

## Practice Theories and the “Circuit of Culture”: Integrating Approaches for Studying Material Culture \*

Emanuela Mora<sup>†</sup>

Eleonora Noia<sup>‡</sup>

Valentina Turrini<sup>§</sup>

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### Abstract

The paper compares two heuristic tools to understand how practice theory could be used to study the phenomena of material culture: the one summarized by Shove et Al. (2012) in *The Dynamics of Social Practice: Everyday Life and How It Changes* and the “circuit of culture” proposed by Paul Du Gay et Al. (1997) in *Doing Cultural Studies. The Case of the Sony Walkman* (1997). The aim of the article is to test the possibility to integrate the use of these two tools. In order to fulfil this purpose, the article is comprised of two parts. The first part illustrates how the two heuristic tools are compatible and what advantages each have over the other. In the second part, both heuristic tools will be applied to explore two case studies, one regarding a technological artefact and another one regarding a type of agricultural practice.

**Keywords:** Material culture; Circuit of culture; Practice theory; Haptic interfaces; Farmer agriculture.

## Introduction

The object of this essay is primarily born of serendipity. While thinking of how to contribute to the symposium here presented, we asked ourselves how a particular version of practice theory, the one summarized by Shove, Pantzar and Watson (2012) in *The Dynamics of Social Practice: Everyday Life and*

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\* This article has been thought up, elaborated, and written together by the three authors. If it were necessary to recognize the specific authorship, it should be attributed as follows: Emanuela Mora wrote the first part. Valentina Turrini wrote section 1 of the second part and Eleonora Noia wrote section 2 of the second part. The introduction and conclusions have been written together.

<sup>†</sup> University Cattolica del Sacro Cuore, Milan (Italy); ✉ [emanuela.mora@unicatt.it](mailto:emanuela.mora@unicatt.it);  <https://orcid.org/0000-0003-0906-9074>

<sup>‡</sup> University Cattolica del Sacro Cuore, Milan (Italy)

<sup>§</sup> University Cattolica del Sacro Cuore, Milan (Italy)

*How It Changes*, could be used to study the phenomena of material culture. We realized that the heuristic device adopted by those authors had something in common with another one, the “circuit of culture” proposed by Paul Du Gay et Al. in *Doing Cultural Studies. The Case of the Sony Walkman* (1997). By comparing these two heuristic tools, we sought to understand how they are compatible with each other and what advantages they each have over the other. Many vital questions, due to the different theoretical backgrounds of the two instruments, remain unexplored; however, it seems that the comparison offers some exciting ideas, useful for conducting empirical research in a non-reductionist way and consistent with the growing interest in the sociological analysis of material culture. The aim of this article is to explore if it is possible to integrate the use of these two tools and, if so, how. In order to fulfil this purpose, the article is comprised of two parts. In the first part, we illustrate how the two heuristic tools are compatible and what work each does that the other does not. In the second part, we try to apply both the two heuristic tools to two case studies, one of a technological artefact and another of a type of agricultural cultivation, in order to highlight the respective advantages they can provide.

The first decade of the Twenty-First century can be considered the time during which the growing body of interdisciplinary research on material culture became a recognized field — albeit, one at the crossroads of a manifold and motley bunch of disciplines (Tilley, 2013, p. 1; Woodward, 2007, pp. 3–4).

The disciplines that studied the materiality underlying the inquiries into the social have been touched in some way by the “turns” of the social sciences in the last decades of the Twentieth century, such as the linguistic, the cultural, the literary, or the textual (Hicks & Beaudry, 2010, p. 1). In all these turns, scholars have contended that making sense of the wide variety of social phenomena requires the acknowledgement of their dual nature as both cultural and material.

Studying material culture, therefore, involves studying objects and devices, as well as the technologies that give rise to ways of living and doing. Moreover, it means studying the knowledge and the relationships through which these ways of doing are realized, and the objects that are incorporated in them.

