it or dislike it? Why did you give it up? How long did you do that job for? Did you do any other jobs after that?

8. Home Life after Finishing School

I'd like to ask you about what happened after you finish the High school:

- 1) Did you continue to live at home? For how long?
IF AT HOME: Did you take on more chores? Did you help with the cooking? Did you eat with your parents?
IF SEPERATELY: Did you live alone or share with anyone? Can you describe the house? Where did you mainly eat? Did you cook for yourself? Did your eating habits change from when you were living at home?
- 2) Were you working at this point?
- 3) Did you take an interest in politics?
- 4) Can you tell me something of how you spent your spare time as a young woman? Did your interests change? Did you belong to any clubs or youth organizations; take part in sports; go to dances; hobbies; go for outings or away for weekends; concerts, theatre, music hall, cinema; pubs?

9. Marriage

I'd like to ask you about your marriage and wedding:

- a) At what age were you married? How old was your husband? What was your husband's job when you married?
- b) How did you meet your husband/partner?
- c) Where did he come from? From what kind of family?
- d) What was your wedding like? What was the dress like? Was it a big spread? How was the wedding meal? Can you recall the menu?
- e) Tell me about your first house together. Who picked it out? Where was it? Did you buy or rent? Did your parents help you in setting up a home? How long did you live there?
- f) Where did you live next? And after that?
- g) Did you work after marriage?

10. Childbirth and Infancy

I'd like to ask you about your child/children and what happened after their birth:

- a) How many children do you have? What were their names?
- b) What changed when you had children?
- c) Did any of your relations or neighbors help? How exactly?
- d) How did you first feed your baby?
- e) When did you first give your baby solid food?
- f) Did your husband help to feed or bath them.

11. Family Life after Marriage

I want to ask you about how you and your husband managed the housekeeping and children's education after you were married:

Housekeeping/Domestic routine

- a) Who chose: food; drink; clothes for children & partner; presents; holidays?
- b) Who looked after the garden?
- c) Who did the cleaning, washing, cooking, looking after the children? Hours? (Did your husband help with jobs in the house/children)
- d) Did your children help with household tasks?
- e) How did things change when you moved house? What was it like?
- f) Who looked after the children while you/your husband was at work?
- g) Did anyone outside the home help you looking after the house or family? In what ways? Regularly?

Meals

- a) When was breakfast eaten? What members of the family were present? How did the others manage for breakfast? What did you usually eat and drink? Did you have anything different on certain days (Sundays)? (REPEAT FOR LUNCH AND EVENING MEALS)
- b) Did someone make bread; jam; pickles; wine; beer; medicines; bottled fruit or veg?
- c) Were vegetables and fruit grown or bought?
- d) Were livestock kept for the family (hens, pigs, goats)? Who looked after them?
- e) How many times a week did you eat meat? Tinned meat?
- f) Did children choose what they wanted to eat from what was cooked or have to eat a bit of everything?
- g) What was your attitude if some food was left uneaten on the plate?
- h) Did all the family present at the meal sit at the table?

Family Activities at Home

- a) When your children had a birthday, would it be different from any other day? Did they receive presents; have anything different to eat; guests?
- b) What did you and your children do on Christmas day? Did you cook a special meal? (REPEAT FOR New Year's Eve, First of Year, Easter and Easter Monday)

Family Activities Outside the Home

- a) Did you ever go away for a holiday? For how long? Where? Did you all go (wife; husband; children; nanny)? Did you cook for yourself or eat out?

Weekends and Religion

- a) Could you tell me how you spent Saturdays in those days? How about Sundays?
- b) Did religion come to mean more or less to you after you were married? Why do you think that was?
- c) Did your children go to *catechismo* (Sunday school)?
- d) Did you follow religious precepts? (e.g., fish on Friday, fasting)

12. Relations, Friends and Neighbors.

I'd like to ask you about your relationship with friends and/or neighbors

- a) Did you have friends? Did they live nearby?
- b) Were people ever invited into the home? How often? Who were these people? Would they be offered anything to eat or drink? On particular days or occasions? (Saturday?)
- c) Did you ever go out to visit friends or neighbors?
- d) People often tell us that in these days they made their own amusements. What did you do when you got together with friends or neighbors? Music? Games?

13. Other Interests and Leisure.

I'd like to ask you about you and husband spent your free time without the children:

- a) When you and your husband were not doing your work, how did you spend your time? Did you ever go out together in the evening? Where? (theatres, concerts, music halls or cinemas?) How often?
- b) When did you and your husband get home from work in the evenings? How many evenings a week would you/he spend at home?
- c) Would you eat together?
- d) Did you have any hobbies? Did you do any gardening?

