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The Advent of Practice Theories in Research on Sustainable Consumption: Past, Current and Future Directions of the Field

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Abstract: The application of practice theories in the domain of sustainability research in consumer studies is increasingly advocated based on the premise that this allows to analyse consumption as a social phenomenon. Consequently, the applications of social practice theories to this field are expanding geometrically and to date, little retrospective work on this evolution has been made. We conduct a bibliometric analysis of applications of practice theories in the domain of sustainability research in consumer studies. Our results show a temporal succession of research trends: 'consumer identity' dominated the field between 2009 and 2012, 'business and governance' between 2012 and 2014, 'sustainable consumption and production' between 2013 and 2014, 'urban living and policy' between 2014 and 2015 and 'household energy' from 2015 until the present. We see a high potential of future applications of practice theories in the fields of the sharing and circular economy, as well as in research on smart cities. We provide new insights into the evolution and future trends of applications of social practice theory to domains that are relevant for research on sustainability and consumer studies.

Keywords: sustainability; sustainable consumption; bibliometric analysis; practice theory; circular economy; sharing economy; smart city

1. Introduction

Several actors in society have acknowledged that we are facing a global sustainability crisis that is likely to have major negative impacts on the natural, social and economic foundations of society. The global demand for ecosystem services is beyond what the planet can provide, and human activities in various domains are on the verge of profoundly altering the underlying earth systems [1–4]. These sustainability challenges emphasise the urgent need to better understand consumption patterns as a means to shape the societal sustainability transition [5–7].

Consumer studies thus increasingly address unsustainable consumption patterns. Amongst the many approaches that find application in the study of consumption, social practice theory seems to play an increasingly important role and has inspired recently published research [8–12]. The application of practice theories to the field of consumption has notably been advocated as a means to analyse

consumption as a social phenomenon [13–15]. Unlike methodologies inspired by social psychology, such as the theory of planned behaviour (TPB), which look at consumer behaviour as individual decisions in a set context, approaches drawing on practice theories look at how elements such as norms, values or material constraints coevolve with consumption practices. Practice theories have proven useful to study the often observed path dependence and stickiness of consumption practices [16–19].

Originally, practice theories have had a very conceptual focus and were aimed at overcoming the structure–agency dichotomy [20–22]. They thus need to be operationalised for empirical work [23]. However, there is little knowledge on whether such efforts of operationalising practice theories have also been made for domains others than consumer studies, but where lifestyles, behaviour or practices also play an important role. Indeed, the question of the domains in which practice theories have found empirical application remains, to date, unanswered. Such knowledge would, however, allow the identification of potential grounds for synergies and cross-fertilisations across different streams of research. Given the complexity of sustainability issues and their interdisciplinary character, exploring these grounds seems essential.

Furthermore, there is currently no understanding as to how the field of practice theory inspired approaches to consumer studies is evolving. So far, practice theories have found application in numerous areas of consumer studies, such as mobility, hygiene, nutrition and energy consumption [6,8–12,15–17,23–25]. However how far are these different applications draw on each other or develop relatively independently of each other and whether there are transversal topics or authors that connect all these different domains are still open questions.

With this article, we aim to bring some light into these questions. This should allow us to provide not only insights on core research trends and the key publications in the different domains in which practice theories have found application, but also to identify future directions that applications of practice theories to consumer studies in the domain of sustainability research can take—based on the insights already gained through research that has already been conducted and based on the emerging fields in sustainability research.

To do so, we use a bibliometric mapping approach to analyse where theories of practice have found application in research dealing with sustainability issues in consumer studies, whether and how the focus of applications of practice theories to the domain of sustainable consumption has evolved over time, the degree to which such applications of theories of practice are fragmented and whether there are potential yet unexplored synergies across different fields of application. The resulting overview of applications and operationalisations also provide a guideline for future work that draws on theories of practice for its analysis.

This paper is structured as follows. In Section 2, we present practice theories and how they are increasingly used as a counterpoint to theories inspired by social psychology. In Section 3, we present the method by which we selected the papers for the bibliometric analysis, as well as how we conducted this analysis. In Section 4, we present the results of our analysis, which we illustrate by means of bibliometric maps. In Section 5, we discuss the implications of our findings regarding the evolution and possible future developments of applications of practice theories to the field of sustainability research in consumer studies. In Section 6, we briefly conclude and present the limitations of our research.

2. Theoretical Background: Practice Theories and Their Development

2.1. Practice Theories: Their Origin and Intellectual Legacy

Practice theories can be traced back to philosophers such as Wittgenstein, and more prominently the interpretations of his work by Schatzki, as well as to sociologists Bourdieu and Giddens. They are the result of the endeavour to overcome the structure–agency dualism, which for a long time characterised and divided social theory. With this, practice theories marked a departure from individualist, structuralist and poststructuralist approaches, as well as from the opposition between constructivism and essentialism [21]. Practice theory overcomes this traditional duality of

individualism and structuralism in that it neither conceives of the social by placing the individual and her agency at the centre, nor by superposing social structure onto individual agency. The human is neither seen as an isolated, independent actor, nor as a passive entity subjugated to social forces that she cannot comprehend. In practice theories, the human is active and reflexive, but it must not be looked at as the centre object of social theory. Indeed, practice theory conceives of the social as being built of practices. This makes the social a continuously changing composition of interconnected human activities, and of what these activities embody [26,27].

