



Article

# Adoption of Plant-Based Diets: A Process Perspective on Adopters' Cognitive Propensity

Fatima Canseco-Lopez \* and Francesc Miralles

Innova Institute, La Salle—Ramon Llull University, 08022 Barcelona, Spain; francesc.miralles@salle.url.edu \* Correspondence: fatima.canseco@salle.url.edu

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. In this sense, this research postulates that current perspectives on the dissemination and adoption of SI offer partial insights into understanding the shift to PBD. To overcome these limitations, a holistic process perspective of the adopter's decision-making to change diet is derived and proposed. An exploratory, abductive, and theory-building effort has been carried out, based on a cross-analysis of three different adopter profiles, with a total of 69 semi-structured interviews. A new model for a comprehensive understanding from the adopter's perspective on dietary change is outlined with new socio-psychological insights emerging from the adopter's viewpoint. Additionally, the new model offers renewed opportunities for practitioners in terms of PBD implementation, usage, and policy.

Keywords: social innovation; diffusion; plant-based; socio-psychological variables; imitation



Citation: Canseco-Lopez, F.; Miralles, F. Adoption of Plant-Based Diets: A Process Perspective on Adopters' Cognitive Propensity. Sustainability 2023, 15, 7577. https://doi.org/10.3390/su15097577

Academic Editors: Piotr Prus and Ricardo García Mira

Received: 30 March 2023 Revised: 27 April 2023 Accepted: 3 May 2023 Published: 5 May 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

# 1. Introduction

The protein transition through changing food patterns promoted by the United Nations (UN) and the Food and Agriculture Organization of the UN (FAO) can contribute to the achievement of some of the Sustainable Development Goals (SDGs), such as "Zero Hunger" and "Climate Action" [1,2]. In addition, policies that favour PBDs will optimise food supply and social justice, and health and the environment [3]. Indeed, there is now a general consensus that food diets link environmental and human health [4].

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 [5,6]. Along these lines, PBDs have been considered SIs [7,8] 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 [9–12] and, in addition, communication is not sufficient to ensure their dissemination [13].

Research on innovation research has been underpinned by different and complementary perspectives [14–17]. Some scholars suggest that SI requires a more integrated perspective focusing on the consumer and user of innovation [18]. In this paper, it is assumed that, in addition to the potential adopter's innovativeness level and adoption patterns [15], 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.

Sustainability **2023**, 15, 7577 2 of 29

Specifically, this research studies social contagion between prior and potential adopters in the PBD adoption process to improve the current understanding of the dissemination of SIs from the adopter's perspective [18]. 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 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 adoption 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 abductive effort, 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, PBD potential adopters should not be assimilated only into users and consumers of new diets. The model clarifies that the PBD 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 PBD. Third, the model provides solid clues to PBD producers seeking strategies for PBD 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 paper is structured as follows: after an introduction to the topic, a literature review follows to describe the main theoretical frameworks that affect the dissemination of SI and the adoption of PBD. Subsequently, the methodology used to answer the research question is detailed, 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, just before the conclusion of this research paper.

#### 2. Literature Review

# 2.1. Challenges of SI Dissemination

Early studies on diffusion assumed that dissemination of an innovation, from the perspective of a potential adopter, meant the exact copying or imitation of how the innovation had previously been used in a different environment and a specific individual's decision to start using this innovation [15]. Early seminal approaches to understanding the

Sustainability **2023**, 15, 7577 3 of 29

dissemination of innovations suggested that the force enabling their dissemination would be an imitation of the idea and its use, just as it was argued that diffusion was based on small psychological interactions between individuals, prior and potential adopters, with imitation being the fundamental force [16]. This can be considered a social contagion in the social network of the potential adopter. Thus, the adoption of a generic innovation (technology, behaviour, or policy) largely depends on how the social context and background of the population using it influences the interaction of potential and prior adopters. This type of result echoes the importance of imitation and mimicry in studies of other types of innovations, both at other times and in other countries [19]. In addition, interpersonal channels and the interactivity features of technologies enhance the imitation effect during the growth stage [20].

The outcome of the dissemination of a particular innovation is the combination of the characteristics of the potential adopter, the characteristics of the innovation, and some contextual conditions that facilitate the interaction between prior and potential adopters. Moreover, some interdependencies among the above-mentioned building blocks intervene in the progress of dissemination. The social network may interfere in the relationship between prior and potential adopters [15] by facilitating and interfering with the necessary trust; the socio-material attributes of the innovation may affect, mainly in SIs, the potential adopter's decision-making behaviour during the dissemination process [21] and the potential adopter may encounter socio-psychological barriers to initially consider, and eventually use, the innovation and has to be able to cope with the resistance to overcome these barriers when they appear [22,23].

Furthermore, SI research has to face new challenges [24] to build bridges with current trends in innovation studies and, as an emerging field, develop theory-building efforts that provide a more holistic perspective that can support the specificities of non-technological approaches and in this line, try to overcome the predominant models on adoption patterns. In this vein, new efforts may include new ways to enhance the adoption-side perspective and propose perspectives that focus on adopters, their specificities and capacities within the context surrounding SI adoption [18].

Focusing on PBD, the current situation of the dissemination of these new diets can be considered to be in the early majority stage [15]. This means that dissemination is based on an imitation perspective and not on an innovation perspective. An innovation perspective is appropriate for the "Innovators" and "Early Adopters" adopter profiles [25]. Based on these profiles, the theoretical framework has been structured in three main sections: the contextual conditions, the relevant conceptual frameworks, and the interrelationships between the above components. The following sections describe the theoretical basis that can help formulate the contribution of this research work.

#### 2.2. Context of SIs Dissemination

#### 2.2.1. What Is SI?

SI is a novel solution to a social problem that is more effective, efficient, sustainable, or fair than existing solutions and whose created value accrues primarily to society as a whole rather than to individuals [26]. In addition, SIs have a cultural focus, as they aim to address unmet human and social needs [27]. The European Commission states that SI means developing innovative ideas, services, and models to better address social problems [28]. Different studies [29] highlight that the three broad outcomes of SI are the provision of solutions to pressing social needs, solutions to social and environmental challenges, and SIs for systemic change, and there are different examples of SI initiatives to support people's lives [30]. Moreover, unexpected and unplanned social uses of innovative technologies can lead to SIs (e.g., open-source software) [29].

When innovation has a social component, its dissemination may face problems, such as societal passivity or lack of funding [31], cultural barriers [32], and communication problems [11], among others. Some scholars have pointed out that attention is paid to difficulties in understanding the dissemination of SI [33]. They add that SI has an inherent

Sustainability **2023**, 15, 7577 4 of 29

desire to spread its message and change the world but point out that this is not sustainable for a large majority of SIs that originate from third sector projects, initiatives, and actors, which do not have a direct interest beyond their local context. The role of professional organisations and networks as intermediaries for dissemination is prominent, downplaying the role of third-sector organisations and citizen's initiatives, as they are often limited to a more local level [33].

The reduction in meat consumption is framed as a diet-focused SI [7]. Moreover, it is demonstrated that it is possible to link vegetarianism and veganism to SIs [8]. The results of their study suggest that, according to the convictions and motives for following such diets, food choices can be qualified as SIs, as most consumers are influenced by and respond to major social and environmental problems, such as animal abuse in macro-farms, environmental pollution from macro-production, deforestation, etc., by choosing these diets. Although the literature had not previously presented them in this light, they were identified as such when projecting SI indicators onto them [8]. Following the dissemination patterns of most SIs [11], the dissemination of PBDs is affected by several variables that can influence the different stages of the dissemination process, such as stereotypes [10], stigmas [12], and food neophobia [9].

# 2.2.2. A Socio-Material Approach to SI Adoption

The socio-material approach is a novel and innovative perspective [34]. In this research study, this approach is appropriate because the adoption of the innovation is affected by the interrelationship between the material aspects of the innovation and the socio-psychological aspects of the potential adopter. The characteristics of the innovation are not enough, and it is necessary to look at the interaction between the innovation itself (material) and the individual (social). In this sense, some socio-psychological variables (linked to the potential adopter) may affect the success of the dissemination among prior and potential adopters and, consequently, disrupt the dissemination process. In the case of SIs, the social component is relevant, as their purpose is to improve the well-being of individuals and communities [35].

Materiality is social because it has been created through social processes and is interpreted and used by individuals in social contexts [21]; furthermore, most material things and objects sustain social life and help individuals. In theories of management [36], organisation [37], and organisational communication [38], the concepts of materiality and socio-materiality are popular due to a deeper understanding of the contextual and relational factors that shape, change, and organise human behaviour.

