Social Innovation and the Adopter's Cognitive Propensity: A Process Perspective of the Adoption of Plant-Based Diets

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DOCTORAL THESIS

Title	Social Innovation and the Adopter's Cognitive Propensity: A Process Perspective of the Adoption of Plant-Based Diets
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In memoriam of my friends Maite and Lorenzo

ABSTRACT

Although there is great interest on the global stage in promoting plant-based diets (PBDs) to achieve some of the Sustainable Development Goals (SDGs), the results of their adoption are unsatisfactory. Academics propose to entangle this effort by addressing the challenges of dissemination of social innovations (SIs). SIs generate different adoption attitudes, some of them related to socio-psychological aspects on the part of potential adopters. This research work aims to better understand the adoption of SIs, such as PBDs, which may induce socio-psychological concerns in potential adopters.

After a first part of the research in which PBDs are framed as a SI with several socio-material characteristics and considering the socio-psychological states of the potential adopter, the research goes on to postulate that current perspectives on SI dissemination and adoption offer partial insights to understand the shift from an omnivorous diet to a PBD. To overcome these limitations and derived from the first part of this research, a holistic process perspective on the decision-making of the potential adopter is proposed and employed, in which his or her perspective is also considered.

An exploratory, theory-building, and abductive study is carried out based on the cross-analysis of three different adopter profiles: adopters of a PBD, and adopters and potential adopters of generations Y and Z, residents or who until recently had lived in the city of Barcelona (Spain), with a total of sixty-nine semi-structured interviews of an average duration of forty-five minutes.

Through the analysis of the data collected, it is observed that the adoption of PBDs is a three-stage process: Communication, Imitation and Acceptance that starts with an initial contact between a prior and a potential adopter and that the potential adopter goes through stage by stage and makes decisions on whether to progress to the next stage. The social environment of the potential adopter as well as his or her interaction influence each stage of the process, modulating his or her psychological states, and thus his or her cognitive propensity is also influenced in the progress of the adoption

process. Thus, the potential adopter must overcome his or her psychological barriers to reach a cognitive consistency favourable to the evolution of the decision-making process related to the change of dietary patterns.

As an academic contribution, this dissertation provides more insights on the diffusion of SI from the adopter's perspective (a new conceptual framework for the adoption process of SIs). The cognitive propensity of the potential adopter must be positive to achieve adoption and regular use of the innovation; therefore, the potential adopter has to be able to overcome his or her psychological barriers that are modulated (triggered or diminished) in his or her interaction with his or her social environment. From the practitioner's point of view, a new model is outlined for a comprehensive understanding of dietary change from the adopter's perspective with new socio-psychological insights emerging from the adopter's viewpoint. In addition, the new model offers renewed opportunities for practitioners in terms of PBD implementation, use and policy. That is, the model provides solid clues for producers of plant-based food seeking strategies for PBD promotion marketing. Moreover, policy makers can draw lessons from the new model to drive the path towards achieving some of the SDGs.

RESUMEN

Aunque existe un gran interés en la escena mundial por promover las dietas basadas en plantas (DBPs) para alcanzar algunos de los Objetivos de Desarrollo Sostenible (ODS), los resultados de su adopción son insatisfactorios. Los académicos proponen enredar este esfuerzo abordando los retos de la difusión de las innovaciones sociales (ISs). Las ISs generan diferentes actitudes de adopción, algunas de ellas relacionadas con aspectos socio-psicológicos por parte de los potenciales adoptantes. Este trabajo de investigación pretende comprender mejor la adopción de las ISs, como las DBPs, que pueden inducir preocupaciones socio-psicológicas en los potenciales adoptantes.

Tras una primera parte de la investigación en la que las DBP se enmarcan como una IS con una serie de características socio-materiales y considerando los estados socio-psicológicos del potencial adoptante, la investigación pasa a postular que las perspectivas actuales sobre la difusión y adopción de IS ofrecen visiones parciales para entender el cambio de una dieta omnívora a una DBP. Para superar estas limitaciones y derivadas de la primera parte de esta investigación, se propone y emplea una perspectiva de proceso holística sobre la toma de decisiones del adoptante potencial, en la que también se considera la perspectiva de éste/a.

Se realiza un estudio exploratorio, de construcción teórica y abductivo, basado en el análisis cruzado de tres perfiles diferentes de adoptantes: adoptantes de una DBP, y adoptantes y potenciales adoptantes de las generaciones Y y Z, residentes o que hasta hace poco habían vivido en la ciudad de Barcelona (España), con un total de sesenta y nueve entrevistas semi-estructuradas de una duración media de cuarenta y cinco minutos.

A través del análisis de los datos recogidos, se observa que la adopción de DBPs es un proceso de tres etapas: Comunicación, Imitación y Aceptación que comienza con un contacto inicial entre un adoptante previo y uno potencial y que el adoptante potencial atraviesa etapa a etapa y toma decisiones sobre si progresa o no a la siguiente. El entorno social del adoptante potencial, así como su interacción, influyen

en cada etapa del proceso, modulando sus estados psicológicos, por lo que su propensión cognitiva también se ve influida en el avance del proceso de adopción. Así, el adoptante potencial tiene que superar sus barreras psicológicas para alcanzar una consistencia cognitiva favorable a la evolución del proceso de toma de decisiones relacionado con el cambio de patrones alimentarios.

Como contribución académica, esta disertación aporta más conocimientos sobre la difusión de las ISs desde la perspectiva del adoptante (un nuevo marco conceptual para el proceso de adopción de las ISs). La propensión cognitiva del adoptante potencial tiene que ser positiva para lograr la adopción y el uso regular de la innovación, por lo tanto, el adoptante potencial tiene que ser capaz de superar sus barreras psicológicas que se modulan (activan o disminuyen) en su interacción con su entorno social. Desde el punto de vista del profesional, se esboza un nuevo modelo para una comprensión integral del cambio dietético desde la perspectiva del adoptante con nuevas percepciones socio-psicológicas que emergen desde el punto de vista del adoptante. Además, el nuevo modelo ofrece oportunidades renovadas para los profesionales en términos de implementación, uso y política de DBPs. Es decir, el modelo proporciona pistas sólidas a los productores de alimentos basadas en plantas que buscan estrategias para el marketing promocional de DPBs. Por otra parte, los responsables políticos pueden extraer lecciones del nuevo modelo para impulsar el camino hacia la consecución de algunos de los ODS.

RESUM

Malgrat existeix un gran interès a l'escena mundial per promoure les dietes basades en plantes (DBP) per tal d'assolir alguns dels Objectius de Desenvolupament Sostenible (ODS), els resultats de la seva adopció són insatisfactoris. Els acadèmics proposen embullar aquest esforç abordant els reptes de la difusió de les innovacions socials (ISs). Les ISs generen diferents actituds d'adopció, algunes d'elles relacionades amb aspectes sòcio-psicològics per part dels potencials adoptants. Aquest treball d'investigació pretén comprendre millor l'adopció de les ISs, com les DBPs, que poden induir preocupacions socio-psicològiques en els potencials adoptants.

Després d'una primera part de la investigació a la qual les DBPs s'emmarquen com una IS amb una sèrie de característiques sòcio-materials i considerant els estats sòcio-psicològics del potencial adoptant, la investigació passa a postular que les perspectives actuals sobre la difusió i adopció d'IS ofereixen visions parcials per entendre el canvi d'una dieta omnívora a una DBP. Per tal de superar aquestes limitacions i derivades de la primera part d'aquesta investigació, es proposa i es fa servir una perspectiva de procés holística sobre la presa de decisions del potencial adoptant, a la que la també es considera la seva pròpia perspectiva.

Es realitza un estudi exploratori, de construcció teòrica i abductiva, basat en l'anàlisi creuat de tres perfils diferents d'adoptants: adoptants d'una DBP, i adoptants i potencials adoptants de les generacions Y i Z, residents o que fins fa poc havien viscut a la ciutat de Barcelona (Espanya), amb un total de seixanta-nou entrevistes semi-estructurades d'una durada promig de quaranta-cinc minuts.

Mitjançant l'anàlisi de les dades recollides, s'observa que l'adopció de DBPs és un procés de tres etapes: Comunicació, Imitació i Acceptació que comença amb un contacte inicial entre l'adoptant previ i un de potencial i que l'adoptant potencial travessa etapa a etapa i pren decisions sobre si progressa o no a la següent. L'entorn social de l'adoptant potencial, així com la seva interacció, influeixen a cada etapa del procés, modulant els seus estats psicològics, per tant la seva propensió cognitiva

també es veu influïda en l'avenç del procés d'adopció. Així, l'adoptant potencial ha de superar les seves barreres psicològiques per assolir una consistència cognitiva favorable a l'evolució del procés de presa de decisions relacionat amb el canvi de patrons alimentaris.

Com a contribució acadèmica, aquesta dissertació aporta més coneixements sobre la difusió de les ISs des de la perspectiva de l'adoptant (un nou marc conceptual pel procés d'adopció de les ISs. La propensió cognitiva de l'adoptant potencial ha de ser positiva per tal d'aconseguir l'adopció i l'ús regular de la innovació, per tant, l'adoptant potencial ha de ser capaç de superar les seves barreres psicològiques que es modulen (activen o disminueixen) en la seva interacció amb el seu entorn social. Des del punt de vista professional, s'esbossa un nou model per una comprensió integral del canvi dietètic des de la perspectiva de l'adoptant amb noves percepcions sòcio-psicològiques que emergeixen des del punt de vista de l'adoptant. A més, el nou model ofereix oportunitats renovades pels professionals en termes implementació, ús i política de DBPs. És a dir, el model proporciona pistes sòlides als productors d'aliments basats en plantes que busquen estratègies pel màrqueting promocional de les DBPs. Per altra banda, els responsables polítics poden extraure lliçons del nou model per impulsar el camí cap a la consecució d'alguns dels ODS.

KEYWORDS

Adoption

Cognitive Dissonance

Communication

Diffusion

Imitation

Plant-based Diets

Social Network Influence

Socio-Psychological Variables

Social Innovation

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This journey began like when I prepared for a high-level swimming competition: a challenge is set and planned, you train hard and move forward with sweet and salty moments always guided and supported by your coach, and the day arrives and, in a few minutes, you do your best performance after all the prior work. Hours and hours of training watered with tears and smiles, failures and achievements, doubts, and certainties, and so on.

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“De todo el tiempo, el presente.” (Manuel Canseco Flórez)

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CHAPTER 0: INTRODUCTION

The protein transition through changing food patterns promoted by the United Nations (UN) and the Food and Agriculture Organization (FAO) of the UN can contribute to the achievement of some of the Sustainable Development Goals (SDGs), such as “Zero Hunger” and “Climate Action” (FAO, 2017, 2022). In addition, policies that favour PBDs will optimise food supply and social justice, and health and the environment (Sabaté and Soret, 2014). Indeed, there is now a consensus that food diets link environmental and human health (Tilman and Clark, 2014) (more information in Appendix 2).

Social innovations (SIs) provide possible solutions to unmet needs, and among these solutions are those that are sustainable for societal challenges, such as animal welfare, climate change, or environmental destruction (Howaldt et al., 2015; Schwerk, 2015). Along these lines, PBDs have been considered SIs (Morris et al., 2014; Ploll et al., 2020) that require special attention for their dissemination because the adaptation to a new diet may require specific and interrelated change decisions at different stages of the adoption process (Alcorta et al., 2021; Cole and Morgan, 2011; Larsson et al., 2003; Markowski and Roxburgh, 2019) and, in addition, communication is not sufficient to ensure their dissemination (Riverola et al., 2017), despite they have existed since time immemorial.

Research on innovation has been underpinned by different and complementary perspectives (Ajzen, 1991; Rogers, 2003; Tarde, 1903; Taherdoost, 2018). Some scholars suggest that SI requires a more integrated perspective focusing on the consumer and user of innovation due to the scarcity of literature on the subject (Hölsgens, 2022). In this dissertation, it is assumed that, in addition to the potential adopter’s innovativeness level and adoption patterns (Rogers, 2003), the adoption of SIs requires an evolution in the potential adopter’s decision-making to change some habits that may hinder and/or impede the potential adopter’s behaviour.

Specifically, this research studies social contagion between prior and potential adopters in the plant-based diet adoption process to improve the current understanding of the dissemination of SIs from the adopter’s perspective (Hölsgens, 2022). Arguing

that the adoption process of some SIs is mediated by the potential adopter's decision to adopt some habits to imitate the behaviour of prior adopters, a process perspective is proposed at the end of Part I for a better understanding of the potential adopter's habit adaptation decision-making. In this vein, this research work delineates an improved conceptual framework based on the different stages of the adoption process paying attention to the evolution of adopters' change and the contexts in which they are expected to adopt the new diet. In summary, the proposed conceptual framework aims to improve knowledge about the adoption process by paying attention to the willingness and capacities of potential adopters and considering the influence of the social context.

Following a qualitative approach supported by an exploratory and theory-building effort in Part I, and an abductive effort in Part II, three cases were studied with sixty-nine semi-structured interviews to delineate the outlines of a suitable conceptual framework based on a process perspective that includes all the specific stages followed by a potential adopter. The proposed conceptual framework sheds light on how to move from a perspective based on the adopter's profile and innovativeness to an adopter's perspective that highlights the adopter's role in the different stages of the adoption process, the contextual environment affecting each stage and the interaction between them, the adopter's propensity to progress in the adoption process, and his or her propensity to overcome or not the barriers that appear in the evolution of decision-making related to the dietary pattern change.

Both academic and professional implications for SIs are derived from the results of this work. The academic implication of this research work is underpinned by a new process model that offers a conceptual framework with a new lens from the perspective of the adopter and his or her socio-psychological conditioning factors in the change to a new diet. The new process model delineates a holistic and comprehensive framework that includes the contextual setting of the adoption decision-making of the potential adopter, the socio-material specificities of PBDs, and a comprehensive interrelationship of all stages of the process in terms of triggers and deterrents affecting the psychological comfort (or discomfort) of the potential adopter.

The implications for practitioners can be seen in the results of the conceptual framework from an adopter's point of view. Specifically, some aspects of the new model could be of interest when the adopter belongs to the early majority adopter's profile. First, plant-based diet potential adopters should not be assimilated only into users and consumers of new diets. The model clarifies that the plant-based diet adoption process is a decision-making process that could affect the psychological comfort of the potential adopter due to the decision to shift diets. Second, this psychological comfort affects all stages of the decision-making process and is affected by the adopter's contextual setting and the socio-material properties of the plant-based diet. Third, the model provides solid clues to plant-based diet producers seeking strategies for plan-based diet promotion marketing. Finally, policymakers can draw new insights from the lessons of the new model to foster the path towards meetings the challenges of some of the SDGs.

The dissertation is structured as follows: after an introduction to the topic, there are two different parts: Part I and Part II. Each of them contains a literature review follows to describe the main theoretical frameworks that affect the dissemination of SI and the adoption of PBDs. On the one hand, part I is also focused on the socio-psychological variables that may affect a potential adopter and the socio-material approach of PBDs. On the other hand, Part II is also focused on the process perspective of the adoption process and the adopter's perspective when talking about SI. Subsequently, each part includes the methodology used to answer the research question, and the in-depth analysis of the empirical data collected. Finally, a discussion of the results and their connection to the previous literature is presented for each part, followed by a short conclusion of each part and just before the general conclusion of this dissertation.

PART I

This part of the research is focused on understanding, in general terms, the diffusion and adoption of a type of SI such as PBDs by considering the socio-psychological state of the potential adopter. Throughout the different chapters, the state of the art in this respect is presented, as well as the research question to be answered. This is followed by the research methodology used and information on data collection, which is then analysed. Finally, a discussion and conclusion are presented, which will lead to the beginning of Part II.

CHAPTER 1: LITERATURE REVIEW

This chapter gathers the most relevant studies in relation to SI, the dissemination of innovation, the socio-psychological variables of the individual and the socio-material approach, to finally present the research question.

1.1. Social innovation (SI)

Although SI can be analysed as a driver of social change (Gurrutxaga and Galarraga, 2022; Howaldt and Schwarz, 2014; Mulgan, 2012; Ogburn, 1969; Tarde, 1903; Zapf, 1994), this study focuses on studying its dissemination and adoption. Therefore, PBDs are chosen as a SI under study. PBDs can be framed as a SI (Ploll et al., 2020) because of their relevant social impact (Smart, 2004; Vinnari and Vinnari, 2014), although the focus is on understanding their dissemination and adoption.

1.1.1. Definition

Some researchers consider that SI is in danger of becoming a catch-all resource, as it seems to be a fashionable concept (Gurrutxaga, 2013).The dominant perspective does not clearly distinguish between what SI is actually (the way it happens in reality) and what one would like it to be (the way one would like changes to happen) (Marques et al., 2018). SI praxis faces multiple barriers and weaknesses and comes up against powerful walls of contention (Gurrutxaga and Galarraga, 2022).

An innovation is "social" to the extent that it varies social action and is socially accepted and diffused in society (totally, in large parts or in certain social sub-fields). SIs can be considered actions that spread in society as a result of imitation, bringing about social change (Zapf, 1994).SI can be understood as a *"starting point for creating social dynamics behind technological innovations"* (Geels, 2006), i.e., as a change that emerges as a result of the constant changes of inventive and imitative actors (Tarde, 2009c). Phills et al. (2008, p. 39) state that SI is a "*novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private*

individuals". Therefore, SI can help to respond to local problems, effect sustainable change and respond to economic and social challenges (Kirwan et al. 2013). Furthermore, SIs have a cultural focus, as they aim to address unmet human and social needs (Lettice and Parekh, 2010). SI means developing innovative ideas, services, and models to better address social problems (European Commission, 2013). The following quote from Castro-Arroyave and Duque-Paz (2020) is also illustrative: *"SI can be conceived as a process, a solution, a methodology, a product, or a strategy for social* change.".

Howaldt and Schwarz (2014) define SI as a new combination/configuration of practices in areas of social action driven by particular actors (or constellations of actors) with the ultimate goal of addressing needs and problems better than is possible with existing practices.SI are new social concepts that aim to find solutions to social problems or challenges with a direct connection to the search for solutions to social problems or challenges (Kolleck, 2014). The term "innovation" is related to "something new" or "renewal", while the term "social" is related to the interaction of actors (Schuster and Kolleck, 2020). According to Normand (2012) and Neumeier (2012), a SI is successful if it meets the following criteria: (a) it is innovative with respect to the user, the context, or the application; (b) it meets needs more effectively than pre-existing alternatives; (c) it offers long-term solutions; (d) it is adopted beyond the initial network that developed it.

In contrast to technological innovations, this type of innovation requires an implementation phase, as the formers involve normative, functional, or pragmatic concepts (Kolleck, 2016). There are different studies on the interaction between technological innovation and SI. Howaldt and Schwarz (2014) consider them to be two poles, i.e., two separate entities that need to be better integrated to improve each other. Eckhardt et al. (2017) argue that in some cases, technology is seen as a driver of SI, especially those SIs developed online or in social media environments.

According to Hölgens and Reichow (2019), one of the differences between technological and SI is the motivation of the inventor. While in the former the motivation is usually related to commercial incentives (apart from solving a problem), in the latter the focus is more on solving a problem that may have different types of motivation (altruism or environmental concern, for example). SI implies a change of practices and

therefore requires that potential adopters have the will to change practices and/or habits. And even having this willingness, the potential adopter needs to have the ability to adopt the new practice.

Taylor (1979) oversimplifies the diffusion of technological innovations, although the author illustrates the challenge presented in the case of SI, as shown in the following quote:

> *"If one builds a better mousetrap, it will probably be taken up rather quickly – given enough advertising and adequate retail distribution. A new mousetrap requires no great revolution in anyone's lifestyle or identity; the consumer simply substitutes the new mousetrap for the old one and life goes on unchanged. But a new social form is not introduced so easily*."

Brackertz (2011) highlighted that the three general outcomes of SI are the provision of solutions to pressing social needs (e.g., Grameen Bank (Yunus, 1999)), solutions to social and environmental challenges (e.g., Red Cross (Pictet, 1979)), and SI for systemic change (e.g., Urban EcoMap (Daughtery et al., 2020)). In addition, unexpected and unplanned social uses of innovative technologies can lead to SIs (e.g., open-source software) (Brackertz, 2011). Brackertz (2011) argued that the creation of networks and collaborations enables the emergence and diffusion of SIand this is demonstrated by the numerous SI labs, incubators, and accelerators (Brackertz, 2011). Moreover, social networks act as facilitators of new social practices that engender SI (Brackertz, 2011). Thus, SIs affect personal, social, and behavioural characteristics of its potential adopter.

SIs do not always achieve the expected results (Bartels, 2017). Pro-innovation bias has been very high in SI studies. Paradoxically, the result is that innovative social practises have been analysed by isolating them from the social and cultural reality in which they are embedded (Godin and Vinck, 2017).

1.1.2. Plant-Based Diets (PBDs) as SI

Reducing meat consumption is framed as a diet-focused SI (Morris et al., 2014) and vegetarian and vegan eating patterns are related to the SI concept (Ploll et al., 2020) as they present novel solutions to social problems (Smart, 2004), promoting more sustainable practices (Vinnari and Vinnari, 2014). This type of eating pattern is a solution to some social challenges such as animal protection, climate change and environmental destruction (Howaldt et al., 2015; Murray et al., 2010; Schwerk, 2015). In addition, reducing the consumption of meat and animal products is an effective way to adopt a healthier diet and, at the same time, strengthen environmental protection (Storz, 2022).

Motivations for adopting a PBD

The most common motives that drive an individual to change to a vegetarian or vegan diet have already been established in previous research (Fox and Ward, 2008; Ruby, 2012; Ruby et al., 2013). Their orientation may be intrinsic and/or extrinsic, as on the one hand, an individual whose motives are health-related is concerned about their own well-being, and on the other hand, if the motives are based on ethical considerations, the individual is concerned about the quality of external conditions (Ploll and Stern, 2020). Previous studies show that the motives of vegetarians and vegans are not fixed (Ruby et al., 2013), and change over time (Stiles, 1998).

In the context of the protein transition, plant-based alternatives to animal products are increasing worldwide due to ethical, environmental and health concerns. The adoption of PBDs presents facilitators such as availability of the products, cooking skills, and perceived good taste of plant foods (Reipurth et al., 2019). Other studies highlight the importance of the ethical concerns (Laila et al., 2021) as well as taste preferences and family support (Perez-Cueto, 2020). Health and sustainability are other two motivations to adopt PBDs according to different authors (Perez-Cueto, 2020; Ruby, 2012).

Barriers for adopting a PBD

There are different motivations that discourage the adoption of PBDs (Reipurth et al., 2019). According to Hassoun et al. (2022), individual barriers, mainly related to the acceptance of sensory properties, the nutritional quality of sustainable plant-based alternatives, and some psychological reluctance towards new sources (food neophobia), continue to hinder wider commercialisation of sustainable plant-based alternatives. In addition to neophobia, an individual “meat-loving” attitude also holds back the spread of these products (Bryant, 2022; Giacalone et al., 2022; Ishaq et al., 2022).

The adoption of PBDs presents other barriers such as the lack of information about them (i.e., people need more information about PBDs and they don’t want to change their eating patterns) (Lea et al., 2006). Also, the lack of family support or the personal taste preferences can discourage the adoption of PBDs (Perez-Cueto, 2020). Additionally, concerns about the protein content of the food and the effects regarding the environment and personal health difficult the diffusion (Reipurth et al., 2019). Finally, the image of the prior adopters of this type of diet and of the diet itself (stereotypes (Cole and Morgan, 2011) and stigmas (Markowski and Roxburgh, 2019) can discourage a potential adopter from deciding to adopt a PBD.

In addition, there are individuals who reaffirm their choice to continue eating meat and identify themselves with that type of diet. For example, Graça et al. (2014) analyzed a case study in which all participants were meat eaters. Some of them described their current meat consumption as a way of affirming belonging and a collective identity, in accordance with cultural roots and gastronomic traditions.

1.2. Diffusion of Innovation

In this section, an overview is presented from the precursor theory of innovation diffusion (Tarde, 1903) to the Diffusion of Innovations theory (Rogers, 2003). The concepts of "imitation", "social networks" and "social contagion" are then introduced.

1.2.1. Tarde's contribution to diffusion research

Diffusion is observed to be a process of interpersonal communication, when in the social network a potential adopter copies the action of the prior adopter (Tarde, 1903). Therefore, diffusion is based on small psychological interaction between individuals, with imitation and innovation being its fundamental forces. Individuals establish relational behaviours according to their individual characteristics, thus often exemplifying one of the three basic, distinctive, and interrelated processes that characterise human society: "Invention", "Imitation" or "Opposition" (Tarde, 1903). Moreover, inventions spread through a process of imitation, on which the social aspect of Tarde's system was entirely based.

Tarde (2009a) focused his attention on the internal logic of these processes of imitation and social learning that determine the innovation process. Traditional diffusion research offers a posteriori explanation of how individual innovations have ended up in social practice. Here it is a question of developing approaches that allow the understanding of the genesis of innovations from the wide range of social practice. It is less about the transfer and modification of single, isolated innovations and more about multiple streams of innovation, fuelled by an evolutionary interplay of invention and imitation: the *"cycle of interconnected and recurring actions (repeating with variations)."* (Tarde, 2009c). Any invention is embedded in a dense network of imitative currents, which shows that SIs are first and foremost joint actions, requiring interaction between many actors (Tarde, 1903). Social practices are basic operations whose execution and repetition drive stability and instability, order, and the emergence of something new. Change in social practices is often a long-term, contingent, and self-organising process which, as Tarde pointed out, is subject to its own "laws": the laws of imitation.

1.2.2. The Diffusion of Innovations (DOI) framework

Tarde's Laws of Imitation (1903) were a source of inspiration for the ideas of Rogers (2003). The Diffusion of Innovations (DOI) framework (Rogers, 2003) has been instrumental in influencing research on the dissemination of innovations. Diffusion is a process by which innovation is spread within a social system over time (Rogers, 2003). The DOI (Rogers, 2003) suggests that adoption occurs through a process of communication and social influence. According to Rogers (2003), the behaviour of related individuals is highly correlated with an individual's adoption behaviour. Understanding the nature of networks can help to understand the process of diffusion (Rogers, 2003).

Rogers (2003) considers innovation as a rational problem solving produced by science and technology and focuses on its transfer to different fields of application. Thus, Rogers (2003) severed the direct connection between invention and innovation (through which an invention becomes an innovation) and reduced the creative process of imitation to its adaptive function. According to Rogers (2003), innovation precedes the diffusion process. Diffusion refers to the acceptance and adoption of the innovation by the relevant individuals, i.e., the innovation gains acceptance rather than being produced. The exchange of information between different individuals is a fundamental part of the diffusion process and its outcome (adoption or non-adoption) (Rogers, 2003).

On the one hand, in relation to the intended target groups, the associated diffusion research asks how the innovation can be substantially modified and prepared for information and communication purposes, so that the rate of adoption can be increased and/or accelerated. It seeks to develop "push strategies" aimed at accelerating the introduction of solutions into society (outside-in processes). Diffusion research is strongly influenced by a pro-innovation bias (Rogers, 2003). It is guided by the conviction that innovation is effective, based on the assumption that the main problem is how to convince different target groups to adopt it. Diffusion research thus generates an asymmetric communication relationship between the promoters and users of solutions or innovations to problems. Society itself (as the original source of innovation and creativity) is a blind spot in diffusion research.

On the other hand, what Rogers (2003) defines as diffusion of an idea, technology, etc., would be described in Tarde's terms as a process that initiates new acts of imitation and triggers processes of cultural learning, while disrupting existing currents of imitation and advancing social change. Inventions open new opportunities, expose problems and shortcomings of established practices, initiate processes of learning and reflection, and ultimately allow new social practices to emerge. To this extent, for any invention it is necessary to inquire into its potential to trigger such processes of imitation and learning and thus generate new social practices. It is only through the development of new social practices or changes in existing practices that their effects unfold, and inventions become innovations and thus social facts. In reality, therefore, the diffusion process is a process focused on changing behavioural patterns that set-in motion social learning processes triggered by new inventions (Howaldt et al., 2015).

1.2.3. Imitation

Imitation is "*the process of copying the behaviours of another person, group, or object, intentionally or unintentionally*" (American Psychological Association - APA) and this social phenomenon takes place within the social network to which both the imitated (prior adopter) and the imitator (potential adopter) belong (Liu et al., 2005). Individuals may become more imitative as they mature, while selectively copying models with a significant level of fidelity (McGuigan et al., 2011).

Imitation is the central mechanism of social reproduction and social change: *"All similarities of social origin that belong to the social world are of some kind of imitation, whether imitation of customs or fashions by sympathy or obedience, instruction or education, naive imitation or carefully considered imitation."* (Tarde, 2009b). New social action practices are first discovered and invented in social niches (micro level) by following Tarde's reflections. From there, they can be imitated and disseminated by certain actors (or networks of actors), modifying themselves in the process.

The concept of imitation underpins an understanding of innovation centred on social practices. Consumption practices, among others, become the central object of Tarde's (1903) conception of imitation (including the production and consumption of technological artefacts). The spread of social ideas/initiatives through imitation tends

to combine with other inventions to form ever more complex and wider-acting SIs. Countless small inventions and ideas can change society and its practices through multiple acts of imitation, and it is only because of imitation that these inventions become an innovation and a true social phenomenon: *"In the social sphere, everything takes place as invention and imitation, imitation forms the rivers and inventions the mountains."* (Tarde, 2009b). Consequently, imitations always involve variations and simultaneously produce innovations in social structures and practices (Tarde, 2009b).

The real causes of change consist of a chain of very numerous, different, and discontinuous ideas, but connected to each other by even more numerous acts of imitation, to which they serve as models (Tarde, 2009b). For Tarde, there was only one decisive factor driving the constitution of society: the mutual imitation of individuals, which was kept in motion by the innovations of others (Keller, 2009). Development and change are made possible by invention, by successful initiatives that are imitated and thus become (social) innovations: *“Social transformations are explained by individual initiatives that are imitated.”* (Tarde, 1903). These social transformations are the directing, determining and explanatory force, the ‘key drivers of social transformation processes’ (Moebius, 2009).

Successful imitation is important to disseminate SI. Following Tarde's reflections (2009b), if a situation is explained based on individual’s imitation practices, then specific cultural frameworks must be decoded. At the same time, inventions can also be adopted from other cultural groups. Not only Tarde (2009b), but later also Ogburn (1969) underlined that the inhabitants of a cultural group can also come into possession of inventions, without making them themselves, but by importing them from other countries. In fact, most of the inventions found in each area are imported.

1.2.4. Social networks

This section explains the rationale for homophily as a precursor to social network formation, and then discusses the relationship between social networks and the spread of PBDs.

Homophily

Homophily is the tendency of individuals to associate with similar others, according to their status or values (Lazarsfeld and Merton, 1954). Rogers (1983) defines homophily as the degree to which pairs of individuals who interact are similar in certain attributes, such as beliefs, education, social status, and the like. Rogers and Bhowmik (1970) state that homophily between the prior and the potential new adopter enhances effective communication, and applying this to innovation diffusion, communication can lead to innovation adoption, because homophilous people tend to promote diffusion among each other (McPherson et al., 2001). Therefore, homophily is likely to increase adoption (Centola, 2011), but it is important to know the degree to which both the prior and the potential new adopter belong to the same social network, depending on the homophily or the perception of the prior adopters (Riverola et al., 2017).

The opposite of homophily is heterophily and the latter is defined as the degree to which two or more individuals who interact are different in certain attributes (Rogers, 2003). Diffusion requires some degree of heterophily between the prior adopter and the potential new adopter in the communication process. So, individuals would be homophilious on all other variables except for innovation (Rogers, 2003). According to Rogers and Bhowmik (1970), ties between heterophilic people are relatively weaker, more difficult to create and more difficult to maintain than ties between homophilic people. But, for example, in the promotion of health behaviours, the development of heterophilic ties between people from healthy and unhealthy groups can increase the effectiveness of the dissemination of good health behaviours. In fact, Rostila (2010) stated that a balance between homophily and heterophily is required, because people tend to be close to people of the same health status.

Homophily helps create social networks, because it structures network ties of every type (McPherson et al., 2001) and it is sufficient to produce the typical structural properties of social networks (Talaga and Nowak, 2020). Homophily has a significant impact on diffusion patterns because it facilitates the development of networks, where individuals are more effective in exerting social influence on individuals alike (Yavas and Yücel, 2014). It is important to consider the effects on the communication of similarity or difference between a sender and the receiver of a message (Rogers and Bhowmik, 1970). But the fact of sharing common characteristics facilitates communications between individuals and the formation of relationships (Cho et al., 2012). Moreover, Golub and Jackson (2008) state that depending both the level and type of homophily and the type of communication, homophily can substantially affect communication processes. In summary, social networks facilitate communication. Besides, both the relevance and credibility of word-of-mouth information are important (Dattée and Weil, 2007). For example, health information and treatments are very common on social networks, and users are willing to use this information to decide on their health (Capurro et al., 2014; Chen & Lee, 2014). Previous research has shown that social networks may hold promise for promoting health behaviours and improving older adults' health outcomes (Flatt et al., 2012).

Social networks in PBD diffusion

Families, among others, create contexts in which homophilic relationships are formed (McPherson et al., 2001) and specific family members and friends can shape an individual's food choices over an extended period (Conklin et al., 2014; de la Haye et al., 2013; Pachucki, 2014; Pachucki et al., 2011). Homophily can stimulate or discourage social contagion (Centola, 2011; Ortt, 1998). There are facilitators (Perez-Cueto, 2020; Reipurth et al., 2019) and barriers (Lea et al., 2006; Perez-Cueto, 2020; Reipurth et al., 2019) to PBD diffusion.

According to Graça et al. (2019), the willingness and support of close people, such as family and friends, facilitate the individual's opportunity to reduce meat consumption and follow a more plant-based diet. In fact, in previous studies by Cramer et al. (2017) and McInstosh et al. (1995), it was observed that individuals who reduced meat

consumption or followed a plant-based diet were encouraged to do so by family members and/or friends, among others. Network homophily can foster and reinforce divisions between convinced meat eaters and individuals who follow a strictly plant-based diet (Vandermoere et al., 2019). Furthermore, communication regarding PBD between the previous adopter and the potential adopter may not be effective, e.g., due to a lack of family support (Pérez-Cueto, 2020).

1.2.5. Social Contagion

The American Psychological Association (APA) defines social contagion as *"the spread of behaviours, attitudes, and affect through crowds and other types of social aggregates from one member to another*". Social contagion is sustained through imitation and conformity, among other variables. Homophily structures the links in the individual's social networks, which are homogeneous in terms of socio-demographic characteristics, values, etc. (McPherson et al., 2001). Therefore, homophily is a facilitator of the communication process and a network builder (Rogers, 2003). Information is transmitted from one individual to another within the social network (Parra-Lopez, 2007). In social networks, when the innovation has been adopted by those actors who have a centralised position, the diffusion of the innovation to the rest of the less central actors is rapid, facilitating imitation by them (Valente and Rogers, 1995). The presence in the social network of prior and potential adopters can trigger the innovation diffusion process (Bapna and Umyarov, 2015). Furthermore, the effects of peer influence and social contagion on the dynamics of behavioural diffusion in social networks are highly content-dependent (Salathé et al., 2013). Thus, the social network of the prior and the potential adopter plays a relevant role in the diffusion process (Cho et al., 2012; Davies and Nutley, 2000; Flatt et al., 2012). Finally, strong behavioural pressures to conform lead the individual to imitate (Kraatz, 1998).

Following Rogers' (2003) framework, if communication is present, imitation is a timing problem and only depends on the level of innovativeness of the potential adopter (adopter profiles), so that communication and social influence are sufficient to drive the imitation process (i.e., the individual's propensity to imitate does not affect the diffusion process). At the heart of the diffusion process is the modelling and imitation by potential

adopters of prior adopters in their network who have already adopted (Rogers, 2003). But imitation is not always the result of a communication process in the diffusion of innovation. Therefore, the imitation process is only affected by the characteristics of the innovation and the innovativeness of potential adopters (Rogers, 1983). The socio-psychological variables observed in the case of the adoption of SIs that may affect the propensity to innovate are not considered in Rogers' (1983) framework, but the work of Tarde (1903) points out that these variables do affect diffusion.

1.3. Socio-psychological variables

This section introduces several socio-psychological variables related to the potential adopter such as cognitive dissonance, food neophobia, traditions, beliefs, and habits, psychological safety, parental feeding education, food preferences and choices.

1.3.1. Cognitive dissonance

In this subsection, the concept of cognitive dissonance is presented along with four examples of its paradigms. The specific case of the cognitive dissonance that can be generated by individuals' meat consumption is then detailed. Finally, the concept of “comfort zone” is detailed due to its connection to cognitive dissonance.

Definition

Cognitive dissonance is usually experienced as psychological stress when individuals perform an action that goes against the feelings, ideas, beliefs, values and/or things in the individual's environment (Dawson, 1999). When two actions or ideas are psychologically inconsistent with each other (once the discomfort is triggered), individuals make every effort to change them until they become consistent, i.e., to find a way to resolve or reduce the contradiction between his or her belief and the perceived new information (Dawson, 1999; Festinger,1962a).

Individuals strive for internal psychological coherence to be able to function mentally in the real world (Festinger, 1962a). To do so, the individual will make changes to justify the stressful behaviour, either by adding new parts to the cognition causing the psychological dissonance (rationalisation) or by avoiding contradictory circumstances and information that may increase the magnitude of the cognitive dissonance (confirmation bias). Festinger (1962a) argues that some individuals will inevitably resolve dissonance by blindly believing what they would like to believe.