Practice theoretic approaches inspired theoretical reflections in domains as diverse as social theory, cultural theory, discourse theory and theory of science. They significantly contributed to the contemporary understanding of social life and human activity, subjectivity, human rationality and meaning. Corresponding to this multitude of fields that have integrated practice theories in their reflections, and the wealth of concepts they have been applied to, it is no surprise that already at an early stage, there was no unified practice theoretic approach [21]. Practice theories should therefore be considered more of an analytical turn, rather than an agreed upon theory [15,21]. What all these different reflections have in common is that practices embody the tacit understandings that motivate human activities, the practical understanding that enables human activities, and the meanings that are attached to these activities. Correspondingly, it is through practices that meanings and understandings are enacted and have an existence in the world. It is through practices that social order manifests itself. This motivates the assertion of practice theorists that the social has to be understood as a nexus of practices [21,26,28].

However, authors differ in how they conceive of practices, and of the interrelations between practices. In Bourdieu's perspective, practices are actions that are largely shared amongst individuals, and which go largely unquestioned. They contain the tacit and collectively shared experience of what is possible in a given context, and thus constitute a form of shared contextual rationality, which in turn motivates the individual actions of which practices consist. Practices are thus the result of the internalisation of the conditions of a given context, and are shared amongst the people who share these experiences. For Bourdieu, these internalised experiences depend on people's position in the social structure—meaning on how people are embedded in power relations. These structures or relations and a person's position in them are thought to be shaped by the volume, structure, distribution and evolution of economic, social, cultural and symbolic capital. People who occupy similar positions in the social structure thus likely share the same internalised experiences [28,29], and it is these experiences that shape practices. At the same time, it is through practices that these social structures are enacted and order the social world [28].

In Giddens' view, practices are constituted by practical knowledge, which is tacit and implicit, and by discursive knowledge, of which people are aware [20]. Giddens emphasises the importance of routines in the structure of everyday social activity, and in the continuous enactment of social structure [27]. Just like Bourdieu, Giddens therefore also emphasises how structure is simultaneously created through its enactment in practices, and at the same time constitutes these practices. Giddens looks at social systems as structured insofar as the relationships of which they consist are stabilised across time. He conceives of social structure as being constituted of rules and resources which are mobilised in the reproduction of the structure. Resources can be both of an authoritative nature, resulting from the coordination of human activity, and of an allocative nature, given by control over the material world [27,30]. Routinised practices simultaneously hold this system of rules and resources together, and are the means through which it is transformed. Practices, situated in this structure, are concerted and thus reproduce the structure [27].

2.2. The Revival of Practice Theories in Consumer Studies

Practice theories have recently been operationalised for empirical field work related to consumer studies in an attempt to overcome the lacunae found in the theoretical approaches which have dominated the field. In consumer studies, just like in other fields of research looking at behaviour, the most commonly used approaches to conceptualise human agency and decision-making build,

in one form or the other, on theories that focus on individual behaviour and personal responsibility. Such individualistic approaches see individuals' actions as goal-oriented, with people being perfectly autonomous and free to set their goals and choose the means to pursue them. Translated into policy measures, such approaches focus on individual agency and choice [10]. As Shove [10] notes, this analytical frame prevails not only in policy documents, but also in academic research on behaviour.

One of the most commonly used approaches in the domain of individualistic approaches is the rational choice theory. Rational choice theory assumes perfectly rational individuals, who strive to maximise their individual wellbeing, and do so based on personal cost–benefit calculations. Rational choice theory has however been criticised for not accounting for social dynamics, given that its key assumption is ceteris paribus [10,23,26]. Furthermore, rational choice theory has proven weak to hold up to empirical evidence, and consequently, a number of alternatives, although still individualistic, approaches have developed [31].

The theory of bounded rationality is one of these alternative individualistic approaches. It starts out from the observation that in the context of complex decisions, there are oftentimes too many factors to take into consideration, and too high degrees of uncertainty, for a human to be able to process rationally. Drawing heavily on experimental research on people's decision-making patterns, the theory of bounded rationality explores the simplifying heuristics which people apply in situations of information overflow, uncertainty and urgency. Research inspired by the theory of bounded rationality currently inspires most environmental policies, which consequently focus on changing the cost–benefit structure of environmental problems, or on improving the availability and quality of information [31].

However, approaches inspired by the theory of bounded rationality have been criticised for not considering the complexity that arises due to conflicting motivations and values that individuals uphold. Approaches inspired by social psychology have been proposed as an alternative. They explicitly include individual value systems, the complexity inherent to conflicting goals and motivations, and perceived and actual loci of action in the analysis of individuals' decision-making processes [31,32]. The theory of planned behaviour, developed by Ajzen [33], stands out as one example. In this view, for an individual to act pro-environmentally, it is necessary that she can consolidate her individual motivations with the prevailing social norms, that she is aware of the need for action, that she perceives her actions as impactful, and that she can act in her desired way given the circumstances [33,34]. The theory of planned behaviour does however not provide any insights on how individuals' motivations, perceived or actual loci of action, and social norms are formed [10,25,35]. Indeed, just like other individualistic approaches, the theory of planned behaviour does not allow for studying changes in the rules of the game, so to speak [10,23,25].