PBD can also be understood from a social-material perspective. There are barriers and facilitators related to social and physical-material opportunities to reduce meat consumption and move towards PBDs (lack of social support and changes in service provision in collective meal contexts, among others) [39]. Moreover, meat consumption performs a fundamental role in the social representation of food and meals, especially in Western societies [40,41]. On the material part, i.e., substance side, some interventions are suggested, such as socio-material restructuring focused on modifying physical/material contexts, e.g., increasing the supply and changing the display of plant-based foods and meals [42].

#### 2.2.3. The Social Network in the Dissemination of SIs

The Tardian theory states that the social contagion of innovations occurs in a community, and its members are the subjects of social contagion. The "social system" is one of the basic elements affecting dissemination, and homophilic relationships facilitate interaction between community members [15]. Moreover, following Tardian contagion theories, influences come largely from the social context and background of the population through social conformity, pressure, and facilitation [16].

Similarity breeds connection [43]. Interaction is easier when both the prior and the potential adopters share some similarities [44] and seems to be more effective when both

Sustainability **2023**, 15, 7577 5 of 29

share a homophilic relationship [45]. Thus, the social network of the prior and potential adopter performs a relevant role in the diffusion process [46,47].

Social networks are relevant in influencing the habits of individual PBD adopters [48,49], critical in maintaining the common dietary practices of plant-based adopters [50] and perform a fundamental role in what and how we eat [51,52]. The willingness and support of close people, such as family and friends, facilitates an individual's opportunity to reduce meat consumption and follow a more PBD [39]. For example, individuals who reduced meat consumption or followed a PBD were encouraged to do so by family members and/or friends [53], among others. Furthermore, network homophily can foster and reinforce divisions between convinced meat eaters and individuals who strictly follow a PBD [54]. In addition, communication regarding PBDs between the prior and the potential adopter may not be effective, e.g., due to a lack of family support [55].

# 2.3. The Main Conceptual Frameworks for Understanding SI Dissemination

In order to understand the PBD dissemination process from an adopter's perspective, this research work takes into consideration the context outlined in the previous section that is relevant for SIs and borrows three main conceptual frameworks rooted in previous studies on the dissemination of innovations. All of them are relevant to SIs and can be adapted accordingly: diffusion of innovations [15], contagion theories [16,56,57], and adoption and acceptance models based on socio-cognitive theory [14].

# 2.3.1. SI Dissemination through the Diffusion of Innovation Framework

The Diffusion of Innovations (DOI) framework [15] suggests that dissemination occurs through a process of communication and social influence. Information is transmitted from one individual to another within the social network [58]. Consistent with Tardian theories, diffusion is a process of interpersonal communication, and imitation occurs when, in the social network, a potential adopter copies the action of a prior adopter. At the heart of the dissemination process is the modelling and imitation of prior adopters by potential adopters, with communication and social influence being sufficient and imitation being accepted as an "automatic reflex action", which "results directly from merely seeing the behaviour of others, without any other mental intermediary" [15]. Indeed, word of mouth is a powerful determinant of technology dissemination [15]. Therefore, if communication is present, imitation is a matter of time and depends only on the innovativeness of the potential adopter, the characteristics of the innovation and social influence. Following this framework, dissemination is more likely to occur when there are common meanings, mutual sub-cultural language and when both sender and receiver have similar personal and social characteristics [59]. In summary, the DOI framework offers a global perspective on the dissemination of innovations that is useful when dissemination depends only on the effectiveness of the communication process and imitation by the potential adopter is automatic. The DOI framework assumes that the innovativeness of the potential adopter is the sole moderator of the potential adopter's decision.

Due to the socio-material character of some SIs in general and PBD in particular, the conditions of the DOI framework are difficult to sustain. SIs may face some communication problems during their dissemination [11]. The socio-psychological variables observed in the case of SI adoption that may affect the propensity to imitate are not taken into account in DOI's framework [15], but Tardian's works indicate that these variables do affect diffusion. Some studies suggest that, in addition to the characteristics of the innovation per se, other characteristics, such as psychological and sociological factors, among others, may affect the diffusion of the innovation [22,23] due to various concerns in communicating innovation characteristics [25,60].

#### 2.3.2. Contagion and Imitation Theories of SI Dissemination

SIs have a social character that interferes with communication between prior and potential adopters. Additionally, although DOI's framework [15] proposes to understand

Sustainability **2023**, 15, 7577 6 of 29

the dissemination process of innovation as an "automatic reflex action" when communication has been successful, the socio-material aspects of SIs and the influence of the social network surrounding the potential adopter may affect the potential adopter's decision when knowledge of the new innovation has been communicated [22,23]. In this vein, the theories of social contagion [16,56,57] argue that the successful dissemination of innovation is based on small psychological interactions between individuals whose fundamental force is imitation. Therefore, the Tardian theories suggested that when a new idea or product appears, the force that would allow its dissemination would be the imitation of the idea or its use. In addition, individuals establish relational behaviours in accordance with their individual characteristics and, therefore, generally exemplify one of the three basic, distinctive, and interrelated processes that characterise human society: "Invention", "Imitation" or "Opposition". "Imitation" refers to the adoption of a behaviour following the observation of similar behaviour in others, according to the Tardian theories. In contrast, "Opposition" refers to the decision not to follow the observed behaviour.

Following the adopter perspective of this research work, social contagion requires a decision to change to follow the observed behaviour on the part of the potential adopter, and in this line, imitation is affected by a wide variety of factors to contribute to the copying of another's behaviour. Previous descriptions of contagion theories focus on various influences, such as "contagion, conformity and social pressures, and social facilitation" [56,57], all of which mediate the imitation decision-making of potential adopters of SIs and PBDs. Moreover, an attempt has been made to assess the likelihood that a person with certain characteristics will imitate a particular new behaviour (i.e., the use of an innovation) [61]. In addition, if innovative product concepts are decomposed into several behavioural elements, it is possible to estimate the likelihood that a person with certain personality traits will imitate these behavioural elements and consequently adopt the new product [61]. Recent research in cognitive and social psychology highlights the subconscious nature of many decisions [62]. Finally, imitation remains the default social behaviour [63].

The existing literature refers to multiple studies on barriers affecting dietary adoption and dissemination. For example, meat eaters claimed to be in agreement with their cultural roots and gastronomic traditions [64]. Sometimes, the desire to fit in can make individuals want to eat what others eat [65]. Therefore, 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, economics, among others) [66]. Overcoming some of these barriers affects the potential adopter's switching process, and different psychological positions can affect the decision to switch.

In the study of individual change, social psychology has proposed paying attention to the situation of discomfort resulting from switching to a new behaviour or idea [67]. The theory of "cognitive dissonance" [68] describes this discomfort that can be present in, for example, consumer buying behaviour and influences decision-making [69]. Moreover, the term "comfort zone" [70–72] has been proposed as a metaphor for overcoming an individual's cognitive dissonance.

At the individual level, both comfort zone and cognitive dissonance can be seen as difficulties for imitation and, consequently, the dissemination of PBDs. On the one hand, 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 are consistent [68]. On the other hand, the comfort zone is a mental/psychological state in which the individual operates under conditions of neutral anxiety and without risk. That is, the individual behaves to achieve a constant level of performance through tasks, actions, and thoughts that always follow the same routine [72].

Interestingly, in the PBD literature, the "meat paradox" [73,74] is an example of an individual's cognitive dissonance from the potential adopter's perspective. Eating meat is a common behaviour, despite the fact that many people claim to love and care about animals. The meat paradox arises from observing the apparent disconnect between not

Sustainability **2023**, 15, 7577 7 of 29

wanting animals to suffer and killing them for food. Therefore, the belief in the value of animal welfare and life can be held at the same time as the belief that one can eat animals whose welfare is poor [74].

#### 2.3.3. Effectiveness in the Adoption Process

After the decision to imitate another's behaviour, the next stage in the dissemination of innovation should be the individual's decision to use the innovation on a regular basis. This stage is based on the mental process that the individual experiences from the moment he or she is aware of the innovation to the acceptance of the positive decision to use an innovation. The conditions of this decision-making that lead to acceptance may be related to a combination of variables derived from cognitive models and theories that attempt to predict user behaviour and that have been used in a wide variety of individual behaviour [14,17].