Cognitive dissonance is used both to promote positive social behaviours (campaigns against public littering (Fried and Aronson, 1995) or speeding (Fointiat, 2004), among others) and consumer (post-purchase) behaviours (Kocamaz and Karadeniz, 2020; Lazim et al., 2020).

Paradigms

There are four theoretical paradigms of cognitive dissonance: Disconfirmation of Beliefs, Induced Compliance, Free Choice, and Effort Justification, which explain, respectively, what happens after an individual acts or makes decisions inconsistently, relative to his or her intellectual perspectives. These paradigms have in common that the individual adheres to a certain perspective when confronted with contrary evidence and does everything possible to justify the retention of the challenged perspective (Brehm, 2007).

In the case of the Free Choice paradigm (Brehm, 2007), this type of cognitive dissonance occurs in an individual faced with a difficult decision and when the rejected choice may still have desirable characteristics for the chooser. The action of deciding provokes psychological dissonance consequent to choosing X over Y, even there is little difference between X and Y; the decision "I choose X" is dissonant with the cognition that "there are some aspects of Y that I like" (Brehm, 1956; Egan et al., 2010). Gächter et al. (2013) suggest that social preferences and social norms can explain peer effects in decision-making.

Example: meat-eating

One of the many examples of cognitive dissonance that can be found in everyday life is eating meat despite being animal lover. In this case, there is ambivalence in the attitude towards animals: although one professes love for them, one does not hesitate to kill them when it is convenient to do so. For the subsistence hunter, there was a direct connection between the animal and the act of eating; although animals were killed, they were also respected and often venerated or given as offerings to the gods. In modern societies, where a complex food supply chain has replaced the direct relationship between hunter and animal, meat has become a mere convenience product bought in shops. The result is seen in the modern supermarket, where pre-cut, plastic-wrapped, aseptic-looking products bear little resemblance to what an animal once was (Fieldhouse, 2013).

The possible discrepancies (conflict) between the act of eating meat and the individual's ideals and affections towards animals (Rothgerber, 2020) is referred to as the "meat paradox" (Bastian and Loughnan, 2017; Loughnan et al., 2014). The individual will try not to let the dissonance occur, but once it does occur, he or she will try to reduce it through justifications in favour of meat, for example (Rothgerber, 2020). The degree of cognitive dissonance varies depending on the individual's values and attitudes. For example, individuals who have a more dominant mindset and who value having a masculine identity tend to experience less cognitive dissonance because they are less likely to believe that eating meat is morally wrong (Loughnan et al., 2014).

Stoll-Kleeman and Schmidt (2017) present a model of factors influencing meat-eating behaviour (personal, socio-cultural, and external) to reduce meat consumption. In the model, as far as personal factors are concerned, there are certain barriers such as lack of knowledge, existing values that prevent learning, existing knowledge that contradicts values, emotional blocks that prevent new knowledge, values or attitudes, or emotional involvement. According to Higgs (2015), social and cultural norms are *"powerful and pervasive. They are strong and closely interlinked barriers; they function to excuse or even legitimise meat-eating behaviour. At the same time, they help to intimidate individuals who deviate from this accepted behaviour and fear social disapproval*." Cognitive dissonance is a key determinant of meat-eating behaviour and

must be overcome. Meat-eaters tend to avoid or resist information about the negative consequences of eating meat to overcome strong emotionally distressing reactions (Stoll-Kleeman and Schmidt, 2017).

Cognitive dissonance occurs when the individual recognises his or her behaviour (eating meat) and realises that eating meat involves some kind of harm (to animals, to his or her own health, to the environment, etc) (Rothgerber, 2020). Subsequently, Rothgerber and Rosenfeld (2021) present a framework to explain Meat-Related Cognitive Dissonance (MRCD) based on cognitive dissonance theory (Festinger, 1962b), moral disengagement (Bandura 1990, 1999) and neutralisation (Sykes and Matza, 1957). MRCD involves unpleasant psychological consequences that motivate individuals to try to avoid their occurrence by employing three strategies: avoidance (non-exposure to information), wilful ignorance (desire to remain ignorant) and dissociation (between the animal and the food product) (Rothgerber and Rosenfeld, 2021).

Comfort zone

An individual in his or her comfort zone (psychological state) moves in the familiar, feels at ease, secure, and perceives that he or she has things under control, thus experiencing low levels of anxiety and stress. The comfort zone is defined as a behavioural state in which the individual operates with a neutral level of anxiety (Bardwick, 1995). In addition, White (2009) states that the individual in his or her comfort zone uses a limited set of behaviours to deliver a constant level of performance, usually without a sense of risk.

In the comfort zone, the need for change is stifled. In doing so, it creates an incredible sense of cognitive dissonance that must continue to be buried to preserve the appearance of contentment. But outside the comfort zone there are opportunities. Considering moving (or moving directly) outside the comfort zone can create mental dissonances that are uncomfortable to maintain with respect to contradictory ideas, beliefs, or values. Cognitive dissonance is therefore a classic symptom when the individual makes a decision that takes them outside their comfort zone.

Outside this zone is a zone of fear in which self-doubt, outside opinions and excuses arise. Once this zone is overcome, the individual enters a learning zone where, by managing problems and challenges, he or she experiences new knowledge and skills. In fact, White (2009) postulates that performance can improve with a certain degree of stress, although stress can have an adverse effect, as the individual may be less daring to try and end up using previously known strategies even if they are not useful (Staal, 2004). The aim should be to expand the comfort zone, and to do so, it is necessary to be willing to step out of it.

Communication appears to be important in influencing individuals to step out their comfort zones. For example, in the case of vaccine-averse parents, communication strategies are used to persuade them to vaccinate their children and avoid health risks (Greenberg et al., 2017).

1.3.2. Food neophobia

In terms of food consumption, neophobia refers to a feeling of reluctance to experience food novelty beyond the usual consumption and comfort zone. According to Fischler (1988), neophobia is a natural tendency or predisposition for people to dislike or distrust new and unfamiliar foods. This tendency is affected by the individual's motivation to seek new and/or exciting experiences (Pliner and Hobden, 1992). Previous research on food consumption by tourists recognises that food-related personality traits, including neophilic and neophobic tendencies, can encourage or prevent tourists from trying new foods in a destination (Ji et al., 2016). *"Most individuals feel more secure when they conform to the norms of their own cultural system, which they consider superior to all others... more rational, more logical, more practical, more noble"* (Cohen, 1968). Often, later generations have been adopted and adapted earlier practices and invested them with new meanings.

1.3.3. Traditions, beliefs, and habits

Tradition is an inherited, established, or habitual pattern of thought, action or behaviour; belief is something that is accepted, held to be true or held as an opinion;

and habit is a pattern of behaviour acquired by frequent repetition (Merriam-Webster dictionary).

Even if there are adopters of PBDs in an individual's social network, he or she may be reaffirmed in his or her choice to continue eating animal protein and even identify with that diet. Graça et al. (2014) analysed the meat case study in which all participants were meat eaters. Some of them described their current meat consumption as a way of affirming belonging and collective identity, in accordance with cultural roots and gastronomic traditions. Thus, beliefs, traditions and habits related to food can be barriers to the spread of a SI such as PBD.

According to Fieldhouse (2013), food is a universal means of expressing sociability and hospitality, and the closeness of social relationships between individuals can almost be measured by the types of food and meals they share. As social circumstances change so do food uses and preferences to fit in, and the desire to eat the same as others can lead to very specific patterns, sometimes raising nutritional problems (Fieldhouse, 2013). Understanding the cultural values and norms of a social system is important for the successful introduction of food innovations. Social systems characterised by modern norms adopt food innovations more quickly than more traditional systems (Mead, 1980).

Meat is an expensive component of the traditional Western diet. Meat is often considered a high-status food and its forced disappearance from the table, in quality or quantity, has negative connotations. In some parts of the world, meat is not available, and vegetarianism is a condition imposed by the environment (Fieldhouse, 2013). Some religions, such as Buddhism, do not allow the elimination of a life that, after all, may contain the soul of an ancestor or a possible child. Vegetarianism as a style of eating can be the result of economic necessity, ecological necessity, or personal choice. In the latter case, it can be freely practised individually or adopted collectively for religious or philosophical reasons, i.e., respect for life and the environment, among others.

Some individuals are influenced by the image of the diet per se and/or by the image they have of prior adopters of PBDs (i.e., stereotypes (Cole and Morgan, 2011) and

stigmas (Markowski and Roxburgh, 2019; Reuber and Muschalla, 2022), and this impacts on the adoption of these diets.

1.3.4. Psychological safety

Psychological safety is a group phenomenon (Edmonson, 2002) and is the belief that one will not be punished or humiliated for talking about ideas, questions, concerns, or mistakes (Edmonson, 1999). Clark (2020) states that psychological safety is about removing fear from human interaction and replacing it with respect and permission. It is also built through communication. Clark (2020) contributed to the concept of psychological safety with the framework of the 4 stages of psychological safety. He defines psychological safety as *"a condition in which human beings feel (1) included, (2) safe to learn, (3) safe to contribute, and (4) safe to challenge the status quo, all without fear of being shamed, marginalised or punished in any way."*

Schein and Bennis (1965), together with Edmondson (1999), identified psychological safety as a cognitive state necessary for learning and change to occur. One of the most relevant findings of the study by Frazier et al. (2017) is the strong relationship that psychological safety was shown to have with information sharing and learning behaviour. Antecedents of psychological safety, such as peer support, and outcomes, such as information sharing, information seeking and experimentation, had a large effect at both the individual and group level in the analysis (Frazier et al., 2017).

An important antecedent of psychological safety is trust, which plays an important role in knowledge sharing as well as a partial mediating role (Zhang et al., 2010). Psychological safety is often confused with trust. The main differences between psychological safety and trust are that psychological safety focuses on a belief about a group norm, but trust focuses on a belief that one person has about another. In addition, psychological safety is defined by how group members believe they are viewed by other group members, but trust is defined by how one views another (Edmonson and Lei, 2014).

People eat not only to satisfy their physiological needs, but also in response to social needs and pressures. Eating is also related to psychological safety. For example, young children, when in a strange environment, prefer familiar foods. Immigrants use familiar foods as a means of feeling secure and not losing their identity in a foreign land and are often willing to pay high prices for these familiar symbols of home (Fieldhouse, 2013).

1.3.5. Parental feeding education

Families, among others, create contexts in which homophilic relationships are formed (McPherson et al., 2001) and specific family members and friends can shape an individual's food choices over an extended period (Conklin et al., 2014; de la Haye et al., 2013; Pachucki, 2014; Pachucki et al., 2011).In terms of parental feeding education, parents use behaviours and strategies to influence what, when and how much their children eat (Russell et al., 2015). Thus, eating habits are acquired early in life (Fieldhouse, 2013), with children learning to like what is prescribed by the food culture into which they are born. Once established, habits are likely to be long-lasting and resistant to change, although they may alter parental eating dynamics due to changes in the social environment, among others (Fieldhouse, 2013).

In the case of Generation Z, the influence of parents is extraordinarily strong, as most individuals continue to live in the nuclear family and are often emotionally and financially dependent on them. In other words, parents often do the shopping, cooking and, to some extent, decide what to eat and what not to eat. In these cases, potential adopters must face their parents' patterns of beliefs, customs and habits if they really want to adopt a plant-based diet, and this can sometimes create more than one conflict, which can be avoided if a plant-based diet is not adopted and/or not even considered in that environment. If communication is not effective between parents and children, this is reflected in a lack of family support, among others (Perez-Cueto, 2020).

1.3.6. Food preferences and choices

Food preferences are an individual's evaluative attitudes towards food, which include the qualities of food, as well as the individual's liking/dislike for food (Meiselman and Bell, 2003). Food preferences are shaped in early life by culturally determined patterns in which foods are consumed in specific combinations and which reflect experiences and associations made largely within the sphere of influence of the family (Fieldhouse, 2013). Beckerman et al. (2017) argue that food preferences are a key determinant of food intake and eating behaviours and persist from early childhood into adulthood.

Food preferences have been analysed as a function of various demographic variables such as race, gender, geography, age, taste physiology and many disease states. For example, Drewnowski (1997) found that men prefer salty foods, while women prefer sweet and fatty foods. Culture is one of the differentiating factors in food preferences. Traditional tastes help the individual to identify culturally acceptable foods, and the incorporation of other tastes may serve to overcome neophobia to new foods (Meiselman and Bell, 2003).

Food preferences, food intake and eating behaviour are strongly influenced by taste (Leturque et al., 2012). According to Drewnowski (1997), sensory responses to taste, smell and texture of food help determine food preferences and consumption habits, but do not in themselves predict food consumption. Nutrition education and intervention strategies aimed at improving people's diets should consider the sensory pleasure response to food, in addition to a wide range of demographic and socio-cultural variables.

Food choice depends on multiple factors, such as product characteristics, individual characteristics, and societal characteristics (culture, economics, and others) (Chen and Antonelli, 2020). Individual characteristics include psychological components, habits, and experiences, among others. The literature shows that food preferences are a significant and important factor in predicting food choice, if economic and availability factors do not interfere (Eertmans et al., 2001; Leng et al., 2017). Food preferences are also significantly associated with the diet followed (Kabir et al., 2018). It is essential

what motives underlie food choice, be it ethical concern, familiarity, convenience, natural content, sensory appeal, etc. (Steptoe et al., 1995).

1.4. Socio-Material approach

This section introduces the socio-material approach in a generic way and then applies it to the case study, PBDs.

1.4.1. Definition

Socio-materiality or the socio-material approach is a theory built on the intersection of technology, work, and organisation, which attempts to understand how the social and material parts of everyday life in organisations are intertwined (Orlikowski, 2007).

In previous literature (Bijker, 1997; Orlikowski, 1992), social aspects related to organizational technology appear. Thus, emphasis starts to be placed on how people interpret technology. According to Leonardi (2012), materiality is social because it has been created through social processes and is interpreted and used by individuals in social contexts; furthermore, most material things and objects sustain social life and help individuals. In theories of management (Jarzabkowski et al., 2013), organization (Carlile et al., 2013), and organizational communication (Leonardi and Barley, 2010), the concepts of materiality and socio-materiality are popular due to a deeper understanding of the contextual and relational factors that shape, change and organize human behaviour.

The socio-material approach is a novel and innovative perspective (Scott and Orlikowski, 2013). This approach is appropriate in the research study of SI because the adoption of an innovation is affected by the interrelationship between the technological aspects of the innovation and the socio-psychological aspects of the potential adopter. In this sense, some socio-psychological variables (linked to the potential adopter) may affect the success of the communication process between prior and potential adopters and, consequently, disrupt the diffusion process. This is more important for SI than in the case of technological innovations.

1.4.2. PBDs from a socio-material perspective

The decision-making process and adoption of PBDs by the potential adopter can be understood from a socio-material perspective. Graça et al. (2019) point to barriers and facilitators related to social and physical-material opportunities to reduce meat consumption and move towards PBD (lack of social support and changes in service provision in collective meal contexts, among others).

Social side

Social context plays a fundamental role in what and how we eat (Köster, 2009; Warde, 2016). Socio-cultural background influences dietary decisions (Fresán et al., 2019; Jabs et al., 1998; Stoll-Kleemann and Schmidt, 2017) and social networks are relevant in influencing the habits of individual PBD adopters (Barr and Chapman, 2002; Rosenfeld, 2018). Indeed, Fresán et al. (2019) find that social networks are central to maintaining the common dietary practices of plant-based adopters.

The choice to follow a PBD shapes personal and social identity and is likely to influence a person's values, attitudes, beliefs, and well-being (Nezlek and Forestell, 2020). For example, right-wing ideology predicts acceptance of animal exploitation and meat consumption (Dhont and Hodson, 2014). In addition, Ruby (2012) notes that vegetarians tend to have more prosocial attitudes and beliefs than omnivores. Furthermore, Minson and Monin (2012) note that to the extent that omnivores see this prosociality as a reproach to their values, the former will disqualify the latter.

Material side

Meat consumption plays a key role in the social representation of food and meals, especially in Western societies (Fiddes, 2004; Graça, 2016; Hartman & Siegrist, 2017). In addition, Michie et al. (2014) suggest interventions such as socio-technical restructuring focusing on modifying physical/material contexts, e.g. increasing the supply and changing the display of plant-based foods and meals. In parallel, Twine (2018) identifies four modes of material constitution related to sustainable food

transition, specifically in the case of the vegan diet: material substitution, novel food exploration, food creativity and taste transition.

1.5. Research Question

Homophily may influence the communication process between prior and potential adopters, and imitation may result from this communication. The literature shows examples in which when homophily is present it can stimulate or discourage adoption (Centola, 2011; Ortt, 1998), because sometimes communication between prior and potential adopter is not effective and therefore, it does not lead to innovation adoption.

Even though innovation is considered necessary and desirable, Ram and Seth (1989) identified functional (use, value, and risk) and psychological (tradition and image) barriers. The tradition barrier considers the magnitude of change caused by the adoption of the innovation, while the image barrier is given by a negative image of the innovation itself. Therefore, the socio-psychological state of the potential adopter may favour or not the adoption of an innovation. That is, psychological barriers caused mainly by psychological conflicts due to the beliefs of the individual (Kleijnen et al., 2009). In addition, Talke and Heidenreich (2014) conceptually present eight psychological barriers: personal risk, functional risk, economic risk, social risk, information, image, norms, and usage.

In the case of PBDs, it is known that eating habits are acquired throughout our childhood through our direct family (Mead, 1980). Changing these food habits can be due to a multitude of reasons (Perez-Cueto, 2020; Ruby, 2012), but if these are different from those acquired, a dissonance can emerge (Rothgerber and Rosenfeld, 2021) and this can pose a barrier that not all individuals are willing to face. Although the consumption of animal protein faces greater scrutiny because of its ethical, health and environmental implications, according to Rothgerber and Rosenfeld (2021), many individuals who consume meat experience an inconsistency between their beliefs or values and their behaviours. That is, cognitive dissonance or conflict when they

become aware that their behaviours contradict their values (e.g., animal welfare or care for the environment).

Considering the previous literature regarding SI, diffusion, homophily, imitation, the socio-material approach, and the current knowledge about the adoption of PBDs, it is noted that the effectiveness of communication in their diffusion process is unclear. That is, homophily is insufficient to explain the success of the communication process between prior and potential adopters, and the consequent final decision on whether to adopt the diet.

This research work argues that communication between the early adopters and the early majority (Rogers, 2003) plays a role in understanding the diffusion of innovation. Moreover, it argues that there is a set of variables or elements related to the socio-psychological state of the potential adopter that plays an essential role in the diffusion process due to the communication between the prior and the potential adopter. Homophily may influence imitation behaviour and therefore, the imitation effect may be the result of the communication between them. Therefore, this research aims to better understand how the potential adopter's social network influences his or her psychological barriers.

Some SIs such as food diets may have a "personal involvement", i.e., the individual is psychologically implicated. Hopwood et al. (2021) found that individual differences in dietary preferences are related to personality traits. Furthermore, they highlight the value of better understanding the psychological factors underlying plant-based eating behaviour. When food choices and eating habits become important statements about an individual's mental health or symbols of survival, well-being and identity, other psychological states of mind may also develop (Marcus, 2008) (e.g., affective symptoms such as anxiety and stress (Beezhold et al., 2015); bodily symptoms and sensations (Leijssen, 2006); psychosomatic processes (Bollas, 1979)). This certain personal involvement can also be present in the case of the adoption of political ideas and in holiday travel decisions, for example, among others (Federico, 2009; Filieri et al., 2015).

This paper postulates that the socio-psychological barriers of the potential adopter may or may not be nuanced and modulating his or her propensity to imitate, because of their communication with other adopters in their social network. Therefore, it makes sense to analyse how new potential adopter's psychological variables are reinforced or attenuated due to the influence of their communication with prior adopters. In the literature, PBDs diets are studied from the point of view of motivations (Ruby, 2012), nutritional characteristics (Tuso et al., 2013), sustainability (Sabaté and Soret, 2014), health effects (Ferdowsian and Barnard, 2009), among others, but not from the point of view of the impact of the social network on the psychology of the potential adopter. This new perspective may help to shed light on the understanding of the adoption of PBDs and their diffusion in society.

Thus, this research aims to overcome the difficulties that arise in understanding the communication process in the diffusion of PBDs. These difficulties are not solved within the communication process between the prior and the potential adopter, as communication is not sufficient, although classical theory assumes that if there is effective communication, the adoption process continues (Rogers, 1962). The focus of this research is on the potential adopter, his or her psychological barriers and how these are attenuated or reinforced by the message received from other prior adopters in his or her social network.

Consequently, the goal is to shed light on the following research question:

How can the communication process in the diffusion of social innovation be better understood through the impact of the socio-psychological involvement of the potential new adopter when he/she receives messages from his/her social network related to the innovation?

That is, considering that communication between the prior and the potential adopter (with the presence of all the elements that facilitate communication to take place) is not sufficient to succeed in the adoption process, it is postulated that successful adoption may be mediated by some social-psychological characteristics of the potential adopter that are activated/deactivated during the communication process. Hence, this research question aims to explore the influence of social network on socio-

psychological variables affecting the success of communication between adopters and potential adopters in obtaining a new adoption.

CHAPTER 2: METHODOLOGY

This chapter provides a rationale for the epistemology employed, the methodological strategy and the research methodologies used, followed by details of the data collection techniques, as well as details of each of the case studies. Finally, the approach used to analyse the data is presented with details of the codification and coding process.

2.1. Epistemological basis

This research work has an interpretivist approach, which is one that understands the role of the researcher in permanent interaction with the object of study. According to Creswell (2009), individuals try to understand the world in which they live and work, so they produce subjective meanings about their experiences of reality (i.e., realities cannot be objectified and generalised). Because there are so many meanings, the researcher tries to appreciate the complexity of the visions to reach a greater understanding, being the objective to inquire deeply on various facets of multiple realities (Berger and Luckmann, 1966). That is, the researcher tries to understand the object of study through how people provide meaning to it (Orlikowski and Baroudi, 1991).

2.2. Methodological strategies used in SI

There are different methodological strategies in SI studies which are based on:

a) Historical (McGowan and Westley, 2015) or contemporary (Bouchard et al., 2015) examples and case studies.

b) Multiple mappings of IS dynamics (Pelka and Terstriep, 2016).

c) Design of national (Krlev et al., 2014) or regional (Unceta et al., 2016) SI indicators.

d) Academic SI-action research methodology to drive territorial development (Moulaert et al., 2016).

In addition, Wittmayer et al. (2017) highlight the importance of process-oriented methodologies (SI as a process), exploratory methodologies (the theoretical state of the field as a challenge) and ambitious methodologies (overview of the universe of SI cases).

2.3. Research Methodologies considered

2.3.1. Exploratory

This research aims to explore, with a certain level of depth, an existing and relatively new problem, which is not clearly defined, so that the problem can be better understood, thus determining its nature (Brown, 2006). In addition, it can help determine the research design, sampling methodology and data collection. Sometimes exploratory research is confused with conclusive research. According to Singh (2007), exploratory research is the initial one, being the basis for more conclusive research. On the one hand, an exploratory work gives rise to a series of causes and alternative options for the solution of a specific problem; on the other hand, a conclusive work identifies the final information that constitutes the only solution to an existing research problem (Sandhusen, 2000).

The methodology of an exploratory study may be less rigorous than that of a conclusive one, and even the sample size may be smaller, but it is important that the study is as methodical as possible, especially considering possible future studies in this regard (Nargundkar, 2003). This type of research has some disadvantages since the qualitative data collected and their interpretation are subject to biases. In addition, the sample sizes are usually small, not adequately representing the target population. Therefore, the findings cannot be generalized to a wider population.

2.3.2. Grounded theory

Grounded theory is an iterative and evolutionary methodology, and its aim is to build a new theory from the data collected and to account for it (Bryant and Charmaz, 2007). This methodology proposes that careful observation of the social world can lead to theory building (Rice and Ezzy, 1999). In addition, it is widely used in a variety of disciplines (Bryant and Charmaz, 2007) that facilitates the construction of theories and new concepts and avoids assuming that structures are stable (Charmaz, 2016).

2.3.3. Theory-building

Theory-building is a process in which a statement of concepts and their interrelationships is created and developed to show how and/or why a phenomenon occurs (Borsboom et al., 2021). Eisenhardt (1989) states that multi-case theory-building is a research strategy that involves the use of multiple cases to create theoretical constructs, propositions and/or mid-range theory from empirical case-based evidence.

2.3.4. Final Methodology Approach

This study aims to contribute to the theory-building effort to better understand the adoption of PBDs from an adopter's point of view. Likewise, attention is paid to some claims in this field (Van der Have & Rubalcaba, 2016) that call for new efforts in this direction. Deepening the effectiveness of communication between prior and potential adopters suggests requiring a qualitative and inductive methodological approach. The adoption of a qualitative approach helps to propose a framework to understand the effectiveness of the communication process that triggers or does not the adoption by potential adopters (in the case of a SI such as PBDs).

2.4. Research Method

The use of the case study allows a deeper understanding and learning about the phenomenon and the context. In the field of organisation and management studies, the case study is often used as a research strategy. Two predominant methodological

models for the use of qualitative data are Eisenhardt's (1989) and Gioia's (2004). On the one hand, Eisenhardt (1989) pioneered the use of case studies to build theories but is post-positivist in nature. On the other hand, Gioia (2004) started from an interpretivist base through in-depth exploration of a case.

The design of this dissertation is informed by the interpretivist leaning tradition (Merriam, 1988; Stake, 1995), which has a more flexible and fluid approach to cases. The research is based on the interpretation of reality, with an iterative process between the literature and the data waiting for concrete narratives to emerge that can inform the generation of a model. Furthermore, the design is inspired by Gioia's (2004) methodology bringing to light the perceptions of individuals. In summary, the research method used in this research is a cross-case study, because this type of analysis allows the researcher to examine themes, similarities, and differences between cases (Mathison, 2005).

2.5. Data Collection Techniques

2.5.1. Introduction

A deep exploration of the ideas and experiences of individuals is required to understand in detail the communication processes between prior and potential adopters of PBDs. Therefore, it will be difficult to generalize to a wider population. The choice of semi-structured interviews rather than structured interviews is because semi-structured interviews allow the interviewer to delve deeper into the issues raised by the interviewee during the conversation; in contrast, a rigid structure will not allow for this flexibility or the possibility of capturing innovative approaches (Myers, 2009). The most common type of interview is the semi-structured interview (Rowley, 2012). Through semi-structured interviews, data were collected using some pre-formulated questions about the socio-demographic characteristics, personal history, and social environment of each of the interviewees.

An outline was designed, and a pilot test was conducted between March and April 2019 to ensure that it covered the different areas of study and was understandable to the participants. The final outline was designed and approved by the Ethics Committee of the Ramon Llull University in April 2019 (more information in Appendix 3 and 4). The outline has 25 questions divided into 5 sections: a) Socio-demography; b) The individual and innovation; c) The individual's perception of innovation; d) The individual and his/her social network; e) The impact of the variable "homophily".

Three case studies were designed to explore the impact of socio-psychological variables on communication on the diffusion of PBDs in different contexts (see Table 1). Therefore, each case study is different, and the aim was to have different sample perspectives. The semi-structured interviews were conducted between April 2019 and December 2020. Candidates received prior information about the content of the research and were provided with a consent form (more information in Appendix 5 and 6). They could withdraw from the study at any time, even if they had signed the consent form. All data obtained were anonymized in accordance with Data Protection regulations. Therefore, the privacy of the participants was guaranteed in all processes. One-to-one interviews lasting approximately 45 minutes in length conducted face-to-face or online. Interviews were conducted in Spanish, Catalan or English and were recorded, transcribed, and reviewed by two different researchers. The analysis and interpretation of the data were carried out through coding; to do so, the information was organized to discover and code the units of analysis, assigning categories and codes. Both the transcription of the interviews and their subsequent analysis were carried out manually. This process helps to explore and deepen the "why" and the "how", i.e., the reasons and the way.

2.5.2. Design of the Cases

The three cases are designed as follows: from the beginning, the idea was to find out how the process of adopting a PBD had been or was being, i.e., to explore how the process of obtaining information was, the impact of the social environment on the individual, etc.

Case study 1 focuses on consumers of a 100% plant-based food shop from Generations X and Y. According to FONA International (2019), Generation X has a strong interest in plant-based foods. Furthermore, the literature highlights that Generations Y and Z are more likely to consume plant-based foods (Lantern, 2019; The Food Institute, 2020) and that, specifically, Generation Z is the most interested in plant-based foods (FONA International, 2019). But there are also differences between them; for example, Kymäläinen et al. (2021) found that Generation Z takes climate change associated with food waste and biased diets very seriously. Therefore, the research also incorporated two more cases to have more perspectives: one for Generation Y and one for Generation Z. In summary, case study 1 has consumption of plant-based food products as a fixed variable (irrespective of age generation), while case studies 2 and 3 have age range (either Generation Y or Z) as a fixed variable, irrespective of the type of food consumption. In other words, in each case study it is possible to explore how each age generation behaves towards a SI such as PBDs.

2.5.3. Sample Size and Sample Bias

In terms of sample size, the guiding principle has been that of saturation. This concept means that no additional data are found to develop the properties of the categories. That is, when similar cases are observed repeatedly, it can be empirically stated that the category in question is saturated (Glaser and Strauss, 2017; Starks and Brown Trinidad, 2007).

In addition, bias was considered when selecting individuals in each of the three samples for each of the three case studies, as proposed by Collier and Mahoney (1996). To this end, an attempt was made to minimise bias by ensuring that there was

a variety of gender and age groups in the case study 1, whereas in case studies 2 and 3, an attempt was made to ensure that potential participants in the sample followed different types of diet and that there was more variety.

2.5.4. Description of the Cases

Table 1 below summarises the main characteristics of each case study and shows the similarities and differences.

	Case Study 1	**Case Study 2**	**Case Study 3**
Name of the case study	PBC#	GENY#	GENZ#
Type of respondent	Gen X and Y	Gen Y	Gen Z
Sample size	14	27	28
Sampling method	Convenience	Snowball	
Range of ages	27–51	26–39	18–25
Gender	5 males/9 females	6 males/21 females	10 males/18 females
Location	Barcelona area		
Channel	One-on-one in person	One-on-one in-person/online (Teams/Skype)	
Duration	45 min avg.		
Languages	Catalan and Spanish	Catalan, Spanish and English	
Period	April–June 2019	October–December 2020	

Table 1. General characteristics of each case study

Case Study 1: PBC

The sample was obtained by recruiting customers from a 100% plant-based food shop located in the Gràcia district of Barcelona (Spain). Since 2016, the city of Barcelona has been declared veg-friendly, i.e., a city-friendly to vegetarian and vegan culture. Moreover, the Gràcia neighbourhood is one of the two (the other is El Born) that brings together most of the city's businesses related to the consumption of all kinds of products of plant origin (food, clothing, footwear, cosmetics, etc.). As the shop only has plant-based food products, it is ensured that customers buy this kind of food products. Potential participants were recruited based on convenience after making their purchase, ensuring that they were consumers of 100% plant-based food products and that there was a variety of both gender and age (Generation X and Y). It was explained to them that a study on the consumption of plant-based food products was being carried out (more information in Appendix 7). Then, after a few minutes of conversation, they were provided with printed information about the study and if the customer wanted to participate, date and time were arranged for the interview.

Respondents included married couples, members of the same family unit and other unrelated individuals. In addition to the socio-demographic characteristics and some others such as occupation, level of education, etc., all were asked about the type of diet adopted. This last variable is essential as a starting point in the analysis of this case. Most of the respondents were adopters of PBDs and only a few of them were in the transition process towards the adoption of a plant-based diet.

The characteristics of the participants of case study 1 (PBC) are shown in Table 2.

Code	Age	Gender	Feeding type	Education	Job position	Place of Residence
BCN1	27	Female	Vegan	Tertiary: MSc	Spanish Teacher	Barcelona
BCN2	32	Female	Vegan	Tertiary: BSc	Physiotherapist	Parets del Vallès
BCN3	43	Male	Vegan	Secondary	Domestic work	Barcelona
BCN4	36	Male	Vegetarian	Tertiary: MSc	Health Engineer	Parets del Vallès
BCN5	36	Female	Vegan	Tertiary	Vegan Store owner	Barcelona
BCN6	28	Male	Vegan	Secondary	Food sector	Barcelona
BCN7	36	Male	Vegan	Secondary	Service sector	Sabadell
BCN8	45	Female	Vegan	Tertiary: Master's degree	Pharmaceutical sector	Barcelona
BCN9	44	Female	Vegan	Tertiary	Employment advice	Barcelona
BCN10	50	Male	Vegetarian	Tertiary: MSc	Public Administration	L'Hospitalet de Llobregat
BCN11	51	Female	Vegetarian	Tertiary: MSc	Dance teacher	Barcelona
BCN12	33	Female	Vegan	Tertiary: BSc	Administrative	Barcelona
BCN13	41	Female	Omnivore	Tertiary: BSc	Administrative	Barcelona
BCN14	40	Female	Vegan	Secondary	Online marketing	Palma de Mallorca

Table 2. General characteristics of CS1 (PBC) respondents

Case Study 2: GENY

Generation Y individuals or millennials were born in the period between 1980 and the mid-1990s, as the Merriam-Webster dictionary mentions. They are characterised by medium- to long-term goals and seek a balance between life and career. They use social media to search for information related to health care and beauty products, and wellness is a key element in their daily lives (Lantern, 2019). PBDs already have an established penetration in this age range (Lantern, 2019). Therefore, a specific age range is ensured to explore the adoption of PBDs.

The sample was drawn from some individuals in this age group selected by convenience. It was explained to them that a study on the consumption of plant-based food products was being conducted. Then, after a few minutes of conversation, the individual was provided with information about the study by email. Once the initial individual agreed to participate in the study, a date and time for the interview were arranged. After the interview, the initial individuals were asked, if possible, to give the researchers the contact details of people they believed would want to participate in the study. Therefore, the data collection method used in this case study is snowball sampling. The next step was to contact these potential candidates to explain to them the study, give them the information they needed and if they agreed to participate, a date and time was set for the interview, and so on (more information in Appendix 8).

It should be noted that during the process, it was ensured that there was a variety of gender and dietary types, while maintaining the corresponding age range (Generation Y) as a common variable for all participants. Respondents included married couples, members of the same family unit, friends, and other unrelated individuals. It should also be noted that the respondents were either adopters of PBDs or were omnivores. The characteristics of the participants of case study 2 (GENY) are shown in Table 3.

Code	Age	Gender	Feeding type	Education	Job Position	Place of Residence
GENY1	29	Male	Flexitarian	Tertiary: BSc	Travel Agency	Barcelona
GENY2	27	Female	Vegan	Tertiary: BSc	Human Resources	Barcelona
GENY3	26	Female	Omnivore	Tertiary: MSc	Sports sector	Barcelona
GENY4	27	Female	Omnivore	Tertiary: MSc	Cultural restoration	Barcelona
GENY5	37	Female	Pescatarian	Studying a PhD	Education sector	Barcelona
GENY6	30	Female	Vegetarian	Secondary	Air Transport sector	l'Hospitalet de Llobregat
GENY7	35	Female	Omnivore	Tertiary: MSc	Marketing sector	Barcelona
GENY8	35	Female	Vegetarian	Studying a PhD	Education sector	Barcelona
GENY9	26	Female	Reducetarian	Tertiary: MSc	Graphic Design	Olot
GENY10	34	Female	Pescatarian	Secondary	Sports sector	Barcelona
GENY11	32	Female	Vegetarian	Secondary	-	Barcelona
GENY12	29	Male	Omnivore	Secondary: FP	Consultancy	Barcelona
GENY13	30	Female	Vegetarian	Tertiary	Education sector	Barcelona
GENY14	30	Female	Omnivore	Tertiary	Real Estate sector	Gavà
GENY15	33	Male	Omnivore	Tertiary: MSc	Transport sector	Barcelona
GENY16	33	Female	Omnivore	Secondary: HS	Food retail sector	Barcelona
GENY17	34	Female	Omnivore	Tertiary: MSc	Administration	Barcelona
GENY18	36	Female	Undefined[1]	Secondary: FP	Air Transport sector	Barcelona
GENY19	32	Female	Carnivore	Secondary	-	El Prat de Llobregat
GENY20	34	Female	Carnivore	Secondary: HS	Travel Agency	Castellar del Vallès
GENY21	33	Female	Undefined[2]	PhD	Education sector	Barcelona
GENY22	26	Male	Vegan	Tertiary: MSc	R&D	Madrid
GENY23	39	Female	Vegetarian	Tertiary: MSc	Marketing sector	Barcelona
GENY24	30	Female	Vegetarian	Tertiary: CFGS	Health sector	Linyola
GENY25	31	Male	Vegetarian	Tertiary	Industry sector	Linyola
GENY26	28	Male	Vegan	Tertiary	Hostelry sector	EEUU
GENY27	30	Female	Vegetarian	Tertiary	Hostelry sector	Argentina

Table 3. General characteristics of CS2 (GENY) respondents

[1]She says that she does not define herself. She does not eat meat.

[2]She says that she does not define herself. But sometimes she eats a bit of everything, although she is much more plant-based.

Case Study 3: GENZ

Generation Z individuals or centennials were born between the late 1990s and early 2000s, as the Merriam-Webster dictionary mentions. This generation is setting food trends in the post-pandemic world because they tend to order more, choose frozen foods, and eat more plant-based dishes (The Food Institute, 2020).

As in the previous case, the sample is obtained from some initial candidates by convenience, and then following the snowball sampling methodology and a posteriori, following the same procedure explained in case study 2 (more information in Appendix 9). Respondents included couples, members of the same family unit, friends, and other unrelated individuals. It should also be noted that the respondents were either adopters of PBDs or were omnivores.