Theories of practice have been advocated as a response to these lacunae. They mark a departure from individualistic approaches. By assuming the context in which practices are enacted and the practice as mutually constitutive and constituting, practice theories focus on the mutual reproduction of the practice and its context of enactment. Practice theories therefore provide insights into the dynamics of social norms, motivations and perceptions, and how they are formed and transformed through their continued enactment [10,15].

However, this originally purely conceptual focus of theories of practice means that to be applied to the analysis of a specific case study, theories of practices need to be operationalised for empirical work [15]. Furthermore, the very general nature of theories of practice implies that they could be applied to a number of fields, with sustainability research being but one of them. To our knowledge, there is however no work that provides an overview of the fields of application of theories of practice, and that looks at how they have been operationalised in these different fields, and in how far its operationalisations in different fields are coherent. Gram-Hanssen [15] provides an overview over four different operationalisations of practices; her analysis is, however, confined to two conceptual works, and two papers which apply theories of practice to sustainability.

The aim of this paper is to overcome this gap, and to complement the existing theoretical and conceptual work on theories of practice with an overview of their application to different research

fields and foci. It is analysed in which fields of research theories of practice find application, and how the theoretical notions are translated into operationalised concepts in these different fields. With this, the paper aims to explore to which degree applications of theories of practice are fragmented, and whether there are potential yet unexplored synergies across different fields of application. The resulting overview of applications and operationalisations should also provide a guideline for future work that draws on theories of practice for its analysis. For this purpose, the following research questions are explored.

1. To which fields of research have theories of practice been applied, and how have they been operationalised in these different fields? And is sustainability one of a main focus of social practice research?
2. Are there interlinkages between how theories of practice are operationalised in different fields?
3. How has the application of theories of practice evolved over time?

In particular, the paper aims at helping scholars and practitioners in understanding the main areas of interest and the knowledge produced by social practice theory research.

3. Methodology

The methodological approach we used in order to answer to the before mentioned research questions is represented by a bibliometric mapping technique.

A bibliometric mapping technique considers scientific literature in order to build maps that are able to visualise the relationships among diverse items of interest [36] and can be quite useful for supporting a systematic literature review. This approach has been applied in several fields to explore static and dynamic structures of the academic research. Bibliometric mapping techniques deliver a visual delineation of the state of the art in a field of research, but can also be used to provide orientation for scientists in developing their area of interest on a certain topic, potentially representing inspiration for future theoretical and practical approaches to expand a certain field of the literature [37–41].

3.1. Data Collection

To carefully select the publications to include in our analysis we used a straight forward multistep procedure. The first step concerned the identification of a robust academic citation indexing service. Scopus, which is widely acknowledged as solid and appropriate [42], was adopted for the identification of the dataset of literature.

As many authors underline [19,43], practice theory was recently reintroduced in consumer studies inspired by earlier work of Schatzki [21], further developed based on his later work [21] and discussed and expanded by Reckwitz [44] and Warde [19]. We used these four references for conducting the research of the academic literature limiting the dataset to papers matching at least two of the four references we identified as fundamental for the examination of practice theory in consumer studies. By doing so, we aimed at excluding those research papers that are too generic for our aims (i.e., not exactly dealing with practice theory in consumer studies). This decision excluded, for example, a paper like the one written by McFarlane and Silver [45] dealing with the dialectics of everyday urbanism and that is thus only marginally related to our research aims.

Then, we decided to exclude the grey literature on the topic (i.e., report, working paper, etc.) relying only on manuscripts accepted in peer review journals and papers presented and discussed in conferences. By doing so, as suggested by Light and Pillemer [46], we improved consistently the quality of the analysis.

In order to ground our analysis on consistent data we finally performed a systematic review of the titles of the papers to remove those too generic. This final check allowed confirming the goodness of the selection procedure.

This procedure found a total of 1519 articles in peer-reviewed journals matching the keyword criteria.

3.2. Term Maps of the Research Domain

After having prepared the dataset of scientific publications we performed the bibliometric map analysis in order to generate a visual representation of noun phrases occurring multiple times in titles and abstracts. The VOS algorithm mapping technique implemented in the software VOSviewer [36] was then used to produce the term maps. Once we produced and analysed the first map we refined it by using a thesaurus file to iteratively exclude terms that are too generic such as "methods", "aims", "results ", "conclusions", etc. The map generation process requires VOSviewer to (1) identify the noun phrases by performing part-of-speech tagging through the use of the Apache OpenNLP toolkit (http://opennlp.apache.org/) [47], (2) assess the Kullback–Leibler distance [48,49] and select the most relevant noun phases, (3) map and cluster the terms by using the unified framework [50,51] and (4) visualise the results of the mapping and clustering exercise.

The resulting maps illustrate the relations between relevant terms. In particular, the map makes it possible to capture the following features.