Methods and analytical tools to study material culture are part of historical, anthropological, and archaeological traditions. In these disciplines, however, objects are studied as bearers of values, meanings, and/or traditions; they are often the only resources available to reconstruct ways of life and practices that have disappeared. Therefore these material objects are treated as texts, messages that attest to a world that no longer exists. Anthropologists of the contemporary and sociologists of culture and consumption have learned from those disciplines that the study of material resources provides a great wealth of information to develop an understanding of everyday practices. These fields have studied, for example, the social life of objects (Appadurai, 1986) and how objects are used by people to classify the world and to inform behaviour within it (De Certeau & Rendall, 1984; Douglas & Isherwood, 1996; Miller, 2010). In doing this, however, anthropologists and sociologists have exposed themselves to the criticism of those who refuse to place emphasis on semiotic production activities and deplore overlooking the active role that objects play in the production of daily life and social order (Ingram, Shove, & Watson, 2007; Matthew Watson, 2008, p. 5). This criticism matured in the context of the practice approach, the subject of this symposium.

In the present article, we decided to refer mainly to a vein within the family of practice theories (Schatzki, 1996, p. 12), the one that, relying in particular on the contributions of Theodor Schatzki and Andreas Reckwitz, was developed around the University of Lancaster and the research group of Elizabeth Shove.

We believe that those scholars have developed important definitions of practice and a simple heuristic tool useful for studying material culture. The tool is not intended to be a method or a specific set of techniques, as supported by Shove in the blog *Practice Theory Methodologies*. It instead offers a lens through which to study practices and identify their core elements and the connections among them. Even if these authors do not consider themselves scholars of material studies, they contribute to the inquiry of material elements of the social and their capacity for both self-reproduction and change.

There is, however, another tradition that has provided scholars with an equally useful heuristic tool for studying the role of artefacts in social practices, the so-called “circuit of culture.” It is the tradition of British cultural studies, born during the 1960s around the Centre for Contemporary Cultural Studies in Birmingham, UK. This circuit is a simplifying scheme to identify the fundamental social processes that

constitute the different cultural dimensions of a practice. It shows how the order in which the practices take place are the products of actions, events, resistances, and inertias occurring in such processes (Du Gay et Al., 1997).

In our opinion, the cultural circuit and the heuristic model developed by Shove et Al., although different, have much in common; they mainly carry out the same work, even if each one does something that the other one does not or does not do equally well.

## First Part

In the following, we briefly present the characteristics of the two heuristic tools, focusing in particular on the elements that, in our opinion, make them compatible and complementary.

### 1. Social Practices and Their Dynamics

In a book of 1996, Theodor Schatzki provides a synopsis of the contribution of numerous scholars who consider practice as the fundamental social phenomenon (Schatzki, 1996, p. 11).

Taking practice as “the primary generic social thing” means dealing in a non-reductionist way with numerous questions concerning human activity:

The nature of subjectivity, embodiment, rationality, meaning and normativity; the character of language, science and power; and the organization, reproduction, and transformation of social life (Schatzki, Knorr-Cetina, & von Savigny, 2001, p. 10).

This is likely why Schatzki does not provide a univocal definition of practice: the many theorists of practice would provide different definitions. In *The Site of the Social* (2002), he nevertheless offers a definition, albeit minimal:

Practice is a “bundle” of activities, that is to say, an organized nexus of actions (Schatzki, 2002, p. 71).

According to him, any material arrangement is part of a practice, as it was stated by authors like Bourdieu and Giddens in the 1970s and 1980s. At that time, the priority was to make explicit the need to look at “the social,” as comprised of interconnected human bodies, organisms, artefacts, and things:

A practice is an open spatially-temporally dispersed sets of doings and sayings organized by common understandings, teleo-affectivities and rules (Schatzki, 2017, p. 32).

Andreas Reckwitz, going further, defines practice as

A routinized type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, “things” and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge (Reckwitz, 2002, p. 249).

His version distinguishes between simple arrangements, which dissolve in the flow of events, and arrangements characterized by rules, knowledge, and skills that make them recognizable and reproducible as parts of specific practices. Even though any action is comprised of material arrangements and mental activities, a practice has to be acknowledged according to identifiable features that persist beyond single enactments.