The characteristics of the participants of case study 3 (GENZ) are shown in Table 4.

Code	Age	Gender	Feeding type	Education	Job Position	Place of Residence
GENZ1	22	Female	Undefined[1]	Studying a MSc	Retail Trade sector	Girona - Sabadell
GENZ2	23	Male	Undefined[2]	Studying a BSc	Education sector	Barberà del Vallès
GENZ3	19	Female	Vegan	Studying a BSc	-	Barcelona
GENZ4	21	Female	Vegan	Studying a BSc	-	Girona
GENZ5	22	Female	Vegan	Studying a MSc	-	Sabadell
GENZ6	23	Female	Vegan	Tertiary: MSc	-	Porqueres
GENZ7	23	Female	Vegan	Tertiary	-	Vic
GENZ8	20	Female	Vegan	Studying a BSc	Retail trade sector	Quart
GENZ9	24	Male	Vegan	Studying a BSc	-	Riudaura
GENZ10	20	Male	Omnivore	Studying a BSc	Retail trade sector	l'Hospitalet de Llobregat
GENZ11	21	Female	Vegan	Studying a CFGS	-	Barcelona
GENZ12	18	Female	Omnivore	Studying a BSc	-	Manresa
GENZ13	21	Female	Reducetarian	Studying a BSc	-	Tiana
GENZ14	25	Female	Undefined[1]	Tertiary: BSc	Education sector	Barcelona
GENZ15	24	Male	Reducetarian	Studying a MSc	-	Tiana
GENZ16	23	Female	Vegetarian	Tertiary: BSc	Education sector	Tiana
GENZ17	23	Male	Vegan	Studying a BSc	Tertiary sector	Chiclana de la Fra.
GENZ18	25	Female	Omnivore	Studying a BSc	Internship in IT	Barcelona
GENZ19	21	Male	Vegan	Secondary: HS	Social sector	France
GENZ20	24	Male	Omnivore	Tertiary: BSc	Internship in IT	Begues
GENZ21	21	Male	Omnivore	Studying a BSc	Philanthropy sector	Barcelona
GENZ22	23	Female	Omnivore	Studying a MSc	-	Chiclana de la Fra.
GENZ23	23	Female	Vegetarian	Tertiary: BSc	-	Badalona
GENZ24	22	Female	Vegetarian	Studying a MSc	Internship	Tiana
GENZ25	20	Male	Flexitarian	Studying a BSc	Internship	Barcelona
GENZ26	22	Male	Omnivore	Studying a BSc	-	Mallorca
GENZ27	21	Female	Omnivore	Studying a BSc	Internship in IT	Barcelona
GENY28	23	Female	Reducetarian	Tertiary: BSc	Research sector	Badalona

Table 4. General characteristics of CS3 (GENZ) respondents

[1]She does not define herself. She says she eats everything. [2]He does not define himself, but if others ask him about it, he says he is "vegan".

2.6. Data Analysis approach

2.6.1. Introduction

The analysis of the data collected during the interviews was structured in four main phases, according to the framework suggested by Sutton and Austin (2015):

a) Transcription

The interviews were transcribed verbatim to avoid misquoting or misinterpreting the participants' contributions. Each interview was reviewed to ensure the accuracy of the text by two researchers.

b) Interpretation

The data collected from the interview transcripts was interpreted. The assessment of these characteristics helps to correctly interpret the respondents' perspectives.

c) Coding

The data were coded by identifying issues, themes, similarities, and differences revealed through the participants' narratives and interpreted by the researchers. In this way, the aim has been to establish common points between the narratives, bringing the contributions closer to similar concepts, definitions, and practices (see Tables 11, 12 and 13).

d) Thematization of the data

The data were categorised following the content analysis method, i.e., the data were categorised into classifications that then form segments and sub-segments of the research and analysis section (Elo and Kyngäs, 2008). For this purpose, the coded versions of the interview transcripts were re-analysed, and

the contributions were assigned to one of the established categories. Then, the classifications were formed to derive and present coherent, significant, and faithful conclusions to the primary data (see Tables 11, 12 and 13).

The transcription, review and interpretation of the interviews were done manually. The whole process was reviewed by two researchers.

2.6.2. Codification and Thematization of the Data

Codes can be words, sentences, or whole paragraphs and help to organise data into concepts and speed up analysis (Myers, 2009). They can be descriptive codes (open codes), interpretive codes (axial or selective codes), etc. In this case, the coding of the interviews was carried out following open, axial, and selective coding (Eisenhardt and Graebner, 2007), that is:

a) Open coding

The data is divided into discrete parts. Key points are selected, and “codes” are created to label them. That is, the construction of conceptual codes from the key points identified in the transcripts.

b) Axial coding

Theoretical concepts emerge. It consists of constructing emergent concepts from the open codes emerged in the prior stage. The aim of this coding process is to establish connections between the codes. So that the codes developed in the prior stage are organised and grouped into categories (Creswell, 2009). Therefore, axial coding moves the data to a higher hierarchical level of abstraction.

c) Selective coding

All categories are connected around a central category. That is the integration of previous codes into a broader theoretical category or schema. The core category developed represents the central thesis of the research.

In this way, by applying each of these strategies in that order, the analysis of the collected data is advanced to obtain research results.

2.6.3. Detail of the Coding Process

After the interviews had been transcribed and reviewed by two different researchers, they were manually coded in an open coded manner. Firstly, two control variables, the type of diet followed by each participant and their gender, were coded, as shown in Table 5:

Category	Codes
Feeding type	Vegan
	Vegetarian
	Flexitarian
	Reducetarian
	Pescatarian
	Carnivore
	Omnivore
	Undefined
Gender	Female
	Male

Table 5. Codes of the categories “Feeding type” and “Gender”

Secondly, each open code was assigned a colour, which was used to mark words, short phrases or longer phrases that were related to the code in question, and these extracts from the interviews were then copied into an Excel document (one per case study) that follows the structure shown in Table 6.

Open Codes	Acronym	Colour Name	Colour	Respondent 1	…	Respondent n-1	Respondent n
Social Network	SN	Lime Green					
Resistance to Adoption	RA	Ash Grey					
Homophily	HOM	Teal					
1st Information Channel / Perception	IC	Canary Yellow					
Economic Factor (Cost)	EF	Turquoise					
Out - In Impact	OII	Persian Pink					
In - Out Impact	IOI	Blue					
Belongingness / Emerging Feelings	SOB	Purple					
Identity / Shared way of being in this world	ID	Golden Brown					
Traditions / Customs / Beliefs / Habits	TC	Pure Red					
Comfort Zone	CZ	Cobalt Blue					

Table 6. Open coding process (first round)

In a second round of open coding, participants who reported a feeding type other than “vegan” or “vegetarian” were further analysed to better understand their thinking and behaviour. To this end, all interviews of participants who claimed to be "flexitarian", "reducetarian", “pescatarian”, "carnivore", "omnivore" or "undefined", were reviewed. Two open codes were added to Table 6 above, as shown below in Table 7:

Open Codes	Acronym	Colour Name	Colour	Respondent 1	…	Respondent n-1	Respondent n
Knowledge / Consciousness	KNW	HTML Grey					
Barriers to Imitation / Social Psychological Variables	SPV	Indian Red					

Table 7. Open coding process (second round)

Some real examples of the open coding are shown below in Table 8, Table 9, and Table 10.

Open Codes	Acronym	Colour Name	Colour	BCN9
Traditions / Customs / Beliefs / Habits	TC	Pure Red		*"People who do not know how to cook and want to get into this world and suddenly want to replace one thing with another."*

Table 8. Example of open coding of Case Study 1 (PBC)

Open Codes	Acronym	Colour Name	Colour	GENY4
Resistance to Adoption	RA	Ash Grey		*"I wouldn't be able to do it because if you take animal protein out of my diet, I have no way of getting protein into my diet."* *"Right now I'm not in a position to say 'come on, I'll do it', because I need to eat, to have a quick meal, and for me the quickest and easiest thing to do, without thinking, is animal protein: chicken, hamburger."*

Table 9. Example of open coding of Case Study 2 (GENY)

Open Codes	Acronym	Colour Name	Colour	GENZ12
Barriers to Imitation / Social Psychological Variables	SPV	Indian Red		*"Yes, I have thought about it many times, in fact. But I'm not, basically, not on principle, because I'm clearly against the animal industry, but I don't think I could live without meat or fish, for example. Maybe if my family didn't think like that, maybe I would be vegan, for example. I think that the family environment is more important than anything else, because no matter how much you want to, if your family doesn't follow your example, so to speak, it's like in the end... I don't know, in my case, I've tried many times, but in my family, they think it's not a balanced diet, so whether you like it or not, it influences you."*

Table 10. Example of open coding of Case Study 3 (GENZ)

2.6.4. Full coding

The final coding of each of the case studies is shown in Table 11 (PBC), Table 12 (GENY) and Table 13 (GENZ) in the next pages. In each table, codes, subcategory elements, category elements, and categories are presented.

Category	Category elements	Subcategory elements	Codes
Individual`s Behaviour with respect to Plant-Based Diets (PBDs)	Dietary Choices	Personal Motivations	Animal welfare, Health, Environment
		Personal Preferences	Taste, Texture
	Psychological Attitude towards Dietary Change	Comfort zone	Resistance to Adoption, Fear of the Unknown, No control, Difficulties, Anxiety, Stress
	Social Network ((SN) Influence	Close and personal SN	Family, Friends
		Professional SN	Co-workers, Classmates
		Ideological SN	Political Activism, Animal rights group
		Other SNs	Sports, Yoga
Adopter (respondent) and non-Adopter (SN) Relationship	non-Communication	Non-interest by the non-Adopter	Unusual contact
		Not enough Intimacy	Private Sphere
		Not active dissemination by the Adopter	No interest
	Positive Impact towards adoption	Tangible	SN tries plant-based diets
			SN reduces consumption of animal-based foods
			the SN considers inclusive options for eating
		Intangible	SN asks questions, receives information and help
			SN shows interest, respect, support, and curiosity
			SN feels inspired and motivated
	Negative Impact towards Adoption	Intangible	The SN feels challenged
			SN is not supportive
non-Adopter (respondent) and Adopter (SN) Relationship	Positive Impact towards adoption	Tangible	Individual tries plant-based foods
			Individual reduces consumption of animal-based foods
		Intangible	Individual receives support in adopting
			Individual questions his/her own views
			Individual shows interest, curiosity, respect, and support

Table 11. Categories, category elements, subcategory elements, codes of case study 1 (PBC)

Category	Category elements	Subcategory elements	Codes
Individual`s Behaviour with respect to PBDs	Dietary Choices	Personal Motivations	Animal welfare, Health, Environment
		Traditions	Culture, Family
		Beliefs	Society, Personal Experiences
		Habits	Selection, Consumption and Use (of food or diets)
		Personal Preferences	Taste, Texture
	Psychological Attitude towards Dietary Change	Cognitive Dissonance	Ideas, Behaviour, Beliefs, Emotions
		Comfort zone	Resistance to Adoption, Fear of the Unknown, No control, Difficulties, Anxiety, Stress, Perception, and Inconvenience of and in the social environment, Lack of knowledge about nutrition as well as plant-based recipes
	Social Network Influence	Close and personal SN	Family, Friends
		Professional SN	Co-workers, Classmates
		Ideological SN	Feminist group, Animal rights group
		Other SNs	Sports, Yoga, Buddhist community, Women's circle
Adopter (respondent) and non-Adopter (SN) Relationship	non-Communication	non-Attention by the non-Adopter	non-Communication (depends on the individual and the environment)
		Not enough Intimacy	non-Communication
	Positive Impact towards Adoption	Tangible	SN reduces consumption of animal protein
			SN tries plant-based diets
			SN perceives impact when eating out or shopping
		Intangible	SN shows interest, respect, support, and curiosity
			SN asks questions, receives information and help
	Negative Impact towards Adoption	Intangible	Close SN adapts
			SN respects, supports but does not adopt
			SN feels fear, rejection, and difficulty in acceptance
non-Adopter (respondent) and Adopter (SN) Relationship	non-Attention by the non-Adopter		non-Communication (depends on the individual)
	Positive Impact towards adoption	Intangible	Individual shows interest, curiosity, respect, and support
			Individual considers adopting
	Negative Impact towards Adoption		Individual prefers to self-inform
			Individual voluntary imitates if there are advantages
			Individual who tries to convince you is annoying

Table 12. Categories, category elements, subcategory elements, codes of case study 2 (GENY)

Category	Category elements	Subcategory elements	Codes
Individual`s Behaviour with respect to PBDs	Dietary Choices	Personal Motivations	Animal welfare, Health, Environment
		Traditions	Culture, Family
		Beliefs	Society, Personal Experiences
		Habits	Selection, Consumption and Use (of food or diets)
		Parental feeding education	
		Personal Preferences	Taste, Texture
	Psychological Attitude towards Dietary Change	Comfort zone	Resistance to Adoption, Fear of the Unknown, No control, Difficulties, Anxiety, Stress, Perception, and Inconvenience of and in the social environment, Lack of knowledge about nutrition as well as plant-based recipes
	Social Network Influence	Close and personal SN	Family, Friends, Roommates
		Professional SN	Co-workers, Classmates
		Ideological SN	Feminist group, Anarchist group, Animal rights group, LGBTI group
		Other SNs	Sports, Theatre group, Reading group, Women's circle
Adopter (respondent) and non-Adopter (SN) Relationship	non-Communication	non-Attention by the non-Adopter	non-Communication (depends on the individual and the environment)
		Not enough Intimacy	non-Communication
	Positive Impact towards Adoption	Tangible	SN perceives impact when eating out or shopping
		Intangible	SN shows interest, respect, support, and curiosity
			The SN is encouraged to adopt
			SN asks questions, receives information and help
	Negative Impact towards Adoption	Intangible	SN feels disinterest, rejection, and discomfort
			SN shows ignorance
non-Adopter (respondent) and Adopter (SN) Relationship	non-Attention by the non-Adopter		non-Communication (depends on the individual and the environment)
	Positive Impact towards adoption	Intangible	Individual shows interest, curiosity, respect, and support
			Individual feels encouraged to adopt
			Individual questions his/her own views
	Negative Impact towards Adoption		Individual prefers to self-inform

Table 13. Categories, category elements, subcategory elements, codes of case study 3 (GENZ)

CHAPTER 3: ANALYSIS

This chapter presents the analysis of the data, on the one hand, from the perspective of the individual and, on the other hand, from the influence that the social network does or does not have on the potential adopter. More quotes can be found on Appendix 10.

3.1. Introduction

The analysis of each case study is organised by considering the individual interviewee as well as his or her social network, and the adoption of PBDs. In general, the analysis indicates that:

a) Personal motivations are key in choosing the type of food diet.

b) Cognitive dissonance (comfort zone) acts as a barrier to adoption.

c) Parental feeding education, personal preferences, traditions, beliefs and habits may act as barriers to adoption.

d) The influence of the social network is null when there is no communication either due to lack of intimacy or lack of interest on either side.

e) Positive influences are observed when the potential adopter is encouraged to try plant-based foods, reduces the consumption of animal protein and even shows interest and curiosity, asks for information and help, and considers adopting;

f) Negative influence is observed when potential adopters feel challenged by the prior adopters, find prior adopters who try to convince them annoying, prefer to self-inform, or show disinterest, rejection, and discomfort.

The cross-case analysis is presented hereafter.

3.2. The individual

Personal motivations are observed to be one of the main facilitators of dietary choices (Larsson et al., 2003; Ruby, 2012; Pérez-Cueto, 2020), being animal welfare, ethics, and health issues the most mentioned by the respondents. In the case of adopters of PBDs, their personal motivations were found to be strong and defined and formed the backbone of their lives. Personal preferences in taste and texture also appear to be related to dietary choices (Boesveldt and de Graaf, 2017; Drewnowski, 1997). PBC10 illustrates both food preferences and personal motivations.

> *"When I was a child, meat and fish disgusted me. Later, as I have evolved from the point of view of conscience, it is also for ethical and moral reasons."* (PBC10)

Personal food preferences (mostly cheese, meat, and fish) act primarily as a barrier, with potential adopters expressing a clear preference for products of animal origin, as GENY8 and GENZ15 illustrate.

> *"If you like cheese, it is very hard for you (to stop eating it)."* (GENY8)

> *"I really like to eat meat."* (GENZ15)

Before an individual decides to adopt a PBD, he or she may experience different preliminary phases of resistance or non-adoption, i.e., opposition, rejection, postponement, and non-resistance (Kleijnen et al., 2009; Rogers, 2003). In the analysis of the narratives, the concept of "resistance to adoption" emerged in the form of resistance to leaving one's comfort zone. The term "comfort zone" refers to a psychological state in which the individual feels familiar with the environment, at ease and in control, thus experiencing low levels of anxiety and stress (White, 2009). Respondents justify themselves by citing deep-rooted traditions and difficulty in

changing habits (Blawert and Wurm, 2020; Guerrero et al., 2009), among others, as PBC8 states.

> *"We have deep rooted traditions at the nutritional level, and any change is very difficult for people to accept at first; even for the family."* (PBC8)

Potential adopters acknowledge that they find it hard to get out of their comfort zone despite knowing that alternatives to animal food products exist, but they usually mentioned a lack of knowledge about nutrition as well as plant-based recipes. According to Dindyal and Dindyal (2003), personal skills and individual's behaviour determine the eating habits. For some potential adopters it is a challenge to ensure they have the key nutrients in the right proportion in their diet. Individual's beliefs about healthiness and knowledge about food regarding nutritional habits are factors influencing eating habits, as GENY19 and GENZ2 illustrate.

> *"I know there are alternatives, but it is like… it is hard for me to get out of my comfort zone, I mean… of course there are alternatives … even almond milk, soya milk, we can look for… coconut milk as well."* (GENY19)

> *"The main problem people have is the time factor and learning new dishes. I think a lot of people are afraid that they do not have enough time to dedicate to creating a new diet."* (GENZ2)

Stepping out of the comfort zone opens new scenarios. Certainly, leaving the comfort zone involves facing a zone of fears (lack of self-confidence, impact of others' opinions, looking for excuses), but after a while you enter a learning zone where you acquire new skills, deal with challenges and problems and face a zone of fears (lack of self-confidence, impact of other's opinions, looking for excuses). This entire process causes our comfort zone to expand, as stated by GENZ6.

> *"I have always loved cooking and I did not know how to make a cake without eggs… How is it going to grow? It is like stepping out of what you consider normal, what you consider healthy, what you think you should eat, stepping completely out of it."* (GENZ6)

This process is difficult for some potential adopters, as GENZ7 and GENZ22 illustrate.

> *"Now, and more so with everything that is going on, it is much harder to get out of your places or zones where people think the same as you. It is very strange."* (GENZ7)

> *"I am kind of afraid to change my habits and it might be worse than what I already have."* (GENZ22)

In addition, some respondents also pointed out the cognitive dissonance that occurs in the adoption of PBDs. Cognitive dissonance occurs when two actions or ideas are not psychologically consistent with each other, and the individual makes every effort to change them until they become consistent (Festinger, 1962a). GENY22 states:

> *"I have in common with them (potential adopters) that the conflict between this is more comfortable even though I know it is wrong; so, I look the other way for my comfort. But I distinguish myself from them saying "I do not care about my comfort. This is not right. So, I stop doing it."* (GENY22)

In summary, the PBD adopters interviewed report having personal motivations to have adopted, while potential adopters cite their dietary preferences and/or report experiencing some difficulties in moving out of their comfort zone, thus resisting adoption.

3.3. The influence of the social network on the individual

In this section, after a general introduction, the three situations observed in the cross-analysis of the case studies are presented: no influence, positive influence, and negative influence.

3.3.1. General Introduction

In most of the narratives, the first source of information about the innovation comes from individuals in the closest social network (family and friends) with whom respondents share similarities (homophily). Respondents were influenced to a greater or lesser extent by their social network: close (family and friends), professional, ideological, or other. During the analysis, it was observed that respondents discuss the issue of adopting PBDs diets mostly with family and friends (Birch and Memery, 2020; De Backer et al., 2019). Some adopters made the decision to adopt a PBD because of their contact with prior adopters in their social networks, as GENZ25 illustrates.

> *"In fact, when I decided to become vegetarian, it was because of a person I knew who had a new relationship with food."* (GENZ25)

The social environment influences an individual's eating habits, as eating is considered a social issue. Lasn (2013) postulates that social circles influence an individual's eating habits. According to Montanari (2006), when an individual spends much of his or her time at work or school, he or she is likely to adopt the eating habits of the individuals he or she interacts with in those environments, thus abandoning his or her personal eating habits. In addition, culture influences the way people prepare, store, cook, consume, and dispose of their food (Messer, 2007). For example, the food culture of a European country is different from that of an Asian country. The concepts of "beliefs", "traditions" and "habits" emerged during the analysis, in relation to "animal protein" and "PBDs", as GENY19 states.

> *"My family is exactly like me. I mean, we like to eat a lot and we do not deprive ourselves or forbid us anything… it is hard for us to change our habits."* (GENY19)

It is pointed out that the perception of the environment conditions the decision of the "potential adopter" to adopt or not to adopt, as GENY21 mentions.

> *"It causes so much inconvenience to the people around me that I do not want to be so strict with myself."* (GENY21)

Individuals receive food education from their parents through behaviours and strategies that influence what, when and how much they eat (Russell et al., 2015). Thus, eating habits are acquired early in life and once established, are likely to be long-lasting and resistant to change (Mead, 1980). Therefore, everyone is influenced by the eating experiences they have had in their close family environment. Moreover, although individuals may consider other options, they may end up conforming to the established dynamics of the nuclear family and thus avoid potential conflict, as GENZ12 states.

> *"I think the family environment is important because no matter how much you want to if your family does not follow your example, it is like in the end... I don't know, in my case, I have tried many times, but in my family, they think it is not a balanced diet, so whether you want it or not, it influences you (and finally, I do not follow a plant-based diet."* (GENZ12)

3.3.2. No influence

If contact between the prior and the potential adopter is unusual, certain topics of conversation may not be addressed and this makes it difficult for information regarding PBDs to be disseminated, as PBC12 states.

> *"It is not a subject that comes up a lot… they have found out about it by eating there (the association in which the individual collaborates). Sometimes the subject has come up, but very occasionally."* (PBC12)

During the analysis, it was also observed that some adopters openly expressed that they preferred not to discuss their eating habits with potential adopters outside their more private sphere (family and friends). In other cases, the prior adopter was not very active in disseminating information to potential adopters in his or her social network and, they felt that potential adopters could seek information about PBDs on their own or bring the topic of PBDs into conversation. PBC7 illustrates the private sphere idea.

> *"I do not think that much, because I am a person who keeps his philosophy of life or his lifestyle very private."* (PBC7)

Communication about PBDs is sometimes difficult or non-existent, as potential adopters show some rejection and/or difficulties in accepting the decision of the prior adopter, as GENY22 mentions.

> *"When I became vegan, I suffered a lot of alienation from some friends… I started to feel like I was being left out… it was hard. They did what they were most comfortable with… pushing me away."* (GENY22)

3.3.3. Positive influence

Some of the respondents categorized as "prior adopters" admit that after adopting PBDs they have observed changes in the eating habits of their social networks. That is, individuals in their usual social environment with whom they have a homophilic relationship (partners or other family members or friends) have initiated dietary change processes. Therefore, they have influenced family and friends by providing them with information and/or giving examples. For example, GENZ24 states:

> *"In my case, I switched to a vegetarian diet. After 6 months, my mother also switched to a vegetarian diet, and after 3-4 years, my sister did too."* (GENZ24)

Prior adopters perceive that they can freely disseminate and share information on PBDs among potential adopters of their social networks, as PBC10 illustrates.

"The fact that they know I am a pro-vegan/vegetarian sometimes brings this topic up in conversation, and I occasionally share an article with co- workers." (PBC10)

Once the prior adopters spread the word about PBDs in their social networks, potential adopters are already aware of the existence of the innovation and therefore, they receive some knowledge about PBDs. It is then that the prior adopter can observe if the potential adopter is persuaded and/or shows interest in PBDs. These potential adopters are in the early stages of the innovation decision process and can be encouraged to try the innovation and then either reject it or postpone the final adoption or non-adoption decision. For example, PBC14 states:

"The day I said I was vegan, that I am vegan, it had a huge impact on my family […] My family, for example, has over time adopted a healthier diet. They have opened their minds to the unknown." (PBC14)

3.3.4. Negative influence

Sometimes, the prior adopter observes some negative reactions from potential adopters such as lack of support and the feeling of being challenged, as PBC4 illustrates.

*"They are more bothered by the discomfort of having to adapt to a place, to where to shop, to their condition, rather than the substance or the impact it may have. They do not see that it is a philosophy of life. They are still blindfolded. I haven't seen anyone interested. Every time the subject comes up, they are not open to understanding, they question you." (*PBC4)

Some prior adopters note that some potential adopters remain hesitant to adopt. In other words, potential adopters respect that the prior adopter has chosen that dietary option and even, in certain circumstances, potential adopters adapt but they maintain their position of not adopting a PBD because they are either afraid of what is unknown to them, or they feel rejection, or they experience difficulties in accepting that type of diet in their day-to-day life. In fact, some potential adopters consider that the adoption

of a PBD would be possible if they themselves observe that it has advantages. Moreover, prior adopters perceive, among other things, the difficulties of acceptance and understanding that potential adopters have, as GENY26 mentions.

> *"I try to comment on the topic and give my point of view. But sometimes I do... sometimes there are those who want to win me over and so we end up fighting because I am not arguing with them, but they get aggressive trying to win me over and no, they fail."* (GENY26)

From the point of view of some of the potential adopters, they claim to be clear about their decision because they have their own opinion and criteria on the topic. In general, these individuals experience fear and rejection (pointing to a fear of going out of the comfort zone), as well as some difficulties in accepting different points of view. In addition, some of the potential adopters emphasize that conflicts sometimes arise with PBD adopters in their social environment, as they find it annoying when prior adopters try to convince or change their minds (perhaps causing this cognitive dissonance between what is being done and what might need to be considered). For example, GENY4 states:

> *"The ones that bother me are those people who suddenly adopt a lifestyle and want you to adopt it too. And they cannot be with you because you eat meat."* (GENY4)

In the analysis of the interviewee' narratives, it was observed that, although knowledge about the innovation is passed on, potential adopters may decide not to adopt even if there are prior adopters in their close social environment. Their mental barriers are not mitigated, and potential adopters show rejection and discomfort, as well as feeling challenged, as GENZ21 illustrates.

> *"I have several vegetarian friends and my current girlfriend is a vegetarian. I have learned more about it. But my perception has not changed, as I still believe that my diet is balanced, and I have no plans to change it. They have mainly helped me to learn more about the subject and, above all, to know why they do it."* (GENZ21)

Thus, despite having homophilic relationships with prior adopters, potential adopters choose not to adopt PBDs despite having some knowledge about them.

There is an absence of experimentation outside of what is known, although as GENZ20 mentions, there may be a situation in which the individual is in an intermediate step in which willpower is needed to take that step outside the comfort zone.

> *"My sister is vegetarian. She also has friends who do the same thing, and in fact, she started because of a particular friend who introduced her to this whole ecosystem. It influences me in the sense that I think… I have not finished taking the next step, which would be to start doing more research on my own or maybe try it out".* (GENZ20)

In summary, the interaction of the potential adopter with his or her social network can positively or negatively influence the former's decision to adopt a PBD. In some cases, it is observed that there is no influence at all, as communication does not take place either because of a lack of interest on either or both sides, or because the prior adopter feels that there is not enough intimacy to talk about his or her food choice, as he or she considers it to be a private matter.

CHAPTER 4: DISCUSSION

After the analysis of the data collected, the empirical data of the three case studies (PBC, GENY and GENZ) are compared with the theoretical framework outlined in the literature review and two main propositions are presented and discussed.

The closest homophilic social network (family and friends) is of great importance and is the setting in which communication between the prior and the potential adopter can take place. In all three cases studied, this homophilic environment favours the communication process due to the type of affective and intimate relationships between the members of the social network. In fact, it is also observed that there may be little or no communication due to the lack of intimacy and trust between the members.

The relationship between the prior and the potential adopter has a socio-material component that also affects the communication process (Graça et al., 2019). Although PBD has a material component based on a multidimensional perspective (Michie et al., 2014; Twine, 2018), food and diets have a clear social role and a psychological engagement (Graça, 2016; Hartmann and Siegrist, 2017; Warde, 2016).

The framework of the PBD communication process must therefore consider the potential tensions between the material part of the PBD, the social relations between the members of the social network and the psychological state of the potential adopter. The following proposition is hereby outlined:

Proposition 1: *The adoption of PBDs, considered as a SI, needs to consider a contextual setting that includes the following components: the socio-material components derived from the interaction between the characteristics of the potential adopter and the characteristics of PBDs as a new diet; and all these in a specific environment built under the umbrella of the social network hosting prior and potential adopters that requires homophilic relationships.*

According to Rogers' (2003) framework, communication between prior and potential adopters favours the spread of the innovation in the social system over time; therefore, sooner or later, individuals in the social network will eventually adopt the

innovation. But when talking about some specific innovations such as PBDs, it is observed that communication is not enough. Therefore, Proposition 2a is presented:

Proposition 2a: *The adoption of PBDs, considered as a SI, needs to consider the contextual settings described in Proposition 1, as well as the fact that communication between prior and potential adopters is not enough to decide on the adoption.*

The socio-material character of PBDs and the socio-psychological variables of the potential adopter (in his or her relationship with his or her closest environment) may generate, in the potential adopter, a conflict or mental discomfort (cognitive dissonance (Festinger, 1962a)) that may modulate/condition his or her propensity to imitate, which can prevent him or her from being open to the new, rejecting the possibility of adopting a PBD. Thus, the following proposition is suggested:

Proposition 2b: *The adoption of PBDs, considered as a SI, needs to consider the contextual settings described in Propositions 1 and 2a, as well as to consider that the potential adopter's propensity to imitate might be influenced by the modulation of his or her psychological characteristics when interacting with his or her close social environment.*

There is a period from the first contact (between the prior and the potential adopter) in a social network until the potential adopter decides whether to adopt a PBD. Imitation does not seem to be sufficient to ensure that there will be a subsequent regular adoption of the innovation. Therefore, during this interval, it is proposed that several stages take place, there being an intermediate stage between Communication and Adoption, Imitation. In the Imitation stage, the potential adopter decides whether to copy the behaviour observed in the prior adopter, while in the Adoption stage, the potential adopter executes the decision previously made in the Imitation stage. The analysis of the three cases suggests that each of these stages must be followed to reach the final decision. This therefore leads to a process perspective and thus to distinguish several stages in the study of the diffusion of PBDs. In line with the literature (Langley et al., 2013), a process perspective may help to understand the different stages. It is a perspective that has been used for example in psychological studies

(Bankins, 2015) and may be helpful to understand the decision-making process of switching from one diet to another. Therefore, the Proposition 2 is presented:

Proposition 2: *The adoption of PBDs, considered as a SI, is delimitated by the contextual settings described in Proposition 1, and influenced by Propositions 2a and 2b, and in this context the adopter's adoption process follows an evolution that is built in three stages: Communication, Imitation, and Acceptance. These stages mediate the adopter's decision-making for a dietary change from the initial contact to the adoption outcome*.

In summary, considering PBDs as SI and with a socio-material perspective, adoption is gathered under the umbrella of homophilic social networks, in which prior and potential adopters meet, and in which communication between them is not always sufficient to trigger adoption, since the propensity to imitate of the potential adopter may be influenced by his or her psychological characteristics, which in turn may be modulated by his or her interaction with his or her social network. Therefore, the potential adopter's perspective and cognitive concerns seem to evolve over time and a three-stage view of the process is proposed in order to understand the adopter's decision-making stage by stage.

CHAPTER 5: CONCLUSION OF PART I

The research on dissemination and adoption of innovation found in the literature is very much focused on technological innovations, and therefore provides partial perspectives when it comes to SI. In the latter case, it is necessary to consider the socio-material characteristics of the SI per se, as well as the psychological states of the potential adopter when interacting with his or her closest social network.

Along these lines, on the basis that PBDs can be framed as SI, and that their dissemination and adoption needs to incorporate both the socio-material perspective and the influence of the individual's social network on their psychological states, it is proposed as future research to consider adoption as a decision-making process divided into three stages (Communication, Imitation and Acceptance) in which the adopter's perspective has to be considered because of its apparent importance.

PART II

In closing Part I of this research, it is found that the dissemination and adoption of PBDs must be studied as a process from the adopter's point of view, since it is a decision process in which in each of its phases there are two options: to follow or not to follow. Therefore, in this part II, the case of PBDs is studied and analysed from the perspectives of the process and the potential adopter. Thus, the relevant literature is incorporated, the methodology is adjusted, and the data collected under these perspectives are analysed to discuss the results obtained and provide a conclusion.

CHAPTER 6: LITERATURE REVIEW

This chapter introduces the general literature on the process perspective and then applies it to the case of SI. It then reviews studies on the adoption of SI, with special emphasis on the scarcity of studies that focus on the adopter's perspective. Finally, as the adoption process is a decision-making process, the concepts of attitude and behaviour are presented, as well as the theories of reasoned action (TRA) and planned behaviour (TPB).

6.1. A Process Perspective on the Adoption of SI

6.1.1. Process Approach

The process perspective studies how and why things emerge, develop, grow or end over time. Time is a key variable, as it examines both the tensions and contradictions in driving patterns of change and the interactions between levels that contribute to change (Langley et al., 2013). This process perspective can contribute to the theory by considering the dynamic development of phenomena over time (Cloutier and Langley, 2020). This approach has already been used in organisation and management studies (Brunet et al., 2021; Langley et al., 2013), in entrepreneurship (Baron and Shane, 2007; Nordqvist et al., 2013), and innovation and organisational change (Edwards, 2000). At the individual level, this approach has been used considering individuals as active and adaptive agents (Bankins, 2015; Caniëls et al., 2014; DiClemente, 1993).

6.1.2. Consideration of Adoption as a Process

The diffusion process is the way in which an innovation spreads from the moment it is conceived until it reaches the individual who will use it (Duening et al., 2020). In parallel, according to Rogers (2003), the diffusion process triggers the adoption process (or adopter decision stages), which is the mental process that the individual undergoes from the moment he or she becomes aware of the innovation until he or

she uses it on a regular basis. Furthermore, the diffusion process consists of four basic elements: innovation, communication, social system, and time (Rogers, 2003).

Arising from the discussion of Part I, this study considers the adoption process as a sequence of stages from the initial contact between a prior adopter and a potential adopter to the continuation stage, in which a new process of social contagion is generated. The intermediate stages suggested are the communicative act, the imitative act, and the adoption act.

6.2. SI adoption

SI implies changes in values, attitudes, and opinions (Lubelcová, 2012). Both Lubelcová (2012) and Dietrich et al. (2016) point out that SI usefulness and rational decision-making do not help explain its adoption of SI. Building on Mulgan et al. (2007), Lubelcová (2012) identifies four potential barriers that need to be considered: efficiency and performance, people's interest, mindset, and relationships. Regarding efficiency and performance, both are related to the idea that it takes time to get used to an innovation and that therefore its performance is lower at the beginning. People prefer stability, especially if they believe that everything works well. Change involves some risk. In addition, change requires energy and investment, and this can threaten the interests of the actors involved. Mental barriers are the assumptions, expectations, values, and norms established in the ways of doing things. These provide stability for people so that the environment is predictable, transparent, and understandable. Finally, pre-existing relationships, networks, commitments, and trust can be barriers in the dissemination of SI.

Rabadjieva and Butzin (2020) argue that social relations are not a necessary condition for SI to diffuse. Moreover, they suggest that more research is needed on the role of individuals (Shove et al., 2012) such as social entrepreneurs, civil society, etc. in the diffusion of SI practices as the focus cannot be exclusively on practices. There is a profusion of plans and strategies designed by public institutions to promote and disseminate SIs (Jenson and Harrison, 2013). When innovation has a social component, its diffusion may face problems such as societal passivity or lack of funding

(Oganisjana et al., 2017), cultural barriers (Lean Startup Co., 2021), and communication problems (Larsson et al., 2003; Ortt, 1998), among others.

6.2.1. The innovator's perspective

Mumford and Moertl (2003) recognize the importance of persuasion, from the innovator's perspective, in promoting SI, although it seems not to be sufficient to ensure its adoption. In fact, they postulate that other social factors must be present for SI to be widely accepted and disseminated. Furthermore, the importance of the congruence of the innovation with other social trends is pointed out (Mumford and Moertl, 2003). Therefore, SI must also be flexible to adapt to social demands and needs. In other words, innovators must be aware of the expectations, values and skills of potential adopters and must link the SI with other emerging social initiatives.

6.2.2. The adopter's perspective

The adopter perspective in innovation diffusion is hardly addressed in the IS literature (Hölsgens, 2022). Dietrich et al. (2016) propose that, in the context of SI adoption, the approach should include non-instrumental factors, which are related to providing usefulness to the adopter. For example, the DOI (Rogers, 1962, 1985, 2003) or the Technology Acceptance Model (TAM) (Davis, 1989) are based on these factors (e.g., relative advantage or perceived usefulness). The rational or instrumental approach is insufficient to explain SI adoption. Thus, Dietrich et al. (2016) also included non-instrumental factors (symbolic, emotional, and motivational) finding that both instrumental and non-instrumental factors play a role in adoption. Symbolic adoption factors (such as openness, competence, and warmth), emotional and motivational factors improved the explanatory power of their regression analysis (although to varying degrees). The results obtained show the importance of considering the adopter's perspective in SI diffusion studies.