Three main drivers are observed in acceptance theories and models. First, social norms are related to the influence of the social network, as explained in the description of the context of this literature review. Second, motivations are needed for the positive decision of use. Motivation is one of the main facilitators of PBD adoption [75]. The most common ones are animal welfare, health, and environment [10,11,55,75]. The third driver is the Perceived Behavioural Control construct which refers to the perception of the individual's ability to use innovation. Dietary research maintains that eating habits are determined by the individual's skills and behaviour [76]. There are different facilitators that promote the decision to use PBDs, such as availability, perceived good taste, culinary skills [75,77], ethical concerns [78], taste preferences, family support [55], health, and sustainability [55,75]. Moreover, there are different barriers that discourage their dissemination as the lack of information [79], personal taste preferences [55], concerns about protein content, and effects on environmental and personal health [77], among others. In addition, even despite the fact that there are prior adopters of PBDs in their social network, it is worth noting that there are individuals who reaffirmed their choice to continue eating meat and identify themselves with this diet [64].

Furthermore, some SIs, such as food diets, may have a "personal involvement", i.e., the individual is psychologically involved. Individual differences in dietary preferences are related to personality traits [80]. Moreover, they highlight the value of better understanding the psychological factors underlying plant-based eating behaviour. 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 [81,82].

Although innovation may be necessary and desirable, some functional (use, value, and risk) and psychological (tradition and image) barriers have been identified [83]. In the case of PBDs, it is known that dietary habits are acquired throughout an individual's childhood through the immediate family [84]. The change in these eating habits may be due to a multitude of reasons [55,75], but if these habits are different from those acquired, as in the case of contagion theories, cognitive dissonance may arise [85] or resistance to leaving the comfort zone and these may be barriers that not all individuals are willing to face.

#### 2.4. Structuring the Intended Contribution of This Work

This research work aims to better understand the adoption of SIs, in general, and PBDs, in particular. To do this, it is proposed to use a process perspective based on the vision that the potential adopter may have. Our research work understands that in order to develop this vision of the adoption process, a comprehensive scope is necessary, from the initial contact to the regular use of the innovation. The conceptual frameworks that have been proposed to understand the adoption of SIs have been based on the dissemination of innovations of a more technological nature. In some cases, solutions for technological innovations are not suitable for SIs.

Sustainability **2023**, 15, 7577 8 of 29

Several reasons support this idea. Initially, individuals in a SI adoption process present cognitive interaction that generates facilitators [55,77] and barriers [55,77,79] to the dissemination of SI. In addition, similarities among individuals create a social network [43,44] that, on the one hand, encourages communication between individuals [15] but, on the other hand, proposes homophilic relationships that can stimulate or discourage social contagion [86]. Finally, although PBDs are studied from the point of view of motivations [75], nutritional characteristics [87], sustainability [3], and health effects [88], among others, few research work considers the impact of the social network and the socio-material nature of SIs, both require interactions between individuals and between the characteristics of the innovation and potential adopters.

The current perspective offers partial visions of the adoption process that can be useful for technological innovations but that prevent the antecedents that affect SIs from being considered in the effects in all stages of the adoption process that the potential adopter follows. Moreover, the dissemination of innovation has been conceptualised as social contagion [89]. The American Psychological Association (APA) defines social contagion as "the spread of behaviours, attitudes, and effects through crowds and other types of social aggregates from one member to another". In this process of contagion, the members who are influenced by the spreading action have to adapt their current behaviours, attitudes, and traits and change to internalise the new action.

For this, a process perspective [90] aims to understand the way in which the potential adopter advances in the decision-making evolution before adopting a SI. Process research seeks to explain how the change in the research object evolves; that is, it arises, develops, and diminishes over time. The process perspective can contribute to the theory by considering the dynamic development of phenomena over time [91]. This approach has already been used in organisation and management [92], entrepreneurship [93], and innovation and organisational change [94]. At the individual level, this vision has been used by considering individuals as active and adaptive agents [95].

This study considers the process of social contagion as a sequence of stages from the initial contact between a prior and a potential adopter to the continuation stage, in which a new process of social contagion is generated. The suggested intermediate stages are based on the conceptual frameworks: communication, imitation, and acceptance. Therefore, this process perspective studies how and why decisions arise, develop, grow, and end over time. Time is a key variable, as it examines both the tensions and contradictions in the driving patterns of change and the interactions between the levels that contribute to the change [90].

In summary, this research work proposes to consider that a successful adoption of SIs can be seen as a process that represents the life cycle that a potential adopter's decision-making should follow from the initial contact with innovation until its use on a regular basis after overcoming those barriers that may arise in the change process.

#### 3. Methodology

This study aims to contribute to the theory-building effort to better understand the specificities of adoption of SI adoption from an adopter's point of view. Likewise, attention is paid to some claims in this field [24] that call for new efforts in this direction. Deepening the effectiveness of adoption communication from the initial contact to the regular use of PBDs by the adopter suggests requiring a qualitative methodological approach. The use of the case study allows a deeper understanding and learning about the phenomenon and the context.

#### 3.1. Methodology Approach

This study adopts a qualitative research approach to propose a framework to understand the effectiveness of the social contagion process that triggers or does not trigger the different stages of the process by potential adopters in the particular case of a SI, such as PBDs. Qualitative researchers are engaged in naturalistic research, studying real-world

Sustainability **2023**, 15, 7577 9 of 29

environments inductively to generate rich narrative descriptions and build case studies [96]. A deep exploration of the ideas and experiences of individuals is required in order to understand in detail the communication processes between them. Therefore, it will be difficult to generalise to a wider population. A cross-case analysis of three cases was performed. Each case was analysed through semi-structured interviews, collecting data using some pre-formulated questions about the socio-demographic characteristics, personal history, and social environment of each of the interviewees.

A pilot test was conducted between March and April 2019 to ensure that the outline covered the different areas of study and was understandable to the participants. The final outline was designed and approved by the Ethics Committee in April 2019. 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; and (e) The impact of the variable "homophily".

#### 3.2. Data Collection

The cross-case analysis allows the researcher to examine themes, similarities, and differences between cases [97]. Three case studies were designed to explore the impact of socio-psychological variables of individuals on communication on the diffusion of PBDs in different contexts. In this way, it can be observed if the results obtained were similar when comparing the different contexts and what other insights emerged that could help to answer the research question. 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. They could withdraw from the study at any time, even if they had signed the consent form. All the data obtained were anonymised in accordance with the Data Protection regulations. Therefore, the privacy of the participants was guaranteed in all processes. Individual interviews of an average duration of 45 min were conducted face-to-face or online. The 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 by coding; for this, the information was organised 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 why [98].

#### 3.2.1. 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. In case study 1 (PBC), a convenience sample of individual customers of a 100% plant-based food store was analysed. The sample obtained belonged to generations Y and X. Generation X has a great interest in plant-based foods [99]. Furthermore, the literature emphasises that Generations Y and Z are more likely to consume plant-based foods [100,101] and that, specifically, Generation Z is the most interested in plant-based foods [99]. However, there are also differences between them; for example, Generation Z takes climate change associated with food waste and biased diets very seriously [102]. For these reasons, this research incorporated two additional case studies focusing on specific samples of age groups of Generation Y and Z, so that case studies 2 and 3 were designed with the age range as a fixed variable. In other words, in each study, it is possible to explore how each generation behaves towards a SI, such as PBDs.

# 3.2.2. 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, Sustainability **2023**, 15, 7577 10 of 29

when similar cases are observed repeatedly, it can be empirically stated that the category in question is saturated [103].

In addition, bias was considered when selecting individuals in each of the three samples for each of the three case studies [104]. 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 of PBC, while in the case studies of GENY and GENZ an attempt was made to have potential sample participants follow different types of diets in order to have more variety.

Table 1 shows the general characteristics of each case study.

Table 1. Genera	l characteristics o	of each case study.
-----------------	---------------------	---------------------

	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		
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 of time	April–June 2019	October-December 2020	

# 3.3. Description of the Cases

# 3.3.1. Case Study 1: PBC

The sample was obtained by recruiting customers from a 100% plant-based food shop located in the Gràcia neighbourhood of Barcelona (Spain). Since 2016, the city of Barcelona has been declared veg-friendly. Moreover, Gràcia is one of the two neighbourhoods that brings together most of the city's businesses related to the consumption of all kinds of plant-based products (food, clothing, etc.). As the shop only offers plant-based food products, it is ensured that customers buy this kind of food product. Participants were recruited on the basis of 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. Respondents included married couples, members of the same family unit and other unrelated individuals.

# 3.3.2. 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 states. Wellness is a key element in their daily lives and PBDs already have an established penetration in this age range [100].

The sample was drawn from some individuals in this age group selected by convenience. Once the initial individual agreed to participate in the study, the date and time for the interview were arranged. After the interview, the initial individual was asked, if possible, to give us the contact details of people he or she 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 the study to them, give them the information they needed, and, if they agreed to participate, a date and time was set for the interview, and so on. Respondents included married couples, members

Sustainability **2023**, 15, 7577 11 of 29

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.