Elizabeth Shove, Mika Pantzar, and Matt Watson see the heuristic potential of a practice approach for understanding the dynamic structure of the social, namely the “coexistence of novelty and persistence” — in a phrase, the change, which is the interest of sociology at large (Shove et Al., 2012, p. 1).

They distinguish between practice as an entity — as in the practice of cooking or skateboarding — and practice as performance, that is the single enactment — as in Emanuela’s cooking “ossobuco con

risotto” tonight or Eleonora’s skateboarding in the afternoon to reach Valentina’s place (Shove et Al., 2012, p. 7).

How is this version of practice theory a useful contribution to the study of material culture? Its primary contribution comes from its explicit attention to things and materials as embedded in the activities of everyday life and to their connections with other social dimensions, such as institutions or rules. Shove and her colleagues are interested in understanding how ways of doing in people’s daily lives — for example, playing sports, cooking, maintaining personal hygiene, storing food, etc. — become stable, and how they change over time. To do this, they simplify the catalogue provided by Reckwitz and propose a scheme based on three elements allowing researchers to identify a practice as an entity. The scheme includes the elements of meaning (what Reckwitz calls mental activities, emotion, and motivational knowledge), materials (which include objects, infrastructures, tools, hardware, and the body), competence (multiple forms of understanding and practical knowledge, as well as rules and norms) (Shove et Al., 2012, p. 23). The aim of this scheme is to focus attention on the links and connections among the elements. These key features allow researchers to identify the existence of practices and evaluate which ones are changing over time.

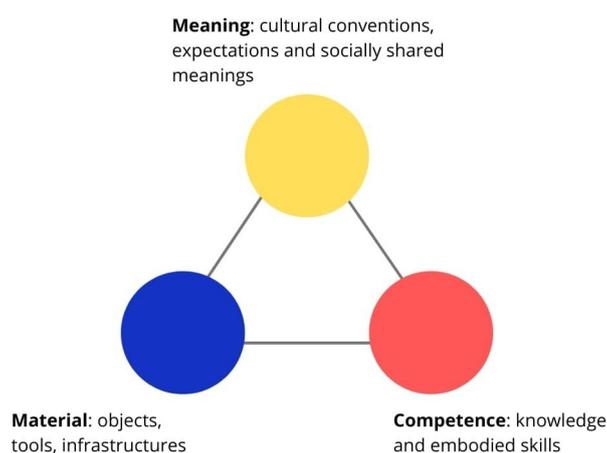


Fig. 1. Element of Practice (Shove *et al.*, 2012).

One of the more pervasive criticisms of this family of theories is that it neglects the actions of practitioners in specific enactments. Recently, a few scholars within the Lancaster group of practice theorists have addressed this issue and some other widely diffused criticisms in an edited collection of essays, *The Nexus of Practices* (Hui, Schatzki & Shove, 2017). In it they offer insight into the role that the practitioners’ production of meanings plays as a core element of practice. Scholars are increasingly aware that the orders according to which practices take place are based on different types of knowledge:

Know-how, interpretive knowledge of routinized attributions of sense, and complexes of culturally modeled affects and motivations (Reckwitz, 2017).

After the theoretical work made in previous publications, the authors feel time is now to explicate that cultural activities are an essential component of practice in order to legitimate the focus on the whole practice as the primary research unit.

The topics addressed in the 2017 volume also attest to the interest of these practice scholars in confirming that their contribution can be useful to elucidate not only small and local phenomena but also larger and more expansive ones. In our opinion, this collection offers space to assess the mutual compatibility of both the heuristic schemes we are comparing in this article. Four topics, in particular, are worthy of consideration: acknowledging the importance of the learning processes in which practitioners are always involved (Alkemeyer & Buschmann, 2017); clarifying the role played by sayings, texts, and discursive formations as offered by Schatzki (2017); considering the emotions as diffused qualities of practices instead of individual qualities, as Reckwitz proposes (2017); suggesting that practice theory should devote more attention to addressing the issue of power, both on the level of organizations and institutions and on that of individuals — an issue that has been often overlooked by practice researchers, more focused on pragmatic solutions of social empirical emergencies (Watson, 2017).