Hölsgens (2022) points out that there is a scarcity of peer-reviewed literature that studies the willingness and capabilities of potential adopters in relation to SI. The potential of SI is often underutilised because innovators do not pay enough attention to the adopters and the contexts in which they are expected to adopt SI. Therefore, the

adopter's perspective is missing in SI research and a proper understanding of SI diffusion dynamics and adopter characteristics is needed. If adopters' perspectives are considered in SI research, the intended policy objectives and the high expectations for SI in European Union research and innovation calls could be better achieved (Hölsgens, 2022). Research in the field is important because, like any other type of innovation, the success of SI depends on its adoption.

Hölsgens (2022) found two relevant topics in his study: a) motivation/willingness; and b) adopters and institutions.

a) An important precondition for people to change a behaviour or practice and thus actually adopt a SI is their willingness to do so. Dufour et al. (2014) point out that the motivation of the actors involved is an important characteristic for the success of a SI. Some barriers to the adoption of SI such as lack of motivation, resistance to change, lack of the necessary professional skills, among others, are mentioned (Dufour et al., 2014). SI has potential in the areas of climate change and sustainability and can provide promising solutions or contributions to solutions. It is especially in the aforementioned areas that the dynamics of adoption need to be better understood. The adoption of these SIs often has individual costs and collective benefits. Motivation is therefore an important factor (Hölsgens, 2022).

b) Deviating from the norms can have a cost for individuals that may end up limiting their desire to adopt a socially innovative practice. For example, individuals who adopt a low-meat diet may choose to eat meat when invited to a barbecue, simply because it is easier to adapt to the practices of such an event. Their motivation not to eat meat is considerably reduced in such a context because the norm is still, in many parts of the world, to eat meat at a barbecue.

6.3. Attitude and Behaviour

Adoption is the decision to fully use an innovation as the best available option, with rejection being the decision not to adopt it (Rogers, 2003). The decision occurs when an individual engages in activities that lead to the choice to adopt or reject the innovation. Moreover, small-scale testing is often part of the decision to adopt and is important as a means of reducing the adopter's perceived uncertainty (Rogers, 2003). But the adoption of any innovation (product, service, behaviour, or idea) is highly dependent on the social context and background of the population using it (Tarde, 1903).

The Theory of Reasoned Action (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975) and its extension, the Theory of Planned Behaviour (Ajzen, 1985, 1991), are cognitive theories that provide a conceptual framework for understanding human behaviour in specific contexts. In the following subsections, a brief but detailed explanation of both theories is presented.

6.3.1. The Theory of Reasoned Action (TRA)

The TRA (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975) attempts to explain the relationship between attitudes and behaviours in the context of human action. The TRA holds that volition and intention predict behaviour. This theory is used to predict pre-existing attitudes and behavioural intentions, whereby an individual's decision to behave in a specific way is based on the outcomes that the individual experiences because of behaving in that way. Thus, intention precedes behaviour and is determined by attitudes towards behaviours and subjective norms.

If the individual positively values the proposed behaviour (attitude) and believes that other individuals want him or her to perform it (subjective norm), intention (motivation) increases, and he or she is more likely to perform the behaviour. There is a high correlation between attitudes and subjective norms and intention and behaviour (Sheppard et al., 1998). The limitation of the TRA is that behavioural intention does not always lead to actual behaviour.

6.3.2. The Theory of Planned Behaviour (TPB)

The TPB (Ajzen, 1985, 1991) is an extension of the TRA (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). Perceived behavioural control is incorporated as an additional determinant of intentions and behaviour, thus extending the TRA to better predict actual behaviour. Behavioural intention does not always lead to actual behaviour, and therefore behavioural intention cannot be an exclusive determinant of behaviour, as the individual's control over behaviour is incomplete.

Perceived behavioural control thus refers to the degree to which the individual believes he or she can perform a given behaviour, including the perception of his or her own ability to perform that behaviour. This perception may vary depending on the circumstances of the environment and the behaviour itself. According to the TPB, intentions are determined by attitudes, subjective norms, and perceived behavioural control.

The TPB includes the impact of non-volitional factors on behaviour and assumes that individuals act rationally, according to their attitudes, subjective norms, and perceived behavioural control. These factors are not necessarily actively or consciously considered during decision-making but form the backdrop to the decision-making process.

CHAPTER 7: METHODOLOGY

Part II of this research work keeps on the one hand, the interpretivist approach, and the use of an exploratory strategy, and on the other hand, the use of multiple case studies and previously collected data. Considering, from now on, the process and adopter perspectives, an abductive research methodology is used.

Peirce initially developed abduction as a method of data analysis to draw inferences for theory building (Hartshome and Weiss, 1935). Abduction refers to the iterative process between theoretically surprising cases and tentative explanations (Coffey and Atkinson 1996; Tavory and Timmermans 2014; Timmermans and Tavory 2012). According to Vila-Henninger et al. (2022), abduction is distinct from both deduction and induction, although it combines features of both types of inference. What differentiates abduction from a purely inductive (ideal-typical) form of inference is that the observed phenomenon does not contain an explanation in itself (induction), nor does it constitute a new instance of an already known general rule (deduction) but is rather a combination of both.

Abductive reasoning offers explanations of possible reasons or motives for a fact by means of the premises obtained (Peirce, 1934), so it refers to a creative inferential process aimed at producing new hypotheses and theories based on surprising research evidence. That is, when surprising and anomalous observations are found that do not fit existing theories, it is necessary to come up with a new theory to accommodate these observations. Lipscomb (2012) proposes that abduction can play a role in qualitative data analysis, specifically in the identification of themes, codes, and categories; indeed, in research, abduction is not restricted or associated with any particular methodology.

This study aims to contribute to the effort to better understand the specificities of SI adoption from an adopter’s point of view. Attention is also given to some claims in this field (Van der Have & Rubalcaba, 2016) that call for further efforts in this direction, specifically in the case of SI diffusion (Hölsgens, 2022). To delve deeper into each of the stages of the adoption process as well as into the variability of the potential adopter's propensity to imitate, due to the modulation of their cognitive concerns, and

the consequent decision making and actions, the need for a qualitative and abductive approach arises.

The research method used is a multiple case study in which the case studies are again PBC, GENY and GENZ as in Part I of this research. The data collected in Part II of the study are the same as in Part I, only that in this part the analysis is done with a new perspective that incorporates the process perspective and the adopter's point of view, which are propositions derived from the discussion in Part I. The approach to data analysis is done through the coding and thematisation of the data obtained through the interviews of the case studies mentioned above (see Tables 14, 15 and 16).

The following Tables 14, 15 and 16 present the categories, subcategories, elements, and codes from the analysis of the interviews.

Category	**Subcategory**	**Subcategory elements**	**Codes**
Communication	Processed Communication	Potential adopter pays attention to new information	Curiosity Interest Asks questions
	Unprocessed Communication	Prior adopter does not promote dissemination of information	Avoidance of the topic Lack of intimacy
		Potential adopter does not pay attention to new information	Lack of interest

Table 14. Subcategories, elements, and codes of the Communication Stage

Category	Subcategory	Subcategory elements	Codes
Imitation	Positive Propensity to Imitate	Overcoming mental barriers (cognitive dissonance)	Comfort zone (Traditions, beliefs, habits, food preferences, etc.)
		Potential adopter's social network influence	Family, friends
	Negative Propensity to Imitate	Failure to overcome mental barriers (cognitive dissonance)	Comfort zone (Traditions, beliefs, habits, food preferences, etc.)

Table 15. Subcategories, elements, and codes of the Imitation Stage

Category	Subcategory	Codes
Acceptance	Positive action (The decision is implemented)	A PBD is adopted
	Negative action (The decision is not implemented)	No PBD is adopted

Table 16. Subcategories, elements, and codes of the Acceptance Stage

CHAPTER 8: ANALYSIS

Part II makes use of new data that were part of the same interviews in Part I. Data collection was carried out for each case separately. Case Study 1 (PBC) was followed by Case Studies 2 and 3 (GENY and GENZ). The coding and analysis of the collected data was done exclusively for each case study to detect similarities and differences.

The discussion in Part I brought up the idea of analysing transcripts from a process and adopter's perspective; therefore, the study of the collected data follows a process approach in Part II, and each stage is analysed separately. This chapter is divided into different parts focusing on the starting point of the process, on each of the three stages, and on the consequence of the progress of the process. Throughout this chapter, some quotes from the interviews will be provided throughout the text to justify the analysis, although many of them can be found duly organised in the Appendix 11.

8.1. Introduction

As an initial condition for all participants in the three case studies, this research work considers that the adoption process begins through the interaction between a PBD prior adopter and a PBD potential adopter who can share the former's experience in this dissemination. This paper is mainly concerned with potential adopters and, later, with potential new adopters. Following Rogers' (2003) framework, the members of the samples can be considered as members of the early majority profile (first stage of the mainstream market). The main characteristics of the individuals (in this research work, our participants) in this profile are individuals that frequently interact with their peers and deliberate before adopting a PBD; therefore, they do not like to "test" them, because they are not looking for products, but for solutions that "work" for them. Thus, they are interested in considering the adoption of PBDs, so they would enter the process of social contagion of such innovation. This process has a specific starting point for each potential adopter, but subsequently follows a similar evolution based on a social contagion process, i.e., a communication stage, an imitation stage, and an acceptance stage.

8.2. Starting point

The first evidence from the empirical work was that each potential adopter is in a different position regarding the adoption process. For example, GENY14 claims that it is necessary to eat everything but consciously, while GENZ22 is in a transition process (consuming more plant-based products and reducing meat consumption).

> *"I believe that we should consume everything, but in the right measure and with awareness. Aware of what we need, aware of where it comes from and how this resource has been obtained."* (GENY14)

> *"I have doubts because I do not know what the right diet is... I still eat everything, but I have reduced my consumption of animal food, animal food, and quite a lot."* (GENZ22)

During the interviews, respondents were asked whether they perceived an evolution in their personal perception of PBDs and, if so, in what way. In this sense, a possible evolution could be observed, which implies a decision-making or maturation process, on the part of the potential adopter. For example, PBC13 illustrates this type of evolution at the food level.

> *"I am in a hybrid process, and it motivates me because I have a relative (sister) who is vegan. We often eat vegan things at home, and I am curious to try the flavours and textures. Also, we hardly eat meat because it has a lot of fibre and when it comes to eating it, it is not pleasant. I also get tired of omnivorous products."* (PBC13)

8.3. Communication Stage: from initial contact to successful communication

Communication between prior and potential adopter is necessary and most of the respondents are aware of its importance. GENZ8 illustrates what communication between the two parties looks like.

> *"I really like to talk about things and discuss them. Then I have deep debates with a lot of people about it and a lot of times, after a week, two weeks, a month, after we have had an intense discussion, they have said "hey, I have not eaten meat for two weeks" or "I watched the documentary you recommended, and I have given up meat completely."* (GENZ8)

8.3.1. The prior adopter

If the prior adopter is skilful and patient, communication can take place between the two parties which facilitates the move to the next stage. GENZ17 points out that manner in terms of content, education and respect are keys.

> *"If you attack someone or say something about eating meat products, they will take it as an offence and will not want to listen to you. However, if that person asks you and you inform them well, politely, and respectfully, they will take more seriously what it means not to eat animals."* (GENZ17)

8.3.2. The potential adopter

Potential adopters may be inspired, curious, and interested. They may ask questions and want to know more about PBDs, while being respectful of prior adopters. BCN12 illustrates the experience of a prior adopter when meeting potential adopters.

> *"There are people who ask me, but with the real intention of finding out the reasons."* (BCN12)

8.3.3. Social network

In all three cases of the cross-case analysis, respondents who were interested or inclined to consider PBDs as a potential dietary option decided to initiate actions to increase their knowledge of PBDs when they encountered prior PBD adopters within their closest social network. For example, PBC6 and BCN13 said:

> *"When I met my partner, I did not know she was a vegetarian. I realised it when I ate with her. She refused the food I wanted, for example, meat. When I realised it, the next day, I stopped eating meat."* (PBC6)

> *"Three or four years after my sister became a vegan, the consumption of meat and eggs was drastically reduced at home."* (BCN13)

Homophilic relationships

In all cases, these family and friendship social networks tend to favour the beginning of the social contagion process due to their emotional and intimate component that is surrounded by homophilic relationships. This is illustrated by the statements of BCN7 and GENY11.

> *"The rest of the people around me became vegan after me (both my mother and my sister)."* (BCN7)

> *"I have influenced them a lot. My partner, for example, does not mind not eating meat and having a vegetarian menu, he even eats a lot of vegetables. My eldest daughter, for example, decided to be a vegetarian, although she sometimes eats meat, and my son, for example, likes meat a lot but eats a lot of vegetables, fortunately too."* (GENY11)

Exchange of information

When the initial contact has been consolidated and contagion has arisen, the two participants in the contagion continue with a communication stage that allows the exchange of information between them, within the framework of innovation diffusion

(Rogers, 2003). As the examples of GENY9 and GENZ13 illustrate, the communication stage is part of the evolution of social contagion.

> *"They (my brothers and sisters) explain a lot of things to me, share videos, information about veganism, social movements that have been generated to fight against something…."* (GENY9)

> *"I have some friends who are vegans, and they explain to me the whole issue of pollution (in relation to animal protein production)."* (GENZ13)

Interest

Communication between prior and potential adopters is possible if there is interest from both sides in all three cases, as GENZ27 said:

> "Sometimes I talk about this with my friends and explain to them why I do *not like buying meat in supermarkets and that I do not like the texture and the idea of how it was produced. So, I think it helps the environment to learn a way of how I am spreading it with the people around me, basically by spreading awareness. My flatmates are becoming vegetarians."* (GENZ27)

Intimacy

The exchange of information requires maintaining the emotional and intimacy component that initiated the contact, as PBC12 explained:

> *"It is not a subject I talk about a lot. It has come up a few times and the reaction (from the potential adopters of the association with which I usually collaborate) has been curiosity."* (PBC12)

In addition, the communication stage requires the involvement of both parties (prior and potential adopter) with a specific role for each of them. GENY15's quote illustrates the emotional and intimacy characteristics of the communication stage.

"In my usual environment, my sister-in-law and her partner are vegans. My sister-in-law respects what others think and asks them to respect what she thinks." (GENY15)

Perception of the potential adopter by the prior adopter

Although the communication act produces the consolidation of contagion, the potential adopter must feel that the prior adopter has enough experience in this diet. This is the case of BCN10 and GENZ20 that confirm the previous variables of emotion and intimacy plus the perceived experience of the prior adopter:

"The fact that they know I am vegan sometimes brings it up in conversation, and also, from time to time, with colleagues, I spread the word about veganism, animal exploitation, the environmental impact of the meat industry on the planet." (BCN10)

"I have had conversations with people who were making the change or who had been vegetarians for some time, for example, my sister. I wanted to take the time to have conversations with them. Everything I heard and everything she explained to me really made a lot of sense." (GENZ20)

Possible difficulties that may be encountered

Avoid exchange information

Prior adopters avoid talking about PBDs with potential adopters, and the formers wait for the latter to bring the topic up in the conversation.

"It is good to talk openly about these issues, but I always think it is better for people (potential adopters) to come to you than for you to come to them." (GENZ2)

During the analysis, it was also observed that some prior adopters openly expressed that they preferred not to discuss their eating habits with potential adopters outside their more private sphere (intimacy) (family and friends). Therefore, it seems that this private sphere (intimacy) is a kind of precondition for the communication act, as PBC7 illustrates.

"I am a person who keeps his philosophy of life or his lifestyle very private." (PBC7)

Some of the difficulties in the progress of social contagion in the communication stage are related to the lack of intimacy between participants, such as prior adopters who do not feel safe in the communication act and need to be (on both sides): (a) willing to discuss PBDs (interest and attention), and (b) avoid criticism and misinterpretation, as illustrated by the quotes from GENZ3 and GENZ17.

"At first it was difficult for me because I did not know anyone else who was vegan. There was rejection in my environment because they did not understand me, and I felt isolated. Because they did not understand me, no one wanted to be interested in the topic, so from there I started to be an activist." (GENZ3)

"If you attack someone or tell them something about eating meat products, they will take it as an offence and they will not want to listen to you." (GENZ17)

Lack of trust

In some cases, prior adopters were not very active in disseminating information to potential adopters, due to a certain lack of trust in the relationship. As an illustrative example, PBC3 considered that prior adopters could search for information about PBDs on their own.

"One day I decided that I would say what I think as I think it. And answers to silly questions would go unanswered… I do not want to answer questions that, if you are really interested, you can find at home. I will answer other kinds of questions that are a bit more complicated, I will even answer sophisticated questions about menus or meals, but not silly questions." (PBC3)

Lack of interest or understanding

Sometimes prior adopters observe that their message is not received by potential adopters, and this takes the form of disinterest or lack of understanding, as noted by BCN3 and GENZ24.

> *"I see them (potential adopters) as lazy people who are constantly excusing themselves and who neither sacrifice nor make an effort if it is not for their own benefit."* (BCN3)

> *"I think sometimes misinformation can lead to misconceptions about what it is."* (GENZ24).

Therefore, some difficulties must be overcome for the act of communication to be successful.

Tables 17 and 18 summarise the elements that favour and hinder communication in this first stage of the process.

Facilitators
Attention
Family and friendship social networks
Interest
Intimacy
Understanding

Table 17. Elements in favouring communication

Barriers	
Avoidance of information exchange	
Criticism	
Misinterpretation	
Lack of	Attention
	Interest
	Intimacy
	Trust
	Understanding

Table 18. Elements that hinder communication

8.4. Imitation Stage

The analysis of the data obtained confirms that, when communication has been successful, the potential adopter has gathered sufficient information to consider whether a PBD fits his or her socio-psychological characteristics, moving on to a new decision-making stage. In all cases, evidence is found that this new stage may be affected by some barriers of the potential adopter that may reduce the likelihood that the adoption process progresses and begins to practice the new diet. These barriers are related to resistance to change in behavioural habits and struggles with prior beliefs. Potential adopters may therefore be reluctant / unwilling to imitate prior adopters due to the influence of these barriers on their socio-psychological state. As described by GENZ22, changing habits, and stepping out of the comfort zone can be detrimental to moving towards PBD adoption:

> *"I am a bit afraid to change my habits and make them worse that what I already have. Because within what I know, on the omnivorous diet I have more knowledge and I am able to, maybe, find a little bit more balance."* (GENZ22)

Similarly, GENY22 notes, as his own experience, that avoiding conflict over behaviour change is more comfortable than facing the challenge of moving towards the adoption of the new diet,

> *"I have in common with potential adopters the conflict between "this is more comfortable, even though I know it is wrong". But they look the other way and do the comfortable thing."* (GENY22)

In all cases, it is common for potential adopters to have to change their current psychological settings and be influenced by their social environment to leave the current comfort zone situation and progress towards PBD adoption. In all three cases, it is observed that overcoming current environments and social influences is not rapid, but involves a certain maturation process that requires a period in which the individual must make the transition to a new diet, including the preliminary phases of resistance to changing behavioural habits and the struggle with previous beliefs (Ram and Seth, 1989).This maturation period may include, as illustrated by PBC7, a process of

learning about the new options available and a change in food preferences, as exemplified by GENY10.

> *"My transition was slow. Little by little I became aware... changing my diet until, in the end, I eliminated all animal products."* (PBC7)

> *"It took me a year and a half to two years to try it because I do not like vegetables... and I did not know the wide variety of non-animal foods that were on the market."* (GENY10)

This analysis has detected different groups of elements that may affect the progress towards PBD adoption (see Table 19). The different groups of elements are illustrated below with examples.

8.4.1. Group 1: Elements that make imitation difficult

Plant-based food has a history going back many centuries, as shown in the following quote:

> *"Vegetarian and vegan food has a long tradition, whether for social, political, or religious reasons, but I know that the concept of vegetarianism goes back at least 6,000 years to the earliest Hindu cultures. Some Greek philosophical schools already rejected the consumption of meat, eggs, and milk, even on ethical grounds, while claiming that an exclusively plant-based diet was healthier."* (GENZ14)

But traditions, beliefs and habits can make imitation difficult when they are not aligned with the information received. If the potential adopter cannot overcome any of these barriers, he or she will not be able to imitate the prior adopter, as illustrated by PBC8 and GENY19.

> *"We have deep-rooted food traditions, and any change is very difficult to accept at first, even for the family."* (PBC8)

"My family is exactly like me. We like to eat a lot and we do not deprive ourselves or forbid ourselves anything… we find it hard to change our habits." (GENY19)

The concepts of "traditions", "beliefs" and "habits" appear in the narratives of the interviewees, in relation to "animal protein" and "PBDs". In a study by Graça et al. (2014), meat eaters claimed to agree with their cultural roots and gastronomic traditions. Chen and Antonelli (2020) state that the choice of food to consume depends on multiple factors such as product characteristics, individual characteristics (psychological components, habits, experiences, among others) and social characteristics (culture, economy, among others). In addition, sometimes, the desire to fit in can make individuals want to eat what others eat (Fieldhouse, 2013).

Traditions

In general, the concept of "tradition" as seen in the narratives has a quite different positioning. For example, respondents mentioned family (PBC2), cultural (GENY12) and regional GENY11) traditions.

"My parents and grandparents are more traditional. My brother is closed-minded. They would find it hard to accept if [something] is not determined by society." (PBC2)

"[...] culturally, meat is quite deeply rooted. Animal products." (GENY12)

"My family is Aragonese and there is always a meat dish on the table, otherwise it is not a meal." (GENY11)

Beliefs

In all cases, beliefs related both to the need (or not) to consume meat and to the differentiation between animals for human consumption and animals as pets are

observed. For example, GENY23 supports the preparation of some dishes with a little meat for health reasons:

> *"I liked a bit of fish and chicken in my soup, especially when I was sick. So, of course, when you are sick, they always say, "make your soup with chicken" and you cannot imagine them taking that away from you."* (GENY23)

Other respondents such as GENY10 and GENY26 point to the existing belief that animals were born to be our food, although they do not currently agree with this belief.

> *"I do not think we should eat animal flesh. I do not believe the hoax that (animals) were born to feed us. We have been taught that from a very young age. Ever since I came into the world, I have been given food of animal origin."* (GENY10)

> *"I thought we needed to eat animals to survive, that God put animals to eat."* (GENY26)

GENZ2 and GEN18 point out the belief related to the difference between animals that are consumed (and even hunted) and those animals that can be a pet or another living being to live with in our home.

> *"Culture has brought us… well, the whole history of human beings since time immemorial… we have classified some animals as food and other animals as companions. […] We must try to break myths. Being vegan is not about consuming products made for vegans, but consuming natural products that are simply not made from animals. And for people to just stop thinking that if they do not eat anything animal, then what do I eat."* (GENZ2)

> *"It's all animals, but I feel like that they are raised with a purpose, like for one purpose and we are allowed to consume. In my family it is a bit difficult because we are hunters. So that is […] in my nature, but I have considered consuming less meat in my own house."* (GENZ18)

Habits

In terms of “habits”, it is observed that these can generally be related to what is eaten (GENZ7), what it feels like to eat differently than usual (GENZ10) or how individuals behave socially (GENY20).

> *“Our diet is based on that. You always must eat a first course, which can be anything, and then a second course, which is some meat or some fish, and I thought I could not, that it was going to be very difficult.”* (GENZ7)

> *“I tried it [to eat plan-based] and when I finished eating, I swear, my body was asking for meat.”* (GENZ10)

> *“I think it is more a question of misinformation. [Potential adopters] would not do it because right now they already have these habits of partying, of consuming this thing that is easier.”* (GENY20)

8.4.2. Group 2: Elements that create barriers to imitation

Parents use behaviours and strategies to influence what, when and how much their children eat (Russell et al., 2015). Thus, eating habits are acquired early in life (Fieldhouse, 2013) and once established, are likely to be long-lasting and resistant to change (Mead, 1980), although they may modify parent’s eating dynamics due to changes in the social environment, among others (Fieldhouse, 2013). In the case of Generation Z, parental influence is extraordinarily strong since most individuals continue to live in the nuclear family and are often emotionally and financially dependent on them. In other words, parents often do the shopping, cooking and, to some extent, decide what to eat and what not to eat. In these cases, potential adopters must face their parents' patterns of beliefs, customs and habits if they really want to adopt a PBD, and this can sometimes create more than one conflict, which can be avoided if a PBD is not adopted and/or not even considered in that environment.

In these cases, potential adopters conform to their parents’ beliefs and customs to avoid conflicts, as illustrated by GENZ1.

"The information I really had was what my parents gave me, little else. I am the one who has to adapt to them (my parents) because they do not understand it." (GENZ1)

Generation Z interviewees highlight the influence of their parents in terms of food education, as well as the difficulties they encounter, as GENZ12 explains:

"I think the family environment is important because no matter how much you want to, if your family does not follow your example, it is like in the end... I do not know, in my case, I have tried many times, but in my family, they think it is not a balanced diet, so whether you want to or not, it influences you." (GENZ12)

In addition, some Generation Y respondents refer to their eating experiences when they were younger and living with their parents, for example, in terms of parental beliefs (GENY6) and the teachings they received from their parents (GENY20).

"When I was a child, at home, you had to eat meat because you had to be strong." (GENY6)

"I have been taught to eat in a way that is neither better nor worse... it is what I have been taught and I like the way I eat." (GENY20)

8.4.3. Group 3: Elements that create initial and transitory reluctance, but which are eventually overcome

The concept of "adoption resistance" emerged in the form of resistance to leaving the potential adopter's comfort zone (White, 2009). Respondents justify this by citing deep-rooted tradition and the difficulty of changing habits (Blawert and Wrum, 2020; Guerrero et al., 2009), among others. Therefore, variables such as traditions, beliefs, habits, food preferences and parental food education may prevent the potential adopter from imitating the prior adopter's eating behaviour. That is, the potential adopter may not step out of his or her comfort zone due to a kind of cognitive dissonance and/or fear that holds him or her back and does not allow him or her to grow or push his or her limits a little further.

In the analysis of the interviewees' narratives, it was observed that even if knowledge of the innovation is passed on, potential adopters may decide not to adopt

it even if there are prior adopters in their close social environment. Having a family member or close friend who is a prior adopter is not always synonymous with having a positive impact on the potential adopter leading him or her to imitate the behaviour of the former. The potential adopter's mental barriers are not mitigated, and he or she shows rejection and discomfort, as well as feeling questioned. GENY15 illustrates the case of not imitating despite having close family who have adopted a PBD.

> *"Both my partner and I are omnivores. My sister-in-law and her partner are vegan.* (GENY15)

Stepping out the comfort zone opens new scenarios. Of course, it means facing a fear zone (lack of self-confidence, impact of others' opinions, excuse-making), but after a while the individual enters a learning zone where new skills are acquired, and challenges and problems are faced. This whole process causes the comfort zone to expand. This process is difficult for some potential adopters, as GENZ6 states:

> *"I have always loved cooking and I did not know how to make a cake without eggs… How is it going to grow? It is like stepping out of what you consider normal, what you consider healthy, what you think you should eat, stepping completely out of it."* (GENZ6)

Other interviewees also expressed the difficulties of making such a transition, as GENZ22 illustrates:

> *"It is quite difficult to adopt a different eating style than the usual."* (GENZ22)

Even some interviewees (GENZ20) show some hesitation or unwillingness / lack of push.

"My sister is a vegetarian. She also has friends who do the same and she started because of a particular friend who introduced her to this whole ecosystem. It influences me in the sense that I think… I have not finished taking the next step, which would be to start doing more research on my own or maybe try it out". (GENZ20)

The comfort zone is overcome even if the current traditions, beliefs, and habits are different from those of the new diet, as PBC9 illustrates:

"Until it was clear to me that, for example, if you make lentils, you do not have to put meat in them... first I made them and I made the classic ones. When it became clear to me, I removed the meat, and it was one less thing. And that is how I have been evolving." (PBC9)

Most respondents cited their habits and beliefs about food and defined these as strong and deeply rooted in their lives. The fact that the potential adopter steps out of the comfort zone and decides to imitate the behaviour of the prior adopter can have a negative impact on the immediate environment, as PBC4, and GENY21 illustrate.

"They (those from the close environment) are more bothered by the discomfort of having to adapt to a place, where to shop, their status, than the background or the impact this might have […] The more radical or the more extreme, the more doors close. For my parents, everything that comes out of what they have been doing, out of their habits ... impacts them. It is more work, it is more laborious, and if they do not share it, it is doing it for something they do not quite understand. If they share it, the time they spend, they see where it goes." (PBC4)

"I cannot incorporate it into my life because it is too much work. It causes so much discomfort to the people around me that I do not want to be so strict with myself." (GENY21)

Potential adopters acknowledge that they find it difficult to get out of their comfort zone despite knowing that there are alternatives to animal-based food products, as GENY19 states:

"I know there are alternatives, but it is like… it is hard for me to get out of my comfort zone, I mean… of course there are alternatives … even almond milk, soy milk… we can look for coconut milk too." (GENY19)

But often they mention a lack of knowledge about nutrition as well as plant-based recipes, as exemplifies by GENZ6:

"I have always liked to cook, and I did not know how to make a cake without eggs… How is it going to grow? It is like stepping out of what you consider normal, what you consider healthy, what you think you should eat, stepping completely out of it." (GENZ6)

Sometimes potential adopters do not they do not consider or question different options, as GENY17, or do not pay attention to what they eat, as in the case of GENZ21.

"I eat what they put on my plate." (GENY17)

"I do not really pay much attention to what I eat. I still think my diet is balanced and I have no plans to change it." (GENZ21)

In some cases, this overcoming is based on an accepted cognitive dissonance, as GENY22 states:

"I have in common with potential adopters the conflict between "this is more comfortable, even though I know it is wrong". But they look the other way and do the comfortable thing. But I distinguish myself from them by saying "I do not care about my comfort. This is not right." So, I stop doing it. I choose other kinds of resources than the conventional, the traditional ones, however comfortable they are because I know it is not right." (GENY22)

8.4.4. Group 4: Elements that cause rejection and discomfort

Even if potential adopters have received information on PBDs, they may decide not to adopt them even if there are prior adopters in their close social environment. Their mental barriers are not mitigated, and potential adopters show rejection and discomfort, as well as feeling challenged, as illustrated by GENY20:

> *"I have been taught to eat in a way that is neither better nor worse... it is what I have been taught and I like the way I eat. I can't not eat a steak or baked sea bream... I like those things. I mean, I would rather eat that than a hamburger substitute... life has worked that way for many years."* (GENY20)

8.4.5. Group 5: Elements related to attitudes and skills

The adoption of PBD may be perceived as complicated by lack of time or culinary knowledge (perceived behavioural control). According to Dindyal and Dindyal (2003), an individual's skills and behaviour determine eating habits. For example, busy individuals will develop the habit of eating out, ordering take-out, skipping meals, or eating little due to their busy schedules. For some potential adopters, it is a challenge to ensure that they their diet contains key nutrients in the right proportion. Individual health beliefs and dietary knowledge about nutritional habits are factors that influence eating habits. For example, GENY4 and GENY15 expressed the importance of cooking knowledge.

> *"I could not do it because if animal protein is removed from my diet, I have no way to add protein to my diet."* (GENY4)

> *"I think what is really lacking in veganism is culinary training. Because I think a lot of people, me included, are not vegan because they do not know how to make tasty dishes... also, there is a lack of knowledge about the impact on animals...[...] people have not seen a farm."* (GENY15)

Time

Time is a key factor for some individuals, as GENY5 and GENZ25 state:

> *"It is a question of time to prepare the food and of organisation.... It is quite difficult. Organising your regime, your diet, making sure you have enough nutrients..."* (GENY5)

> *"I think the main problem people have is the time factor and learning new dishes. A lot of people panic because they do not have enough time to dedicate to building a new diet".* (GENZ25)

Food preferences

Personal food preferences in terms of taste and textures also are related to dietary choices whether for or against eating meat (or animal protein). For example, on the one hand, GENY16 and GENZ27 claim that they love to eat meat.

> *"(her sister is a vegetarian) I really like meat. Everyone is free to follow the diet they want to follow."* (GENY16)

> *"I am big meat lover."* (GENZ27)

And these food preferences can reinforce the attitude against imitating a prior adopter who adopts a PBD. On the other hand, PBC2 and PBC10 are two examples of respondents that in earlier stages were not heavy consumers of animal protein.

> *"I have never been much of a meat eater… reading (a book) was like a personal inspiration. I did not feel right, I was not comfortable with myself… and I stopped (eating meat)."* (PBC2)

> *"When I was a child, meat and fish disgusted me. Later, as I have evolved from the point of view of consciousness, it is also for ethical and moral reasons."* (PBC10)

Therefore, personal food preferences (especially cheese, meat, and fish) may act mainly as a barrier, with respondents expressing a clear preference for animal products.

Table 19 shows all the elements that have been identified as having some kind of impact during this stage.

Elements that may	
…hinder	Traditions, beliefs, and habits
… create barriers	Parental feeding education
… generate overcomeable resistance	Lack of self-confidence, opinions of others, excuses, hesitation, unwillingness, lack of push and /or knowledge
… create rejection or discomfort	Feeling challenged
… be related to attitudes or skills	Lack of time, lack of culinary skills and/or knowledge, food preferences

Table 19. Elements that may affect the progress towards PBD adoption

8.5. Acceptance Stage

Once the imitation stage is effective, i.e., once potential adopters adopt a PBD, prior adopters note that some of those who were potential adopters in their close environment have adopted a PBD. In fact, some prior adopters such as GENY5, and GENZ24 say about the latter:

> *"Now others eat less meat now because of me."* (GENY5)

> *"In my case, after I switched to a vegetarian diet, after six months my mother also switched to a vegetarian diet and after three or four years, so did my sister."* (GENZ24)

Therefore, the prior adopters themselves observe that in some way their environment has been influenced by their previous change in eating behaviour. In fact, GENY23 states:

> *"If we are always interacting with each other, it can happen that in the end, maybe something that the other person does, you also adopt it because you see it in your environment. Maybe it is something you were not familiar with. Then it might even help me to adopt more menus in my diet or other things, other habits."* (GENY23)

Moreover, those who were previously potential adopters realise which prior adopters in their immediate environment have influenced them in their decision to take the step of imitating them.

> *"My partner started vegetarian/vegan before me. It affects you in the sense that she adopts other habits. You eat differently. You go to different places… I have joined the diet. I mean, I have moved closer to it; I have just occasionally eaten things that she has not."* (PBC4)

> *"My motivation to become a vegetarian came from my sister's influence… after a long time of insisting and not insisting, in the end…"* (GENZ16)

From the collected data, some aspects that apply to the decision to initiate the specific behaviour of adopting a PBD can be identified. In this situation, potential adopters have experienced a process of contagion and communication of the

characteristics of the PBDs and have positively overcome the barriers to imitate the new behaviour.

The conditions of this decision-making that lead to adoption behaviour can be related to a combination of variables from the Theory of Reasoned Action (TRA; Ajzen and Fishbein, 1980) and variables from the Theory of Planned Behaviour (TPB; Ajzen, 1991).

Drivers of adoption

Three drivers of adoption are observed: social norms, motivation/attitude, and perceived behavioural control.

Social norms

Once the imitation stage becomes effective, potential adopters such as PBC end up adopting a PBD and state:

> *"My partner started being vegetarian/vegan before me. It affects you in the sense that she adopts other habits. You eat differently. You go to different places… I have joined the diet. I mean, I have moved closer to it; I have just occasionally eaten things that she has not."* (PBC4)

In general, in all three cases, it is observed that the close relationship with the prior adopter (family member or friend) influences the potential adopter, and the latter gradually ends up adopting a diet with more plant-based foods.

Motivation/ Attitude

Motivations are needed for the adoption to be sustained. Motivation is one of the main facilitators of PBDs adoption (Ruby, 2012), being animal welfare, health, and the environment the most common ones (Cole and Morgan, 2011; Larsson et al., 2003; Perez-Cueto, 2020; Ruby, 2012). In the analysis of the interviews, motivations were

found to be strong and defined and formed the backbone of adopter's lives. Motivations such as animal welfare, environment and health are mentioned most frequently, as illustrated by PBC4, GENY22, GENY27 and GENZ5.

> *"My basic motivation was the animals. How ruthless the production is and how well they do it by hiding it. It pricks my conscience."* (PBC4)

Perceived Behavioural Control

Eating habits are determined through the individual's skills and behaviour (Dindyal and Dindyal, 2003). Food preferences, lack of time and lack of culinary knowledge may also be included here. GENY4 and GENZ2 illustrate some of these elements.

> *"I could not do it because if animal protein is removed from my diet, I have no way of adding protein to my diet."* (GENY4)

> *"The main problem people have is the time factor and learning new dishes. I think a lot of people are afraid that they do not have enough time to dedicate to creating a new diet."* (GENZ2)

At this stage, there are no differences between the three case studies. Potential adopters claim that they have close contact with a prior adopter and that subsequently, one or a combination of several motivations (animal welfare, health, and environment) pushes them to adopt a more diet with more plant-based foods. As new dietary learning requires a perceived behavioural control, the "comfort zone" variable may reappear at this stage. Even so, respondents find that they should go beyond their comfort zone and, in some cases, develop culinary skills, among others, for the adoption to be effective.

8.6. Continuation to a new contagion process

According to the data obtained, “new adopters” promote social contagion through their close homophilic relationships (they adopt a “prior adopter” role) and some of them admit that after adopting PBDs they have observed changes in the eating habits of their social networks. That is, potential adopters in their usual social environment with whom they have a homophilic relationship (partners or other family members or friends) have initiated processes of dietary change. Therefore, they have, to some extent, influenced family and friends by providing them with information and/or by example. It is an example that potential adopters observe and that may cause them to question their diet, look for more information, and ask questions, etc., as GENY2 points out.