14. Present Day

I'd like to ask you about present day and how your cooking habits changed overtime:

- a) Thinking to the present day now, do you do a lot of cooking yourself?
- b) Do you eat out much?
- c) What is your favorite type of food?
- d) Do you enjoy cooking? Baking? What kinds of things do you like to bake/cook?
- e) What do you use to cook? Do you use a microwave?
- f) Is food different from when you were younger? Why do you think that's the case?
- g) Do you think the way you eat and cook has changed across your life? Do you know what might have brought on these changes?
- h) Do you find any specific change in meat consumption?

APPENDIX D

ITALIAN EXTENDED TPB QUESTIONNAIRE (STUDY 2)



DEPARTMENT OF HUMAN SCIENCES FOR EDUCATION “RICCARDO MASSA”

&

FACULTY OF ARTS AND HUMAN SCIENCES

Gentile Partecipante,

Grazie per aver acconsentito a partecipare alla mia ricerca incentrata sugli atteggiamenti nei confronti del consumo di carne.

Il questionario non richiederà più di 10 minuti per essere completato. Tutte le risposte resteranno completamente anonime e i dati raccolti non verranno utilizzati da persone al di fuori dell'università degli studi di Milano-Bicocca e dell'università del Surrey.

Non impiegare troppo tempo per rispondere alle domande: scrivi le prime cose che ti vengono in mente e poi passa al quesito successivo. Ti ricordo, che non ci sono risposte giuste o sbagliate, quello che conta è la tua opinione sincera.

Grazie in anticipo per la TUA PREZIOSA collaborazione,

Elena Cadel

e.cadel@campus.unimib.it

Per favore, leggi attentamente le istruzioni. Non soffermati troppo a lungo su ciascuna domanda: spunta la prima risposta che ti viene in mente e passa al quesito successivo. Non ci sono risposte giuste o sbagliate, quello che conta è la tua opinione sincera.

A. Per favore, stima al meglio il tuo consumo medio di cibo e rispondi a tutte le domande (non lasciare spazi vuoti). Metti un segno (√) su OGNI casella

Tipo di Alimento	Consumo medio a settimana					
Tipo di carne	Mai	Meno di 1 volta a settimana	1 volta a settimana	2-3 volte alla settimana	4-5 volte alla settimana	6+ volte alla settimana
Bistecca, filetto, roastbeef di manzo, vitello o cavallo						
Hamburgers						
Spezzatino, brasato, polpette, arrosto di manzo o vitello						
Manzo o vitello bolliti						
Cotoletta impanata di manzo o vitello						
Costoletta, cotoletta, paillard o arrosto di maiale						
Pollo o tacchino (poco condito o lessato)						
Pollo, tacchino o coniglio arrosto, fritto o in umido						

Tipo di carne	Mai	Meno di 1 volta a settimana	1 volta a settimana	2-3 volte alla settimana	4-5 volte alla settimana	6+ volte alla settimana
Agnello, capretto						
Prosciutto crudo, bresaola, o speck						
Prosciutto cotto						
Salame, mortadella, bologna, salsicce, pancetta, wurstel						
Fegato						
Carne in scatola						
Lasagne, cannelloni, tortellini con carne						
Pasta, riso al ragù						
Pizza (con carne, wurstel, affettati)						
Kebab, piadine e altri panini con dentro carne o affettati						
Altri tipi di carne _____						

B. Su una scala da 1 a 7, dove 1 esprime il massimo grado di disaccordo e 7 rappresenta il massimo livello di accordo, come valuteresti le seguenti affermazioni?

Completamente in disaccordo	Molto in disaccordo	Abbastanza in disaccordo	Né in accordo né in disaccordo	Abbastanza d'accordo	Molto d'accordo	Completamente d'accordo
1	2	3	4	5	6	7

B.1. Penso che mangerò carne questa settimana	1	2	3	4	5	6	7
B.2. Voglio mangiare carne questa settimana	1	2	3	4	5	6	7
B.3. Ho intenzione di mangiare carne questa settimana	1	2	3	4	5	6	7