# 3.3.3. Case Study 3: GENZ

Generation Z individuals or centennials were born between the late 1990s and early 2000s, according to the Merriam-Webster dictionary. 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 [101].

As in the previous case, the sample is obtained from some initial candidates by convenience, then followed the snowball sampling methodology. The procedure was the same as explained in case study 2. 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.

#### 3.4. Data Analysis Approach

The analysis of the data collected during the interviews was structured in four main phases: (a) transcription, (b) interpretation, (c) coding, and (d) thematisation of the data [105]. 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. The next step was to interpret the data collected from the interview transcripts. The assessment of these characteristics helps to correctly interpret the respondents' perspectives. Subsequently, the data were coded by identifying issues, themes, similarities, and differences revealed through the participants' narratives and interpreted by the researcher [105]. In this way, the aim has been to establish common points between the narratives, bringing the contributions closer to similar concepts, definitions, and practices.

In the last phase, after coding, the data were categorised following the content analysis method, i.e., the data were categorised into classifications that then formed segments and sub-segments of the research and analysis section [106]. 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 in order to derive and present coherent, significant, and faithful conclusions to the primary data. The transcription, review, and interpretation of the interviews were completed manually. The whole process was reviewed by two researchers.

#### 4. Analysis

Data collection was carried out for each case separately. The first case was PBC, followed by GENY and GENZ. As an initial condition for all participants in the three cases, 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' framework (Rogers, 2003), the members of the samples can be considered as members of the early majority profile (first stage of the mainstream market). Participants frequently interact with their peers and deliberate before adopting 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 PBD, so they would enter into 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.

#### 4.1. 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, GENZ22 is in a transition

Sustainability **2023**, 15, 7577 12 of 29

process (consuming more plant-based products and reducing meat consumption), while GENY14 claims that it is necessary to eat everything but consciously.

"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)

"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)

During the interviews, respondents were asked whether or not they perceived an evolution in their personal perception of PBDs and, if so, in what way. In this way, a possible evolution could be observed, which implies a decision-making, a 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)

# 4.2. From Initial Contact to Successful Communication

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

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

Moreover, 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 statement of GENZ12:

"When someone close to you is vegan, for example, I think you're kind of more influenced to be vegan or more curious to understand it or... just because people are close to you (friends)." (GENZ12)

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 [15]. As the example of GENZ13 illustrates, the communication stage is part of the evolution of social contagion.

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

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

"It's 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)

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 Sustainability **2023**, 15, 7577 13 of 29

with the people around me, basically by spreading awareness. My flatmates are becoming vegetarians." (GENZ27)

In addition, the communication stage requires the involvement of both parties (prior and potential adopters) 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)

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 GENZ20 which confirms the previous variables of emotion and intimacy plus the perceived experience of the prior adopter:

"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)

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 GENY22 and GENZ17.

"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)

"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)

Moreover, in other 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)

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

# 4.3. 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. As described by GENZ22, changing habits, and stepping out of the comfort zone can be detrimental to moving towards PBD adoption:

Sustainability **2023**, 15, 7577 14 of 29

"I am kind of afraid to change my habits and that it might be worse than what I already have." (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". However, 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 in order to leave their current comfort zone 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 [83,107]. This maturation period may include, as illustrated by PBC7, a process of learning about the new options available and, as exemplified by GENY10, a change in food preferences,

"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 or two years to try it because I do not like vegetables... and I did not know what a wide variety of non-animal food there was on the market." (GENY10)

This analysis has detected different groups of elements that may affect the progress towards PBD adoption. The different groups of variables are illustrated below with examples.

# 4.3.1. Group 1—Elements That Make Imitation Difficult

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 nutritional 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 . . . it is hard for us to change our habits." (GENY19)

#### 4.3.2. Group 2—Elements That Create Barriers to Imitation

Parents use behaviours and strategies to influence what, when and how much their children eat [108]. Thus, eating habits are acquired early in life [65] and, once established, are likely to be long-lasting and resistant to change [109], although they may modify parents' eating dynamics due to changes in the social environment, among others [65]. 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 these cases, potential adopters conform to their parents' beliefs and customs in order to avoid conflicts, as illustrated by GENZ1.

"I am the one who has to adapt to them because they (her parents) do not understand." (GENZ1)

# 4.3.3. Group 3—Elements That Create Initial and Transitory Reluctance but That Are Eventually Overcome

Leaving the comfort zone means facing a zone of fear (lack of self-confidence, impact of others' opinions, excuse-making), but after a while, the individual enters a learning zone

Sustainability **2023**, 15, 7577 15 of 29

where he or she acquires new skills and faces challenges and problems. 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)

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 made the classic ones. When it was clear to me, I removed the meat and that was one less thing. And that is how I have been evolving." (PBC9)

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 saying "I do not care about my comfort. This is not right." So I stop doing it." (GENY22)

#### 4.3.4. 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, and 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 a baked sea bream... I enjoy these things. I mean, I would rather eat that than a hamburger substitute... life has been working this way for many years." (GENY20)

# 4.3.5. Group 5—Elements Related to Attitudes and Skills

The adoption of PBD may be perceived as complicated by a lack of time or culinary knowledge (Perceived Behavioural Control). An individual's skills and behaviour determine eating habits [76]. For example, GENY15 states:

"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." (GENY15)

Food preferences can reinforce the attitude against imitating a prior adopter who adopts a PBD, as GENY16 and GENZ27 claim:

"I like meat very much." (GENY16)

"I am big meat lover." (GENZ27)

# 4.4. Acceptance Stage

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) [110] and variables from the Theory of Planned Behaviour (TPB) [14]. Three drivers of adoption are observed: social norms, motivation/attitude, and Perceived Behavioural Control.

Sustainability **2023**, 15, 7577 16 of 29

#### 4.4.1. Social Norms

Once the imitation stage becomes effective, potential adopters, such as PBC4, GENY10, and GENZ16, end up adopting a PBD and state:

"My partner started vegetarian/vegan before me. It has an impact on 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 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 become a vegetarian came from my sister's influence ... after a long time of insisting and not insisting, in the end ..." (GENZ16)

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.

# 4.4.2. Motivation/Attitude

Motivations are needed for the adoption to be sustained. Motivation is one of the main facilitators of PBD adoption [75]. The most common are animal welfare, health, and environment [10,11,55,75]. In the analysis of the interviews, it was found that the motivations were strong and defined and formed the backbone of the adopters' lives. Motivations, such as animal welfare, environment, and health, are mentioned most frequently, as illustrated by PBC4, GENY27, and GENY22.

"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)

"The main motivation was that I did not feel physically comfortable eating animal protein. And on the other hand, clearly, for the environment and animals." (GENY27)

"Strictly, a moral issue." (GENY22)

# 4.4.3. Perceived Behavioural Control

Eating habits are determined by the individual's skills and behaviour [76]. 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 to add 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 diet with more plant-based foods. As new dietary learning requires a perceived behavioural control, the "comfort zone" influence may reappear at this stage. Even so, respondents find that they have to go beyond their comfort zone and, in some cases, develop culinary skills, among others, for the adoption to be effective.

#### 4.5. 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 to say, potential adopters in their usual social environment with Sustainability **2023**, 15, 7577 17 of 29

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. 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.

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 co-workers." (PBC10)

#### 5. Discussion

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 and a series of propositions are discussed in the following sections. The set of propositions builds the conceptual framework that includes 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 failure. A high-level schema of the conceptual framework with the main contextual configurations is drawn in Figure 1.

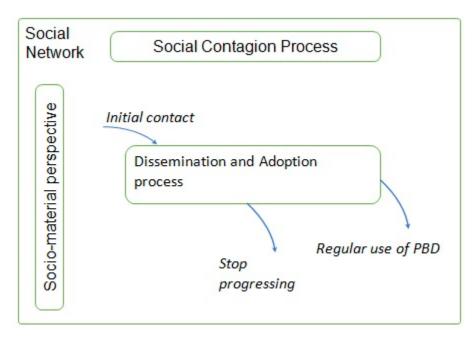


Figure 1. Contextual description of the proposed conceptual framework.

#### 5.1. Setting up the Environment for the Contagion to Exist

The importance of the social network is highlighted, which is the scenario in which the initial contagion occurs and the successive contagions, mainly within a close homophilic environment. In all the cases of our analysis, this homophilic environment favours the beginning of the contagion process from the affective relationships and intimacy between the members of the social network. Moreover, as an additional confirmation of this relationship, some of the difficulties for the continuation in most stages of the contagion process are related to the lack of intimacy or trust between the participants.