The first topic is addressed in the contribution of Thomas Alkemeyer and Nikolaus Buschmann. They describe the subjectivity of practitioners as the result of a process in which they learn to act competently and accurately according to the practice's requirements. In turn, this practice is progressively structured through the interplay of its components, such as things, bodies, and artefacts (Alkemeyer & Buschmann, 2017, p. 8).

The authors start from the notion of "distributed agency." According to them, looking at the distributed agency requires accounting for the evolution of artefacts, as well as for how practices improve through the interplay among artefacts. Often, however, this strategy leads practice scholars to overlook the reflexive learning processes in which practitioners are involved, once they have engaged with a practice.

According to Alkemeyer and Buschmann (2017) practices include the following: unstable structures that evolve along time making sense both of stability and diversity inside themselves; situations where learning continually occurs, being that the practitioners are always confronted with conflicts, ambivalence and uncertainties; the socio-material constellations that provide the conditions for the subjectivity of the practitioners to come into being, thanks to the active learning processes they go through (p. 22).

Alkemeyer and Buschmann focus attention around the central role played by the learning processes in the reciprocal constitution of the practitioners' subjectivity as well as of the very structure the practice assumes. Their effort follows that of Schatzki (2017). He insists on the importance of sayings and doings, as well as of general understandings as integrative resources — the second topic we want to stress. According to Schatzki (and to Warde & Welch, 2017, p. 195), they contribute to creating the order of practice.

As it happens with the learning processes, the whole practices are comprised of both bodily and mental activities. Schatzki thinks of texts and sayings like uttered sentences in a conversation that perish in the event (Schatzki, 2017, p. 132) and like interactions, such as dissemination of knowledge, power and domination, and aesthetical experience — that is, those constant adjustments that actors make to the world, besides the general action of understanding that cannot be performed outside the context of language (Hui et Al., 2017). The scholar, therefore, does not underestimate the importance of subjective and intersubjective productions of meanings and understandings, which allow people to "pursue ends, carrying out tasks... being imbued by particular emotions and general understandings" (Schatzki, 2017, p. 130). The cultural activities in practices contribute to creating the framework of meanings that makes the pre-reflexive affective responses of the practitioners compatible with the discursive frameworks that govern the normative and teleological structure of the practice itself.

Among the cultural formations that allow practices to become ordered and intelligible and, therefore, to recruit practitioners, scholars also count emotions and affects (Reckwitz, 2017, p. 116). This is the third topic we wish to address, and it is of particular interest here, as it is a cultural component of practice that is often not adequately addressed by the scholars who adopt the circuit of culture. Emotions have been included in the definition of the core dimensions of practices since the 2001 volume, edited by Schatzki, Knorr-Cetina and Von Savigny.

Emotions are a component of the social; to understand them, it is necessary to focus attention as much on cultural and symbolic components as on the material ones (Reckwitz, 2017, p. 115). Following this general understanding of what the social is, Reckwitz considers emotions and affects as entities that favour the recruitment process of practitioners by the practices themselves:

Social practice "interpellates" the subject in a certain way. However, how can the subject be interpellated in this way and thus participate in the practice? The answer is that the practice must entail a specific motivation to perform it. From this perspective, it is not the individual who comes to the practice with their own "psychological" motivation, but rather the practice itself of which the motivation is already an integral part. Motivation is where affects come into play; there must be some affective incentive to participate in the practice. The incentive can be a positive desire, a defensive incentive to avoid displeasure or a combination of the two (Reckwitz, 2017, p. 120).