C. Quanto sei in accordo/disaccordo con le seguenti affermazioni?

Completamente in disaccordo	Molto in disaccordo	Abbastanza in disaccordo	Né in accordo né in disaccordo	Abbastanza d'accordo	Molto d'accordo	Completamente d'accordo	
1	2	3	4	5	6	7	
C.1. Penso che mangiare carne sia <i>la</i> fonte primaria di proteine, ferro e altri nutrienti essenziali	1	2	3	4	5	6	7
C.2. Penso che mangiare carne di provenienza sconosciuta sia pericoloso (dannoso per la salute)	1	2	3	4	5	6	7
C.3. Penso che mangiare carne sia fondamentale per una dieta sana e bilanciata	1	2	3	4	5	6	7
C.4. Penso che mangiare carne sia molto costoso	1	2	3	4	5	6	7
C.5. Penso che mangiare carne sia una questione di gusto	1	2	3	4	5	6	7
C.6. Penso che mangiare troppa carne sia difficile da digerire	1	2	3	4	5	6	7
C.7. Penso che la carne sia facile da cucinare	1	2	3	4	5	6	7
C.8. Penso che mangiare carne possa causare problemi cardiovascolari e altre malattie	1	2	3	4	5	6	7
C.9. Penso che la carne sia facile da trovare quando mangio fuori casa	1	2	3	4	5	6	7
C.10. Penso che mangiare carne sia dannoso per la mia salute	1	2	3	4	5	6	7

D. Le persone importanti per noi possono approvare o disapprovare i nostri comportamenti. Ti chiediamo quindi di indicare quanto sei d'accordo o in disaccordo con le affermazioni che seguono

Completamente in disaccordo	Molto in disaccordo	Abbastanza in disaccordo	Né in accordo né in disaccordo	Abbastanza d'accordo	Molto d'accordo	Completamente d'accordo
1	2	3	4	5	6	7

D.1. La maggior parte delle persone che sono importanti per me pensano che <i>non</i> dovrei mangiare carne	1	2	3	4	5	6	7
D.2. Ci si aspetta da me che mangi carne	1	2	3	4	5	6	7
D.3. Le persone importanti per me vogliono che io mangi carne	1	2	3	4	5	6	7

E. Alcuni comportamenti sono più facili, altri più difficili da mettere in atto. Utilizzando le varie scale proposte, ti chiediamo di valutare le seguenti affermazioni

Estremamente difficile	Molto difficile	Abbastanza difficile	Né facile Né difficile	Abbastanza facile	Molto facile	Estremamente facile
1	2	3	4	5	6	7

E.1. Per me mangiare carne è...	1	2	3	4	5	6	7
---------------------------------	---	---	---	---	---	---	---

Completamente in disaccordo Molto in disaccordo Abbastanza in disaccordo Né in accordo né in disaccordo Abbastanza d'accordo Molto d'accordo **Completamente d'accordo**

1 **2** **3** **4** **5** **6** **7**

E.2. Sarebbe molto difficile per me smettere di mangiare carne	1	2	3	4	5	6	7
E.3. Posso cucinare molti piatti diversi senza la carne	1	2	3	4	5	6	7
E.4. La carne è facilmente reperibile per me	1	2	3	4	5	6	7
E.5. Non mangiare carne è solo una mia decisione	1	2	3	4	5	6	7

F. Su una scala da 1 a 7, dove 1 esprime il massimo grado di disaccordo e 7 rappresenta il massimo livello di accordo, come valuteresti le seguenti affermazioni?

Completamente in disaccordo Molto in disaccordo Abbastanza in disaccordo Né in accordo né in disaccordo Abbastanza d'accordo Molto d'accordo **Completamente d'accordo**

1 **2** **3** **4** **5** **6** **7**

F.1. Sono il tipo di persona che mangia carne	1	2	3	4	5	6	7
F.2. Mi considero un “carnivoro”	1	2	3	4	5	6	7
F.3. Mangiare carne è una parte importante di me	1	2	3	4	5	6	7