To complete the configuration of the environment, the relationship between prior and potential adopters involves socio-material components that affect the evolution of the PBD contagion process [39]. Although PBD has a material component based on a multidi-

Sustainability **2023**, 15, 7577 18 of 29

mensional perspective [42,111], food and diets have a clear social role and a psychological engagement [40,41,52]. In this vein, the environment of our potential framework for the PBD contagion process should consider the potential tensions between the materiality of PBD and the socio-psychological relationships between the participants in the contagion process.

Therefore, the following proposition is delineated:

**Proposition 1**. The adoption of PBDs from the adopter's perspective, considered as a SI, needs to consider the overall social contagion process within 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; the process of social contagion leading the adopter from the first contact with the new diet to the regular use of it; and, finally, all these in a specific environment built under the umbrella of the social network hosting prior and potential adopters that requires homophilic relationships.

### 5.2. A Process Perspective for the Adopter's Point of View on the Adoption of PBD

From the first contact between the prior and potential adopter in a social network, until the potential adopter decides whether to adopt a PBD, there is a period of time in which different stages have been proposed to occur: communication, imitation, and acceptance. According to the analysis of our cases, the contagion process needs to follow each of these stages to be successful. At each stage, the contagion may continue to the next stage or fail. Therefore, and according to previous literature [90], a process perspective helps to understand the different stages: how and why they occur, grow, or end over time. A process perspective has been used in psychological studies [95] and based on the empirical effort, it is useful to understand the decision-making structure of changing from a previous diet to a new one. Although most of the specific stages have been studied individually, this work's contribution is rooted in a comprehensive understanding of the overall contagion process by integrating the existing stages into a unique perspective. Therefore, the next proposition is presented:

**Proposition 2**. The adoption of PBDs, considered as a SI, from an adopter's perspective is delimitated by the contextual settings described in proposition 1, 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.

#### 5.3. Overcoming Socio-Psychological Concerns about the PBD Adoption

Following the adopter's point of view on the PBD 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 the PBD. These cognitions can be understood as facilitators or barriers in the adopter's decision-making to switch his or her 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 the barriers implies the failure of the contagion process, while the use of facilitators

Sustainability **2023**, 15, 7577 19 of 29

to reduce them allows the potential adopter to progress in the adoption process, opening the individual to experiment and to the success of the contagion process.

In the empirical analysis of our cases, in all three cases, facilitators are present to mediate in the stages of the social contagion process. In this vein, communication between prior and potential adopters is favoured by homophilic relationships and intimacy within the social network that includes individuals participating in social contagion. The effect of the communication stage on contagion has been highlighted by the effect of those prior adopters that have been recent adopters within the close contacts of the potential adopters. Additionally, the decision to imitate can be favoured by a set of facilitators that come from the potential adopter's socio-psychological characteristics, the influence of contextual settings (such as social networks), and diet characteristics on the socio-material effects on the adopter's decision. Finally, in the acceptance stage, social norms, favourable attitudes, and positive perceived behavioural control can facilitate potential adopters' definitive commitment to the use of PBD.

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 [107], and, prior adopters may consider their food choices to be part of the private sphere and, therefore, not talk about them outside of their closest homophilic relationships and this may hinder the dissemination of information about PBD. In this sense, in the PBC case, 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, although the potential adopter could have gathered enough information to consider whether PBD fits his or her socio-psychological characteristics, in all cases of this research work, 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 eating 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 struggle with previous beliefs [107].

Considering the empirical data of the three cases of this study, the decision to start, on a regular basis, using the new diet 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 can 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 the GENZ case when parental feeding education was not aligned with the new diet.

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

Sustainability **2023**, 15, 7577 20 of 29

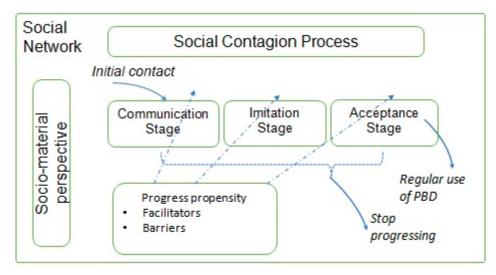


Figure 2. A high-level perspective of the conceptual framework on the PBD adoption.

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.

Although different studies have proposed barriers and facilitators of the adoption of PBD [55,77], 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 PBD adoption. Furthermore, to ensure an adopter's perspective, each of the stage should consider the adopter's decision-making progress towards a switch to the new diet. In this sense, the 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 adopter's propensity to engage in the new diet. Our conceptual framework includes the adopter's point of view by understanding that progress at each stage is related to the individual's propensity to overcome each stage. In this vein, proposition 3a is delineated:

**Proposition 3a.** Facilitators and barriers that mediate each of the stages of the social contagion process, configure a set of factors that predispose an 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 the authors know, 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, evidence was found in empirical work 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.

Sustainability **2023**, 15, 7577 21 of 29

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 diet. In this vein, 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.

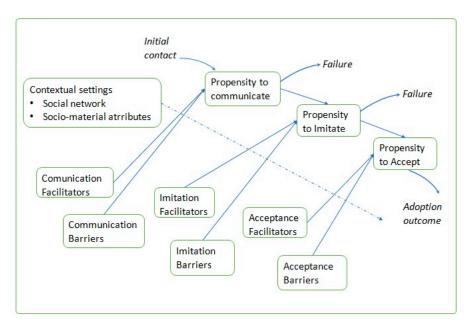


Figure 3. Mediation effects of facilitators and barriers in each stage of the adoption process.

## 5.4. Adopter's Cognitive Consistency When Switching to PBD

One of the features coming from most of the participants in the empirical work of this study is the affective implication of switching diets. This dimension is common in the literature on goals and action propensity in health and dietary circumstances [112–114]. 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 [73,74]. Cognitive dissonance [68] 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 PBD 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 [115], 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 PBD switching processes are affected by cognitive discomfort when their affective state due to different cognitions, either facilitators or barriers, is negative towards the PBD switch. In this vein, PBD potential adopters 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 PBD.

Sustainability **2023**, 15, 7577 22 of 29

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 PBD adoption. In this process some barriers and facilitators intervene such as dissonant or consonant cognitions that produce a psychological discomfort in the potential adopter.

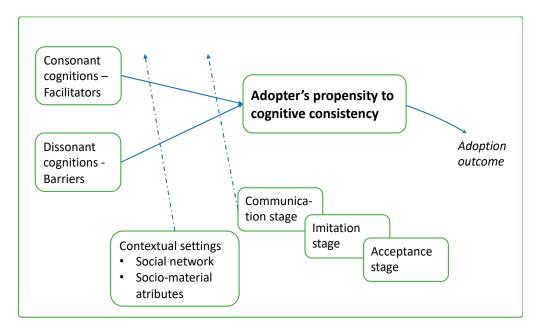
**Proposition 4a.** Potential adopters elaborate the consequences of facilitators and barriers at all stages of the social contagion process by understanding those combinations of them that produce a less negative state of psychological discomfort.

It has been proposed that the magnitude of the cognitive dissonance caused by the PBD switch 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 to achieve a sufficiently comfortable combination of them through the reinforcement of facilitators, the reduction of barriers and the proposal of a stable psychological state in the switch to PBD.

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



**Figure 4.** Moderating and mediating elements that influence the potential adopter's propensity to cognitive consistency.

Finally, Figure 5 presents the process perspective of the adoption of PBDs in which all the elements involved and their relationship can be seen.

Sustainability **2023**, 15, 7577 23 of 29

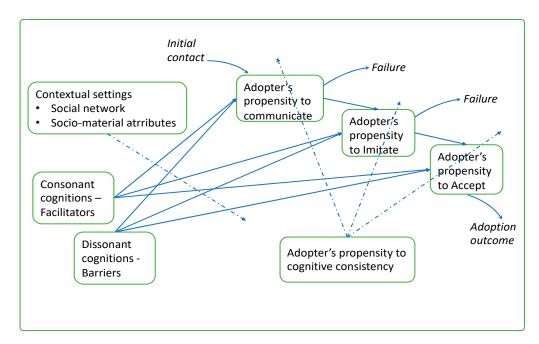


Figure 5. A process perspective of PBD adoption.

# 5.5. 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 [24], 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 [18] and the affective state of the adopter in the switch to PBDs.