> *“When they see that you do it in such a natural way, without imposing anything, just answering them if they have questions... it is also a very healthy way to promote veganism. And I have also been seen to lead this lifestyle without any problems, quite the opposite, and to be much happier. So it is like an example, like a snowball that is spreading more and more.”* (GENY2)

In other words, this example may stir something inside the potential adopters. Then eventually, they will resonate with the example or not, but they will see something different from what they usually do, as GENY27 states.

> *“I think yes, changing a life habit starts to make noise for a lot of people. For example, my sister has cut down on meat. It is like you are trying to help people change their mindset. And there are a lot of people that resonate with it. Sometimes you must accept and understand that we cannot make the change for everyone. The idea is not to fight, but to make noise.”* (GENY27)

In fact, in these social networks it is possible to have some kind of intimacy, and this gives rise to opening the individual's private sphere to these close people. For example, PBC2 said:

"My husband, thanks to the fact that I stopped eating animal products, has greatly reduced his consumption and is now a vegetarian." (PBC2)

In general, new adopters perceive that they can freely disseminate and share information about PBDs among potential adopters in their social networks. In this way, a kind of communication through example is observed, as PBC10 illustrates.

"The fact that they know I am pro vegan/vegetarian sometimes brings this topic up in conversations, and I occasionally share an article with coworkers." (PBC10)

Once these adopters spread the word about PBDs in their social networks, potential adopters are already aware of the existence of the innovation and therefore receive some knowledge about PBDs. It is then that the new adopters can observe whether the potential adopter is persuaded and/or shows interest in PBDs. These potential adopters can be encouraged to try them and then either reject them or postpone the final decision on whether to adopt it or not. For example, PBC14 highlights the impact that his decision to adopt a PBD had and has had on his close family.

"The day I said I was vegan, that I am vegan, it had a big impact on my family […] My family, for example, has over time adopted a healthier diet. They have opened their minds to the unknown." (PBC14)

During the analysis of the interviews, it was observed that in social networks, such as family and friends, if an individual adopts a PBD, potential adopters are influenced by the decision of the prior adopter, as GENZ24 exemplifies.

"In my case, I switched to a vegetarian diet. After 6 months, my mother also switched to a vegetarian diet and after 34 years, so did my sister." (GENZ24)

It was observed that, in some cases, the adopter's social environment shows interest in PBDs and starts reducing animal protein consumption (e.g., eliminating animal protein one or two days a week or incorporating more alternatives to meat, or

substituting it with legumes and vegetables), and eventually even adopting a PBD (implementation of a 100% PBD), as GENY10 and GENY11 claim.

> *"And my sister-in-law, when she heard about the initiative we were taking (adopting a plant-based diet), she also joined in."* (GENY10)

> *"I have influenced them a lot. They see veganism in a different way. They accept it much better now. My partner, for example, does not mind eating meat and making a vegetarian menu; he even eats a lot of vegetables."* (GENY11)

Some adopters (respondents) decided to adopt a PBD because they knew prior adopters with whom they had a close relationship (homophily) and felt encouraged to start a process of dietary change by adopting a PBD. GENY10 points to sharing the same housing and experiences with people to her as a facilitator.

> *"My sister was the first (to adopt). My partner and I were the second. Living in the same house made it easier for us to go together."* (GENY10)

CHAPTER 9: DISCUSSION

(Note: This discussion is published in an article by Canseco-López and Miralles (2023))

After the analysis of the data collected, the empirical data of the three cases (PBC, GENY and GENZ) are compared with the theoretical framework outlined in the literature review of Part II and a series of propositions are discussed in the following sections (Canseco-López and Miralles, 2023). The set of propositions builds the conceptual framework that includes Propositions 1 and 2 (presented in Part I), and the process perspective of social contagion with its respective stages. This perspective tries to include an integral vision of the social contagion process for the PBDs adoption from the adopter's point of view. This conceptual framework aims to explain how the generation of the outcome due to the PBD adoption develops, whether it is a success or a failure. A high-level schema of the conceptual framework with the main contextual configurations is drawn in Figure 1. In this scheme, the process of dissemination and adoption of an innovation is presented from its socio-material and social contagion process perspective. The potential adopter interacts with other members of the social network and these contacts can, in general terms, facilitate or hinder the progress of the dissemination of the innovation.

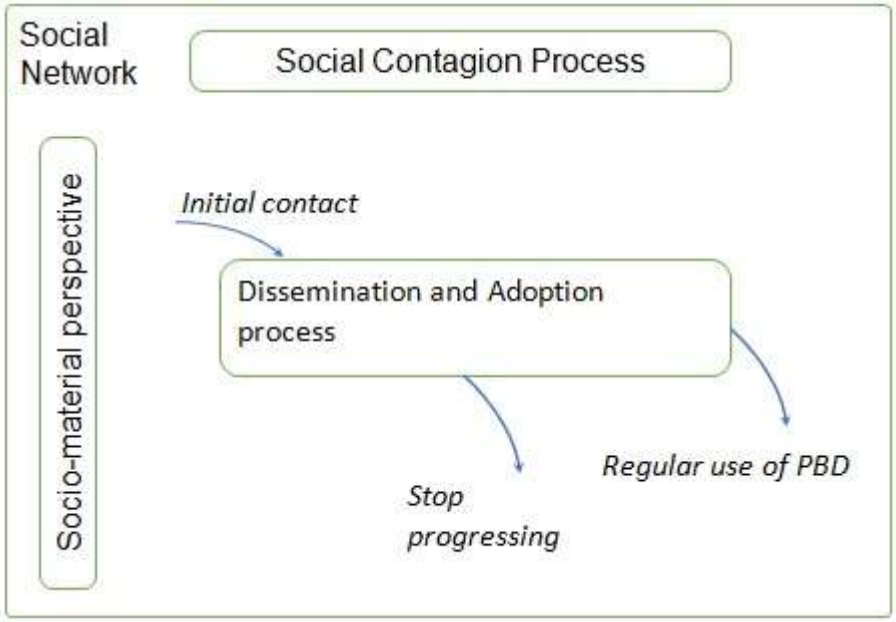


Figure 1. Contextual description of the proposed conceptual framework

9.1. Overcoming Socio-Psychological Concerns about the Adoption of PBDs

Following the adopter's point of view on the PBDs adoption, the cross-case analysis provides evidence that the adopter's decision-making to switch to the new diet is influenced by some socio-psychological aspects that come from the adopter's profile that can favour or deter the adoption of the new diet. The socio-psychological concerns can appear as cognitions that are promoted by the social network, by the psychological characteristics of the potential adopter and by the interaction between the adopter and the materiality of PBDs. These cognitions can be understood as facilitators or barriers in the adopter's decision-making process to change diet.

The individual's facilitators and barriers can be modulated by the influence of the individual's social network (mainly the close and personal ones, i.e., family and friends), promoting or discouraging the decision to obtain information about the new diet, the decision to imitate the behaviour of the prior adopter, and, finally, the decision to engage in regular use of the new diet. In other words, the potential adopter reacts to the messages that he or she receives from the prior adopter of the social network either by applying those facilitators to his or her decision-making or by lifting the associated barriers. Thus, lifting barriers implies the failure of the contagion process, while using facilitators to lower barriers allows the potential adopter to move forward in the adoption process, opening the individual to experimentation and thus to the success of the contagion process.

In the empirical analysis of our study cases, in all of them, facilitators are present to mediate in the stages of the social contagion process. In this sense, communication between prior and potential adopters is favoured by homophilic relationships and intimacy within the social network that includes the individuals involved in social contagion. The effect of the communication stage on social contagion has been shown by the effect of those prior adopters who have been recent adopters within the close contacts of potential adopters. In addition, the decision to imitate may be favoured by a set of facilitators coming from the socio-psychological characteristics of the potential adopter, the influence of contextual settings (such as social networks), and the characteristics of the diet on the socio-material effects on the adopter's decision.

Finally, in the acceptance stage, social norms, favourable attitudes, and positive perceived behavioural control may facilitate potential adopters' definitive commitment to the use of PBDs.

Taking into consideration the analysis described in the previous chapter, if any of the characteristics of the environment delimited in Proposition 1 is not present, the contagion process can fail. Specifically, potential adopters can argue that the information is not reliable enough to overcome existing barriers (Kleijnen et al., 2009; Ram and Sheth, 1989), and prior adopters may consider their food choices to be part of the private sphere and, therefore, not to talk about them outside of their closest homophilic relationships, and this may hinder the dissemination of information about PBDs. In this sense, in the study case 1 (PBC), the barriers to communication came from the prior adopter's attitude not to disclose information about the new diet because the personal diet is part of the private sphere.

As a result of the empirical analysis and in all cases of this research work, although the potential adopter could have gathered enough information to consider whether PBDs fit his or her socio-psychological characteristics, evidence is found that potential adopters may feel some barriers that may deter them from imitating the prior adopter's behaviour. Overcoming socio-psychological barriers includes changing habits and stepping out of the comfort zone and, consequently, a proactive attitude to imitate the behaviour of adopting a PBD. In the analysis of this work, five groups of elements (cognitions) have been detected. In all cases, new psychological adjustments are needed and overcoming current environmental and social influences implies a certain maturation process that could include preliminary steps of resistance to changing behavioural habits and struggling with previous beliefs (Kleijnen et al., 2009; Ram and Sheth, 1989).

Considering the empirical data of the three study cases, the decision to start using the new diet on a regular basis is affected by barriers due to different groups of elements. Some of these elements arise in the acceptance stage; other barriers are also present in previous stages. As in the case of the imitation stage, the barriers that may deter the adoption process need to be overcome by the potential adopter to progress towards a successful PBD adoption. Again, the propensity to overcome these

barriers will depend on the cognitive dissonance of the potential adopter. A specific situation was detected in case study 3 (GENZ) when parental feeding education was not aligned with the new diet.

In this sense, a new proposition is described:

Proposition 3: *The progress of the adopter's decision-making regarding a diet change is mediated by some facilitators and barriers that affect each of the stages of the contagion process. Facilitators and barriers come from the adopter's cognitions generated by the contextual setting, the diet characteristics, the adopter characteristics, and the interaction due to the PBD socio-material characteristics.*

Figure 2 describes a detailed composition of the conceptual framework on which the following propositions will be based.

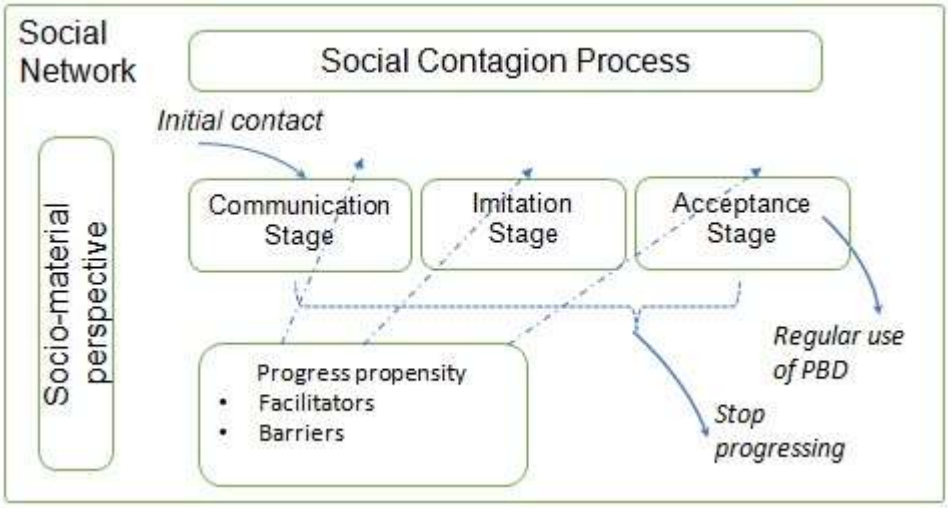


Figure 2. High-level perspective of the conceptual framework on PBD adoption

Although different studies have proposed barriers and facilitators of the adoption of PBDs (Perez-Cueto, 2020; Reipurth et al., 2019), the conceptual framework of this study aims to better understand the adoption process from an adopter's point of view. To achieve our objective, this conceptual framework proposes an integral perspective of the social contagion process that includes those stages that have been found

relevant in the PBDs adoption. Furthermore, to ensure an adopter's perspective, each of the stages should consider the progress of the potential adopter's decision-making towards switching to the new diet. In this sense, the potential adopter's progress towards the action of switching to the new diet includes a motivational part and a volitional part (this is common in transitions due to health issues and dietary aspects) and can be conceptualised as the propensity of the potential adopter to engage in the new diet. Our conceptual framework includes the potential adopter's point of view with the understanding that progress at each stage is related to the individual's propensity to overcome each stage. In this sense, Proposition 3a is delineated:

Proposition 3a: *The facilitators and barriers that mediate each stage of the social contagion process make up a set of factors that predispose the individual to switch to a PBD.*

By emphasising the adopter's point of view, the proposed comprehensive perspective adds a better understanding of the adoption process since the adopter's socio-psychological concerns affect all stages, but each stage is affected in a specific way. As far as it is known, this comprehensive process perspective has not yet been proposed.

Although all cognitive concerns, either facilitators or barriers, are part of the adopter's affective state, and all of them can affect the adopter's decision-making to switch the diet, in empirical work evidence was found that these cognitive concerns can have a different effect at each of the stages of the process. In this sense, a new proposition is made:

Proposition 3b: *The mediating effects of these facilitators and barriers are moderated by the specificities of each stage.*

Moreover, all cognitive concerns, either facilitators or barriers, come from the social network and the socio-material characteristics of the new diet and the potential adopter has internalised them as part of the adopter's decision-making to switch diets. In this sense, the following proposition is raised:

Proposition 3c: *The mediating effects of those facilitators and barriers are moderated by the contextual settings of the adoption process.*

Figure 3 shows the mediating effects of both facilitators and barriers at each stage of the adoption process.

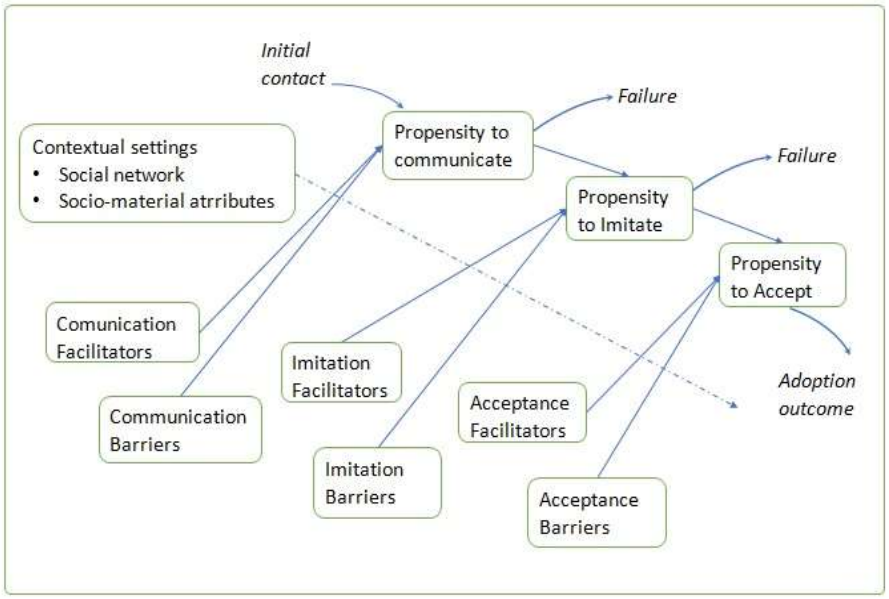


Figure 3. Mediating effects of facilitators and barriers at each stage of the adoption process

9.2. Adopter's Cognitive Consistency When Switching to PBDs

One of the characteristics that emerged from most participants in the empirical work of this study is the affective involvement of dietary change. This dimension is common in the literature on goals and propensity to action in health and food circumstances (Chatzisarantis et al., 2008; Harmon-Jones et al., 2009; Reuter et al., 2008). In this sense, most of the participants expressed concern about overcoming the comfort zone and dealing with cognitive dissonance due to switching to a new diet. The "meat paradox" is an exemplary case of such situations (Aaltola, 2019; Rothgerber, 2020). Cognitive dissonance (Festinger, 1962a) is a theory that tries to explain why and how an individual overcomes a change situation in which cognitions (these cognitions can arise from eating habits, beliefs, and opinions, coming from the current diet or the new diet) about the prior state and the future state generate some kind of conflict and consequently, an affective discomfort.

As in the case of PBDs adoption, cognitive dissonance is relevant in situations where cognitions are acquired in a decision-making process that drives one to perform an action and pursue a goal. In these situations, the decision-maker experiences a state of negative impulse, and the adoption process could fail. To avoid the lack of cognitive consistency (Gawronski, 2012), the action-based cognitive dissonance model posits that the potential adopter will intervene by adding consonant cognitions or by devaluing dissonance cognitions and/or a combination of both. Participants in PBDs switching processes are affected by cognitive discomfort when their affective state due to different cognitions, either facilitators or barriers, is negative towards the switch to PBD. In this vein, potential adopters of PBDs expressed their willingness to improve psychological comfort to progress in the adoption process by combining facilitators (consonant cognitions) and barriers (dissonance cognitions) to reach a situation of cognitive consistency to switch to PBDs.

In this sense, the following propositions are described:

Proposition 4: *The potential adopter needs to progress in the decision-making process that is necessary for a change in the adoption of PBDs. In this process, some*

barriers and facilitators intervene as dissonant or consonant cognitions that produce psychological discomfort in the potential adopter.

Proposition 4a: *Potential adopters elaborate the consequences of facilitators and barriers at all stages of the social contagion process by understanding these combinations of them as producing a less negative state of psychological discomfort.*

It has been proposed that the magnitude of the cognitive dissonance caused by the switch to PBDs is a function of the number of cognitions (facilitators or barriers), and a specific weight should be considered for each cognition. Since the presence of cognitive dissonance is uncomfortable, potential adopters struggle to reduce it by reinforcing consonant cognitions, de-valuing dissonant cognitions, and/or changing one or both cognitions to make them more consonant with each other.

In this vein, the following proposition is considered:

Proposition 4b: *Potential adopters elaborate the consequences of facilitators and barriers at all stages of the social contagion process striving for a sufficiently comfortable combination of them by reinforcing facilitators, reducing barriers, and proposing a stable psychological state in the switch to PBD.*

Figure 4 presents the set of elements that moderate or mediate by influencing the propensity for cognitive consistency on the part of the potential adopter.

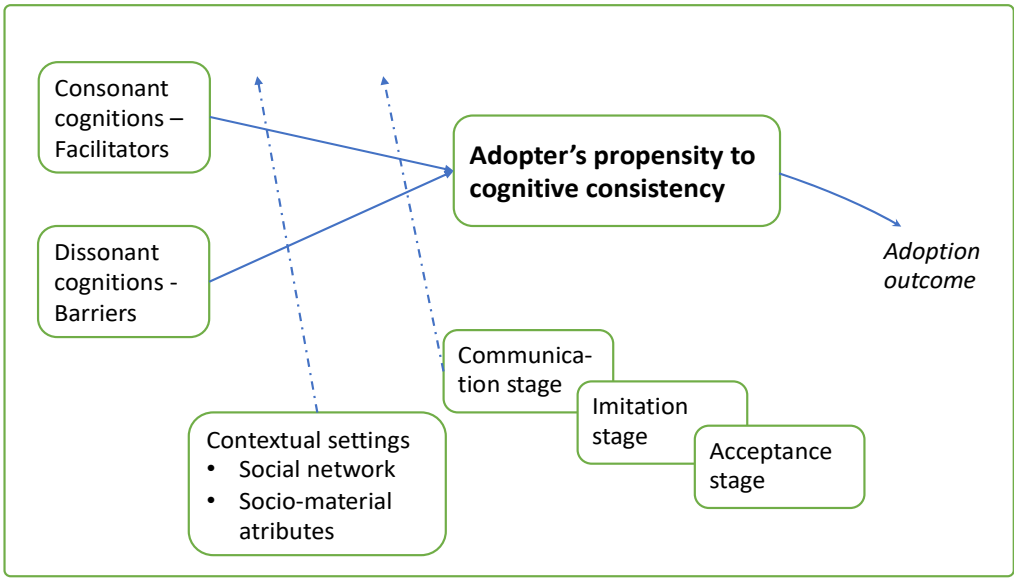


Figure 4. Moderating and mediating elements influencing the propensity for cognitive consistency of the potential adopter

Finally, Figure 5 presents the process perspective of the adoption of PBDs in which all the elements involved and their relationship to each other can be seen. Consonant cognitions (facilitators) and dissonant cognitions (barriers) modulate the propensity for cognitive consistency of the potential adopter at each stage of the social contagion process of PBD adoption, without losing sight of the influence of both the social and material characteristics of the innovation per se and the influence of the individual's social network.

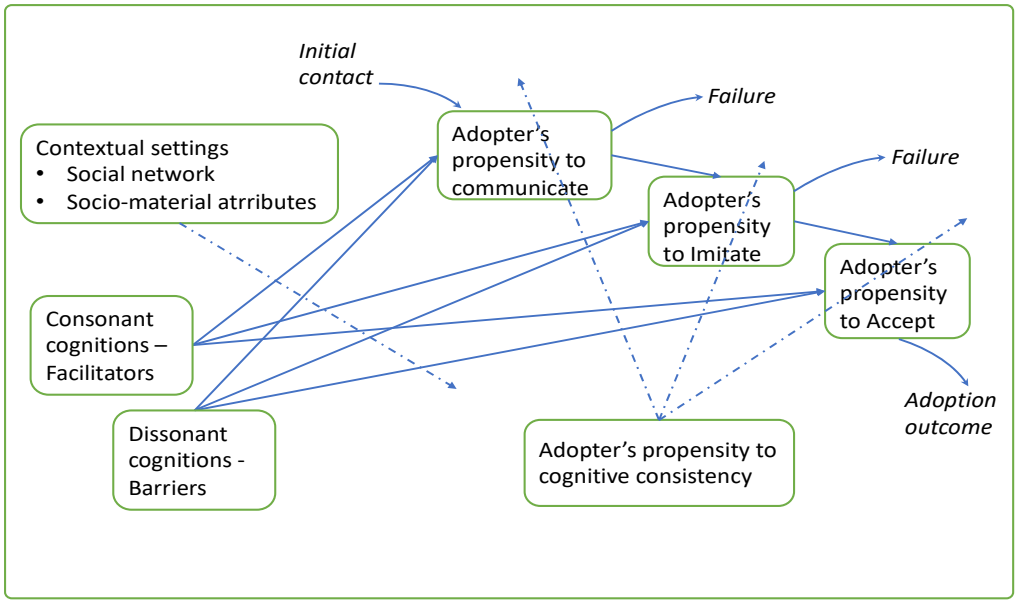


Figure 5. A process perspective of PBD adoption.

Finally, considering the process perspective on PBD adoption, on the one hand, it can be said that both consonant and dissonant cognitions mediate each of the stages of the process by modulating the propensity to communicate, imitate and accept of the potential adopter, while on the other hand, the social context, and attributes of PBDs moderate each of these stages. Thus, the potential adopter must progress through each of the stages successfully, so that his or her propensity for cognitive consistency will become increasingly positive, and hence the result will be the adoption of a PBD.

9.3. Implications

In summary, this research work contributes to some challenges of SI research, as an emerging field, to propose a new model as a research reflection based on a theory-building effort to better understand the specificities of the adoption of non-technological technologies. Additionally, responding to some claims in this field (Van der Have and Rubalcaba, 2016), the derived process model delineates a comprehensive framework based on a set of propositions, providing a more holistic perspective that enhances the perspective on the adoption side and proposing a process that focuses on adopters' decision making, their cognitive specificities and capacities within the context surrounding the adoption of SIs (Hölsgens, 2022) and the affective state of the adopter in the switch to PBDs.

9.3.1. For the Academia

As an academic contribution, this paper provides further insights into SIs dissemination from the adopter's perspective in response to previous work pointing to the lack of more literature on the topic (Hölsgens, 2022). Innovation diffusion, in general, has always been studied on the assumption that adoption is only a matter of time due to the innovativeness of the potential adopter; therefore, imitation is an inherent action of adoption. In some previous studies (Lai et al., 2016; Lee et al., 2011; Lee et al., 2013) related to technological innovations, it is partially pointed out that the potential adopter may be partially influenced at the psychological level by their relationship with prior adopters.

In the case of certain SI such as PBDs, it is noted that adoption may or may not take place because it is a process divided into stages that must be overcome one by one, with the possibility of failing in each stage and therefore not moving on to the next. This research study contributes to this view of the process in the case of certain SI, considering that the obligatory passage from one stage to another, to reach the final adoption, is modulated by the influence that the close social environment of the potential adopter has on the psychological states of the latter in each of the stages of the proposed process that constructs the conceptual framework. Thus, cognitive

propensity must be positive to achieve adoption and regular use of the innovation and for this, the influence of facilitators and barriers on the psychological state of the potential adopter has to be considered. His or her close social network exerts an influence in modulating these states and can make it easier or harder for the individual to progress in the adoption process.

Finally, this research work goes a step further by proposing a holistic perspective that allows analysing what happens in the process of contagion of an SI, such as PBDs, from the point of view of the influence on the psychological states of the potential adopter, i.e., an action-based approach to cognitive dissonance allows to analyse the psychological comfort (and discomfort) of the potential adopter at all stages of the decision-making process to change diet.

9.3.2. For Practitioners

The implications for practitioners can be seen from a threefold perspective.

a) PBD potential adopters are users and consumers of novel diets. Interestingly, novel diets, such as health products, can be considered products with high consumer cognitive involvement. In this sense, the adoption process could be assimilated to a consumer behaviour process. Moreover, the adopter's perspective could be useful in the case of products with high consumer cognitive involvement, and this should help in the promotion of these new diets. However, the results of this research work illustrate which conditioning factors of the adoption process require the necessary attention in the dissemination processes of innovations with a high socio-psychological component.

   Both facilitators and barriers may have a determining and complementary role in these processes, and these roles may manifest influence on different dimensions (stages of the social contagion process, mediating role of barriers and facilitators in each stage, contextual effects, and affective state) of the decision maker to switch to a new diet. Moreover, these dimensions of the influence of cognitions on adoption decision-making seem to be arranged in a

hierarchical structure that requires specific attention if intervention is to be exerted. In this sense, PBD potential adopters cannot be considered solely from the perspective of consumer behaviour.

The new model clarifies that PBDs potential adopters experience the PBD adoption process as a decision-making process to change their diet. This process might affect their psychological comfort due to the socio-material properties of PBDs, conditioning factors derived from cognitive involvement and the effects of the contextual setting that are present in the decision to change diet. Interestingly, this psychological comfort (or discomfort) of the PBD potential adopter affects, in an understandable, holistic, and integrated way, all stages of the decision-making process. In this vein, actions to support the PBD's potential adopter's cognitive coherence should have a perspective that encompasses the whole process and is affected by the adopter's contextual setting and the socio-material properties of PBDs.

b) It is not surprising that the model provides new tools for the promotion and marketing of PBDs. Marketing strategies should consider, on the one hand, the specificities of early majority adopters, and, on the other hand, that although the PBDs potential adopter follows different stages in the decision-making process, promotion actions should focus on his or her holistic psychological comfort. Furthermore, the psychological comfort of the potential adopter derives from his or her cognitive coherence in the evolution towards a new diet.

c) In a complementary way, the model can be useful to better understand the challenges for policymakers who are willing to drive the path towards the protein transition challenges included in some of the SDGs. Lessons from the new model can help in this endeavour. On the one hand, the model focuses on a strong individual component in the decision-making process to change diets. Congruently, the model emphasises different dimensions: intimacy, psychological comfort, private sphere, and cognitive coherence. However, on the other hand, the model emphasises the social and community dimension of the contextual setting of the decision-making process. The role of the family and parental influence on eating habits and the homophilic influence of the potential

adopter’s social network are dimensions that could be included in the policy intervention to promote the protein transition.

CHAPTER 10: CONCLUSION OF PART II

Part I of this research work concluded that PBDs understood as IS required consideration of their socio-material attributes, as well as the socio-psychological characteristics of the potential adopter, although it was noted and proposed as a future line to incorporate a process perspective to adoption per se from the adopter's point of view, since it was detected that the potential adopter went through a whole path of decisions and that these were influenced by the weight of their psychological states derived from their interaction with their social network.

In this line, starting from the conclusion of Part I and following the work carried out in Part II, it is observed that the potential adopter's facilitators (consonant elements) and barriers (dissonant elements) mediate in each of the stages and therefore, the individual is deciding in each of these whether to progress in the adoption process. In addition, in parallel, the social environment and the socio-material characteristics of PBDs moderate the whole process.

CHAPTER 11: MAIN CONCLUSION

SI addresses social issues and aims to improve social services (European Commission, 2013). Some of the solutions proposed by SIs are sustainable for some social challenges, such as climate change (Howaldt et al., 2015; Schwerk, 2015). In fact, the protein transition promoted by the UN and the FAO can contribute to achieving some of the SDGs, such as Climate Change. In fact, according to several studies (Tilman and Clark, 2014), there is a consensus that food diets are also related to environmental and human health.

Although innovation research has developed a good bunch of theoretical frameworks that have made it possible to study the dissemination and adoption of innovations with a solid technological foundation, they provide partial support for an integral perspective of the needs of SIs. It is required to consider the involvement of the adopter, considering cognitive, social, and psychological traits. Adopter's profiles and adopter's innovativeness are the main theoretical lenses that build dissemination of innovation. This research work proposes an adopter's point of view that provides an integral vision of the overall social contagion process with all the interdependencies between the different stages of the process, from the initial contact to the definitive use of the innovation by the user and consumer.

In this line, developing an abductive approach, this research work proposes a conceptual framework based on a process perspective of the adopter's evolution from the first contact with PBDs to the regular use of the new diet. Based on the empirical effort of three cases, a cross-case analysis has been developed to propose the facilitators and barriers of the adoption process paying attention to the contextual elements that affect decision-making for the change from the old diet to the new one. In addition to the context, the process conceptual framework includes the different stages of the decision-making process towards the adoption of the new diet. All the proposed process stages, in an integral perspective, are based on the main theoretical frameworks that have been proposed for the understanding of the dissemination and adoption of innovation.

Certain limitations can be observed since some questions may remain unanswered, since at the exploratory level, they are not explored as much as at the quantitative level. The qualitative character of this research effort lacks generalisation of its contribution. However, an enhanced perspective has been offered because of an empirical effort that can suggest new insights into the adoption and dissemination of PBDs. Like many of the research papers, this work should consider additional limitations. Specifically, the limitations of this qualitative research work are due to the location of the interviewed individuals (most of them are residents of Barcelona). In addition, the current global pandemic situation has made it impossible for the interviews of cases 2 and 3 to be conducted offline, which means that the richness of the study is lost due to the lack of non-verbal information from the interviewee. In terms of the theoretical frameworks of all stages, new approaches can be used. Using the current frameworks, derived from technological innovations, that can limit the integral perspective, since the starting point can be conditioned by these partial perspectives. Considering that the potential adopter integrates all the effects in the decision-making process that allow the dietary change, it could be interesting to explore more integrative frameworks to develop new conceptual pathways avenues in the adopter's process perspective.

Thus, this work can be seen as a starting point for further works that quantify the propositions mentioned in this work, and for a more detailed study of the influence of communication processes. The exploration of the influence of the stages in the social contagion process in the psychological states of potential adopters in the PBD dissemination processes should facilitate further research in the field of SI, as it can be a starting point to study the dissemination of other emerging SIs from the point of view of the socio-psychological involvement of the potential adopter (Canseco-Lopez, and Miralles, 2023). Moreover, as the field of innovation diffusion shifts from technological to SI, there is a growing need to delve into the psychological aspects related to the individual and his or her environment that can affect the dissemination of SI. In terms of future research, the study could be expanded to include a comparison of the samples according to the range of ages, gender, level of education, etc. Also, the perspective of the cultural background of the participants could be considered. In addition, further research could include other case studies with individuals from other parts of the world and/or other age groups. In addition, specific case studies could also

be designed in which individuals have gender, economic capacity, and religious or spiritual group membership in common to observe if new insights can be proposed. Finally, another future research line could be to study more in-depth the individual's final decision.

REFERENCES

Aaltola, E. (2019). The meat paradox, omnivore's akrasia, and animal ethics. *Animals*, *9*(12), 1125.

Afshin, A., Sur, P. J., Fay, K. A., Cornaby, L., Ferrara, G., Salama, J. S., ... & Murray, C. J. (2019). Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, *393*(10184), 1958-1972.

Ajzen, I. (1985). *From intentions to actions: A theory of planned behaviour*. Springer Berlin Heidelberg.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Ajzen, I. and Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Prentice-Hall, Englewood Cliffs.

Alae-Carew, C., Green, R., Stewart, C., Cook, B., Dangour, A. D., & Scheelbeek, P. F. (2022). The role of plant-based alternative foods in sustainable and healthy food systems: Consumption trends in the UK. *Science of the Total Environment*, *807*, 151041.

Albert Schweitzer Foundation. (2022). European Chicken Commitment. [ONLINE] Available at: https://albertschweitzerfoundation.org/campaigns/european-chicken-commitment (accessed 19 November 2022).

Alcorta, A., Porta, A., Tárrega, A., Alvarez, M. D., & Vaquero, M. P. (2021). Foods for plant-based diets: Challenges and innovations. *Foods*, *10*(2), 293.

Aleksandrowicz, L., Green, R., Joy, E. J., Smith, P., & Haines, A. (2016). The impacts of dietary change on greenhouse gas emissions, land use, water use, and health: a systematic review. *PloS one*, *11*(11), e0165797.

Alonso, M. E., González-Montaña, J. R., & Lomillos, J. M. (2020). Consumers' concerns and perceptions of farm animal welfare. *Animals*, *10*(3), 385.

Animal Welfare Institute. (2022). Inhumane practices on factory farms. [ONLINE] Available at: https://awionline.org/content/inhumane-practices-factory-farms (accessed 17 November 2022).

Appel, L. J. (2008). Dietary patterns and longevity: expanding the blue zones. *Circulation*, *118*(3), 214-215.

Appleby, P. N., Davey, G. K., & Key, T. J. (2002). Hypertension and blood pressure among meat eaters, fish eaters, vegetarians, and vegans in EPIC–Oxford. *Public health nutrition*, *5*(5), 645-654.

Bandura, A. (1990). Selective activation and disengagement of moral control. *Journal of Social Issues*, *46*, 27–46.

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, *3*, 193–209.

Bankins, S. (2015). A process perspective on psychological contract change: Making sense of, and repairing, psychological contract breach and violation through employee coping actions. *Journal of Organizational Behavior*, *36*(8), 1071-1095.

Bapna, R., & Umyarov, A. (2015). Do your online friends make you pay? A randomized field experiment on peer influence in online social networks. *Management Science*, *61*(8), 1902-1920.

Bardwick, J. M. (1995). *Danger in the Comfort Zone: From Boardroom to Mailroom--how to Break the Entitlement Habit That's Killing American Business*. Amacom Books.

Barnard, N. D., Cohen, J., Jenkins, D. J., Turner-McGrievy, G., Gloede, L., Green, A., & Ferdowsian, H. (2009). A low-fat vegan diet and a conventional diabetes diet in the

treatment of type 2 diabetes: a randomized, controlled, 74-wk clinical trial. *The American journal of clinical nutrition*, *89*(5), 1588S-1596S.

Baron, R. A., & Shane, S. (2007). Entrepreneurship: A process perspective. *The psychology of entrepreneurship*, 19-39.

Barr, S. I., & Chapman, G. E. (2002). Perceptions and practices of self-defined current vegetarian, former vegetarian, and nonvegetarian women. *Journal of the American Dietetic Association*, *102*(3), 354-360.

Bastian, B., & Loughnan, S. (2017). Resolving the meat-paradox: A motivational account of morally troublesome behavior and its maintenance. *Personality and Social Psychology Review*, *21*(3), 278-299.

Beckerman, J. P., Alike, Q., Lovin, E., Tamez, M., & Mattei, J. (2017). The development and public health implications of food preferences in children. *Frontiers in nutrition*, *4*, 66.

Berger, P., & Luckman, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. New York: Doubleday Anchor.

Bijker, W. E. (1997). *Of bicycles, bakelites, and bulbs: Toward a theory of sociotechnical change*. MIT press.

Borsboom, D., van der Maas, H. L., Dalege, J., Kievit, R. A., & Haig, B. D. (2021). Theory construction methodology: A practical framework for building theories in psychology. *Perspectives on Psychological Science*, *16*(4), 756-766.

Bouchard, M. J., Trudelle, C., Briand, L., Klein, J. L., Lévesque, B., Longtin, D., & Pelletier, M. (2015). A relational database to understand social innovation and its impact on social transformation. In *New frontiers in social innovation research*, 69-85.

Brackertz, N. (2011). Social innovation. [ONLINE] Available at: https://apo.org.au/node/27387 (accessed 7 October 2022).

Brehm, J. W. (1956). Postdecision changes in the desirability of alternatives. *The Journal of Abnormal and Social Psychology*, *52*(3), 384.

Brehm, J. W. (2007). A brief history of dissonance theory. *Social and Personality Psychology Compass*, *1*(1), 381-391.

Brown, R. B. (2006). Doing your dissertation in business and management: the reality of researching and writing. *Doing Your Dissertation in Business and Management*, 1-128.

Brunet, M., Fachin, F., & Langley, A. (2021). Studying Projects Processually. *International Journal of Project Management*, *39*(8), 834-848.

Bryant, C. J. (2022). Plant-based animal product alternatives are healthier and more environmentally sustainable than animal products. *Future Foods*, 100174.

Bryant, A., & Charmaz, K. (2007). *The SAGE Handbook of Grounded Theory*. Los Angeles: Sage.