G. Per favore, utilizza la scala sottostante per valutare il grado con cui ciascun elemento si applica alla tua persona

Completamente in disaccordo	Molto in disaccordo	Abbastanza in disaccordo	Né in accordo né in disaccordo	Abbastanza d'accordo	Molto d'accordo	Completamente d'accordo	
1	2	3	4	5	6	7	
G.1. Mi considero una persona che mangia in modo sano	1	2	3	4	5	6	7
G.2. Quando descrivo me stesso agli altri, solitamente faccio riferimento ai miei sforzi per mangiare in modo sano	1	2	3	4	5	6	7
G.3. Ho diversi obiettivi legati ad una sana alimentazione	1	2	3	4	5	6	7
G.4. Essere una persona che mangia in modo sano è un elemento fondamentale dell'idea che ho di me stesso	1	2	3	4	5	6	7
G.5. Ho bisogno di mangiare in modo sano per sentirmi bene con me stesso	1	2	3	4	5	6	7
G.6. Gli altri vedono in me uno che mangia in modo sano	1	2	3	4	5	6	7
G.7. Mi sforzo tutti i giorni per essere una persona che mangia in modo sano	1	2	3	4	5	6	7
G.8. Sarebbe una vera perdita se non potessi mangiare in modo salutare tutti i giorni (e.g., per ragioni economiche o di disponibilità)	1	2	3	4	5	6	7
G.9. Mangiare in modo sano è qualcosa a cui penso tutti i giorni	1	2	3	4	5	6	7

H. In che misura ti senti di appartenere ai seguenti gruppi?

	Pochissimo		Nè poco Nè tanto			Tantissimo		
	1	2	3	4	5	6	7	
H.1. Le persone con cui vivi	1	2	3	4	5	6	7	N/A*
H.2. Le persone con cui lavori	1	2	3	4	5	6	7	N/A
H.3. Le persone con cui studi	1	2	3	4	5	6	7	N/A
H.4. Le persone del tuo gruppo sportivo/della palestra	1	2	3	4	5	6	7	N/A
H.5. Le persone nella tua parrocchia/gruppo di fede/gruppo religioso	1	2	3	4	5	6	7	N/A
H.6. La tua famiglia	1	2	3	4	5	6	7	N/A
H.7. I tuoi vicini di casa/comunità in cui vivi	1	2	3	4	5	6	7	N/A
H.8. Il tuo gruppo preferito su Facebook	1	2	3	4	5	6	7	N/A
H.9. Le persone che segui su Twitter	1	2	3	4	5	6	7	N/A

* *Non Applicabile*

I. Quanta carne pensi che mangino le persone in questi gruppi? (Per favore, pensa a tutti i tipi di carne che sono stati elencati nella prima domanda del questionario)

	Pochissimo		Nè poco Nè tanto			Tantissimo		
	1	2	3	4	5	6	7	
I.1. Le persone con cui vivi	1	2	3	4	5	6	7	N/A*
I.2. Le persone con cui lavori	1	2	3	4	5	6	7	N/A
I.3. Le persone con cui studi	1	2	3	4	5	6	7	N/A
I.4. Le persone del tuo gruppo sportivo/della palestra	1	2	3	4	5	6	7	N/A
I.5. Le persone nella tua parrocchia/gruppo di fede/gruppo religioso	1	2	3	4	5	6	7	N/A
I.6. La tua famiglia	1	2	3	4	5	6	7	N/A
I.7. I tuoi vicini di casa/comunità in cui vivi	1	2	3	4	5	6	7	N/A
I.8. Il tuo gruppo preferito su Facebook	1	2	3	4	5	6	7	N/A
I.9. Le persone che segui su Twitter	1	2	3	4	5	6	7	N/A

* *Non Applicabile*

J. Domande socio-demografiche

J.1. Quanti anni hai? _____

J.2. Genere?

- Femmina
- Maschio

J.3. Quanto pesi? _____ Kg

J.4. Qual è la tua altezza? _____ Cm

J.5. Qual è la tua nazionalità (per esempio, italiana, francese) ? _____

J.6. Titolo di studio (se sei ancora studente, segna il livello più alto conseguito)

- Diploma di scuola media
- Diploma scuola superiore
- Laurea breve
- Laurea specialistica
- Master
- Dottorato
- Nessuno di questi titoli

J.7. Con chi vivi?

- Vivo da solo
- Vivo con amici/altri coinquilini
- Vivo con il mio compagno/a

- Vivo con la mia famiglia

J.8. Se vivi da solo o dividi la casa con altre persone/amici, quanto paghi mediamente al mese di affitto?

- Meno di 300 €
- Tra 300 € e 500 €
- Più di 500 €
- Non pago l'affitto

J.9. Hai dei figli?

- Sì
- No

J.10. Se hai risposto sì alla domanda precedente (J.9.), quanti figli hai? _____

GRAZIE MILLE PER IL TUO AIUTO!

APPENDIX E

ENGLISH EXTENDED TPB QUESTIONNAIRE (STUDY 3)



DEPARTMENT OF HUMAN SCIENCES FOR EDUCATION “RICCARDO MASSA”

&

FACULTY OF ARTS AND HUMAN SCIENCES

Dear participant,

Thank you for agreeing to assist with my research on people’s attitudes towards eating meat.