As an academic contribution, the results of this research work show that the psychological states of potential adopters can be influenced by each of the stages of the process of the proposed process that builds the conceptual framework. In addition, these influences may also come from the relationship with prior adopters and as an effect derived from the contextual environment surrounding the contagion process. Although this has already been partially observed in the case of certain technological innovations [22,23,116], this research work goes a step further by proposing a holistic perspective that allows the analyses of what happens in the contagion process of a SI, such as PBDs, from the point of view of the influence on the psychological states of the potential adopter. Finally, an action-based cognitive dissonance approach allows the analysis of the psychological comfort (and discomfort) of the potential adopter at all stages of the decision-making process to change diet.

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

Sustainability **2023**, 15, 7577 24 of 29

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.

Second, it is not surprising that the model provides new tools for the promotion and marketing of PBDs. Marketing strategies should take into account, 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.

Finally, 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.

#### 6. Conclusions

SI addresses social issues and aims to improve social services [28]. Some of the solutions proposed by SIs are sustainable for some social challenges, such as climate change [5,6]. 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 [4], there is a general 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, taking into account 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

Sustainability **2023**, 15, 7577 25 of 29

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 as a result of an empirical effort that can suggest new insights into the adoption and dissemination of PBDs. Similar to many of the research papers, this work should take into account 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. 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 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.

**Author Contributions:** Both authors have participated in all stages of the process. All authors have read and agreed to the published version of the manuscript.

Funding: The APC was funded by La Salle—Ramon Llull University.

**Institutional Review Board Statement:** The study was conducted and approved by the Ethics Committee of Ramon Llull University (reference number CER URL 2018-2019\_001) on 26 March 2019.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Data are available from the corresponding author upon reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

# References

- 1. FAO. The Future of Food and Agriculture. Trends and Challenges. Available online: https://www.fao.org/3/i6583e/i6583e.pdf (accessed on 7 October 2022).
- FAO. Dietary Guidelines and Sustainability. Available online: http://www.fao.org/nutrition/education/food-dietary-guidelines/background/sustainable-dietary-guidelines/en/ (accessed on 7 October 2022).

Sustainability **2023**, 15, 7577 26 of 29

3. Sabaté, J.; Soret, S. Sustainability of plant-based diets: Back to the future. *Am. J. Clin. Nut.* **2014**, *100* (Suppl. S1), 476S–482S. [CrossRef] [PubMed]

- 4. Tilman, D.; Clark, M. Global diets link environmental sustainability and human health. *Nature* **2014**, *515*, 518–522. [CrossRef] [PubMed]
- 5. Howaldt, J.; Kopp, R.; Schwarz, M. Social innovations as drivers of social change—Exploring Tarde's contribution to social innovation theory building. In *New Frontiers in Social Innovation Research*; Palgrave Macmillan: London, UK, 2015; pp. 29–51.
- 6. Schwerk, A. Strategische Einbettung von CSR in das Unternehmen. In *Corporate Social Responsibility*; Springer Gabler: Berlin, Germany, 2015; pp. 519–542.
- 7. Morris, C.; Kirwan, J.; Lally, R. Less meat initiatives: An initial exploration of a diet-focused social innovation in transitions to a more sustainable regime of meat provisioning. *Int. J. Soc. Agric. Food* **2014**, *21*, 189–208. [CrossRef]
- 8. Ploll, U.; Petritz, H.; Stern, T. A social innovation perspective on dietary transitions: Diffusion of vegetarianism and veganism in Austria. *Environ. Innov. Soc. Trans.* **2020**, *36*, 164–176. [CrossRef]
- 9. Alcorta, A.; Porta, A.; Tárrega, A.; Alvarez, M.D.; Vaquero, M.P. Foods for plant-based diets: Challenges and innovations. *Foods* **2021**, *10*, 293. [CrossRef]
- 10. Cole, M.; Morgan, K. Vegaphobia: Derogatory discourses of veganism and the reproduction of speciesism in UK national newspapers 1. *Brit. J. Soc.* **2011**, *62*, 134–153. [CrossRef]
- 11. Larsson, C.L.; Rönnlund, U.; Johansson, G.; Dahlgren, L. Veganism as status passage: The process of becoming a vegan among youths in Sweden. *Appetite* **2003**, *41*, 61–67. [CrossRef] [PubMed]
- 12. Markowski, K.L.; Roxburgh, S. If I became a vegan, my family and friends would hate me: Anticipating vegan stigma as a barrier to plant-based diets. *Appetite* **2019**, *135*, 1–9. [CrossRef] [PubMed]
- 13. Riverola, C.; Ortt, R.; Miralles, F.; Dedehayir, O. When do early adopters share or scare? A conceptual model. In Proceedings of the ISPIM Conference, Austria, Vienna, 18–21 June 2017; pp. 1–12.
- 14. Ajzen, I. The Theory of Planned Behavior. Organ. Behav. Hum. Decis. Process. 1991, 50, 179–211. [CrossRef]
- 15. Rogers, E.M. Diffusion of Innovations, 5th ed.; The Free Press: New York, NY, USA, 2003.
- 16. Tarde, G. The Laws of Imitation; H. Holt: New York, NY, USA, 1903.
- 17. Taherdoost, H. A review of technology acceptance and adoption models and theories. *Procedia Manuf.* **2018**, 22, 960–967. [CrossRef]
- 18. Hölsgens, R. Introducing the adopter perspective in social innovation research. *Innov. Eur. J. Soc. Sc. Res.* **2022**, *35*, 245–264. [CrossRef]
- 19. Conell, C.; Cohn, S. Learning from other people's actions: Environmental variation and diffusion in French coal mining strikes, 1890–1935. *Am. J. Soc.* **1995**, *101*, 366–403. [CrossRef]
- 20. Lee, S.G. An Integrative Study of Mobile Technology Adoption Based on the Technologyacceptance Model, Theory of Planned Behavior and Diffusion of Innovation Theory. Ph.D. Thesis, University of Nebraska-Lincoln, Lincoln, NE, USA, 2003.
- 21. Leonardi, P.M. Materiality, sociomateriality, and socio-technical systems: What do these terms mean? How are they different? Do we need them. *Mater. Organ. Soc. Interact. Technol. World* **2012**, 25, 10–1093. [CrossRef]
- 22. Lai, V.S.; Lai, F.; Lowry, P.B. Technology evaluation and imitation: Do they have differential or dichotomous effects on ERP adoption and assimilation in China? *J. Man. Inf. Syst.* **2016**, *33*, 1209–1251. [CrossRef]
- 23. Lee, S.G.; Trimi, S.; Byun, W.K.; Kang, M. Innovation and imitation effects in Metaverse service adoption. *Serv. Bus.* **2011**, *5*, 155–172. [CrossRef]
- 24. Van der Have, R.P.; Rubalcaba, L. Social innovation research: An emerging area of innovation studies? *Res. Pol.* **2016**, 45, 1923–1935. [CrossRef]
- 25. Dedehayir, O.; Ortt, R.J.; Riverola, C.; Miralles, F. Innovators and early adopters in the diffusion of innovations: A literature review. *Int. J. Innov. Manag.* **2017**, 21, 1740010. [CrossRef]
- 26. Phills, J.A.; Deiglmeier, K.; Miller, D.T. Rediscovering Social Innovation. Stanf. Soc. Innov. Rev. 2008, 6, 34–43.
- 27. Lettice, F.; Parekh, M. The social innovation process: Themes, challenges and implications for practice. *Int. J. Technol. Manag.* **2010**, *51*, 139–158. [CrossRef]
- 28. European Commission. Social Innovation Research in the European Union. Available online: https://op.europa.eu/en/publication-detail/-/publication/86b50f05-2b71-47d3-8db3-4110002b0ccb (accessed on 20 September 2022).
- 29. Brackertz, N. Social Innovation. Available online: https://apo.org.au/node/27387 (accessed on 3 August 2022).
- 30. European Commission. Social Innovation: Inspirational Practices Supporting People throughout Their Lives. Available online: https://ec.europa.eu/social/main.jsp?catId=738langId=enpubId=8352furtherPubs=yes (accessed on 25 April 2023).
- 31. Oganisjana, K.; Svirina, A.; Surikova, S.; Grīnberga-Zālīte, G.; Kozlovskis, K. Engaging universities in social innovation research for understanding sustainability issues. *Entrep. Sustain. Issues* **2017**, *5*, 9–22. [CrossRef]
- 32. Lean Startup Co. What Makes Lean Impact Harder: Top 10 Challenges for Social Innovation. Available online: https://leanstartup.co/what-makes-lean-impact-harder-top-10-challenges-for-social-innovation/ (accessed on 26 September 2022).
- 33. Brandsen, T.; Evers, A.; Cattacin, S.; Zimmer, A. The good, the bad and the ugly in Social Innovation. In *Social Innovations in the Urban Context*; Springer: Berlin/Heidelberg, Germany, 2016; pp. 303–310.
- 34. Scott, S.V.; Orlikowski, W.J. Sociomateriality—Taking the wrong turning? A response to Mutch. *Inf. Organ.* **2013**, 23, 77–80. [CrossRef]

Sustainability **2023**, 15, 7577 27 of 29

35. OECD. Social Innovation. Available online: https://www.oecd.org/regional/leed/social-innovation.htm (accessed on 23 January 2023).