Caniëls, M. C., De Stobbeleir, K., & De Clippeleer, I. (2014). The antecedents of creativity revisited: A process perspective. *Creativity and Innovation Management*, *23*(2), 96-110.

Canseco-Lopez, F., & Miralles, F. (2023). Adoption of Plant-Based Diets: A Process Perspective on Adopters' Cognitive Propensity. *Sustainability*, 15*(9)*, 7577.

Carlile, P. R., Nicolini, D., Langley, A., & Tsoukas, H. (2013). *How matter matters: Objects, artifacts, and materiality in organization studies*. OUP Oxford.

Centola, D. (2011). An experimental study of homophily in the adoption of health behavior. *Science*, *334*(6060), 1269-1272.

Charmaz, K. (2016). Shifting the grounds: Constructivist grounded theory methods. In *Developing grounded theory* (pp. 127-193). Routledge.

Chatzisarantis, N. L., Hagger, M. S., & Wang, J. C. (2008). An experimental test of cognitive dissonance theory in the domain of physical exercise. *Journal of Applied Sport Psychology*, *20*(1), 97-115.

Chen, P. J., & Antonelli, M. (2020). Conceptual models of food choice: influential factors related to foods, individual differences, and society. *Foods*, *9*(12), 1898.

Cho, Y., Hwang, J., & Lee, D. (2012). Identification of effective opinion leaders in the diffusion of technological innovation: A social network approach. *Technological Forecasting and Social Change, 79*(1), 97-106.

Clark, T. R. (2020). *The 4 stages of psychological safety: Defining the path to inclusion and innovation*. Berrett-Koehler Publishers.

Clark, M. A., Domingo, N. G., Colgan, K., Thakrar, S. K., Tilman, D., Lynch, J., ... & Hill, J. D. (2020). Global food system emissions could preclude achieving the 1.5 and 2 C climate change targets. *Science*, *370*(6517), 705-708.

Cloutier, C., & Langley, A. (2020). What makes a process theoretical contribution?. *Organization Theory*, *1*(1), 2631787720902473.

Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: Complementary research strategies*. Sage Publications, Inc.

Cohen, Y.A. (1968). Food Consumption Patterns. In *International Encyclopedia of the Social Sciences Vol. 5*, (ed. D.L. Sills), MacMillan Co. & The Free Press, New York, pp. 508--13.

Cole, M., & Morgan, K. (2011). Vegaphobia: Derogatory discourses of veganism and the reproduction of speciesism in UK national newspapers 1. *The British Journal of Sociology*, *62*(1), 134-153.

Collier, D. & Mahoney, J., 1996. Insights and pitfalls: Selection bias in qualitative research. *World Politics*, pp. 56-91.

Conklin, A. I., Forouhi, N. G., Surtees, P., Khaw, K. T., Wareham, N. J., & Monsivais, P. (2014). Social relationships and healthful dietary behaviour: evidence from over-50s in the EPIC cohort, UK. *Social science & medicine*, *100*, 167-175.

Craig, W. J., Mangels, A. R., Fresán, U., Marsh, K., Miles, F. L., Saunders, A. V., ... & Orlich, M. (2021). The safe and effective use of plant-based diets with guidelines for health professionals. *Nutrients*, *13*(11), 4144.

Cramer, H., Kessler, C. S., Sundberg, T., Leach, M. J., Schumann, D., Adams, J., & Lauche, R. (2017). Characteristics of Americans choosing vegetarian and vegan diets for health reasons. *Journal of nutrition education and behavior*, *49*(7), 561-567.

Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of mixed methods research*, *3*(2), 95-108.

Dasgupta, P. (2021). The economics of biodiversity: the Dasgupta review. *Hm Treasury*.

Daughtery, L. G., Zajicek-Farber, M. L., & Koh, E. (2020). Use of the Ecomap and Cultural Ecogram in Strengthening Healthcare Services for Urban African American Grandparents With Diabetes Type 2: A Case Application. *Urban Social Work*, *4*(1), 58-76.

Davis, F. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*, 319-340.

Davies, H. T., & Nutley, S. M. (2000). *What works?: Evidence-based policy and practice in public services*. Policy Press.

Dawson, L. L. (1999). When prophecy fails and faith persists: A theoretical overview. *Nova Religio*, *3*(1), 60-82.

De Boer, J., & Aiking, H. (2022). Considering how farm animal welfare concerns may contribute to more sustainable diets. *Appetite*, *168*, 105786.

De La Haye, K., Robins, G., Mohr, P., & Wilson, C. (2013). Adolescents' intake of junk food: Processes and mechanisms driving consumption similarities among friends. *Journal of Research on Adolescence*, *23*(3), 524-536.

DiClemente, C. C. (1993). Changing addictive behaviors: A process perspective. *Current Directions in Psychological Science*, *2*(4), 101-106.

Dietrich, M., Znotka, M., Guthor, H., & Hilfinger, F. (2016). Instrumental and non-instrumental factors of social innovation adoption. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *27*, 1950-1978.

Dindyal, S., & Dindyal, S. (2003). How personal factors, including culture and ethnicity, affect the choices and selection of food we make. *Internet Journal of Third World Medicine*, *1*(2), 27-33.

Drewnowski, A. (1997). Taste preferences and food intake. *Annual review of nutrition*, *17*, 237.

Duening, T. N., Hisrich, R. A., & Lechter, M. A. (2020). *Technology entrepreneurship: Taking innovation to the marketplace*. Academic Press.

Dufour, S., Lessard, D., & Chamberland, C. (2014). Facilitators and barriers to implementation of the AIDES initiative, a social innovation for participative assessment of children in need and for coordination of services. *Evaluation and program planning*, *47*, 64-70.

EAT-Lancet. (2019). [ONLINE] The Planetary Health Diet. [ONLINE] Available at: https://eatforum.org/eat-lancet-commission/the-planetary-health-diet-and-you/ (accessed 19 November 2022).

Edmondson, A. (1999). Psychological safety and learning behaviour in work teams. *Administrative Science Quarterly*, *44*, 350–383.

Edmondson, A. C. (2002). *Managing the risk of learning: Psychological safety in work teams* (pp. 255-275). Cambridge, MA: Division of Research, Harvard Business School.

Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual review of organizational psychology and organizational behavior*, *1*(1), 23-43.

Edwards, T. (2000). Innovation and organizational change: developments towards an interactive process perspective. *Technology Analysis & Strategic Management*, *12*(4), 445-464.

Eertmans, A., Baeyens, F., & Van Den Bergh, O. (2001). Food likes and their relative importance in human eating behavior: review and preliminary suggestions for health promotion. *Health education research*, *16*(4), 443-456.

EFSA. (2022). Animal welfare. [ONLINE] Available at: https://www.efsa.europa.eu/en/topics/topic/animal-welfare (accessed 17 November 2022).

Egan, L. C., Bloom, P., & Santos, L. R. (2010). Choice-induced preferences in the absence of choice: Evidence from a blind two choice paradigm with young children and capuchin monkeys. *Journal of Experimental Social Psychology*, *46*(1), 204-207.

Eisen, M. B., & Brown, P. O. (2022). Rapid global phase-out of animal agriculture has the potential to stabilize greenhouse gas levels for 30 years and offset 68 percent of CO2 emissions this century. *PLoS Climate*, *1*(2), e0000010.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, *14*(4), 532-550.

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of advanced nursing, 62*(1), pp.107-115.

Eshel, G., Stainier, P., Shepon, A., & Swaminathan, A. (2019). Environmentally optimal, nutritionally sound, protein and energy conserving plant-based alternatives to US meat. *Scientific reports*, *9*(1), 1-11.

European Commission. 2013. Social Innovation. [ONLINE] Available at: https://op.europa.eu/en/publication-detail/-/publication/86b50f05-2b71-47d3-8db3-4110002b0ccb (accessed 22 November 2022).

EUROSTAT. (2022). Livestock. [ONLINE] Available at: https://ec.europa.eu/eurostat/web/agriculture/data/database?node_code=apro_mt_ls (accessed 17 November 2022).

FAO. (2016). Food guidelines offer opportunities to protect the planet, too. [ONLINE] Available at: http://www.fao.org/news/story/en/item/414955/icode/ (accessed 24 June 2022).

FAO. (2017). The future of food and agriculture. Trends and challenges. [ONLINE] Available at: https://www.fao.org/3/i6583e/i6583e.pdf (accessed 24 June 2022).

FAO. (2021a). Dietary guidelines and sustainability. [ONLINE] Available at: http://www.fao.org/nutrition/education/food-dietary-guidelines/background/sustainable-dietary-guidelines/en/ (accessed 25 June 2022).

FAO. (2021b). Tracking progress. [ONLINE] Available at: http://www.fao.org/sustainable-development-goals/tracking-progress/en/ (accessed 20 June 2022).

FAO. (2022). Global Livestock Environmental Assessment Model (GLEAM). [ONLINE] Available at: https://www.fao.org/gleam/dashboard-old/en/#:~:text=Emissions%20from%20livestock%20supply%20chains&text=Methane%20(CH4)%20accounts%20for,24%20and%2026%20percent%2C%20respectively(accessed 17 November 2022).

FAO, IFAD (International Fund for Agricultural Development) & WFP (World Food Programme). (2015). Achieving Zero Hunger. The critical role of investment in social protection and agriculture. Rome, FAO.

Fanzo, J. (2019). Healthy and Sustainable Diets and Food Systems: the Key to Achieving Sustainable Development Goal 2? *Food ethics 4*, 159–174.

Fardet, A. (2017). New concepts and paradigms for the protective effects of plant-based food components in relation to food complexity. In *Vegetarian and plant-based diets in health and disease prevention* (pp. 293-312). Academic Press.

Federico, C. M. (2009). How people organize their political attitudes: The roles of ideology, expertise, and evaluative motivation. *Psychological Science Agenda*, *23*(9).

Ferdowsian, H. R., & Barnard, N. D. (2009). Effects of plant-based diets on plasma lipids. *The American journal of cardiology*, *104*(7), 947-956.

Festinger, L. (1962a). Cognitive dissonance. *Scientific American*, *207*(4), 93-106.

Festinger, L. (1962b). *A theory of cognitive dissonance* (Vol. 2). Stanford university press.

Fieldhouse, P. (2013). *Food and nutrition: customs and culture*. Springer.

Filieri, R., Alguezaui, S., & McLeay, F. (2015). Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth. *Tourism management*, *51*, 174-185.

Finley, J. W., & Davis, C. D. (1999). Manganese deficiency and toxicity: are high or low dietary amounts of manganese cause for concern?. *Biofactors*, *10*(1), 15-24.

Fischler, C. (1988). Food, self and identity. *Social science information*, *27*(2), 275-292.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley.

Flatt, M. J. D., Agimi, M. Y., & Albert, S. M. (2012). Homophily and health behavior in social networks of older adults. *Family & community health*, *35*(4), 312.

Fointiat, V. (2004). “I know what I have to do, but…” When hypocrisy leads to behavioral change. *Social Behavior and Personality: an international journal*, *32*(8), 741-746.

Fox, N., & Ward, K. J. (2008). You are what you eat? Vegetarianism, health and identity. *Social science & medicine*, *66*(12), 2585-2595.

Fraser, G. E., & Shavlik, D. J. (2001). Ten years of life: Is it a matter of choice?. *Archives of internal medicine*, *161*(13), 1645-1652.

Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel Psychology*, *70*(1), 113-165.

Fresán, U., & Sabaté, J. (2019). Vegetarian diets: planetary health and its alignment with human health. *Advances in nutrition*, *10*(Supplement_4), S380-S388.

Fresán, U., Errendal, S., & Craig, W. J. (2020). Influence of the socio-cultural environment and external factors in following plant-based diets. *Sustainability*, *12*(21), 9093.

Fried, C. B., & Aronson, E. (1995). Hypocrisy, misattribution, and dissonance reduction. *Personality and Social Psychology Bulletin*, *21*(9), 925-933.

FONA International. 2019. Plant-Based, Seeds of Change. Part 2: Plant-Based Eating as a Permanent Shift. [ONLINE] Available at : https://www.fona.com/articles/2019/04/plantbased-seeds-of-change-part-2-plantbased-eating-as-a-permanent-shift (accessed 25 July 2022).

Gächter, S., Nosenzo, D., & Sefton, M. (2013). Peer effects in pro-social behavior: Social norms or social preferences?. *Journal of the European Economic Association*, *11*(3), 548-573.

Gawronski, B. (2012). Back to the future of dissonance theory: Cognitive consistency as a core motive. *Social cognition*, *30*(6), 652-668.

Geels, F.W. (2006). Multi-level Perspective on System Innovation. In Olsthoorn, A. and Wieczorek, A.J. (eds), *Understanding Industrial Transformation: Views fromDifferent Disciplines*. Dordrecht: Springer.

Giacalone, D., Clausen, M. P., & Jaeger, S. R. (2022). Understanding barriers to consumption of plant-based foods and beverages: Insights from sensory and consumer science. *Current Opinion in Food Science*, 100919.

Gibson, R. S. (1994). Content and bioavailability of trace elements in vegetarian diets. *The American journal of clinical nutrition*, *59*(5), 1223S-1232S.

Gioia, D. A. (2004). A renaissance self: Prompting personal and professional revitalization. *Renewing research practice: Scholars' journeys*, 97-114.

Glaser, B. G., & Strauss, A. L. (2017). *Discovery of grounded theory: Strategies for qualitative research*. Routledge.

Graça, J. (2016). Towards an integrated approach to food behaviour: Meat consumption and substitution, from context to consumers. *Psychology, Community and Health, 5*(2), 152-169.

Graça, J., Calheiros, M. M., & Oliveira, A. (2014). Moral disengagement in harmful but cherished food practices? An exploration into the case of meat. *Journal of agricultural and environmental ethics*, *27*(5), 749-765.

Graça, J., Godinho, C. A., & Truninger, M. (2019). Reducing meat consumption and following plant-based diets: Current evidence and future directions to inform integrated transitions. *Trends in Food Science & Technology*, *91*, 380-390.

Greenberg, J., Dubé, E., & Driedger, M. (2017). Vaccine hesitancy: in search of the risk communication comfort zone. *PLoS currents*, *9*.

Harmon-Jones, E., Amodio, D. M., & Harmon-Jones, C. (2009). Action-based model of dissonance: A review, integration, and expansion of conceptions of cognitive conflict. *Advances in experimental social psychology*, *41*, 119-166.

Hartmann, C., & Siegrist, M. (2017). Consumer perception and behaviour regarding sustainable protein consumption: A systematic review. *Trends in Food Science & Technology*, *61*, 11-25.

Hartshorne, C., & Weiss, P. (1935). Collected Papers of Charles Sanders Peirce. Vol. V, Pragmatism and Pragmaticism. *Mind*, *44*(174).

Hassoun, A., Boukid, F., Pasqualone, A., Bryant, C., Garcia-Garcia, G., Parra-López, C., Jagtap, S., Trollman, H., Cropotova, J., & Barba, F. (2022). Emerging trends in the agri-food sector: Digitalisation and shift to plant-based diets. *Current Research in Food Science, 5*, 2261-2269.

Heller, M.C., & Keoleian, G.A. (2015). Greenhouse Gas Emission Estimates of U.S. Dietary Choices and Food Loss. *Journal of Industrial Ecology*, 19: 391 401.

Higgs, S. (2015). Social norms and their influence on eating behaviours. *Appetite*, *86*, 38-44.

Hölsgens, R. (2022). Introducing the adopter perspective in social innovation research. *Innovation: The European Journal of Social Science Research*, *35*(2), 245-264.

Hopwood, C. J., Rosenfeld, D., Chen, S., & Bleidorn, W. (2021). An investigation of plant-based dietary motives among vegetarians and omnivores. *Collabra: Psychology*, *7*(1).

Hoste, R. (2020). España: líder en costes de producción en producción porcina en Europa. Euroganadería. [ONLINE] Available at: https://www.euroganaderia.eu/ganaderia/reportajes/espana-lider-en-costes-de-produccion-en-produccion-porcina-en-

europa_56_6_1161_0_1_in.html#:~:text=Espa%C3%B1a%3A%20l%C3%ADder%20en%20costes%20de%20producci%C3%B3n%20en%20producci%C3%B3n%20porcina%20en%20Europa,-Robert%20Hoste%2C%20economista&text=Los%20costes%20de%20producci%C3%B3n%20porcina,e%20Italia%20(v%C3%A9ase%20gr%C3%A1fica)(accessed 17 November 2022).

Howaldt, J., & Schwarz, M. (2014). *Soziale Innovation im Fokus: Skizze eines gesellschaftstheoretisch inspirierten Forschungskonzepts*. transcript Verlag.

Howaldt, J., Kopp, R., & Schwarz, M. (2015). Social innovations as drivers of social change—Exploring Tarde's contribution to social innovation theory building. In *New frontiers in social innovation research* (pp. 29-51). Palgrave Macmillan, London.

IATP and Changing Markets Foundation. (2022). Emissions Impossible: Methane Edition. [ONLINE] Available at: https://www.iatp.org/emissions-impossible-methane-edition (accessed 17 November 2022).

Ishaq, A., Irfan, S., Sameen, A., & Khalid, N. (2022). Plant-based meat analogs: A review with reference to formulation and gastrointestinal fate. *Current Research in Food Science*.

Jarzabkowski, P., Spee, A. P., & Smets, M. (2013). Material artifacts: Practices for doing strategy with 'stuff'. *European management journal*, *31*(1), 41-54.

Jenson, J., & Harrison, D. (2013) *Social Innovation Research in the European Union. Approaches, Findings and Future Directions. Policy Review.* Luxembourg: European Union.

Jetter, K. M., & Cassady, D. L. (2006). The availability and cost of healthier food alternatives. *American journal of preventive medicine*, *30*(1), 38-44.

Ji, M., Wong, I. A., Eves, A., & Scarles, C. (2016). Food-related personality traits and the moderating role of novelty-seeking in food satisfaction and travel outcomes. *Tourism Management*, *57*, 387-396.

Kabir, A., Miah, S., & Islam, A. (2018). Factors influencing eating behavior and dietary intake among resident students in a public university in Bangladesh: A qualitative study. *PloS one*, *13*(6), e0198801.

Kahleova, H., Levin, S., & Barnard, N. (2017). Cardio-metabolic benefits of plant-based diets. *Nutrients*, *9*(8), 848.

Kahleova, H., & Barnard, N. D. (2022). Can a plant-based diet help mitigate Covid-19?.*European journal of clinical nutrition*, 1-2.

Kateman, B. (2022). *Meat Me Halfway: How Changing the Way We Eat Can Improve Our Lives and Save Our Planet*. Rowman & Littlefield.

Keller, F. (2009). Das endgültige soziale Rom. Tarde, Saussure und darüber hinaus. In Borch, C. and Stäheli, U. (eds), *Soziologie der Nachahmung und desBegehrens. Materialien zu Gabriel Tarde*. Frankfurt a.M.: Suhrkamp.

Kim, H., Caulfield, L. E., Garcia-Larsen, V., Steffen, L. M., Coresh, J., & Rebholz, C. M. (2019). Plant-based diets are associated with a lower risk of incident cardiovascular disease, cardiovascular disease mortality, and all-cause mortality in a general population of middle-aged adults. *Journal of the American Heart Association*, *8*(16), e012865.

Kim, H., Rebholz, C. M., Hegde, S., LaFiura, C., Raghavan, M., Lloyd, J. F., ... & Seidelmann, S. B. (2021). Plant-based diets, pescatarian diets and COVID-19 severity: a population-based case–control study in six countries. *BMJ Nutrition, Prevention & Health*, *4*(1), 257.

Kleijnen, M., Lee, N., & Wetzels, M. (2009). An exploration of consumer resistance to innovation and its antecedents. *Journal of economic psychology*, *30*(3), 344-357.

Kocamaz, İ., & Karadeniz, M. (2020). An Investigation of Post-Purchase Cognitive Dissonance and Its Determinants in Online Shopping. *Yaşar Üniversitesi E-Dergisi*, *15*, 307-315.

Köster, E. P. (2009). Diversity in the determinants of food choice: A psychological perspective. *Food quality and preference*, *20*(2), 70-82.

Kraatz, M. S. (1998). Learning by association? Interorganizational networks and adaptation to environmental change. *Academy of management journal, 41*(6), 621-643.

Krlev, G., Bund, E., & Mildenberger, G. (2014). Measuring what matters—Indicators of social innovativeness on the national level. *Information Systems Management*, *31*(3), 200-224.

Kymäläinen, T., Seisto, A., & Malila, R. (2021). Generation Z food waste, diet and consumption habits: A Finnish social design study with future consumers. *Sustainability*, *13*(4), 2124.

Lai, V. S., Lai, F., & Lowry, P. B. (2016). Technology evaluation and imitation: do they have differential or dichotomous effects on ERP adoption and assimilation in China?. *Journal of Management Information Systems*, *33*(4), 1209-1251.

Laila, A., Topakas, N., Farr, E., Haines, J., Ma, D. W., Newton, G., & Buchholz, A. C. (2021). Barriers and facilitators of household provision of dairy and plant-based dairy alternatives in families with preschool-age children. *Public Health Nutrition*, 1-13.

Langley, A. N. N., Smallman, C., Tsoukas, H., & Van de Ven, A. H. (2013). Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Academy of management journal*, *56*(1), 1-13.

Lantern. (2019). The Green Revolution: Entendiendo la expansión de la ola “veggie”. *Lantern Papers*.

Larsson, C. L., Rönnlund, U., Johansson, G., & Dahlgren, L. (2003). Veganism as status passage: The process of becoming a vegan among youths in Sweden. *Appetite, 41*(1), 61-67.

Lazarsfeld, P. F., & Merton, R. K. (1954). Friendship as a social process: A substantive and methodological analysis. In *Freedom and control in modern society*, *18*(1), 18-66.

Lazim, N. A. M., Sulaiman, Z., Zakuan, N., Mas'od, A., Chin, T. A., & Awang, S. R. (2020, March). Measuring post-purchase regret and impulse buying in online shopping experience from cognitive dissonance theory perspective. In *2020 6th International Conference on Information Management (ICIM)* (pp. 7-13). IEEE.

Lea, E., Crawford, D. & Worsley, A. (2006). Public views of the benefits and barriers to the consumption of a plant-based diet. *European Journal of Clinical Nutrition*, *60*, 828–837.

Lean Startup Co. (2021). [ONLINE] Available at: https://leanstartup.co/what-makes-lean-impact-harder-top-10-challenges-for-social-innovation/ (accessed 14 May 2022).

Lee, S. G., Trimi, S., Byun, W. K., & Kang, M. (2011). Innovation and imitation effects in Metaverse service adoption. *Service Business*, *5*(2), 155-172.

Lee, S. G., Trimi, S., & Kim, C. (2013). Innovation and imitation effects' dynamics in technology adoption. *Industrial Management & Data Systems*.

Leng, G., Adan, R. A., Belot, M., Brunstrom, J. M., de Graaf, K., Dickson, S. L., ... & Smeets, P. A. (2017). The determinants of food choice. *Proceedings of the Nutrition Society*, *76*(3), 316-327

Leonardi, P. M. (2012). Materiality, sociomateriality, and socio-technical systems: What do these terms mean? How are they different? Do we need them. *Materiality and organizing: Social interaction in a technological world*, *25*(10), 1093.

Leonardi, P. M., & Barley, S. R. (2010). What's under construction here? Social action, materiality, and power in constructivist studies of technology and organizing. *Academy of Management Annals*, *4*(1), 1-51.

Lettice, F., & Parekh, M. (2010). The social innovation process: themes, challenges and implications for practice. *International Journal of Technology Management*, *51*(1), 139-158.

Leturque, A., Brot-Laroche, E., & Le Gall, M. (2012). Carbohydrate intake. *Progress in Molecular Biology and Translational Science*, *108*, 113-127.

Li, H., Zeng, X., Wang, Y., Zhang, Z., Zhu, Y., Li, X., ... & Yang, W. (2022). A prospective study of healthful and unhealthful plant-based diet and risk of overall and cause-specific mortality. *European Journal of Nutrition*, *61*(1), 387-398.

Lipscomb, M. (2012). Abductive reasoning and qualitative research. *Nursing philosophy*, *13*(4), 244-256.

Liu, B. S. C., Madhavan, R., & Sudharshan, D. (2005). DiffuNET: The impact of network structure on diffusion of innovation. *European Journal of Innovation Management*, *8*(2), 240-262.

Loeb, S., Fu, B. C., Bauer, S. R., Pernar, C. H., Chan, J. M., Van Blarigan, E. L., ... & Mucci, L. A. (2022). Association of plant-based diet index with prostate cancer risk. *The American Journal of Clinical Nutrition*, *115*(3), 662-670.

Loughnan, S., Bastian, B., & Haslam, N. (2014). The psychology of eating animals. *Current Directions in Psychological Science*, *23*(2), 104-108.

Lubelcová, G. (2012). Social innovations in the context of modernization. *Sociológia-Slovak Sociological Review*, *44*(3), 291-313.

MAPAMA. (2017). Guía de las mejores técnicas disponibles para reducir el impacto ambiental de la ganadería. Ministerio de Agricultura y Pesca, Alimentación y Medio

Ambiente. [ONLINE] Available at: https://www.agro-alimentarias.coop/ficheros/doc/05547.pdf (accessed 17 November 2022).

Markowski, K. L., & Roxburgh, S. (2019). “If I became a vegan, my family and friends would hate me:” Anticipating vegan stigma as a barrier to plant-based diets. *Appetite*, *135*, 1-9.

Martin, M., & Brandão, M. (2017). Evaluating the Environmental Consequences of Swedish Food Consumption and Dietary Choices. *Sustainability* 9, no. 12: 2227.

Masson-Delmotte, V., Zhai, P., Pörtner, H. O., Roberts, D., Skea, J., Shukla, P. R., ... & Waterfield, T. (2018). Global warming of 1.5ºC: *An IPCC Special Report on the impacts of global warming of* 1.5ºC above Pre-industrial Levels in Context of Strengthening Response to Climate Change, Sustainable Development, and Efforts to Eradicate Poverty. Cambridge University Press.

Mathison, S. (2005). Cross-case analysis. *Encyclopedia of evaluation*, 95-96.

McGuigan, N., Makinson, J., & Whiten, A. (2011). From over-imitation to super-copying: Adults imitate causally irrelevant aspects of tool use with higher fidelity than young children. *British Journal of Psychology*, *102*(1), 1-18.

McGowan, K., & Westley, F. (2015). At the root of change: The history of social innovation. *New frontiers in social innovation research*, 52-68.

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual review of sociology*, 415-444.

Meiselman, H. L., & Bell, R. (2003). Eating habits. In *Encyclopedia of Food Sciences and Nutrition* (pp. 1963-1968). Elsevier Academic Press. Second edition.

Merino, J., Joshi, A. D., Nguyen, L. H., Leeming, E. R., Mazidi, M., Drew, D. A., ... & Chan, A. T. (2021). Diet quality and risk and severity of COVID-19: a prospective cohort study. *Gut*, *70*(11), 2096-2104.

Merriam, S. B. (1988). *Case study research in education: A qualitative approach*. San Francisco: Jossey Bass.

Michie, S., Atkins, L., & West, R. (2014). *The behaviour change wheel*. *A guide to designing interventions. Great Britain: Silverback Publishing*, *1003*, 1010.

Moran, D., & Wall, E. (2011). Livestock production and greenhouse gas emissions: Defining the problem and specifying solutions. *Animal Frontiers*, *1*(1), 19-25.

Moebius, S. (2009). Imitation, differentielle Wiederholung und Iterabilität. Über eine Affinität zwischen Poststrukturalistischen Sozialwissenschaften und den “sozialen Gesetzen” von Gabriel Tarde. In Borch, C. and Stäheli, U. (eds), *Soziologie derNachahmung und des Begehrens. Materialien zu Gabriel Tarde*. Frankfurt a.M.: Suhrkamp.

Morris, C., Kirwan, J., & Lally, R. (2014). Less meat initiatives: An initial exploration of a diet-focused social innovation in transitions to a more sustainable regime of meat provisioning. *International Journal of Sociology of Agriculture and Food*, *21*(2), 189-208.

Morris, M. C., Tangney, C. C., Wang, Y., Sacks, F. M., Bennett, D. A., & Aggarwal, N. T. (2015). MIND diet associated with reduced incidence of Alzheimer's disease. *Alzheimer's & Dementia*, *11*(9), 1007-1014.

Mumford, M. D., & Moertl, P. (2003). Cases of social innovation: Lessons from two innovations in the 20th century. *Creativity research journal*, *15*(2-3), 261-266.

Myers, M.D. (2009). *Qualitative Research in Business & Management*. Sage Publications, Thousand Oaks, CA.

Nargundkar, R. (2003). *Marketing research-Text & cases 2E*. Tata McGraw-Hill Education.

Newby, P. K. (2006). Examining energy density: comments on diet quality, dietary advice, and the cost of healthy eating. *Journal of the American Dietetic Association*, *106*(8), 1166-9.

Newby, P. K. (2009). Plant foods and plant-based diets: protective against childhood obesity?. *The American journal of clinical nutrition*, *89*(5), 1572S-1587S.

Newby, P. K., & Ulm, J. W. (2003). The future of food: how science, technology, and consumerism shape what we eat. *Vision: Essays on our Collective Future*, 3-23.

Nordqvist, M., Wennberg, K., Bau, M., & Hellerstedt, K. (2013). An entrepreneurial process perspective on succession in family firms. *Small Business Economics*, *40*(4), 1087-1122.

Oganisjana, K., Svirina, A., Surikova, S., Grīnberga-Zālīte, G., & Kozlovskis, K. (2017). Engaging universities in social innovation research for understanding sustainability issues. *Entrepreneurship and Sustainability Issues*, *5*(1), 9-22.

Ogburn, W. F. (1969). *Kultur und sozialer Wandel. Ausgewählte Schriften. Herausgegeben und eingeleitet von Otis Dudley Duncan. Soziologische Texte, 56.*Neuwied, Berlin: Luchterhand.

Oltenacu, P. A., & Algers, B. (2005). Selection for increased production and the welfare of dairy cows: are new breeding goals needed?. *AMBIO: A Journal of the Human Environment*, *34*(4), 311-315.

Orlich, M. J., Singh, P. N., Sabaté, J., Jaceldo-Siegl, K., Fan, J., Knutsen, S., ... & Fraser, G. E. (2013). Vegetarian dietary patterns and mortality in Adventist Health Study 2. *JAMA internal medicine*, *173*(13), 1230-1238.

Orlikowski, W. J. (1992). The duality of technology: Rethinking the concept of technology in organizations. *Organization science*, *3*(3), 398-427.

Orlikowski, W. J. (2007). Sociomaterial practices: Exploring technology at work. *Organization studies*, *28*(9), 1435-1448.

Orlikowski, W. J., & Baroudi, J. J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information systems research*, *2*(1), 1-28.

Ornish, D., Scherwitz, L. W., Billings, J. H., Gould, K. L., Merritt, T. A., Sparler, S., ... & Brand, R. J. (1998). Intensive lifestyle changes for reversal of coronary heart disease. *Jama*, *280*(23), 2001-2007.

Ornish, D. (2002). Statins and the soul of medicine. *American Journal of Cardiology*, *89*(11), 1286-1290.

Ortt, J. R. (1998). Videotelephony in the consumer market. Delft University of Technology.

Pachucki, M. C. (2014). Food choices and peer relationships: Examining 'a taste for necessity in a network context. *Sociologie et sociétés*, *46*(2), 229.

Pachucki, M. A., Jacques, P. F., & Christakis, N. A. (2011). Social network concordance in food choice among spouses, friends, and siblings. *American journal of public health*, *101*(11), 2170-2177.

Parra-Lopez, C., De-Haro-Giménez, T., & Calatrava-Requena, J. (2007). Diffusion and adoption of organic farming in the southern Spanish olive groves. *Journal of Sustainable Agriculture*, *30*(1), 105-151.

Payne, C. L., Scarborough, P., & Cobiac, L. (2016). Do low-carbon-emission diets lead to higher nutritional quality and positive health outcomes? A systematic review of the literature. *Public health nutrition*, *19*(14), 2654-2661.

Pedreño Cánovas, A., Giménez Casalduero, M., & Ramirez Melgarejo, A. J. (2021). Cerdos, acumulación y producción de naturaleza barata. *Relaciones Internacionales*, (47), 143-162.

Perez-Cueto, F. J. (2020). Sustainability, health and consumer insights for plant-based food innovation. *International Journal of Food Design*, *5*(1-2), 139-148.

Phills, J. A., Deiglmeier, K., & Miller, D. T. (2008). Rediscovering social innovation. *Stanford Social Innovation Review, 6*(4), 34-43.

Pictet, J. (1979). The fundamental principles of the Red Cross. *International Review (1961-1997)*, *19*(210), 130-149.

Pliner, P., &Hobden, K. (1992). Development of a scale to measure the trait of food neophobia in humans. *Appetite*, *19*(2), 105-120.

Ploll, U., Petritz, H., & Stern, T. (2020). A social innovation perspective on dietary transitions: Diffusion of vegetarianism and veganism in Austria. *Environmental Innovation and Societal Transitions*, *36*, 164-176.

Ploll, U., & Stern, T. (2020). From diet to behaviour: exploring environmental-and animal-conscious behaviour among Austrian vegetarians and vegans. *British food journal*, *122*(11), 3249-3265.

Poore, J., & Nemecek, T. (2018). Reducing food's environmental impacts through producers and consumers. *Science*, *360*(6392), 987-992.

Poulain, M., Pes, G. M., Grasland, C., Carru, C., Ferrucci, L., Baggio, G., ... & Deiana, L. (2004). Identification of a geographic area characterized by extreme longevity in the Sardinia island: the AKEA study. *Experimental gerontology*, *39*(9), 1423-1429.

Proudfoot, C., Carlson, D. F., Huddart, R., Long, C. R., Pryor, J. H., King, T. J., ... & Fahrenkrug, S. C. (2015). Genome edited sheep and cattle. *Transgenic research*, *24*(1), 147-153.

Rabadjieva, M., & Butzin, A. (2020). Emergence and diffusion of social innovation through practice fields. *European Planning Studies*, 28*(5)*, 925-940.

Ram, S., & Sheth, J. N. (1989). Consumer resistance to innovations: the marketing problem and its solutions. *Journal of consumer marketing*, *6*(2), 5-14.

Ramey, M. M., Shields, G. S., &Yonelinas, A. P. (2022). Markers of a plant-based diet relate to memory and executive function in older adults. *Nutritional neuroscience*, *25*(2), 276-285.

Reipurth, M. F., Hørby, L., Gregersen, C. G., Bonke, A., & Cueto, F. J. P. (2019). Barriers and facilitators towards adopting a more plant-based diet in a sample of Danish consumers. *Food quality and preference, 73*, 288-292.

Reuber, H., & Muschalla, B. (2022). Dietary identity and embitterment among vegans, vegetarians, and omnivores. *Health Psychology and Behavioral Medicine*, *10*(1), 1038-1055.

Reuter, T., Ziegelmann, J. P., Wiedemann, A. U., & Lippke, S. (2008). Dietary planning as a mediator of the intention–behavior relation: An experimental-causal-chain design. *Applied Psychology*, *57*, 194-207.

Rice, P. L., & Ezzy, D. (1999). Qualitative Research Methods: A Health Focus. South Melbourne (Australia): Oxford University Press.

Riverola, C., Ortt, R., Miralles, F., & Dedehayir, O. (2017). When do early adopters share or scare? A conceptual model. In *ISPIM Conference Proceedings* (pp. 1-12). The International Society for Professional Innovation Management (ISPIM).

Rogers, E. M. (1962). Diffusion of innovations. New York, *NY: The Free Press.*

Rogers, E. M. (1983). Diffusion of Innovations. New York, *NY: The Free Press*.

Rogers, E. M. (2003). Diffusion of Innovations (5th ed.). New York, *NY: The Free Press.*

Rogers, E. M., & Bhowmik, D. K. (1970). Homophily-heterophily: Relational concepts for communication research. *Public opinion quarterly*, *34*(4), 523-538.

Rosell, M., Appleby, P., Spencer, E., & Key, T. (2006). Weight gain over 5 years in 21 966 meat-eating, fish-eating, vegetarian, and vegan men and women in EPIC-Oxford. *International journal of obesity*, *30*(9), 1389-1396.

Rosenfeld, D. L. (2018). The psychology of vegetarianism: Recent advances and future directions. *Appetite*, *131*, 125-138.

Rothgerber, H. (2020). Meat-related cognitive dissonance: A conceptual framework for understanding how meat eaters reduce negative arousal from eating animals. *Appetite*, *146*, 104511.

Rothgerber, H., & Rosenfeld, D. L. (2021). Meat-related cognitive dissonance: The social psychology of eating animals. *Social and Personality Psychology Compass*, *15*(5), e12592.

Rowley, J. (2012). Conducting research interviews. *Management research review*, *35*(3/4), 260-271.

Ruby, M.B. (2012). Vegetarianism. A blossoming field of study. *Appetite*, 58(1), 141-150.

Ruby, M. B., Heine, S. J., Kamble, S., Cheng, T. K., & Waddar, M. (2013). Compassion and contamination. Cultural differences in vegetarianism. *Appetite*, *71*, 340-348.

Russell, C. G., Worsley, A., & Campbell, K. J. (2015). Strategies used by parents to influence their children's food preferences. *Appetite*, *90*, 123-130.

Sabaté, J. & Soret, S. (2014). Sustainability of plant-based diets: back to the future. *The American Journal of Clinical Nutrition*, Volume 100, Issue suppl_1, Pages 476S–482S.