1. Clusters: words belonging to the same cluster are depicted in the same colour.
2. Dimension of the words: words in larger fonts are those occurring most frequently across the sample of publications, while those in smaller fonts are those occurring less frequently.
3. Distances: between words: the higher is the distance between two terms and the smallest is their co-occurrence, while the smaller is the distance between two terms the higher their co-occurrence.
4. Linkages: connections between words show the bonds between words mostly occurring together in the database of scientific publication.

3.3. Co-Citation Analysis of the Research Domain

In order to obtain a deeper understanding of how interlinkages between theories of practice are operationalised in different knowledge fields, a document co-citation analysis is conducted. Co-citation analysis is an effective method for discovering the intellectual structure of research domains and its deployment makes it possible to measure similarities between documents by means of citation relationships [52,53]. Co-citation was firstly defined by Small [54] as the "frequency with which two documents are cited together by other documents". A co-citation exists when two references appear together in the same publication and the more co-citations two documents have, the higher the degree of similarity between them [54,55].

The data collected were elaborated with BibExcel [56]. BibExcel assist in the analysis of bibliographic data by generating ad hoc files which can be uploaded onto any software program that takes tabbed data records for further processing. Then, we decided to use the VOS algorithm mapping technique implemented in the software VOSviewer to produce the maps [36]. VOSviewer's algorithm aims at locating the items in a low-dimensional space so that the distance between two items is an accurate indicator of their relatedness. Take two items i and j, the input for VOS is a non-negative similarity s_{ij} (treated on a ratio scale). These similarities s_{ij} are calculated using the following equation [57,58].

$$AS_{ij} = \frac{c_{ij}}{c_i c_j}$$

VOSviewer determines the position of the items in the map by minimising the weighted sum of the squared distances between all pairs of items:

$$V(x_1, \ldots, x_n) = \sum_{i<j} s_{ij} \|x_i - x_j\|^2$$

where the squared distance between item pairs is weighted by their similarity, a constraint is imposed in order to avoid the trivial solutions in which all items have the same location:

$$\frac{2}{n(n-1)} \sum_{i<j} \|x_i - x_j\| = 1$$

The resulting co-citation map illustrates the relations between the relevant literature cited in this field. In more detail, the map captures the following features.

1. Clusters: authors belonging to the same cluster are depicted in the same colour.
2. Dimension of the references: references in larger fonts are those occurring most frequently across the identified publications, while those in smaller fonts are those occurring less frequently.
3. Linkages: connections between references show the bonds between references co-occurring together in the database of scientific publication; the size of the linkage is larger when the number of co-citations is large while is smaller when the number of co-citations is small.

3.4. Overlay Representation of Journals in a Global Map of Science

In addition, in order to further explore the interrelation in the field of research, we used the Leydesdorff et al. [59] overlay framework. Such framework allows plotting the journals containing the 1519 academic papers on a global map of science based on 20,554 academic journals. In more detail, such process allows to counts the number of occurrences of each journal title in the dataset composed by the 1519 academic papers matching the journal titles with the positional information of the base map [59]. The resulting journals map is as follows.

1. The journal names under investigation are highlighted with colour in the map; on the contrary all other nodes are depicted in grey.
2. The size of each journal as a node is depicted proportionally to the number of occurrences.

Finally, we used also the Rao–Stirling diversity index as a measure of interdisciplinarity in the sets under investigation [60–62].

4. Results

4.1. Static Analysis

The visual representation based on the overall set of 1519 academic publications (Figure 1) presents the connections between different research areas.
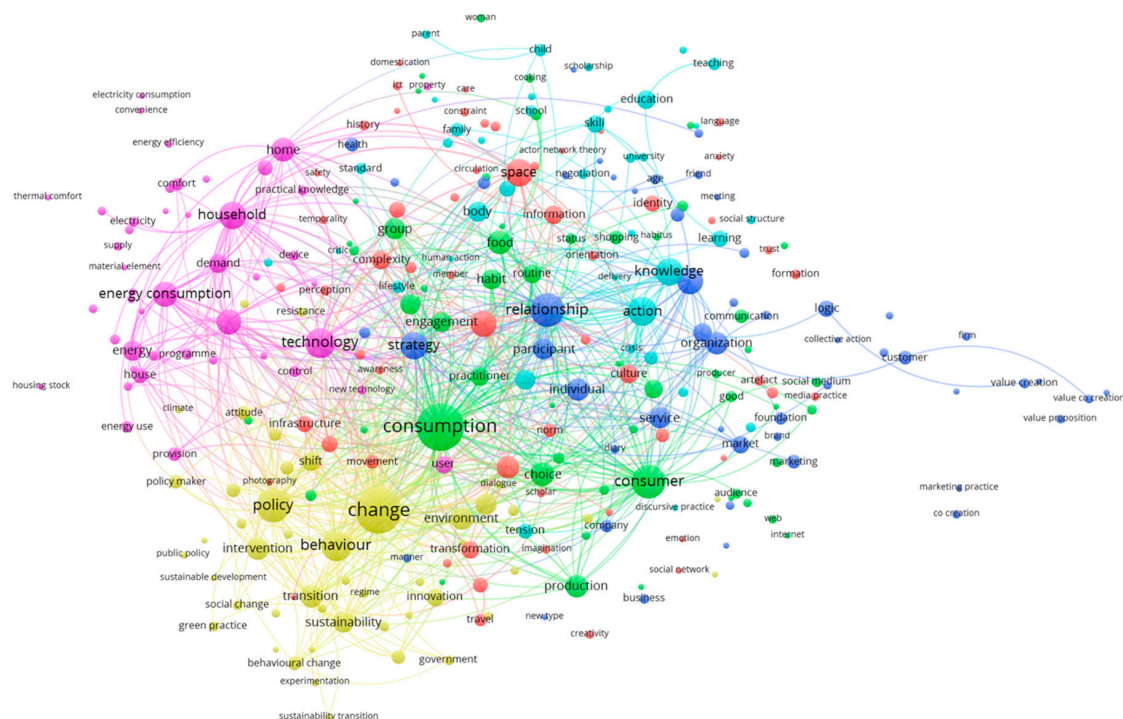