Considering emotions as properties of practices rather than qualities of individuals, Gert Spaargaren himself suggests that practical nature of emotions arises from the interactional energy produced in a gathering of participants to a situation. They jointly focus their attention and develop a shared emotional mood (Spaargaren, Weenink & Lamers, 2016, p. 66 and 73). Affects, as activities rather than properties, would then have three characteristics: they have a social nature and not a subjective one; they are states of physical arousal of pleasure or displeasure; they are directed at specific persons, objects or ideas. Every practice favours and foresees the unfolding of some affects and inhibits others in an unbreakable intertwining of cultural dimensions and material dimensions. Having the senses affected offers emotional material to the subject's mental activities, while they are performing the practice itself (Reckwitz, 2017, p. 123). For example, consider a piece of fashion clothing or the atmosphere that reigns in a museum, as they can produce emotional arousal that influences the individual or collective agency. Practices, therefore, are also organized around an order of affects, as they offer pleasures, displeasures, or pre-interpreted emotions, artefacts that potential practitioners can choose to adhere to and reproduce or transform.

The fourth topic we want to review is that of power and how practice theory can account for it in practices and enactments. As Matt Watson (2017, p. 169) states, practice theory should be able to account for power. Most scholars, however, find it uncomfortable to analytically elaborate a notion of power that is consistent with the commitment of practice theory toward a flat ontology.

A flat ontology assumes that all social phenomena are composed of practices and enactments of practices, laid out on one level, called by Schatzki "the plenum of the social" (Schatzki, 2017, p. 31). According to this assumption, "the basic ingredients of all the social phenomena are of a piece." Therefore, all the relations between the components of practices and arrangements produce events or phenomena that have the same nature as those from which they originate (Schatzki, 2017, pp. 31–32). Such a flat ontology, apparently, does not account for the "reality of enduringly powerful social agents such as corporations or governments" (Watson, 2017, p. 171). These social agents seem to act, rather, as "overarching structures" (Spaargaren et Al., 2016, p. 78), influencing practices and arrangements from another level of reality. One solution, developed according to Foucault, considers power not as the property of some subjects but as an effect of performances or practices. Following the French scholar, power can be analysed only as "power relations." It becomes visible in arrangements where some subjects end up being systematically advantaged by their positions and by the interactions in which they are involved (Watson, 2017, p. 174). Gert Spaargaren, however, following Manuel Castells (2009), contends that the effects of power are produced where human agents are able "to make and break linkages between social practices." As he says, "connectivity is key to power, innovation, and social change" (Spaargaren et Al., 2016, p. 79). Power, therefore, becomes visible and effective in chains or networks of practices that change the scale of the social phenomenon under scrutiny, but not the ingredients of which they are comprised (Watson, 2017, p. 175).

What we have contended in the previous pages is that practice scholars are genuinely interested in cultural activities as diffused in practice and not as a product of individual meaning production. Furthermore, they are consistently aware that practice theory needs to make sense of phenomena apparently out of reach for an approach focused on spatially- and temporally-localized practices. Hui et Al. (2017) and Spaargaren et Al. (2016), in the last years, have explicitly addressed these issues. What we propose in the following is that the "circuit of culture" allows researchers to make visible the relations among practices that are interconnected, shedding light on the people, objects, and technologies that thread through practices. Moreover, we argue that analysing social phenomena with the help of the circuit allows scholars to understand which practices, or arrangements of a practice, have a better capacity to influence other

practices or arrangements. Integrating the two heuristic tools, therefore, fosters the analysis of practices' dimensions that are often overlooked, despite scholars' awareness of their importance.

## 2. The Circuit of Culture and the Discovery that Matter Matters

The circuit of culture was introduced in 1997 in the book *Doing Cultural Studies. The Story of the Sony Walkman*, edited by sociologist Paul Du Gay and other scholars, working at the Birmingham Centre for Contemporary Cultural Studies. It was the first volume of a series published by Sage for the Open University with the intent of providing students with textbooks for distance-learning courses. The circuit was implicitly based on a previous version, elaborated by R. Johnson in 1986 and on the well-known scheme that Stuart Hall published in 1973 to describe the processes of encoding and decoding meanings both by media professionals and by audiences in the media production system.