Salathé, M., Vu, D. Q., Khandelwal, S., & Hunter, D. R. (2013). The dynamics of health behavior sentiments on a large online social network. *EPJ Data Science*, *2*(1), 1-12.

Sánchez-Villegas, A., & Martínez-Lapiscina, E. H. (2018). A healthy diet for your heart and your brain. *The Prevention of Cardiovascular Disease Through the Mediterranean Diet*.

Sandhusen, R. L. (2000). *Marketing Básico-Série Essencial*. Saraiva Educação SA.

Satija, A., & Hu, F. B. (2018). Plant-based diets and cardiovascular health. *Trends in cardiovascular medicine*, *28*(7), 437-441.

Schein, E. H., & Bennis, W. G. (1965). *Personal and organizational change through group methods: The laboratory approach*. New York, NY: Wiley.

Schenk, P., Rössel, J., & Scholz, M. (2018). Motivations and constraints of meat avoidance. *Sustainability*, 10(11), 3858.

Schwerk, A. (2015). Strategische Einbettung von CSR in das Unternehmen. *Corporate Social Responsibility: Verantwortungsvolle Unternehmensführung in Theorie und Praxis*, 519-542.

Scott, S. V., & Orlikowski, W. J. (2013). Sociomateriality—taking the wrong turning? A response to Mutch. *Information and Organization*, *23*(2), 77-80.

Sentience Institute. (2019). Global Farmed & Factory Farmed Animal Estimates. [ONLINE] Available at: https://www.sentienceinstitute.org/global-animal-farming-estimates (accessed 17 November 2022).

Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. Sage.

Singer, P. (1995). *Animal liberation*. New York, NY: *Random House*.

Singh, K. (2007). *Quantitative social research methods*. Sage.

Staal, M. A. (2004). Stress, cognition, and human performance: A literature review and conceptual framework. *National Aeronautics and Space Administration,* 212824.

Stake, R. (1995). *The art of case research*. Thousand Oaks, CA: Sage.

Starks, H., & Brown Trinidad, S. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative health research*, *17*(10), 1372-1380.

STATISTA. (2022). Number of cattle worldwide from 2012 to 2022 (in million head). [ONLINE] Available at: https://www.statista.com/statistics/263979/global-cattle-population-since-1990/ (accessed 17 November 2022).

Steinfeld, H., Gerber, P., Wassenaar, T. D., Castel, V., Rosales, M., Rosales, M., & de Haan, C. (2006). *Livestock's long shadow: environmental issues and options*. Food & Agriculture Org.

Steptoe, A., Pollard, T. M., & Wardle, J. (1995). Development of a measure of the motives underlying the selection of food: the food choice questionnaire. *Appetite*, *25*(3), 267-284.

Stiles, B. (1998). Vegetarianism: Identity and experiences as factors in food selection. *Free Inquiry in Creative Sociology*, *26*(2), 213-226.

Stoll-Kleemann, S., & Schmidt, U. J. (2017). Reducing meat consumption in developed and transition countries to counter climate change and biodiversity loss: a review of influence factors. *Regional Environmental Change*, *17*(5), 1261-1277.

Storz, M.A. (2022). What makes a plant-based diet? a review of current concepts and proposal for a standardized plant-based dietary intervention checklist. *European Journal of Clinical Nutrition*, 76, 789–800.

Sun, Z., Scherer, L., Zhang, Q., & Behrens, P. (2022). Adoption of plant-based diets across Europe can improve food resilience against the Russia–Ukraine conflict. *Nature Food*, 1-6.

Sutton, J., & Austin, Z. (2015). Qualitative research: Data collection, analysis, and management. *The Canadian journal of hospital pharmacy, 68*(3), p.226.

Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: A theory of delinquency. American Sociological Review, 22, 664–670.

Taherdoost, H. (2018). A review of technology acceptance and adoption models and theories. *Procedia manufacturing*, *22*, 960-967.

Tarde, G. (1903). *The Laws of Imitation.* H. Holt.

Tarde, G. (2009a) *Die sozialen Gesetze. Skizze einer Soziologie* (1899). Marburg: Metropolis.

Tarde, G. (2009b) *Die Gesetze der Nachahmung.* Frankfurt a.M.: Suhrkamp.

Tarde, G. (2009c). *Monadologie und Soziologie.* Frankfurt a.M.: Suhrkamp.

Tavory, I., & Timmermans, S. (2014). *Abductive analysis: Theorizing qualitative research*. University of Chicago Press.

Terstriep, J., & Pelka, B. (2016). Mapping Social Innovation Maps–The State of Research Practice across Europe. *European Public and Social Innovation Review.*

Theurl, M. C., Lauk, C., Kalt, G., Mayer, A., Kaltenegger, K., Morais, T. G., ... & Haberl, H. (2020). Food systems in a zero-deforestation world: Dietary change is more important than intensification for climate targets in 2050. *Science of the Total Environment*, *735*, 139353.

The Food Institute. (2020). Gen Z's Influential Food Preferences. [ONLINE] Available at: https://foodinstitute.com/focus/gen-z-preferences/ (accessed 10 August 2022).

Tilman, D., & Clark, M. (2014). Global diets link environmental sustainability and human health. *Nature*, *515*(7528), 518-522.

Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological theory*, *30*(3), 167-186.

Tonstad, S., Butler, T., Yan, R., & Fraser, G. E. (2009). Type of vegetarian diet, body weight, and prevalence of type 2 diabetes. *Diabetes care*, *32*(5), 791-796.

Tuso, P. J., Ismail, M. H., Ha, B. P., & Bartolotto, C. (2013). Nutritional update for physicians: plant-based diets. *The Permanente journal*, *17*(2), 61–66.

Twine, R. (2018). Materially constituting a sustainable food transition: The case of vegan eating practice. *Sociology*, *52*(1), 166-181.

UN. (2012). Food security and nutrition and sustainable agriculture. [ONLINE] Available at: https://sdgs.un.org/topics/food-security-and-nutrition-and-sustainable-agriculture (accessed 5 July 2022).

UN. (2019). Goal 2: Zero Hunger. [ONLINE] Available at: https://www.un.org/sustainabledevelopment/hunger/ (accessed 4 July 2022).

UN. (2021a). Goal 3: Ensure healthy lives and promote well-being for all at all ages. [ONLINE] Available at: https://www.un.org/sustainabledevelopment/health/ (accessed 4 July 2022).

UN. (2021b). Goal 3: Ensure sustainable consumption and production patterns. [ONLINE] Available at: https://www.un.org/sustainabledevelopment/sustainable-consumption-production/ (accessed 4 July 2022).

UN. (2021c). Goal 13: Take urgent action to combat climate change and its impacts. [ONLINE] Available at: https://www.un.org/sustainabledevelopment/climate-change/ (accessed 4 July 2022).

UN Climate Change Conference. (2022). Sharm el-Sheikh Implementation Plan. [ONLINE] Available at: https://unfccc.int/sites/default/files/resource/cop27_auv_2_cover%20decision.pdf (accessed 21 November 2022).

Unceta, A., Castro-Spila, J., & García Fronti, J. (2016). Social innovation indicators. *Innovation: The European Journal of Social Science Research*, *29*(2), 192-204.

UNEP. (2021). Global Methane Assessment. [ONLINE] Available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/35917/GMA_ES.pdf (accessed 17 November 2022).

Valente, T. W., & Rogers, E. M. (1995). The origins and development of the diffusion of innovations paradigm as an example of scientific growth. *Science communication, 16*(3), 242-273.

Van der Have, R. P., & Rubalcaba, L. (2016). Social innovation research: An emerging area of innovation studies?. *Research Policy*, *45*(9), 1923-1935.

Vila-Henninger, L., Dupuy, C., Van Ingelgom, V., Caprioli, M., Teuber, F., Pennetreau, D., ... & Le Gall, C. (2022). Abductive coding: theory building and qualitative (re) analysis. *Sociological Methods & Research*, 00491241211067508.

Warde, A. (2016). *The practice of eating*. John Wiley & Sons.

White, A. (2009). *From comfort zone to performance management: Understanding Development and Performance*. White & MacLean Publishing.

Wilcox, B. J., Suzuki, M., Donlon, T. A., He, Q., Grove, J. S., Masaki, K. H., & Wilcox, D. C. (2013). Optimizing Human Health Span and Life Span: Insights From Okinawa and Hawaii. *Annual Review of Gerontology & Geriatrics*, *33*(1), 135.

Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., ... & Murray, C. J. (2019). Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*, *393*(10170), 447-492.

Wittmayer, J. M., Avelino, F., van Steenbergen, F., & Loorbach, D. (2017). Actor roles in transition: Insights from sociological perspectives. *Environmental Innovation and Societal Transitions*, *24*, 45-56.

WOAH. (2022). Terrestrial Animal Health Code. [ONLINE] Available at: https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-welfare/ (accessed 17 November 2022).

Xu, X., Sharma, P., Shu, S., Lin, T. S., Ciais, P., Tubiello, F. N., ... & Jain, A. K. (2021). Global Greenhouse Gas Emissions from Plant-and Animal-Based Food. *Nature Food, 2*(9), 724–732.

Yunus, M. (1999). The grameen bank. *Scientific American*, *281*(5), 114-119.

Zapf, W. (1994). Sozialer Wandel. In *Wolfgang Zapf. Modernisierung, Wohlfahrtsentwicklung und Transformation: soziologische Aufsätze 1987 bis 1994* (pp. 11-22). Berlin: Edition Sigma.

Zhang, Y., Fang, Y., Wei, K. K., & Chen, H. (2010). Exploring the role of psychological safety in promoting the intention to continue sharing knowledge in virtual communities. *International Journal of Information Management*, *30*(5), 425-436.

Appendix 1: Glossary

This appendix includes the definition of terms that are specific to this doctoral research.

Acceptance

Personal action of consenting to integrate the use of a product or behaviour because it is considered appropriate or valid.

Adopter

A person or organisation that chooses to take up, pursue or employ a product, behaviour, service, or idea.

Adopter's perspective

Adopter's point of view on innovation or social innovation.

Adoption

A process by which an individual becomes a user of a product, service, behaviour, or idea. This process enables the individual to employ or make use of and become a regular user of the product, service, behaviour, or idea.

Adoption Attitude

Predisposition and/or tendency to adopt.

Attitude

An individual's disposition to behave or act. It is a function of the person's salient behavioural beliefs.

Cognition

The individual's ability to know through perception and the organs of the brain.

Cognitive Dissonance

An unpleasant psychological state resulting from an inconsistency between two or more elements of the cognitive system. This state creates a motivational drive in the individual to reduce the dissonance.

Cognitive Propensity

Natural inclination, tendency, or disposition to know in a balanced way.

Comfort Zone

Psychological state in which the individual feels confident, without anxiety, to achieve a constant level of performance.

Communication

Verbal (oral and/or written) or non-verbal transmission of information, i.e., an exchange of ideas, knowledge, feelings, and experiences for social and interpersonal purposes.

Contagion Process

Spontaneous spread of a behaviour, emotion, belief or innovation in a group or social network.

Dietary patterns

Quantities, proportions, variety or combination of different foods, beverages, and nutrients in diets, and the frequency with which they are usually consumed.

Diffusion

Process by which knowledge, innovation, language, and cultural characteristics are spread, disseminated, or distributed between individuals (within or between cultures or communities).

Diffusion Of Innovation (DOI)

Sociological theory that seeks to explain how, why and at what speed technology and new ideas are transmitted in a social system. This theory was developed in 1962 by Everett Rogers.

Dissemination

Dissemination, unlike dissemination, is an active process by which a given message is transmitted, valuing the heterogeneity of the target audiences, and trying to adapt it, as far as possible, to the characteristics of each one of them, to get the most out of the multiple and diverse communication channels.

Homophily

Natural tendency to establish links with similar individuals, either by status (age, gender, etc.) or by common interests (hobbies, ideas, etc.).

Imitation

Process of copying the behaviour of another individual or group, intentionally or unintentionally.

Innovation

Innovation refers to something that the individual perceives as new, which can be tangible (e.g., a hydrogen-powered vehicle) or intangible (e.g., a way of thinking).

Innovation Diffusion

Gradual spread of an innovation among the population or segments of the population.

Intention

Something the individual wants and plans to do. Determined by attitudes, subjective norms, and perceived behavioural control.

Intimacy

Familiarity or closeness with another individual or group of individuals.

Motivation

Encouragement that pushes the individual to act or perform an action.

Perceived Behavioural Control (PBC)

An individual's expectation that the performance of the behaviour is under his or her control. Based on beliefs about access to the resources and opportunities needed to perform the behaviour successfully.

Plant-Based Diet

A diet in which most of the foods consumed are fruits and vegetables, as well as nuts, seeds, whole grains, and legumes.

Potential Adopter

Individual who in the near future may be interested in making regular use of a product or integrating a new behaviour.

Prior Adopter

An individual who has been using a product regularly for some time or with a behaviour that is integrated into their daily routine.

Process Perspective

A theory that explains how a process changes and develops over time, considering inputs, intermediate steps, and outputs that interface with other processes.

Propensity

Natural inclination or disposition towards a thing or action.

Social Innovation

Products, services, behaviours, or ideas that address unmet needs in a more satisfying way so that they meet social needs, create social relationships, and form new collaborations.

Social Network (from an individual perspective)

A relatively organised set of relationships that the individual has with other individuals. This set has its own ways of communicating, patterns of liking and disliking, and considers the strength of interpersonal connections.

Social Network (from a group perspective)

A relatively organised set of individuals that share some relationships among them. This group has its own ways of communicating, patterns of liking and disliking, and considers the strength of interpersonal connections.

Social Norms

The set of rules that people in a community must follow to live together better to which human behaviour, tasks and activities must conform. Set or system of norms, rules or duties that regulate the actions of individuals among themselves.

Socio-Material Approach

Theory that examines the social and material aspects of technology.

Socio-Psychology

The study of the mind and behaviour of the individual, considering his or her personality, interpersonal relationships, and group behaviour.

Socio-Technical Approach

Theory in which its central part is the idea that the design and performance of any organisational system can only be understood and improved if both the technical and social aspects are brought together and treated as interdependent parts of a complex system.

Sustainable Development Goals (SDGs)

Seventeen interconnected global goals designed to be a "plan for a better and sustainable future for all". They were established in 2015 by the United Nations and are intended to be achieved by 2030.

Theory of Planned Behaviour (TPB)

Theory based on Reasoned Action Theory and that incorporates the Perceived Behavioural Control variable.

Theory of Reasoned Action (TRA)

A general model of the relationships between attitudes, beliefs, social pressure, intentions, and behaviour that aims to predict human behaviour.

Subjective Norms

Role of normative beliefs. Perceptions of others' specific preferences about whether to perform a behaviour.

Use of an Innovation

Action whereby a new product is used on a regular basis, or a behaviour is integrated.

Appendix 2: Plant-based Diets (PBDs)

The following sub-chapters present an overview of the relationship between PBDs and SDGs, as well as their contribution to animal welfare and to reducing pollution. Furthermore, at the micro level, the connection of PBDs and human health is presented.

2.1. Introduction to the SDGs

The United Nations (UN) Member States adopted the 2030 Agenda for Sustainable Development in 2015. Therefore, the SDGs are the key point to give continuity to the Agenda. There are 17 SDGs which cover main and different topics. Reducing hunger and changing dietary patterns can contribute to the achievement of some SDGs such as "Zero Hunger" (SDG2), "Good Health and Well-being" (SDG3) or "Climate Change" (SDG13) (Martin and Brandão, 2017; UN, 2012).

According to UN (2019) data, on the one hand, close to 750 million people are exposed to severe levels of disruption of food intake or eating patterns because of lack of money or other resources (food insecurity). On the other hand, it is estimated that around 2 billion people do not have regular access to safe, nutritious, and sufficient food. Considering that more than 690 million people are hungry, and it is estimated that 2 additional billion people will be hungry by 2050, it is necessary to increase agricultural productivity and sustainable food production to alleviate or reduce hunger and its consequences.

The Food and Agriculture Organization (FAO) (2017) stated that agriculture remains much less capital intensive in low- and middle-income countries. They invest in agriculture as much, in absolute terms, as high-income countries, about US$190 billion in both groups of countries. In the period from 1991 to 2014, levels of agricultural investment increased in all groups of countries, albeit at different rates. ‘Business-as-usual’ investment patterns would leave hundreds of million people undernourished to 2030 and there would be no improvement in income growth. Therefore, additional investments required to end hunger by 2030 would amount to US$265 billion a year.

These investments would be needed for both social protection programmes (US$67 billion), which would improve access to food for vulnerable populations, and for investment in pro-poor productive activities (US$198 billion) that provide low-income earners with structural opportunities to earn, save, invest, and improve their livelihoods (FAO, IFAD, and WFP, 2015).

An individual's food environment can impact on their choice of products to consume, with the availability and price of these products determining the type of diet an individual chooses to follow. In a study by (Jetter and Cassady, 2006), it was found that the lack of availability of certain healthy products in small grocery shops in low-income neighbourhoods and the higher cost of the healthier shopping basket can be deterrents to eating a healthy diet.

A recent UK study by Alae-Carew et al. (2022) shows that the consumption of plant-based food alternatives has increased and appears to be accelerating. These alternatives have been identified as key to a dietary shift towards more sustainable diets, with women, millennials and people with higher incomes showing significantly higher consumption than other profiles.

2.2. SDGs and PBDs

Since ancient times, PBDs have been value-based. Policies that favour this type of diet will optimise food supply, health, the environment, and social justice (Sabaté and Soret, 2014). A return to this type of diet seems to be an alternative to achieve sustainability. In general, PBDs have valuable benefits for human, animal, and environmental health (Newby, 2009).

PBDs include fruits, vegetables, legumes, cereals, nuts, and seeds, and their derivatives (Fardet, 2017). A dietary pattern is defined as the quantity, variety, or combination of different foods and beverages in a diet and the frequency with which they are habitually consumed (Sánchez-Villegas and Martínez-Lapiscina, 2018). The Plant-Based Foods Association (2019) defines plant-based food as a finished product consisting of ingredients derived from plants that include vegetables, fruits, whole

grains, nuts, seeds and/or legumes. Additionally, fungi and algae, although not technically plants, will also be counted towards the percentage of plant-based ingredients. Related to the term “plant-based”, there are diverse types of diets such as vegan, vegetarian, and flexitarian, among others.

In its dietary guidelines, the FAO (2021a) recommends eating a primary PBD through its Food-based Dietary Guidelines, i.e., the FAO promotes dietary practices such as following a PBD and reducing red meat, among others. Moreover, the FAO named the year 2021 as the International Year of Fruits and Vegetables to promote the idea that they are essential in the diet and with the objective to improve healthy and sustainable food production and reduce food loss and waste using innovation and technology.

Achieving the SDG2 will have negative impacts on other SDGs and vice versa (Fanzo, 2019). If the disruption of these patterns is alleviated by means of the achievement of the SDG2, this may impact other SDGs as SDG3, SDG12 or SDG13. For example, one of the objectives of SDG3 is to reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. The reduction of GHG emissions attributed to animal agriculture (Singer, 1995) can promote environmental sustainability and it is possible reducing meat consumption (Martin and Brandão, 2017). Emissions grew more quickly between 2000 and 2010 than in each of the three previous decades (UN, 2019). Most aspects of climate change will persist for many centuries even if emissions are stopped. Moreover, it is important the use and management of the land and water, among others, in a sustainable way because they are key inputs into food production (UN, 2021c).

The FAO is proposed as “custodian” UN agency for SDG2, among others. The FAO includes the economic and socio-cultural dimensions in a sustainable diet in addition to nutrition and environment. The Food-Based Dietary Guidelines (FBDG) promote specific food practices and choices via recommendations such as having a mostly PBD, focusing on seasonal and local foods, reduction of red and processed meat, etc. According to the FAO (2016, 2021b), sustainable diets are those diets with low environmental impacts which contribute to food and nutrition security and to healthy

life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair, and affordable; nutritionally adequate, safe, and healthy, while optimizing natural and human resources.

The FAO and the Food Climate Research Network (FCRN) (2016) concluded that all the countries that include issues of sustainability in their FBDGs highlight that a PBD has advantages for health and for the environment. Most of them talk about the high environmental impact of meat, but their advice often lacks specificity and the maximum intake levels are based only on health, rather than environmental concerns. According to Payne et al. (2016), dietary patterns that replace animal food products with plant-based ones confer significant environmental benefits. Therefore, to make the global food system sustainable, the dietary shift from meat-based diets to PBDs is an inevitable strategy (Sabaté and Soret, 2014).

SDG12 aims to ensure sustainable consumption and production patterns which are essential in the transformation towards a more sustainable society (UN, 2021b). According to the UN (2012), current western excessive meat production and consumption have negative environmental, health, social and economic impacts. Therefore, people adopting an individual flexitarian policy (substantial meat reduction) reclaim their personal and collective rights to better health and a more sustainable world. This policy is proposed for all Western countries and could be implemented with an immediate effect and benefit.

The choice of one diet or another may be motivated by ethics, health, environment, or even taste or social pressure (Schenk et al., 2018). The social and cultural contexts, environmental al factors, and personal preferences such as taste, cost, and convenience, influence food choices and nutritionists and educators must be aware of the context in which the dietary behaviour occurs (Newby and Ulm, 2003; Newby, 2006). In the developed world, behavioural choices, such as dietary choices, have an enormous influence on environmental impact (Heller and Keoleian, 2015). Vegan and vegetarian diets are associated with significant reductions in GHG emissions, water, and land use (Aleksandrowicz et al., 2016). Many studies estimate that activities related to food production account for 20-30% of anthropogenic (human-originated)

greenhouse gas (GHG) emissions (Martin and Brandão, 2017). Vegetarian and vegan diets, despite the potential for increased toxicity, have the potential to reduce many environmental impacts. In their study, it was found that a reduction in meat consumption led to potential impact reductions in GHG, emissions, eutrophication, and acidification. Results also indicate higher toxicity in diets with more vegetable-based products and less meat. Other studies focused on the potential toxicity of vegetarian diets due to the increased intake of manganese, magnesium, selenium, and copper (Finley and Davis, 1999; Gibson, 1994). But vegetarian and vegan diets with an increased number of organic foods may further improve upon the toxicity potential by removing conventionally produced products and removing pesticides (Martin and Brandão, 2017).

2.3. PBDs and Animal Welfare and Pollution

Eating less meat is relatively simple. De Boer and Aiking (2022) focus on transforming animal welfare concerns for farm animals into possible goals for the individual inspired by the principles that were once designed for laboratory animals (the three R's). In this case, they would be "substitution" (eating less meat), and/or "reduction" (less and better meat) and/or "refinement" (animal proteins of "less concern"). The above steps help in animal welfare, and in turn also serve to combat climate change, among other things.

2.3.1. Animal welfare

The World Organisation for Animal Health (WOAH), in its Terrestrial Animal Health Code (WOAH, 2022), defines "animal welfare" as "the physical and mental state of an animal in relation to the conditions under which it lives and dies". Animal welfare is a complex and multifaceted issue with scientific, ethical, economic, cultural, social, religious, and political dimensions.

In their work, Alonso et al. (2020) observed that consumers perceive the need to increase the level of farm animal welfare, even though their level of knowledge about animal welfare and agriculture is relatively low. An animal-friendly product is

considered healthier, safer, tastier, more hygienic, more traditional, and more environmentally friendly. In addition, legislation is needed to ensure minimum welfare conditions for the animals.

In Spain, according to Pedreño Cánovas et al. (2021), there is social resistance to the expansion of macro-farms in rural areas outside pig production due to the problems of waste and pollutant emissions that they entail. According to MAPAMA (2017), these facilities generate problems such as water and air pollution, production of greenhouse gases, high water consumption, bad odours, noise and dust, dissemination of heavy metals, pesticides and toxic substances, dissemination of microorganisms and residues of veterinary medicines in water and soil.

There are several techniques that are used to make animals more productive (e.g., intensive breading, selective breeding and genetic selection). In the case of pigs, intensive rearing is used to increase the productivity of female pigs (Hoste, 2020). In the case of chickens, selective breeding is used to make them bigger. This involves altering their genetic make-up through complicated crossbreeding (Kateman, 2022). As the chicks are confined in very small spaces, their behaviours are also controlled to avoid certain forms of expression such as pecking and flying at close range (Kateman, 2022). In the case of cows, genetic selection to increase cow milk production has increased industry profits at the cost of reduced animal welfare (reduced reproductive capacity, increased health problems and reduced longevity of cows) (Oltenacu and Algers, 2005). Genetic selection is used in the case of sheep and cattle (Proudfoot et al., 2015).

Globally, an estimated 31 billion land animals and between 38.8 and 215.9 billion fish are farmed at any given time (Sentience Institute, 2019). According to EUROSTAT (2022), in December 2021, there were 142 million pigs, 76 million cattle, 60 million sheep and 11 million goats in the EU. The global cattle population in million head is expected to exceed one billion in 2022 (in 2021, there were approximately 996 million) (STATISTA, 2022).

The intensive animal husbandry industries maximise profits by treating animals not as sentient creatures, but as production units. Animals are confined in cramped

spaces where they can barely move or behave normally. To facilitate the confinement of these animals in such stressful, crowded, and unsanitary conditions, painful mutilations are often carried out without anaesthesia or pain relief, such as cutting off the horns of cattle or the beaks of chickens, and cutting off the tails of sheep, pigs and dairy cattle, among others (Animal Welfare Institute, 2022).

According to the European Food Safety Authority (EFSA) (2022), the 2009 Lisbon Treaty includes an explicit recognition that animals are sentient beings. In addition, the European Union and its Member States have an ethical responsibility to prevent the mistreatment, pain and suffering of animals. A wide variety of factors can affect their well-being, for example, the space in which they live, how they are transported, stunned, and slaughtered, etc.

There are initiatives that aim to contribute to the welfare of animals reared and slaughtered for human consumption. This is the case of the European Chicken Commitment (ECC), which calls for the replacement of fast-growing breeds with slower and more natural growing breeds or a reduction in the number of chickens per m2 so that they have greater freedom of movement, among others (Albert Schweitzer Foundation, 2022).

2.3.2. Pollution

The study by The Institute for Agriculture and Trade Policy (IATP) and the Changing Markets Foundation (2022) calculates the methane emissions of five of the largest meat companies and 10 of the largest dairy companies. Their combined methane (CH_4) emissions are approximately 12,8 million tonnes, which is equivalent to more than 80% of the entire EU methane footprint.

During the 27th Conference of the Parties (COP27) or 2022 United Nations Climate Change Conference some countries, including Spain, met in Sharm el-Sheikh (Egypt) to present their roadmap. On the first page of the COP27 outcomes (the Sharm el-Sheikh Plan of Implementation) food is mentioned twice, once to address sustainable consumption patterns and once to address food production systems. It literally says: *"Noting the importance of transition to sustainable lifestyles and sustainable patterns*

of consumption and production for efforts to address climate change". (UN Climate Change Conference, 2022).

Livestock is the largest source of methane, responsible for about 32% of anthropogenic methane emissions (United Nations Environment Programme's, UNEP, 2021). In 2010, according to FAO (2022), livestock supply chains emitted an estimated total of 8,1 Gt of CO_2-eq. Methane accounts for about 50% of the total, while nitrous oxide (N_2O) and carbon dioxide (CO_2) account for about the same percentage, at 24% and 26% respectively. Animal agriculture also contributes to deforestation, eutrophication of surface waters, and the displacement of the biomass carbon in the land used to support livestock. Global emissions from food production are 17,150 ± 1,760 Tg CO_2eq/year, of which animal food production and feeding contributes 58%, plant food production 29%, and the remaining 13% of emissions are due to other uses (Xu et al., 2021). According to Moran and Wall (2011), the growth of global meat consumption highlights the need to manage demand and consumption as well as intervene in its production. The magnitude and rapidity of the potential effects should place the reduction or elimination of livestock farming at the forefront of strategies to avoid disastrous climate change (Eisen and Brown, 2022).

The relationship between meat production and the environment gained prominence with an FAO report (Steinfeld et al., 2006). Subsequently, Poore and Nemecek (2018) showed that animal products contributed disproportionately to cropland use and food-related emissions, and that plant-based alternatives tended to have a much lower impact. Theurl et al. (2020) then concurred with these earlier findings and highlighted that global diet was one of the strongest determinants of food-related emissions when the impact of deforestation was considered. Vegan diets produce the least emissions, while diets high in meat and dairy products produce the most emissions (Theurl et al., 2020). The planetary health diet is a flexitarian diet created by the EAT-Lancet commission (2019). In a recent study by Sun et al. (2022), it is shown that a transition to this diet in the EU and the UK alone would almost compensate for all production shortfalls in Russia and Ukraine, while leading to improvements in blue water use, greenhouse gas emissions and carbon sequestration.

According to Clark et al. (2020), recent analyses have shown that even if we were to eliminate all fossil fuels, emissions from the global food system alone would still take us beyond the 1.5°C and possibly 2.0°C envisaged in the Paris Agreement. Consequently, reducing meat is a key part of the environmental plans outlined in the IPCC special report (Masson-Delmotte et al., 2018), the EAT Lancet Commission (Willett et al., 2019) and the Dasgupta (2021) Review, which stresses that reducing meat consumption is essential to preserve the planet's biodiversity. In addition, other animal products have environmental impacts, such as dairy and eggs (Eshel et al., 2019).

2.4. PBDs and health

Proper nutrition includes dimensions such as adequate calories intake, micronutrient availability and healthy diets. Moreover, the growing incidence of non-communicable diseases in both developed and developing countries is intricately linked to unhealthy diets and lifestyles (UN, 2021a). According to the Global Burden of Disease Study (Afshin et al., 2019), high consumption of red and processed meat, to the detriment of consumption of fruits, vegetables, and whole grains, is one of the major global health risks. In the case of the United States, proper nutrition could prevent almost half of all cardiometabolic deaths.

A diet with a low frequency of animal protein consumption and more plant-based is increasingly recommended for its benefits to an individual's health. In fact, when a PBD is designed in a healthy way, it can improve an individual's cardiovascular health, as well as being an environmentally sustainable option (Satija and Hu, 2018). According to research by Morris et al. (2015), it has been found that a diet rich in fruits, grains, legumes, vegetables, nuts, and seeds can reduce the risk of Alzheimer's by more than half.

Ramey et al. (2022) examined the associations between a PBD and cognitive functioning. The results suggest that this type of diet is related to better cognition, especially through better executive control. The potential health benefits of PBDs are the support of weight management (Rosell et al., 2006) and the reduction of:

a) Body mass index (Tuso et al., 2013)
b) Blood pressure (Appleby et al., 2002; Tuso et al., 2013)
c) Glycosylated haemoglobin (HbA1C) (Tuso et al., 2013)
d) Cholesterol levels (Tuso et al., 2013)
e) Risk of obesity (Tonstad et al., 2009; Tuso et al., 2013)
f) Risk of type 2 diabetes (Barnard et al., 2009; Tuso et al., 2013)
g) Risk of coronary heart disease (Esselstyn et al., 2014; Kahleova et al., 2017; Kim et al., 2019; Ornish et al., 1998; Orlich et al., 2013; Tuso et al., 2013)
h) Risk cerebral vascular disease (Kahleova et al., 2017)
i) Risk of colorectal cancer (Loeb et al., 2022)
j) Risk of COVID-19 infection (Kahleova and Barnard, 2022; Kim et al., 2021; Merino et al., 2021)
k) Medication needs (Barnard et al., 2009; Ornish, 2002)

The consumption of PBDs is safe and effective at all stages of the individual's life cycle including pregnancy and lactation. The PBD, due to its high fibre and polyphenol content, is also associated with a diverse gut microbiota, producing metabolites with anti-inflammatory functions that can help control disease processes (Craig et al., 2021).

In terms of life expectancy, PBDs can play an important role in increasing life expectancy (Kahleova and Barnard, 2022). Indeed, in so-called "blue zones" (Poulain et al., 2004), high longevity is observed in populations sharing healthy dietary patterns (Appel, 2008). Some of these areas are Loma Linda in California (Fraser et al., 2001), Okinawa in Japan (Wilcox et al., 2013). According to Li et al. (2022), the consumption of healthy plant food products is associated with a lower mortality risk, while consuming less healthy plant foods is associated with a high mortality risk among American adults.

Appendix 3: Outline of the Interview

(English version)

The decision to adopt/not adopt veganism

INTRODUCTION

Explain the purpose of the research:

- Understanding the process of adopting veganism.
    - In the case of vegans: what their motivations are for becoming vegan and what the evolution of their perception of veganism has been from the first time they started to talk about it to the present day. What the perception of veganism is in their environment and assessment of the possible influences of this environment on their decision.
    - In the case of non-vegans: find out if they have never considered going vegan. How they perceive veganism and how the concept of veganism has evolved. How veganism is perceived in their environment and how it may influence their decision.

(Next steps):

- Verify that the objective of the study has been understood.
- Explain that participating in this study involves being interviewed and audio-recorded, and that the interview will be transcribed for use in the study.
- Explain that the recordings and transcripts will be stored on our personal computer until the study is completed, at which point they will be deleted.

- Explain that we will not use names or any data that could identify the interviewees.

- Clarify possible questions/doubts.

- Hand over the informed consent document so that it can be read and signed.

PARTICIPANT HISTORY

1. Identifier code (PBC#, GENY#, GENZ#):
2. Age:
3. Gender:
4. Level of education: primary, secondary, or tertiary?
5. Do you work? If so, in what sector?
6. Place of residence:
7. Do you have animals at home? Do you consider that animals know as domestic animals are the same as or different from animals that are raised for mass human consumption?
8. Do you think that your diet has any kind of impact on the environment? **And animal-based products (why/in which way)?**
9. What type of diet do you consider to be the most balanced for you? **Do you supplement your diet?**
Comments:

OUTLINE

Question
1. When faced with new lifestyles or approaches to life, are you curious enough to experience them, if not completely, part of them? 2. If someone in your immediate environment had decided to adopt a new lifestyle, how do you think this decision would on impact you? 3. If you decide to adopt a new lifestyle, how do you think this decision would impact on your immediate environment?
4. What does the word “vegan” mean to you? 5. When was the first time you heard the words “vegan” or “veganism”? (Who said it or who heard it from, where, how did you perceive veganism at that time) 6. How do you think that situation/moment and person influenced your perception of veganism? 7. How much do you think the economic factor influences the decision to become a vegan? Why? 8. How do you think your perception of veganism has evolved from that first moment when you first heard about it? 9. What has this process been like: experiences, relationships with vegan people, etc.?
10. Do you define yourself as a vegan, vegetarian or omnivore? (If the interviewee is vegan or vegetarian) 11. Since when have you been vegan or vegetarian? What was your motivation for becoming vegan/vegetarian? (If the interviewee is an omnivore) 12. Have you considered becoming vegan or vegetarian? Why yes/no? 13. Do you know other vegan people in your usual environment (family, work, associations)? (If yes) 14. What perception do these people have of veganism? How do you think these people impact your (the interviewee’s) personal perception of veganism and/or the decision to be/not to be vegan? (If no)

15. What perception does your usual environment have of veganism? How do you think your usual environment impacts your (the interviewee's) personal perception of veganism and/or the decision to be/not to be vegan?

16. Which label do you identify yourself with: vegan or plant-based, vegetarian or omnivore? (Depending on the profile of the interviewee)

17. Do you belong to a collective such as an NGO, association, or group?

(If yes)

18. Are there any vegans in this group?

19. Do you consider that your way of being in this world is shared by the people in this group? If so, in what way?

20. Was your decision to be/not to be a vegan/vegetarian before or after you joined this group?

21. Do you feel that you belong to this collective, and what feelings do you have with the other members of the collective?

22. How do you think these people impact on your decision to adopt or not to adopt veganism? Has your perception of veganism changed?

23. Do you think that your decision to be/not to be a vegan/vegetarian has any kind of impact on these people in the group you belong to? How much?

24. Do you relate to non-vegans outside this group (i.e., another group with different motivations)? How much do you think you are like its members? Why?

25. To what extent do you interact with other groups / networks of different types of people? How?

(Catalan version)

La decisió d'adopció/no adopció del veganisme

INTRODUCCIÓ

Explicar el propòsit de la investigació:

- Entendre el procés d'adopció del veganisme.

    - En el cas dels vegans: quines són les motivacions per fer-se vegà i quina ha estat la evolució de la seva percepció del veganisme des del primer cop que en va sentir a parlar i fins l'actualitat. Quina és la percepció del veganisme en els seus entorns i valoració de les possibles influències d'aquests entorns en la seva decisió.

    - En el cas dels no-vegans: conèixer si mai s'han plantejat ser vegans. Com perceben el veganisme i com ha evolucionat el seu concepte. Com perceben el seu entorn el veganisme i com els hi pot influir en la seva decisió.

(Següents passos):

- Verificar que s'ha entès l'objectiu de l'estudi.

- Explicar que participar en aquest estudi implica ser entrevistat i gravat en àudio, i que l'entrevista serà transcrita per tal de fer-la servir en l'estudi.

- Explicar que les gravacions i transcripcions seran guardades en el nostre ordinador personal fins que l'estudi finalitzi, moment en que s'esborraran.

- Explicar que no farem servir noms ni cap dada que pugui identificar els entrevistats.

- Aclarir possibles qüestions/dubtes.

- Entrega del document de consentiment informat per tal que sigui llegit i signat.