The questionnaire will take you no longer than 15 minutes to fill in. All responses will remain completely anonymous and the data will not be used by parties outside the University of Milano-Bicocca and the University of Surrey. Please read and follow the instructions carefully.

Please do not dwell for too long on any item: tick the first answer that comes to mind and then move on to the next item of the questionnaire. There are no right or wrong answers, I am interested in your sincere opinions.

I greatly appreciate your help and time,

Elena Cadel

e.cadel@campus.unimib.it

Please read and follow the instructions carefully. Please, do not dwell for too long on any item: select the first answer that comes to mind and then move on to the next item of the questionnaire. There are no right or wrong answers, I am interested in your sincere opinions.

A. Please, estimate your average food use as best you can, and please answer every question (do not leave any lines blank). Please, put a tick (✓) on every line

Food	Average use per week					
	Never	Less than once per week	Once a week	2-3 per week	4-5 per week	6+ per week
Types of meat						
Beef: roast, steak, mince or casserole						
Beef burgers						
Pork: roast, chops or slices						
Lamb: roast, chops or stew						
Chicken or other poultry (e.g. turkey)						
Bacon						
Ham, salami						
Corned beef, spam, luncheon meats						
Sausages						

Types of meat	Never	Less than once per week	Once a week	2-3 per week	4-5 per week	6+ per week
Savoury pies (e.g. meat pie, pasties, steak & kidney pie, sausage rolls)						
Liver, liver pâté, liver sausages						
Lasagna, cannelloni, tortelloni with meat						
Pasta bolognese, pasta with meatballs						
Pizza with meat, kebab, wrap and other sandwiches with meat						
Any other type of meat _____						

B. On a scale of 1 to 7, where 1 represents “extremely disagree” and 7 represents “extremely agree”, how would you rate the following statements?

Extremely Disagree	Quite Disagree	Slightly Disagree	Neither	Slightly Agree	Quite Agree	Extremely Agree
1	2	3	4	5	6	7

B.1. I expect to eat meat this week	1 2 3 4 5 6 7
B.2. I want to eat meat this week	1 2 3 4 5 6 7
B.3. I intend to eat meat this week	1 2 3 4 5 6 7

C. To what extent do you agree or disagree with the following statements?

Extremely Disagree	Quite Disagree	Slightly Disagree	Neither	Slightly Agree	Quite Agree	Extremely Agree				
1	2	3	4	5	6	7				
C.1. I think eating meat is <i>a</i> primary source of protein, iron and other essential nutrients				1	2	3	4	5	6	7
C.2. I think eating meat from unknown origin would be unsafe (bad for the health)				1	2	3	4	5	6	7
C.3. I think eating meat is essential to a healthy and balanced diet				1	2	3	4	5	6	7
C.4. I think eating meat is very expensive				1	2	3	4	5	6	7
C.5. I think eating meat is a matter of taste				1	2	3	4	5	6	7
C.6. I think meat is difficult to digest				1	2	3	4	5	6	7
C.7. I think meat is easy to cook				1	2	3	4	5	6	7
C.8. I think eating meat can cause cardiovascular problems and other diseases				1	2	3	4	5	6	7
C.9. I think meat is easy to find when I eat out				1	2	3	4	5	6	7
C.10. I think eating meat is bad for my health				1	2	3	4	5	6	7

D. Important people for us can approve or disapprove our behavior. How would you rate the following statements? Please choose the number that better represents your answer

Extremely Disagree	Quite Disagree	Slightly Disagree	Neither	Slightly Agree	Quite Agree	Extremely Agree				
1	2	3	4	5	6	7				
D.1. Most people who are important to me think that I should <i>not</i> eat meat				1	2	3	4	5	6	7
D.2. It is expected of me that I eat meat				1	2	3	4	5	6	7
D.3. People who are important to me want me to eat meat				1	2	3	4	5	6	7

E. Some behaviors are easier, other are more difficult. How would you rate the following statements? Please, use the scales provided to answer

Extremely Difficult	Quite Difficult	Slightly Difficult	Neither	Slightly Easy	Quite Easy	Extremely Easy				
1	2	3	4	5	6	7				
E.1. For me eating meat is...				1	2	3	4	5	6	7

Extremely Disagree	Quite Disagree	Slightly Disagree	Neither	Slightly Agree	Quite Agree	Extremely Agree
1	2	3	4	5	6	7

E.2. It would be difficult for me giving up on eating meat	1	2	3	4	5	6	7
E.3. I can make many different meals without meat	1	2	3	4	5	6	7
E.4. Meat is easily available for me	1	2	3	4	5	6	7
E.5. Whether I do not eat meat is entirely up to me	1	2	3	4	5	6	7

F. On a scale of 1 to 7, where 1 represents “extremely disagree” and 7 represents “extremely agree”, how would you rate the following statements?