Figure 1. Term map of the research field.

The term analysis identified seven clusters, represented by colours in Figure 1. The pink colour cluster group keywords relate to the use of social practice theory in the energy field. Most of those studies deal with household practices. An example of a study conducted in this field is represented by the work by Shove & Walker [63]. The authors contrapose the common understanding of energy as a resource base, of which the management and organisation depends on various interconnected systems (i.e., economic, political and technological) to a different perspective viewing energy supply and energy demand as part of the continuous reproduction of bundles and complexes of social practice.

The yellow colour cluster groups keywords related to sustainable behavioural change in general terms and policy interventions needed to fully address the transition to more sustainable lifestyles. An example of published research in this field is represented by the work of Hargreaves [6]. Making use of social practice theory, the author provides insights into pro-environmental behaviour adoption using an ethnographic case study of a behaviour change initiative. The article enlightens the barriers encountered in attempts changing practices and underlining issues to be addressed to overcome those barriers.

The green colour cluster groups consumer and consumption studies using a social practice theory approach; it is worth noting that one of the aspects related to consumption is connected with food. In this case, one representative example is the work conducted by Delormier et al. [64]. The authors illustrate a framework for the analysis of eating patterns as a social phenomenon trying to understand how food choice practices are routinised by families, showing how family rules and resources act as a driver or a limit condition under which family members develop food choices.

The light blue cluster groups keywords of studies in the field of education and learning. In this case, one representative example is the work conducted by Keller & Ruus [65]. In their research the authors examine the co-shopping practices of children and parents in supermarkets providing several implications for consumer education.

Finally, the blue cluster groups keywords related to pure business aspects (e.g., accounting, value creation and marketing). A relevant study in this area is represented by the work of Echeverri & Skålén [66]. In this case, the authors using a practice–theory perspective analyse the interactive value formation at the provider-customer interface. In particular, with their analysis the authors [66] characterise four types of interactive value formation cases corresponding with four subject positions which practitioners' step into when engaging in interactive value formation.

The red cluster groups several keywords that are widely used in different research areas and which are consequently difficult to categorise properly.

As for more a general overview, two patterns seem evident. First, a significant share of research has focused on change, interactions between practices, agency and strategy and on the domains of household practices, food and energy, relating to consumers and policies. Second, many applications of SPT tackle sustainability related issues. Some of the sustainability issues have been close and related to education research as well as food consumption.