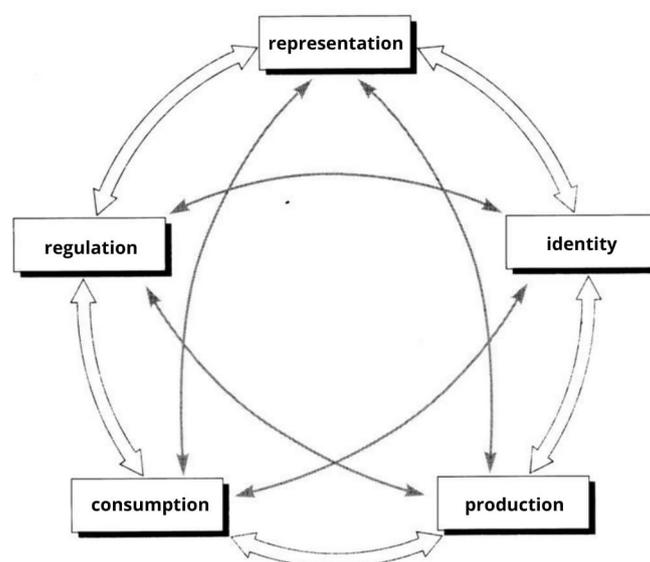


Fig. 2. The circuit of culture (Du Gay *et Al.*, 1997 and 2013).

The case study of the Sony Walkman (Du Gay *et Al.*, 1997) "was designed to offer a sociologically inflected introduction to the interdisciplinary field of cultural studies" (Du Gay *et Al.*, 2013, p. XV). The book's reception went far beyond the expectations of its authors. The book itself went beyond its delineated aims, as did the analytical tool called "the circuit of culture" (Fig. 2), which was originally developed as a pedagogic and heuristic device, useful to organize the massive amount of materials related to the Sony Walkman that the authors gathered during the months they devoted to the collection of data.

As an outcome of its success, the "circuit of culture" ended up to make visible the steps any analysis of a "cultural text or artefact" should pass through. It encompasses five knots, corresponding to five processes (representation, production, consumption, identity, regulation), whose examination enables us to understand the phenomenon in which an artefact or text is embedded.

An updated edition of the book was published in 2013, as the diffusion of web-based mobile devices had drastically changed the practices of playing and listening to music, both in private and in public spaces, since 1997.

Comparing the cultural practices associated with the Walkman with the practices related to modern Web-based mobile devices reveals both continuities and changes in the ways such

technologies have been represented, identified with, produced, consumed and regulated (Du Gay et Al., 2013, p. XII).

The effects of the material turn are woven throughout the second edition of the textbook. The centrality of the relationship between practitioners and artefacts was affirmed already in the 1997 version, but the new edition clearly explains that to understand social practices it is necessary to “think about action as a phenomenon that is distributed between human and non-human actants that are assembled in so-called ‘actor-networks’” (Du Gay et Al., 2013, p. XVIII). In support of the “renewed focus on the role of ‘the material’, ‘matter’, and ‘materiality’ in the constitution of socio-cultural relations” (Du Gay et Al., 2013, p. 7), a reading by Bruno Latour, has been included, namely an excerpt from *Technology is Society Made Durable* (Latour, 1990).

Why did the authors feel the need to explicate an interest in the material components of social practices? During the time between the publications of 1997 and 2013 editions, a journey took place within the cultural studies environment, which corresponds to the more general maturing of the material turn that we mentioned earlier in the article. The original reason to study the Sony Walkman was that such a small device was regarded as “a crucial new development in modern culture. Whether it was a liberating device or the symbol of an antisocial youth-culture, it was, however, a controversial issue” (Du Gay et Al., 2013, p. XI). Scholars, commentators, as well as journalists, users, and non-users — anybody who came in contact with it or with its representations and uses — could not avoid considering it an essential piece of the contemporary popular culture, able to interfere with the more diffused ways of doing things. Cultural studies scholars were interested in all forms of cultural production and “not only in art and learning but in institutions and ordinary behaviours” (Williams, 1973, p. 57). Therefore, the Sony Walkman was an appealing case through which to demonstrate how material objects that enable particular social practices can be at the centre of interaction networks and particularly of complex meanings.