- 36. Jarzabkowski, P.; Spee, A.P.; Smets, M. Material artifacts: Practices for doing strategy with 'stuff'. Eur. Man. J. 2013, 31, 41–54. [CrossRef]
- 37. Carlile, P.R.; Nicolini, D.; Langley, A.; Tsoukas, H. How Matter Matters: Objects, Artifacts, and Materiality in Organization Studies; OUP Oxford: Oxford, UK, 2013.
- 38. Leonardi, P.M.; Barley, S.R. What's under construction here? Social action, materiality, and power in constructivist studies of technology and organizing. *Acad. Manag. Ann.* **2010**, *4*, 1–51. [CrossRef]
- 39. Graça, J.; Godinho, C.A.; Truninger, M. Reducing meat consumption and following plant-based diets: Current evidence and future directions to inform integrated transitions. *Trends Food Sci. Technol.* **2019**, *91*, 380–390. [CrossRef]
- 40. Graça, J. Towards an integrated approach to food behaviour: Meat consumption and substitution, from context to consumers. *Psychol. Commun. Health* **2016**, *5*, 152–169. [CrossRef]
- 41. Hartmann, C.; Siegrist, M. Consumer perception and behaviour regarding sustainable protein consumption: A systematic review. Trends Food Sci. Technol. 2017, 61, 11–25. [CrossRef]
- 42. Michie, S.; Atkins, L.; West, R. *The Behaviour Change Wheel. A Guide to Designing Interventions*, 1st ed.; Silverback Publishing: London, UK, 2014; pp. 1003–1010.
- 43. McPherson, M.; Smith-Lovin, L.; Cook, J.M. Birds of a feather: Homophily in social networks. *Annu. Rev. Soc.* **2001**, 27, 415–444. [CrossRef]
- 44. Lazarsfeld, P.F.; Merton, R.K. Friendship as a social process: A substantive and methodological analysis. *Freedom Control Mod. Soc.* **1954**, *18*, 18–66.
- 45. Rogers, E.M.; Bhowmik, D.K. Homophily-heterophily: Relational concepts for communication research. *Public Opin. Q.* **1970**, *34*, 523–538. [CrossRef]
- 46. Cho, Y.; Hwang, J.; Lee, D. Identification of effective opinion leaders in the diffusion of technological innovation: A social network approach. *Technol. Forecast. Soc. Change* **2012**, *79*, 97–106. [CrossRef]
- 47. Flatt, M.J.D.; Agimi, M.Y.; Albert, S.M. Homophily and health behavior in social networks of older adults. *Fam. Commun. Health* **2012**, *35*, 312. [CrossRef] [PubMed]
- 48. Barr, S.I.; Chapman, G.E. Perceptions and practices of self-defined current vegetarian, former vegetarian, and nonvegetarian women. *J. Am. Diet. Assoc.* **2002**, 102, 354–360. [CrossRef] [PubMed]
- 49. Rosenfeld, D.L. The psychology of vegetarianism: Recent advances and future directions. *Appetite* **2018**, 131, 125–138. [CrossRef] [PubMed]
- 50. Fresán, U.; Errendal, S.; Craig, W.J. Influence of the socio-cultural environment and external factors in following plant-based diets. *Sustainability* **2020**, *12*, 9093. [CrossRef]
- 51. Köster, E.P. Diversity in the determinants of food choice: A psychological perspective. Food Qual. Prefer. 2009, 20, 70–82. [CrossRef]
- 52. Warde, A. The Practice of Eating; John Wiley Sons: Hoboken, NJ, USA, 2016.
- 53. Cramer, H.; Kessler, C.S.; Sundberg, T.; Leach, M.J.; Schumann, D.; Adams, J.; Lauche, R. Characteristics of Americans choosing vegetarian and vegan diets for health reasons. *J. Nutr. Educ. Behav.* **2017**, *49*, 561–567. [CrossRef]
- 54. Vandermoere, F.; Geerts, R.; De Backer, C.; Erreygers, S.; Van Doorslaer, E. Meat consumption and vegaphobia: An exploration of the characteristics of meat eaters, vegaphobes, and their social environment. *Sustainability* **2019**, *11*, 3936. [CrossRef]
- 55. Perez-Cueto, F.J. Sustainability, health and consumer insights for plant-based food innovation. *Int. J. Food Des.* **2020**, *5*, 139–148. [CrossRef]
- 56. English, H.B.; English, A.C. A Comprehensive Dictionary of Psychological and Psychoanalytical Terms: A Guide to Usage; Longmans, Green: London, UK, 1958.
- 57. Wheeler, L. Toward a theory of behavioral contagion. Psyc. Rev. 1966, 73, 179. [CrossRef]
- 58. Parra-Lopez, C.; De-Haro-Giménez, T.; Calatrava-Requena, J. Diffusion and adoption of organic farming in the southern Spanish olive groves. *J. Sustain. Agric.* **2007**, *30*, 105–151. [CrossRef]
- 59. Chabot, S.; Duyvendak, J.W. Globalization and transnational diffusion between social movements: Reconceptualizing the dissemination of the gandhian repertoire and the "coming out" routine. *Theory Soc.* **2002**, *31*, 697–740. [CrossRef]
- 60. Moldovan, S.; Steinhart, Y.; Ofen, S. "Share and scare": Solving the communication dilemma of early adopters with a high need for uniqueness. *J. Cons. Psychol.* **2015**, 25, 1–14. [CrossRef]
- 61. Langley, D.J.; Pals, N.; Ortt, J.R.; Bijmolt, T.H. Imitation analysis: Early prediction of the market demand for major innovations. *Eur. J. Innov. Man.* **2009**, *12*, 5–24. [CrossRef]
- 62. Dijksterhuis, A.; Bos, M.W.; Nordgren, L.F.; Van Baaren, R.B. On making the right choice: The deliberation-without-attention effect. *Science* **2006**, *311*, 1005–1007. [CrossRef]
- 63. Hurley, S.; Chater, N. Perspectives on Imitation: From Cognitive Neuroscience to Social Science; MIT Press: Cambridge, MA, USA, 2005.
- 64. Graça, J.; Calheiros, M.M.; Oliveira, A. Moral disengagement in harmful but cherished food practices? An exploration into the case of meat. *J. Agric. Environ. Ethics* **2014**, *27*, 749–765. [CrossRef]
- 65. Fieldhouse, P. Food and Nutrition: Customs and Culture; Springer: Berlin/Heidelberg, Germany, 2013.
- 66. Chen, P.J.; Antonelli, M. Conceptual models of food choice: Influential factors related to foods, individual differences, and society. *Foods* **2020**, *9*, 1898. [CrossRef]

Sustainability **2023**, 15, 7577 28 of 29

67. Cohen, G.L.; Sherman, D.K. The psychology of change: Self-affirmation and social psychological intervention. *Annu. Rev. Psychol.* **2014**, *65*, 333–371. [CrossRef]