4.2. Dynamic Analysis

Figure 2 shows how the application of SPT in research domains has varied over time. The first applications appear to be in domains related to pure business-related aspects, in blue colour, in 2012. More in detail, social practice theory research in this period contributes mainly to the discussion on the relationship between identity and consumption [67,68] and the dynamics and transitions of practices in everyday life [69,70]. Then, in 2013, SPT was stated to be applied to innovation issues, marketing research and business strategy. There are several studies dealing with strategic and innovation management theories and applications [71–73] and applied marketing research [74,75]. Consumption studies related to change, behaviour, consumer and sustainability seem to be predominant topics around the years 2013 and 2014. The application of SPT to policy, food and travel use dominated the years 2015 and 2016. The energy related field of research seems actually the hot spot of current research related to SPT.
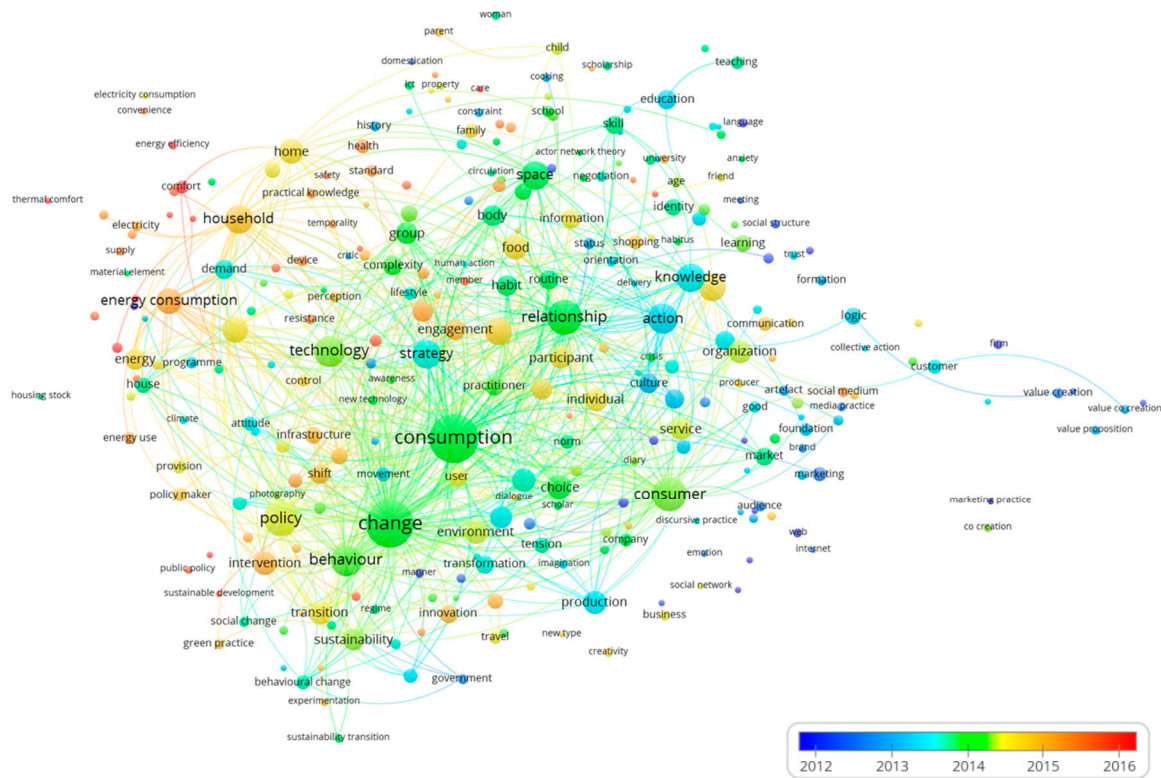
Figure 2. Temporal term map of the research field.

4.3. Co-Citation Analysis

To analyse the application of SPT to consumer studies in more detail, we also produced a co-citation map grouping the 50 most cited academic publications in the field of analysis (Figure 3).
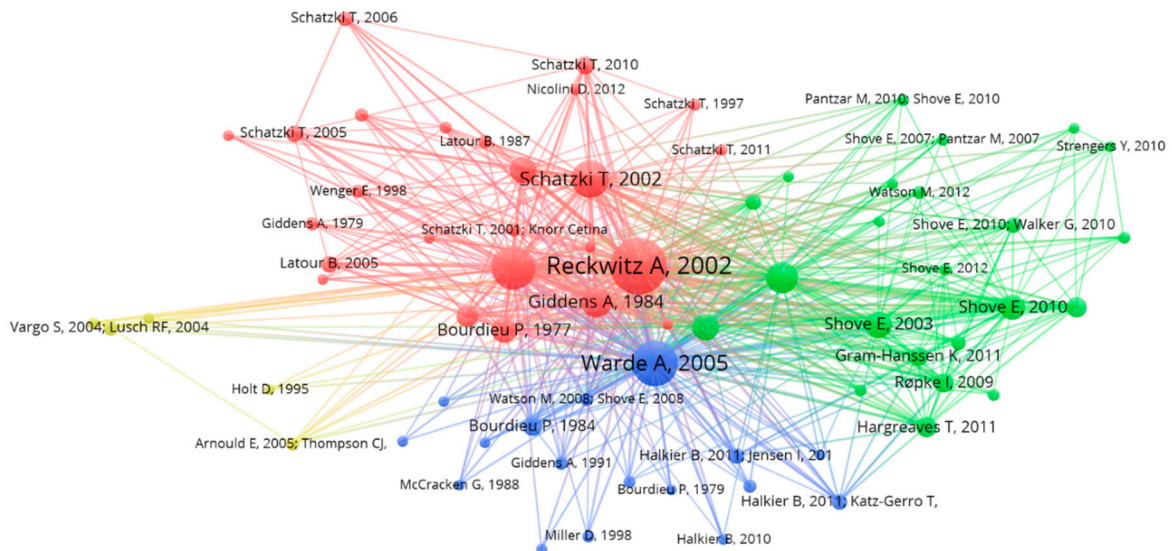

Figure 3. Co-citation map of the research field.

In this case there are four main clusters of interest. The green cluster, which represents one of the biggest in the figure, groups several studies related to sustainable consumption patterns and energy related issues. The work conducted by Shove & Walker [63] and Røpke [7] are clear examples of the kind of researches related to sustainable consumption and energy related issues. The red cluster groups general literature on practice theory. It is worth noting that three out of four references used for

conducting the research of the academic literature [21,26,44] belong to this cluster. The blue cluster groups the third largest area of research. Literature listed in this cluster deals also with general aspects on practice theory but more on a theoretical and methodological perspective in comparison to the previous one. For instance, Halkier [76], grounding his argumentation on practice theory, contributes to the discussions about generalising, by way of exemplifying some of the methodological practicalities in analytical generalisation.

The yellow cluster, which is the smallest one in comparison to the others, groups just five studies dealing mostly with consumer and marketing research issues [77]. This cluster is located in a complete opposite position with respect to the green one and very few linkages are depicted between the two clusters.