In the 1997 edition, the authors’ primary theoretical and methodological intent was to affirm that cultural processes, on a par with the economic and political ones, were able to “alter material conditions in the ‘real world.’ All the intangible materials of which cultural processes are made permeate social processes, which must therefore be considered cultural as well” (Du Gay et Al., 1997, p. 2). Scholars recognized the importance of the material, and, with the Sony Walkman, they put an artefact at the centre of their cultural analysis. However, what they were mainly interested in was how objects are invested with meanings and how, loaded with new meanings, they offer themselves to new cycles of understanding and agency.

Fifteen years later, it is no longer so relevant to emphasize that “in order to conduct a social practice we need to give it a certain meaning, have a conception of it, be able to think meaningfully about it,” as this has become a taken-for-granted, background understanding. What is explicitly re-affirmed, instead, is the role of the “material.” The changes in technologies and material devices involved in a given practice change profoundly the practice itself.

Since the circuit’s nodes represent all the processes of the phenomenon under study, they make evident some dimensions of practices not explicitly considered in the tripartite instrument elaborated by Shove et Al., even if, as we have seen in the previous section, practice scholars are well-aware of the need to account for them. As we did for the practice approach, we want to underline the relevance of some issues emerging from the 2013 volume about the Sony Walkman and another volume of the same series, dedicated to the node of representation (Hall, Evans & Nixon, 2013). The first issue concerns the process of regulation, the second concerns the process of representation, that Stuart Hall, following Foucault, considers as the product of discursive formations (Hall et Al., 2013), and the third concerns the relations between two processes, namely those of production and consumption, which are considered as inextricably linked (Du Gay et Al., 2013).

The first question is that of regulation. The theme of the rules governing the uses of artefacts — in this case the Sony Walkman — is addressed as closely related to the issue of representation. The rules to which practices are subject are the product of classification systems, and therefore of representation, according to which what is appropriate or inappropriate in a given spatial-temporal context is established. Whenever a new technological artefact is introduced into people’s lives, the accepted classification system is challenged, as it becomes possible to develop new practices or to alter standard ways of doing. The Sony Walkman, for instance, blurs the boundaries between the public sphere and the private sphere (Du

Gay et Al., 2013, pp. 104–107). The technological device allows people to do things in public that were previously considered appropriate to do only in private — namely, listening to music. The consequence is that the practice's reach is modified, and with it also the general understandings that support it (e.g., the fact that the private sphere is the place of intimate and emotionally dense relationships, personal pleasures and particular values, while the public sphere is the place of universality and rationality). In their analysis of the Sony Walkman, the authors explore the effects of altering the rules governing a practice by focusing on public/private classification.

However, analysis of other artefacts or practices can reveal changes in other classifications adopted as regular, for example, in the functioning of genders or of hygiene maintenance or food preparation. In short, the regulation node allows us to highlight something that the scholars of practices know very well: technological devices or any innovation that alters the ordinary organized course of events requires, or derives from, a restructuring of the pole of meanings available in a practice and a restructuring of the pole of competencies of practitioners, to adapt or to consolidate the new emerging order. The analysis through the circuit never loses sight of the interconnections among nodes. Therefore, we hypothesize that it allows researchers to focus on the role and changes of rules in the chain of interconnected practices. Moreover, we contend that it also enables us to understand which practices or arrangements of practices are more able to influence others. In other words, we suggest that, with the circuit, we can gather useful information to understand the effects of power on practice. This is also possible because — and this is the second theme we address — Du Gay, Hall, and their colleagues consider rules as the performative translation of the representations leading social actors to classify the socio-technical systems in which they participate. In Schatzki's language, representations are the general understandings that make practices understandable even to those who are not practitioners and that allow people to understand how different practices, and arrangements of them, are connected to each other.