- 68. Festinger, L. A Theory of Cognitive Dissonance; Stanford University Press: Stanford, CA, USA, 1962.
- 69. Sharma, M.K. The impact on consumer buying behaviour: Cognitive dissonance. Glob. J. Financ. Manag. 2014, 6, 833–840.
- 70. Brown, M. Comfort zone: Model or metaphor? J. Outdoor Environ. Educ. 2008, 12, 3–12. [CrossRef]
- 71. Russo-Netzer, P.; Cohen, G.L. 'If you're uncomfortable, go outside your comfort zone': A novel behavioral 'stretch' intervention supports the well-being of unhappy people. *J. Posit. Psychol.* **2022**, *18*, 1–17. [CrossRef]
- 72. White, A. From Comfort Zone to Performance Management; White and MacLean Publishing: Baisy-Thy, Belgium, 2009.
- 73. Rothgerber, H. Meat-related cognitive dissonance: A conceptual framework for understanding how meat eaters reduce negative arousal from eating animals. *Appetite* **2020**, *146*, 104511. [CrossRef] [PubMed]
- 74. Aaltola, E. The meat paradox, omnivore's akrasia, and animal ethics. Animals 2019, 9, 1125. [CrossRef] [PubMed]
- 75. Ruby, M.B. Vegetarianism. A blossoming field of study. Appetite 2012, 58, 141–150. [CrossRef] [PubMed]
- 76. Dindyal, S.; Dindyal, S. How personal factors, including culture and ethnicity, affect the choices and selection of food we make. *Int. J. Third World Med.* **2003**, *1*, 27–33.
- 77. Reipurth, M.F.; Hørby, L.; Gregersen, C.G.; Bonke, A.; Cueto, F.J.P. Barriers and facilitators towards adopting a more plant-based diet in a sample of Danish consumers. *Food Qual. Prefer.* **2019**, 73, 288–292. [CrossRef]
- 78. Laila, A.; Topakas, N.; Farr, E.; Haines, J.; Ma, D.W.; Newton, G.; Buchholz, A.C. Barriers and facilitators of household provision of dairy and plant-based dairy alternatives in families with preschool-age children. *Pub. Health Nutr.* **2021**, 24, 1–13. [CrossRef] [PubMed]
- 79. Lea, E.; Crawford, D.; Worsley, A. Public views of the benefits and barriers to the consumption of a plant-based diet. *Eur. J. Clin. Nutr.* **2006**, *60*, 828–837. [CrossRef]
- 80. Hopwood, C.J.; Rosenfeld, D.; Chen, S.; Bleidorn, W. An investigation of plant-based dietary motives among vegetarians and omnivores. *Collabra Psychol.* **2021**, *7*, 19010. [CrossRef]
- 81. Federico, C.M. How People Organize Their Political Attitudes: The Roles of Ideology, Expertise, and Evaluative Motivation. Available online: https://www.apa.org/science/about/psa/2009/09/sci-brief (accessed on 13 September 2022).
- 82. Filieri, R.; Alguezaui, S.; McLeay, F. Why do travellers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth. *Tour. Manag.* **2015**, *51*, 174–185. [CrossRef]
- 83. Ram, S.; Sheth, J.N. Consumer resistance to innovations: The marketing problem and its solutions. *J. Consum. Mark.* **1989**, *6*, 5–14. [CrossRef]
- 84. Nicklaus, S. Development of food variety in children. Appetite 2009, 52, 253–255. [CrossRef]
- 85. Rothgerber, H.; Rosenfeld, D.L. Meat-related cognitive dissonance: The social psychology of eating animals. *Soc. Personal. Psychol. Compass* **2021**, *15*, e12592. [CrossRef]
- 86. Centola, D. An experimental study of homophily in the adoption of health behavior. *Science* **2011**, *334*, 1269–1272. [CrossRef] [PubMed]
- 87. Tuso, P.J.; Ismail, M.H.; Ha, B.P.; Bartolotto, C. Nutritional update for physicians: Plant-based diets. *Perm. J.* **2013**, 17, 61. [CrossRef]
- 88. Ferdowsian, H.R.; Barnard, N.D. Effects of plant-based diets on plasma lipids. Am. J. Cardiol. 2009, 104, 947–956. [CrossRef]
- 89. Salathé, M.; Vu, D.Q.; Khandelwal, S.; Hunter, D.R. The dynamics of health behavior sentiments on a large online social network. *EPJ Data Sci.* **2013**, 2, 1–12. [CrossRef]
- 90. Langley, A.N.N.; Smallman, C.; Tsoukas, H.; Van de Ven, A.H. Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Acad. Manag. J.* **2013**, *56*, 1–13. [CrossRef]
- 91. Cloutier, C.; Langley, A. What makes a process theoretical contribution? Organ. Theory 2020, 1. [CrossRef]
- 92. Brunet, M.; Fachin, F.; Langley, A. Studying Projects Processually. Int. J. Proj. Manag. 2021, 39, 834–848. [CrossRef]
- 93. Nordqvist, M.; Wennberg, K.; Bau, M.; Hellerstedt, K. An entrepreneurial process perspective on succession in family firms. *Small Bus. Econ.* **2013**, *40*, 1087–1122. [CrossRef]
- 94. Edwards, T. Innovation and organizational change: Developments towards an interactive process perspective. *Technol. Anal. Strateg. Manag.* **2000**, *12*, 445–464. [CrossRef]
- 95. Bankins, S. A process perspective on psychological contract change: Making sense of, and repairing, psychological contract breach and violation through employee coping actions. *J. Organ. Behav.* **2015**, *36*, 1071–1095. [CrossRef]
- 96. Patton, M.Q. Qualitative Research. In *Encyclopedia of Statistics in Behavioural Science*; Wiley Online Library: Hoboken, NJ, USA, 2005; pp. 1633–1636. [CrossRef]
- 97. Mathison, S. Cross-case analysis. In Encyclopedia of Evaluation; SAGE Publications Ltd.: Thousand Oaks, CA, USA, 2005; pp. 95–96.
- 98. Busetto, L.; Wick, W.; Gumbinger, C. How to use and assess qualitative research methods. *Neurol. Res. Pract.* **2020**, 2, 14. [CrossRef] [PubMed]
- 99. FONA International. Plant-Based, Seeds of Change. Part 2: Plant-Based Eating as a Permanent Shift. Available online: https://www.fona.com/articles/2019/04/plantbased-seeds-of-change-part-2-plantbased-eating-as-a-permanent-shift (accessed on 25 July 2022).
- 100. Lantern. The Green Revolution: Entendiendo la Expansión de la ola "Veggie"; LanternPapers: Madrid, Spain, 2019.

Sustainability **2023**, 15, 7577 29 of 29

101. The Food Institute. Gen Z's Influential Food Preferences. Available online: https://foodinstitute.com/focus/gen-z-preferences/(accessed on 10 August 2022).

- 102. Kymäläinen, T.; Seisto, A.; Malila, R. Generation Z food waste, diet and consumption habits: A Finnish social design study with future consumers. *Sustainability* **2021**, *13*, 2124. [CrossRef]
- 103. Glaser, B.G.; Strauss, A.L. The Discovery of Grounded Theory: Strategies for Qualitative Research; Routledge: New York, NY, USA, 2017.
- 104. Collier, D.; Mahoney, J. Insights and pitfalls: Selection bias in qualitative research. World Politics 1996, 49, 56–91. [CrossRef]
- 105. Sutton, J.; Austin, Z. Qualitative research: Data collection, analysis, and management. *Can. J. Hosp. Pharm.* **2015**, *68*, 226. [CrossRef]
- 106. Elo, S.; Kyngäs, H. The qualitative content analysis process. J. Adv. Nurs. 2008, 62, 107–115. [CrossRef]
- 107. Kleijnen, M.; Lee, N.; Wetzels, M. An exploration of consumer resistance to innovation and its antecedents. *J. Econ. Psychol.* **2009**, 30, 344–357. [CrossRef]
- 108. Russell, C.G.; Worsley, A.; Campbell, K.J. Strategies used by parents to influence their children's food preferences. *Appetite* **2015**, 90, 123–130. [CrossRef]
- 109. Shepherd, R. Resistance to changes in diet. Proc. Nutr. Soc. 2002, 61, 267–272. [CrossRef]
- 110. Ajzen, I.; Fishbein, M. Understanding Attitudes and Predicting Social Behavior; Prentice-Hall: Englewood Cliffs, NJ, USA, 1980.
- 111. Twine, R. Materially constituting a sustainable food transition: The case of vegan eating practice. *Sociology* **2018**, *52*, 166–181. [CrossRef]
- 112. Chatzisarantis, N.L.; Hagger, M.S.; Wang, J.C. An experimental test of cognitive dissonance theory in the domain of physical exercise. *J. Appl. Sport Psychol.* **2008**, *20*, 97–115. [CrossRef]
- 113. Reuter, T.; Ziegelmann, J.P.; Wiedemann, A.U.; Lippke, S. Dietary planning as a mediator of the intention–behavior relation: An experimental-causal-chain design. *Appl. Psychol.* **2008**, *57*, 194–207. [CrossRef]
- 114. Harmon-Jones, E.; Amodio, D.M.; Harmon-Jones, C. Action-based model of dissonance: A review, integration, and expansion of conceptions of cognitive conflict. *Adv. Exp. Soc. Psychol.* **2009**, *41*, 119–166. [CrossRef]
- 115. Gawronski, B. Back to the future of dissonance theory: Cognitive consistency as a core motive. *Soc. Cogn.* **2012**, *30*, 652–668. [CrossRef]
- 116. Lee, S.G.; Trimi, S.; Kim, C. Innovation and imitation effects' dynamics in technology adoption. *Ind. Manag. Data Syst.* **2013**, *113*, 772–799. [CrossRef]

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.