4.4. Overlay Representation

Moreover, in order to further explore the interrelation in this field of research we produced a map showing the journals containing the 1519 academic papers plotted on a global map of science (Figure 4). As presented in the map, most of academic researches related to social practice theory were made in journals dealing with psychology and social science, economic and management and environmental sciences. Only a smaller number of publications were made in journals related to human health-related journals. The scarce interdisciplinarity of the area of research is also confirmed by the Rao–Stirling diversity index [60–62] of 0.11.
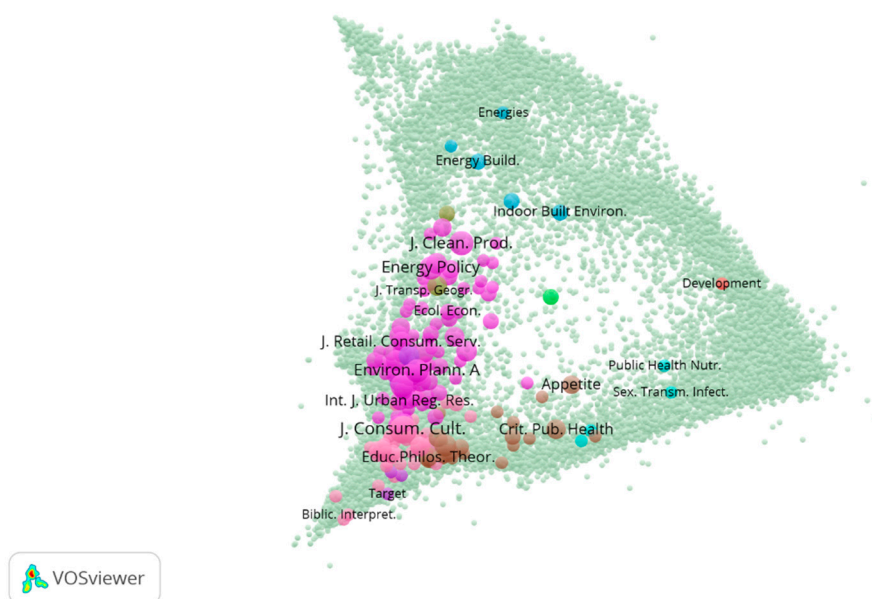

Figure 4. Overlay representation of journals.

5. Discussion

From a theoretical perspective, it is evident from the term map how practice theoretic approaches in consumer studies have bridged to other theoretical frameworks. There are, indeed, several references to technology and innovation (respectively on the central and lower part of the maps). This shows how some scholars link practice theories to different aspects of sociotechnological transitions [7,9,70,78], or study how interconnected practices play into sociotechnological change [8,43]. In this domain, links have also been created between theories of practice and transition theories, which study transitions in sociotechnological systems [73,79,80]. Other authors also focus on technology, but emphasise the agentive aspects of technology in the reproduction of practices, and on how technologies are embedded in practices [7,11,16,81]. However, still under this theoretical perspective, surprisingly both in the term maps (Figures 1 and 2) and in the co-citation map (Figure 3) only very few links could be found

to the theory of reasoned action [82] or the theory of planned behaviour [33] that are often used as framework to analyse sustainable behaviours related to consumption.

Several other considerations can be taken into account when analysing past and current research trends; indeed, building on the static analysis that identified five main streams of research topics (Figure 1), the dynamic analysis on the evolution of the fields in which SPT found application (Figure 2) and the co-citation analysis which allowed us to identify influential publications in each field (Figure 3), a framework of potential near-future directions in the application of social practice theories in sustainability research is proposed and shown in Figure 5.
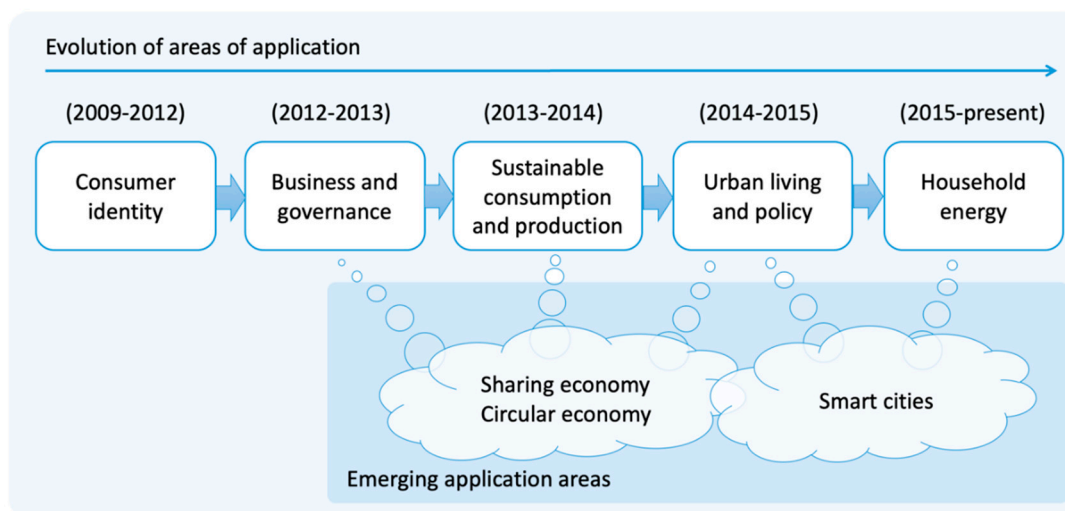
Figure 5. Framework linking past and current to future application areas of social practice theories.