HISTORIAL DEL PARTICIPANT

1. Codi identificador (PBC#, GENY#, GENZ#):
2. Edat:
3. Gènere:
4. Nivell d'estudis: primari, secundari o terciari?
5. Treballa? En cas afirmatiu, en quin sector laboral?
6. Lloc de residència:
7. Té animals a casa? Considera que els animals anomenats domèstics són iguals o diferents respecte als animals que es crien per l'alimentació humana massiva?
8. Considera que la seva alimentació té algun tipus d'impacte en el medi ambient? **I els productes d'origen animal? (per què/de quina manera)**
9. Quin tipus d'alimentació li sembla la més equilibrada per a vostè? **Suplementa la seva dieta?**
Comentaris:

OUTLINE

Pregunta
1. Davant de nous estils o enfocs de vida, se li desperta la curiositat per experimentar-los, sinó completament, part d'ells? 2. Si algú del seu entorn més proper, hagués decidit adoptar un nou estil de vida, com considera que aquesta decisió l'impactaria? 3. Si decideix adoptar un nou estil de vida, com considera que aquesta decisió impactaria en el seu entorn més proper?
4. Què significa per a vostè la paraula «vegà»? 5. Quan va ser el primer cop que va sentir la paraula «vegà» o «veganisme»? (Qui li va dir o a qui li va escoltar, on, com va percebre el veganisme en aquell moment) 6. Com considera que aquella situació/moment i persona li van influir en la seva percepció del veganisme? 7. Què tant creu que influeix el factor econòmic en la decisió de fer-se vegà? Per què? 8. Com considera que ha evolucionat la seva percepció del veganisme des d'aquell primer moment en que va sentir-ne parlar? 9. Com ha estat aquest procés: vivències, relació amb persones veganes, etc.?
10. Es defineix vostè com a vegà, vegetarià o omnívor? *(Cas que l'entrevistat sigui vegà o vegetarià)* 11. Des de quan es vostè vegà o vegetarià? Quina va ser la seva motivació per fer-se vegà/vegetarià? *(Cas que l'entrevistat sigui omnívor)* 12. S'ha plantejat fer-se vegà o vegetarià? Per què si/no? 13. Coneix altres persones veganes dins del seu entorn habitual (família, feina, associacionisme)? *(En cas afirmatiu)* 14. Quina percepció tenen aquestes persones sobre el veganisme? Com considera que aquestes persones impacten la seva percepció personal (de l'entrevistat) sobre el veganisme i/o sobre la decisió de ser/no ser vegà? *(En cas negatiu)*

15. Quina percepció té el seu entorn habitual sobre el veganisme? Com considera que el seu entorn habitual impacta la seva percepció personal (de l'entrevistat) sobre el veganisme i/o sobre la decisió de ser/no ser vegà?

16. Amb quina etiqueta s'identifica vostè: vegà o *plant-based*, vegetarià o omnívor? (dependent del perfil de l'entrevistat)

17. Pertany vostè en algun col·lectiu tipus ONG, associació o grup?

(En cas afirmatiu)

18. Dins d'aquest col·lectiu hi ha persones veganes?

19. Considera que la seva manera de ser i estar en aquest món és compartida per les persones d'aquest col·lectiu? En cas afirmatiu, de quina manera?

20. La seva decisió de ser/no ser vegà, va ser anterior o posterior a l'entrada en aquest col·lectiu?

21. Considera que pertany a aquest col·lectiu? Quins sentiments afloren quan està amb la resta de membres del col·lectiu?

22. Com considera que impacten aquestes persones en la seva decisió respecte a l'adopció o no adopció del veganisme? Ha canviat la seva percepció sobre el veganisme?

23. Considera que la seva decisió de ser/no ser vegà té algun tipus d'impacte sobre aquestes persones del col·lectiu al qual vostè pertany? Què tant?

24. Es relaciona amb persones no veganes fora d'aquest col·lectiu? (poder amb un altre grup amb motivacions diferents) Què tant creu que s'assembla als seus membres? Per què?

25. Fins a quin punt et relaciones amb altres grups/xarxes de diferents tipus de persones? Com?

Appendix 4: Approval of the Ethics Committee (URL)

UNIVERSITAT RAMON LLULL

REPORT OF THE RESEARCH ETHICS COMMITTEE OF UNIVERSITAT RAMON LLULL

The Research Ethics Committee of the Universitat Ramon Llull, at its meeting held on 14th March 2019, based on the evaluation of the proposal with reference number CER URL 2018-2019_001, entitled "Study of consumers motivations to buy animal or vegetarian based products, as well as their perceptions on veganism" coordinated by the investigator Dra. Carla Riverola, and taking into consideration the submitted documentation and the aspects detailed below:

EVALUATION

	Adequate	Incorrect	Doubtful	Not applicable
Justification for research	X			
Description of the research purpose	X			
Ethical implications in the design and methodology	X			
Obtaining the informed consent and other require reports	X			
Information about the adequacy of workspace and required instruments	X			
Competence of the research group	X			
Confidentiality agreement	X			

Observations/ Comments: None

Consequently, resolves to issue: Favourable

Date: 26 March 2019

Signature of the president of the Committee:

All the members of the CER-URL agree to guarantee the confidentiality of the information to which they have access in the development of their tasks. This ensures that the received documentation and the individuals identity are properly dealt with.

Appendix 5: Consent Form

(English version)

Identifier Code (PBC#, GENY#, GENZ#):

Informed Consent Form

The decision to adopt/not adopt veganism

Researchers

Fàtima Canseco, PhD Candidate
fatima.canseco@salleurl.edu

Carla Riverola, PhD
criverola@salleurl.edu

Innova Institute
La Salle - Ramon Llull University
St. Joan La Salle, 42
08021 Barcelona (Spain)

1. I confirm that I have read and understood the information sheet on the above-mentioned study and that I have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reasons.
3. I agree to participate in the above-mentioned study.

I agree to be recorded at audio level	YES ☐	NO ☐
I would like to be mentioned in the study	YES ☐	NO ☐
If I do not want to be mentioned, I agree to the use of anonymous quotes in publications.	YES ☐	NO ☐

Signature and date by participant and researchers

(Catalan version)

Codi identificador (PBC#, GENY#, GENZ#):

Formulari de Consentiment Informat

La decisió d'adopció/no adopció del veganisme

Investigadores

Fàtima Canseco, Doctoranda
fatima.canseco@salleurl.edu

Carla Riverola, Doctora
criverola@salleurl.edu

Innova Institute
La Salle - Universitat Ramon Llull
St. Joan La Salle, 42
08021 Barcelona

1. Confirmo que he llegit i entès el full informatiu sobre l'estudi esmentat i que he tingut la oportunitat de fer preguntes.

2. Entenc que la meva participació és voluntària i que sóc lliure de retirar-me en qualsevol moment, sense explicar els motius.

3. Estic d'acord en participar en l'estudi esmentat.

Estic d'acord en ser gravat/da a nivell d'àudio	SI	☐	NO	☐
Desitjoque se m'esmenti a l'estudi	SI	☐	NO	☐
Si no vull ser mencionat/da, estic d'acord en que es facin servir cites anònimes a les publicacions	SI	☐	NO	☐

Signatura i data per participant i investigadores

Appendix 6: Information for Participants

(English version)

laSalle

Information for participants

The members of the GREITM Research Group, led by FRANCESC MIRALLES, are carrying out the research project: "Study to understand the motivations of consumers when consuming products of animal or plant-based origin, as well as their perception of veganism".

The aim of the project is to find out the consumption habits and motivations of the people interviewed. Once these interviews have been carried out, they will be analysed in order to observe the key points that provide an answer to our research question (how belongingness influences the process of adopting/not adopting veganism). The following research centre is participating in the project: LA SALLE – UNIVERSITAT RAMON LLULL. In the context of this research, we would like to ask for your voluntary collaboration in order for you to participate, as you meet the inclusion requirement of having purchased products in this establishment.

This collaboration involves participating in a semi-structured personal interview. All participants will be able to withdraw from the study at any time. Each participant will be assigned a code, therefore it is impossible to identify the participant with the answers given, guaranteeing total confidentiality. The data obtained from their participation will not be used for any purpose other than that specified in this research and will become part of a data file for which the principal researcher will be ultimately responsible. These data will be protected by means of a password on a corporate computer, and only Carla Riverola, Fátima Canseco and Francesc Miralles will have access to them. Once the study is finished, all the information obtained will be deleted from the computer. Subsequently, the results obtained will be presented at a conference in each of the two shops.

The data file of the study will be under the responsibility of the principal investigator, before whom the rights established in Organic Law 3/2018, of 5 December, on the Protection of Personal Data and Guarantee of Digital Rights, may be exercised at any time.

We are at your disposal to answer any questions you may have. You can contact us by e-mail: fatima.canseco@salle.url.edu.

(Catalan version)

laSalle

Informació per als participants

Els membres de l'equip d'investigació GREITM, dirigit per FRANCESC MIRALLES, estem portant a terme el projecte d'investigació: "Estudi per a conèixer les motivacions dels consumidors a l'hora de consumir productes d'origen animal o vegetal, així com les seves percepcions sobre el veganisme".

El projecte té com a finalitat conèixer els hàbits de consum i les motivacions de les persones entrevistades. Un cop realitzades aquestes entrevistes, aquestes s'analitzaran per observar els punts clau que donen resposta a la nostra pregunta d'investigació (com influeix el sentiment de pertinença en el procés d'adopció/no adopció del veganisme). En el projecte participa el següent centre d'investigació: LA SALLE – UNIVERSITAT RAMON LLULL. En el context d'aquesta investigació, li demanem la seva col·laboració voluntària per a que participi ja que vostè compleix el requisit d'inclusió d'haver adquirit productes en aquest establiment.

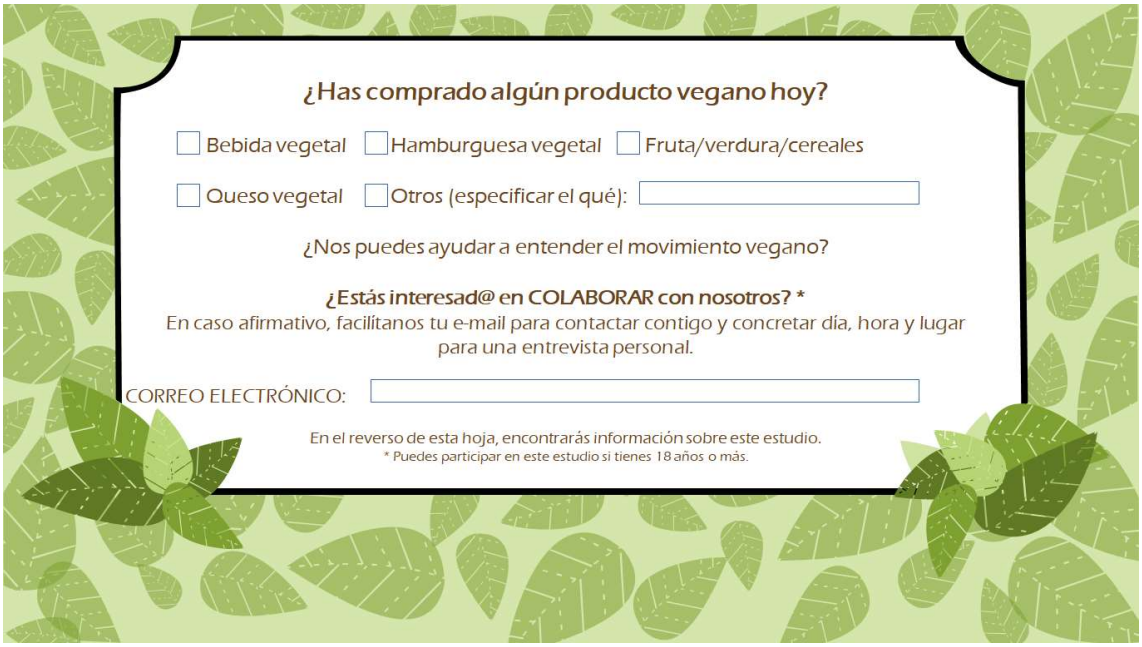
Aquesta col·laboració implica participar en una entrevista persona de tipus semi-estructurat. Tots els participants podran retirar-se de l'estudi en qualsevol moment. Cada participant tindrà assignat un codi, per tant és impossible identificar el participant amb les respostes donades, garantint totalment la confidencialitat. Les dades que s'obtinguin de la seva participació no s'utilitzaran amb cap altre fi diferent a l'explicitat en aquesta investigació i passaran a formar part d'un fitxer de dades del qual l'investigador principal en serà el màxim responsable màxim. Aquestes dades quedaran protegides mitjançant contrasenya en un ordinador corporatiu, i únicament Carla Riverola, Fátima Canseco i Francesc Miralles en tindran accés. Un cop finalitzi l'estudi, tota la informació obtinguda serà eliminada de l'ordinador. Posteriorment, els resultats obtinguts es presentaran en una xerrada a cadascuna d'ambdues botigues.

El fitxer de dades de l'estudi estarà sobre la responsabilitat de l'investigador principal davant del qual podrà exercir en tot moment els drets que estableix la Llei Orgànica 3/2018, de 5 de desembre, de Protecció de Dades Personals i Garantia dels Drets Digitals.

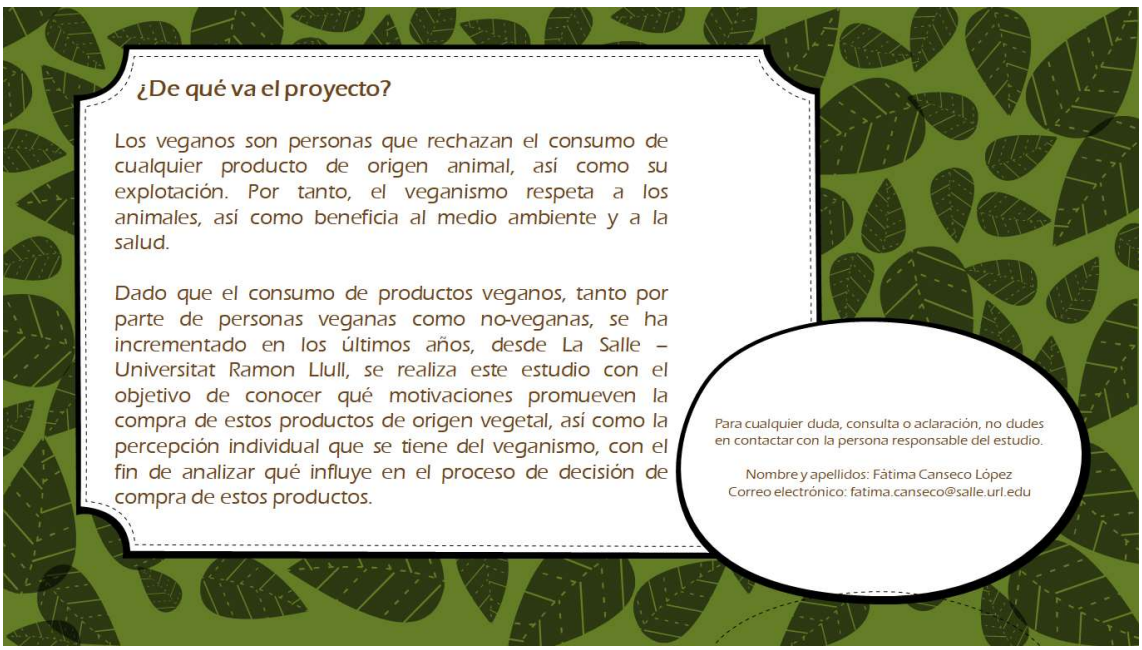
Ens posem a la seva disposició per a resoldre qualsevol dubte que la mateixa li hagi suscitat. Pot contactar amb nosaltres mitjançant el correu electrònic: fatima.canseco@salle.url.edu.

Appendix 7: Flyer used in Case Study 1 (PBC)

Front

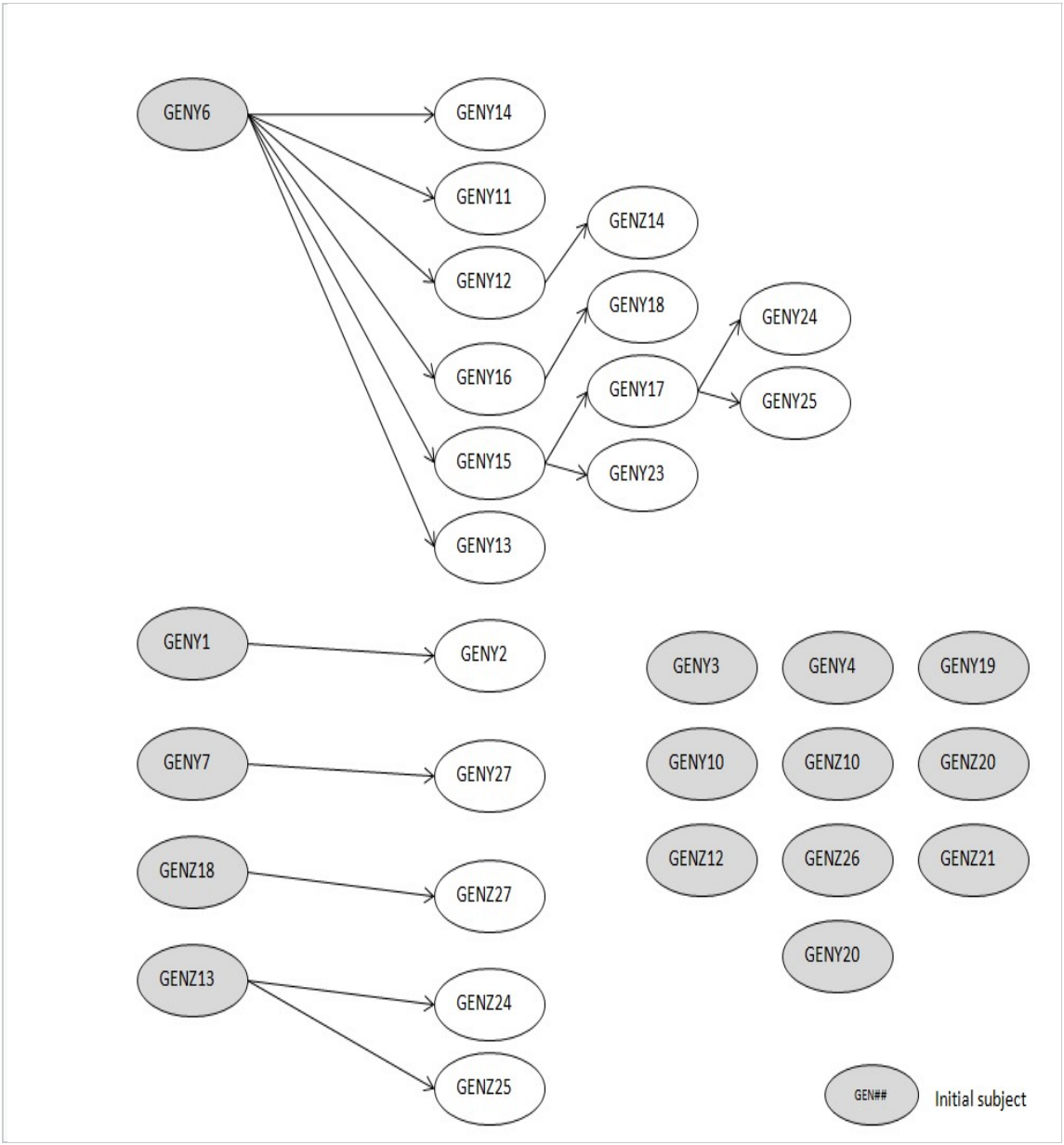


Reverse



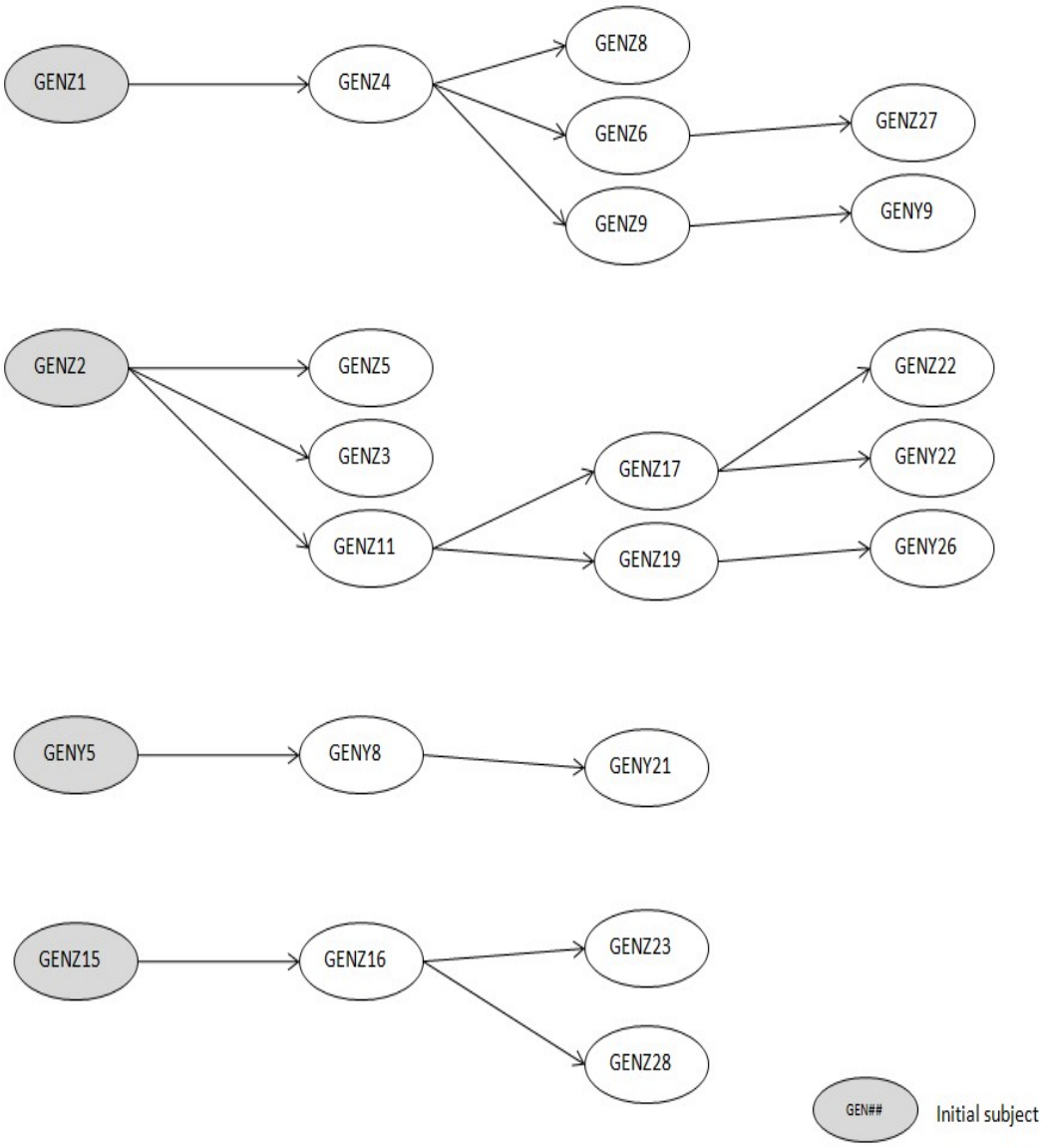
Appendix 8: Connection between respondents in Case Study 2 (GENY)

(Convenience and snowball sampling)



Appendix 9: Connection between respondents in Case Study 3 (GENY)

(Convenience and snowball sampling)



Appendix 10: Additional quotes (Part I – Analysis)

	Quotes
Food preferences	*"I like meat and I do not want to limit myself."* (GENZ16)

	Quotes
Lack of knowledge	*"I could not do it because if animal protein is removed from my diet, I have no way of adding protein to my diet."* (GENY4)
	"Both my partner and I are omnivores. My sister-in-law and her partner are vegan. I think what is really lacking is culinary education. There is also a lack of knowledge about the impact of animals… people have not seen a farm." (GENY15)

	Quotes
Beliefs	*"When you were a kid, at home, you had to eat meat because you had to get strong. That was the idea."* (GENY6)
	"(Socially) You always must eat a first course, which can be anything, and then a second course, which is some meat or fish." (GENZ7)
Traditions / Customs	*"If you go, for example, to the UK and if you tell them that in Spain, they eat a rabbit, they will say "what are you telling me? If it is a pet…" You know what I mean? Or if you go somewhere else… they eat snails here too, and somewhere else they will say "that is disgusting" … it is very social. It depends a lot on where you live. And for me it does not depend on where you live. For me they are all animals."* (GENY11)
	"Culture has brought us… well, the whole history of human beings since time immemorial… we have classified some animals as food and other animals as companions." (GENZ2)
Habits	*"You have always acted in a standard way. And now, you seem to be totally removed from what you used to do. And now, you see the standard food that you may have had during your life as something very negative or something harmful."* (GENZ20)

	Quotes
No influence **No communication**	*"One day I decided that I would say what I think as I think it. And those answers to silly questions would be left unanswered… I do not want to answer questions that, if you are really interested, you can find at home. I will answer other kinds of questions that are a bit more complicated, I will even answer sophisticated questions about menus or meals, but not silly questions."* (PBC3)
	"It is good to talk openly about these issues, but I always think it is better for people to come to you than you for to come to them." (GENZ3)

	Quotes
Positive Influence	*"My husband, because I stopped eating animal products, he has cut down a lot and is now a vegetarian."* (PBC2)
	"My sister was the first (to adopt). My partner and I were the second. Living in the same house made it easier for us to leave together. And my sister-in-law, when she heard about the initiative we were taking (adopting a PBD), she also joined in." (GENY10)
	"I have influenced them a lot. They see veganism in a different way. They are much more accepting of it now. My partner, for example, does not mind eating meat and making a vegetarian menu; he even eats a lot of vegetables." (GENY11)
	"My motivation to become a vegetarian came from my sister's influence… after a long time of insisting and not insisting, in the end…" (GENZ16)

		Quotes
Negative Influence	**Lack of support or being challenged**	*“They see me as something strange. Like this is silly. As something temporary. They do not understand or do not want to understand.”* (PBC8)
	Difficulties in acceptance and understanding	*“You also encounter resistance, especially from family members. Also, friendships. It has generated, at certain times, debates. Important debates [...] Having planted the seed of this awareness in the family, … I was the first one to comment on this or to live in this way, well, yes, it made them reflect, and in a certain way, there was an impact.”* (GENY6)
		“Most of these people do not understand. And it is like "well, let us see how long this "nonsense" is going to last", "but aren't you still eating meat?" (GENY24)
		“Some people do not want to understand.” (GENY25)

	Quotes
Parental Feeding Education	*"It is me who must adapt to them because they (parents) do not understand."* (GENZ1)
	"(Parents) consider necessary or important to eat meat as well." (GENZ20)

	Quotes
Environment and Constraints	*"There are certain lifestyles that if they do not negatively impact on the comfort of your environment, they will be seen as harmless; but if it involves any kind of self-criticism or deep reflection that might shake their comfort a bit or make them feel guilty or remorseful, it will surely be approached as something negative. Quite simply, even something that generates insecurity."* (GENY22)

Appendix 11: Additional quotes (Part II – Analysis)

Communication Stage: from initial contact to successful communication

	Quotes
Communication between the two parties	*"We often become masters of our lifestyle for others."* (GENY2)
	"When the topic of conversation comes up in my omnivore environment, they usually do not have a bad reaction, but more of interest or trying to understand or comprehend. I would like to think that my decision makes them reflect in some way… think about their eating habits." (GENZ16)

	Quotes
Interest/inclination to adopt PBDs --> initiate action **(prior adopters in their close social network)**	*"My brother eats steak. Last week I saw that he had bought vegetable milks and I asked him about it. He said he wanted to introduce them at breakfast. I think people are making choices they consider healthier."* (BCN11)
	"At the beginning I had no knowledge and when my sister had knowledge, she was like a reference to follow. If she did it, it was probably because it had its benefits and it was probably the good thing, the best thing. Yes, it struck me that if she made that decision, I was going to inform myself and I was going to try it. My sister was the first; my partner and I were the second to do it. The fact that we lived in the same house made it very easy for both of us to leave. And my sister-in-law, when she heard about the initiative we were taking, also joined in." (GENY10)
	"My partner, his family and close friends are vegetarians. My partner's family was the one who told me to inform myself and read articles, interviews... I guess the fact that people close to me are vegetarian or vegan has made me see or understand veganism in a more open way than at the beginning." (GENZ15)

	Quotes
Homophilic relationships	*"Since I stopped eating animal products, my husband has reduced his consumption a lot and is now a vegetarian."* (BCN2)
	"I imagine that if he (my husband) ate meat, it would have been much more difficult for me to give it up. If you have a person who has the same ideals as you, supports you and thinks the same way, it is always much easier to reach that goal." (GENY24)
	"When someone close to you is vegan, for example, I think you are kind of more influenced to be vegan or more curious to understand it or... just because people are close to you (friends)." (GENZ12)

		Quotes
Difficulties	**Lack of intimacy**	*"When I became vegan, I suffered a lot of alienation from some friends… I started to feel like I was being left out… it was hard. They did what was most comfortable for them… pushing me away."* (GENY22)
	Lack of interest or understanding	*"They are still blindfolded. I have not seen anyone interested. Whenever the subject comes up, they are not open to understand, they question you."* (BCN4)
		"With my closest environment (parents, siblings, or even close friends), I do try to make them see that what they do has an impact and that maybe they should see things differently. But there are people who do not want to understand that. It is not for me to tell someone to stop eating animals, animal products." (GENY25)

Imitation stage

Group 1 – Elements that make imitation difficult

General comments	*"I have several vegetarian friends and my current girlfriend is a vegetarian. I have learned more about it. But my perception has not changed, as I still believe my diet is balanced and have no plans to change it. They have mainly helped me to learn more about the subject and, above all, to know why they do it."* (GENZ21)
Traditions (regional ones)	*"I am Argentinian and in Argentina meat consumption is very high and, especially in my family, I was brought up eating meat."* (GENY7)
	"Maybe cheese is what people miss the most. It depends on the culture you come from." (GENZ5)
	"Where I live (Vic - Barcelona) the economy is... above all, the issue of pork is very important. […] (Socially) You always must eat a first course, which can be anything, and then a second course, which is some meat or fish." (GENZ7)
Habits (from the social perspective)	*"In my family, in terms of food, we have always, always been carnivores."* (GENZ10)

Group 2 – Elements that create barriers to imitation

		Quotes
Parental feeding education	**GenY perspective**	*"Even as a child I did not like to eat meat. My mother always tells me that when I was little, I always got angry because I didn't want to eat meat, I always asked why the animal had been killed." (GENY25)*
	GenZ perspective	*"I did not really care, and I did not do my own food shopping. I was at home, so I was influenced by my parents and how I was brought up. I have to say that I like meat and I do not want to limit myself".* (GENZ18)
		"My parents think that eating meat is important, that the body needs meat and protein can obviously be obtained from other sources. They buy quality meat, only beef... we do not eat pork. They think it is not bad at all. Just like you can eat fish, just like it is necessary to eat vegetables and dairy products, they think it is also necessary or important to eat meat." (GENZ20)
		"The environment... you grow up and you eat what they (parents) put on the table. At home they are not in favour of being vegan/vegetarian as a matter of food, but they are in favour of reducing meat consumption." (GENZ28)

Group 3 – Elements that create initial and transitory reluctance, but that are eventually overcome

		Quotes
Negative impacts of stepping out the comfort zone	**On the social level**	*"At the beginning, when you change habits, if people are not used to it, then they worry about you, let us say they worry, right? We have awareness and a culture that implies certain foods and that without them you are going to lack everything, so they worry, yes… I understand that it has a negative impact at the beginning."* (PBC5)
		"There are certain lifestyles that if they do not impact negatively on the comfort of your environment, will be seen as harmless, but if it involves any kind of self-criticism or deep reflection that might shake their comfort a little bit or make them feel guilty or have some kind of remorse, it will probably be seen as something negative. Even something that simply generates insecurity." (GENY22)
	On the personal level	*"I think it is complicated... the transition from carnivore to herbivore, so to speak, is complicated. From a young age they (parents) make you eat something, they (parents) make you see that it is ok, that you can eat it and then when you really wake up... you take that step... and a lot of people have told me... they would like to, but they cannot. Or that they have tried to quit, and they have gone back."* (GENY25)

Group 5 – Elements related to attitudes and skills

	Quotes
Time	*"Right now, I am not in the mood to say "come on, I am in", because I need to eat, to make a quick meal, and for me the quickest and easiest without thinking is animal protein: chicken, hamburger ..."* (GENY4)

		Quotes
Food preferences	**Cheese**	"If you like cheese, it is very hard (to stop eating it)." (GENY8)
	Fish	"Fish gives you a lot of nutrients and it is delicious. I will not say "no" to that." (GENY12)
	Meat	*"Out of habit and usage, I like to eat meat. Even if I do not do it regularly or even if I try to reduce consumption."* (GENY7)
		"I do like meat, but I am aware of the impact it has on the environment and in general, so I also try to reduce it to feel good and also to be a bit true to the values I might have." (GENZ14)
		"I like eating meat a lot, but I have reduced my meat consumption a lot compared to what I used to eat." (GENZ15)

		Quotes
Food preferences	**Various foods of animal origin**	*"I like the small amount of meat or fish I eat. Yes, for example, I would rather be vegetarian than vegan, because without cheese, without eggs, I do not think I could live."* (GENY17)
		"I love ham and cheese and things like that... it would be very difficult for me to take all this stuff out of my nutritional sphere.... I mean it would be very difficult for me." (GENY19)
		"I liked a bit of fish and chicken in my soup, especially when I was sick. So, of course, when you are sick, they always say, "make your soup with chicken" and you cannot imagine taking it away." (GENY23)
		"I think we should eat everything. After that, whether you have one principle, or another is different. But I think that to be balanced you must eat everything: proteins, vegetables, meat, etc. I think being vegan means taking supplements, because what you do not get from meat or meat products, you must supplement it in some way." (GENZ12)
		"I am a bit special when it comes to food, and cheese and eggs play a very important role in my diet." (GENZ23)

Acceptance stage

	Quotes
Potential adopters in the near environment have adopted PBDs (from the perspective of prior adopters)	*"In my family, my sister and I started to be vegetarian about two or three years ago, and then.... well, we have been vegan for a year now and at home, well, in the end we are all… vegans ourselves, but everyone else has become vegetarian. If you know other people who are vegan, then you find it easier to make the transition."* (GENZ9)
	"Just a year after I went vegan, as I was slowly raising her awareness, my mother finally went fully vegan, about four years ago. My father is also going vegan now. They bring things to you, visions of veganism that maybe you did not have, and you also bring them other visions. And so, I think it is reciprocal." (GENZ11)

		Quotes
Drivers of Adoption	**Social Norms**	*"My sister was the first (to adopt). My partner and I were the second. Living in the same house made it easier for us to go together."* (GENY10)
		"My motivation to reduce meat consumption I think is mostly a mix between my partner and the news concerning the industry. The savagery you can see or read about, and the criticisms made by experts on the subject. It makes you think seriously about things." (GENZ15)
		"My motivation to become a vegetarian came from my sister's influence… after a long time of insisting and not insisting, in the end…" (GENZ16)
	Motivation / Attitude	*"Strictly, a moral issue."* (GENY22)
		"The main motivation was that I did not feel physically comfortable eating animal protein. And on the other hand, clearly, for the environment and the animals." (GENY27)
		"Mainly it is because of the environment, but I had always been aware of animal suffering, it is just that after learning more I have become even more aware of it." (GENZ5)

Appendix 12: My Biography

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Her prior professional experience consists of teaching in the Department of Electrical Engineering at the Universitat Politècnica de Catalunya (UPC) in Barcelona, and as a Head of the Road Traffic Control Centre of Catalonia in the Home Affairs Department of Catalonia, Spain. In addition, she holds an MSc in Engineering Management (MEM), an MBA, and a BSc in Industrial Engineering, Minor in Electronics, from the UPC.

Publication

Canseco-Lopez, F., & Miralles, F. (2023). Adoption of Plant-Based Diets: A Process Perspective on Adopters’ Cognitive Propensity. *Sustainability*,15*(9)*, 7577. https://doi.org/10.3390/su15097577.

Appendix 13: Formal Presentations to Scientific Communities

Canseco-Lopez, F., "Social network communication and socio-psychological variables of the individual in the case of adoption of a plant-based diet". In *Book of Abstracts of the Joint SCORAI-ERSCP-WUR Conference on Transforming Consumption-Production Systems Towards Just and Sustainable Futures (SCP23).* Wageningen, The Netherlands, July 2023. https://doi.org/10.18174/632251.

Canseco-Lopez, F., "Plant-based Diets as a Social Innovation: How their diffusion process can be better understood considering the personal involvement of the individual", *Science, Technology, and Society (STS) Conference*, Graz, Austria, May 2023. https://doi.org/10.3217/978-3-85125-955-1.

Canseco-Lopez, F., "My thesis in 4 minutes", *Explain your thesis in 4 minutes*, La Salle – Ramon Llull University, Barcelona, Spain, 2022.

Canseco-Lopez, F., "The role of communication in the diffusion of social innovations. The case of plant-based diets", *Networks, Information, Technology & Innovation Management (NITIM) Virtual Summer School* in cooperation with the *ICE/IEEE ITM Conference*, online, 2021.

Canseco-Lopez, F., "A look into the impact of the sense of belongingness and of homophily in the diffusion of innovations", *NITIM Graduate Summer School* in cooperation with the *ICE/IEEE ITM Conference*, Nice, France, 2019.

Canseco-Lopez, F., & Riverola, C., "When innovations struggle to disseminate: Veganism as a case study", *European Association for Critical Animal Studies (EACAS)*, Barcelona, Spain, 2019.

Canseco-Lopez, F., Riverola, C., & Miralles, F., "When social innovations struggle to disseminate. A look into the impact of the sense of belongingness", *Social Business Academia Conference (SBAC)*, Wolfsburg, Germany, 2018.