Extremely Disagree	Quite Disagree	Slightly Disagree	Neither	Slightly Agree	Quite Agree	Extremely Agree
1	2	3	4	5	6	7

F.1. I am the type of person who eats meat	1	2	3	4	5	6	7
F.2. I see myself as a meat eater	1	2	3	4	5	6	7
F.3. Eating meat is an important part of who I am	1	2	3	4	5	6	7

G. Please, use the scale provided to rate the extent to which each item applies to you

Extremely Disagree	Quite Disagree	Slightly Disagree	Neither	Slightly Agree	Quite Agree	Extremely Agree
1	2	3	4	5	6	7

G.1. I consider myself to be a healthy-eater	1 2 3 4 5 6 7
G.2. When I describe myself to others, I usually mention my efforts to practice healthy eating	1 2 3 4 5 6 7
G.3. I have numerous goals related to healthy eating	1 2 3 4 5 6 7
G.4. Being a healthy-eater is a central factor to myself concept	1 2 3 4 5 6 7
G.5. I need to eat a healthy diet to feel good about myself	1 2 3 4 5 6 7
G.6. Others see me as someone who practices healthy eating	1 2 3 4 5 6 7
G.7. For me, being a healthy eater is something I work on daily	1 2 3 4 5 6 7
G.8. I would feel a real loss if I were unable to eat healthy on a daily basis (e.g. for financial or access reasons)	1 2 3 4 5 6 7
G.9. Healthy eating is something I think about daily	1 2 3 4 5 6 7

H. To what extent do you feel you belong to the following groups?

	Extremely little			Neither			Extremely much	
H.1. The people you live with	1	2	3	4	5	6	7	N/A*
H.2. The people you work with	1	2	3	4	5	6	7	N/A
H.3. The people you study with	1	2	3	4	5	6	7	N/A
H.4. The people in your sport club/gym	1	2	3	4	5	6	7	N/A
H.5. The people in your church/faith group/religious group	1	2	3	4	5	6	7	N/A
H.6. Your family	1	2	3	4	5	6	7	N/A
H.7. Your neighborhood/community group	1	2	3	4	5	6	7	N/A
H.8. Your favorite group on Facebook	1	2	3	4	5	6	7	N/A
H.9. The people you follow in Twitter	1	2	3	4	5	6	7	N/A

* *Not Applicable*

I. How much meat do you think most of people in these groups eat? (Please, think about all types of meat as described in the first question of the questionnaire)

	Extremely little			Neither			Extremely much	
I.1. The people you live with	1	2	3	4	5	6	7	N/A
I.2. The people you work with	1	2	3	4	5	6	7	N/A
I.3. The people you study with	1	2	3	4	5	6	7	N/A
I.4. The people in your sport club/gym	1	2	3	4	5	6	7	N/A
I.5. The people in your church/faith group/religious group	1	2	3	4	5	6	7	N/A
I.6. Your family	1	2	3	4	5	6	7	N/A
I.7. Your neighborhood/community group	1	2	3	4	5	6	7	N/A
I.8. Your favorite group on Facebook	1	2	3	4	5	6	7	N/A
I.9. The people you follow in Twitter	1	2	3	4	5	6	7	N/A

J. Socio-demographic data

J.1.) What is your age? _____

J.2.) What is your gender?

- Female
- Male

J.3.) What is your weight? _____ kg

J.4.) What is your height? _____ cm

J.5.) What is your nationality (e. g. British, French) ? _____

J.6.) What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.

- Graduated High School
- Graduated College
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate degree
- No schooling completed

J.7.) With whom do you live?

- I live alone
- I live with friends

- I live with my partner
- I live with my family

J.8.) If you live alone or share an house with other people, how much do you pay per month, average?

- Less than 300£
- Between 300£ and 500£
- More than 500£
- I don't pay any rent

J.9.) Do you have children?

- Yes
- No

J.10.) If you reply yes to the previous question (J.9.), how many children do you have?_____

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