As mentioned in the results section, sustainability emerged as a predominant topic around the years 2013 and 2014. In this time period, social practice theory research was used mainly to study what plays into the emergence of sustainable consumption and production practices or what keeps unsustainable modes of consumption and production in place [16,73,83–86]; as well as to shed light on how practices are intertwined in different contexts of consumption [15,87–89].

With time, applications of social practice theory to consumer studies increasingly focused on analysing the potential for achieving a shift to more sustainable practices in the context of urban living and policy development (2014–2015). Such applications include work on sustainable eating [16,90–92], community, infrastructure, technology [77,93–98] and how practices play into the interface between consumption and sustainable policy [99–107].

Finally, the application of social practice theory from 2015 to date has been largely in the context of household energy use and demand; more specifically related to electricity consumption and usage [108–119] and thermal comfort [120–129].

Based on these insights, we identify some fields in which social practice theory could be applied in future research.

Circular economy and sharing economy are fertile and promising areas for future applications of social practice theory. Indeed, the commonly used linear production model has been recently contested by developments in the field of circular economy, a concept that conceives of production systems by extending the useful life of goods, materials and resources beyond their use as consumer goods (e.g., by means of reusing and sharing practices [130]) and waste management conscious behaviour [131] (e.g., such as waste prevention behaviours [132]). Within this field of research, a significant body of research related to sharing, repair and reuse behaviour seems to be emerging from the streams 'business and governance', 'sustainable consumption and production' and 'urban living' (Figure 4). More in detail, we envisage a significant stream of emerging research dealing with the diffusion of access-based consumption and business models, and examination of its dynamics in the context of the

sharing economy as represented by the few recent publications already available [133–135]. Moreover, investigation of behavioural practices and circular business models related to replacement, repair and reuse in the context of the circular economy could also represent a future trend supported, also in this case, by few recent publications already showing such tendency [136–141].

Another promising area for the application of social practice theory is represented by smart cities. The concept behind making a city smarter has been widely explored by researchers during the recent years [142–146]. Within this context, as a derivation of the more recent research focused on the streams 'urban living and policy' and 'household energy', it appears that the application of social practice theory is heading to the direction of reframing the challenges and potentials of orienting citizens' behaviour in the context of energy consumption and production in smart cities [111,147–150]. During the last decade, we assisted also to a wider interest in promoting sustainable decentralised energy production fostered by citizen participation is a number of local projects implemented in smart cities contexts [151,152]. Such projects comprehend a wide range of activities ranging from energy generation projects to energy conservation projects (e.g., renewable energy generation from locally-owned infrastructures, refurbishment of community building, programs fostering behavioural change, etc.) which take the appellative of energy communities [153]. Within this filed of research, practice theory could represent the theoretical approach, in the future, to analyse how community engagement programs can change over time the response to the rapid deployment and adoption of locally-owned renewable energy systems.

6. Conclusions

With this research we have mapped the emerging trend of applications of practice theories to consumer studies, and put these applications in relation with applications of practice theories in other domains. We found that sustainability research represents one of the main foci of social practice studies. In particular, there is extensive literature dealing with sustainable behaviour change and a recently also an increasing application of practice theory to research on energy consumption. Our results revealed that sustainability issues in practice theory started to be predominant topics around the years 2013 and 2014 and that the energy related field of research represent the newest field of research related to practice theory. Over time, consumer identity (2009–2012), business and governance (2012–2014), sustainable consumption and production (2013–2014), urban living and policy (2014–2015) and household energy (2015-present) were the areas in which the social practice theory has been extensively applied to.

This analysis has allowed us to identify synergies that could be explored between different fields of application of practice theories to open up possible future fields where an application of practice theories could be promising. This notably concerns two emerging fields in the domain of sustainability research—the sharing economy and circular economy, as well as smart cities—both fields where applications of practice theories could usefully contribute to already ongoing work and fruitfully draw on previous applications of practice theories to different but closely related fields of research. Such applications could, in the case of the sharing and circular economy, focus for instance on replacement, reusing and repairing practices, and in the case of smart cities, on the practices related to the deployment and adoption of locally-owned renewable energy systems.

Some limitations need to be taken into consideration in the interpretation of our results. Those notably concern the data. The produced sample depends on the assumptions which guided the paper selection process, and which we have documented in the methods section. Lastly, since they constitute a simplified depiction of the bibliometric analysis, the produced maps might create some distortions.

Finally, knowledge about which are the major field of analysis of the practice theory research could be helpful in complementing and confronting the findings of the presented paper. More specifically, how the findings from the application of the competing practice theory differ from those concerning sustainable behaviours is a salient gap needing attention. Bridging the gaps between these research

fields would represent an important contribution in the pursue of addressing (un)sustainable consumption patterns in consumer studies.

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