Stuart Hall takes up the Foucauldian definition of "discursive formation" and describes the process of representation as determining what things are while simultaneously influencing how things must be done. Through this definition of representation, he overcomes the distinction between language and practice but explicitly refuses to reduce reality to mental activity or linguistic structure (Hall et Al., 2013, p. 29). According to this perspective, defining things — using some words rather than others — means constructing the reality itself. Above all, however, it means establishing how things can be done and interpreted. Analysing the cognitive and practical steps through which the processes of representation take place, therefore, makes it possible to reconstruct where social actors are — around which node of the circuit are they mostly active — and who has a significant chance to influence the conduct of others in one or more practices — what they do (Hall et Al., 2013, pp. 29–33). The third theme relevant to testing the compatibility of the two analytical tools concerns the inextricable connection between the pole of production and that of consumption. People, in the practices of their daily life, using the goods they buy, transform them from commodities into objects that occupy a specific place within practices. According to this perspective, therefore, consumption is not merely the passive result of the process of "consumption production" through the planned activities of design, marketing, and advertising conducted by companies. The scholars of the culture's circuit recognize that in the practices of goods' appropriation mechanisms are active for conditioning consumer behaviour through scripts embedded in products. Nevertheless, they consider consumption as a process relatively autonomous from production. As will be clear in the second part of the paper, the blurry borders between consumption and production also affect practices related to processes of identity.

This is consistent with the claims by Warde (2005), who, in a seminal article, discussed the advantages of studying consumption from the perspective of the theory of practices. According to this approach, the concept of "the consumer" ceases to be the unit of analysis. "The key focal points become the organization of the practice and the moments of consumption enjoined" (Warde, 2005). Most importantly, this approach challenges the way in which people have been considered, in a polarized way, either as sovereign choosers or as dupes.

In conclusion, it seems possible to argue that the two heuristic instruments serve to analyse the same type of phenomena and do much of the same work, as they help us to focus on the interweaving of human and non-human agents, the symbolic processes in which they are involved, and the way the "social" takes shape. If this is true, then one may wonder whether these two instruments can somehow

be combined — that is, whether they can be integrated such that one allows researchers to see something that the other deemphasizes. We believe that this is the case. The merit of the culture's circuit is providing an articulated analytic scheme of the processes through which practices are connected. These processes are comprised of an articulation of practices. They go far beyond any specific practice. They indeed involve also social components that do not exhaust their activities within a single practice: for instance, the market and elaborate production systems; the regulatory systems that rule its operations but also apply in other fields; and the broader social identities to which the practitioners belong and that are relevant for the practitioner's conduct in the performances. Understanding this complexity enables us to study how a practice is placed on a broader social background. In it, many forms of agency are at work, such as the agency of individuals, organizations, and institutions, each the consequence of powerful socio-technical systems. They are not neutral: even if they are not directly connected to the practice in question, they are affected by it and can influence it. It seems to us that the circuit of culture illustrates the suggestion made by Davide Nicolini (2013, p. 181) and taken up by Spaargaren (2016, p. 74) not to reify practices, insisting in categorizing them as neatly defined sets of components. Those scholars suggest to "start with processes and to take the emergence and creation of provisionally identifiable units as the thing to be explained" (Nicolini, 2013, p. 180; Spaargaren et Al., 2016, p. 74).

An ontological issue arises, however, from the comparison of the two heuristic tools: while the practice theory applies expressly to a flat ontology through its assumption that the social is comprised only by practices, the circuit of culture relies on no such assumption. Moreover, the articulation among processes and practices, as it applies to the circuit, seems to suggest a predilection for an epistemological foundation rather than an ontological one. Such an issue falls beyond the scope of this article since we believe that, regardless of their underlying ontologies, these two heuristic tools, if integrated, can lead to better cultural analysis of practices and material culture.

The practice approach proves to be invaluable in demonstrating how knowledge, agency, affections, and emotions are distributed in practices rather than existing as the property of individuals. Moreover, practice scholars emphasize the emotional and affective components of a practice that are overlooked in analyses through the circuit of culture. The chief merit of practice theory, finally, is to highlight how practices are reproduced beyond the contribution of individual practitioners. The cultural and material components taken on by practitioners become elements of the practice itself: patterns and configurations, ways of thinking and of doing that retain value beyond any single performance of practitioners. The need to distinguish between practices and those social arrangements that do not crystallize in any recognizable practice is something that is not adequately addressed by the mere application of the circuit tool.

In the following part, we will present some results from two case studies in order to test the two heuristic tools and the respective analytical advantages. The case studies have been realized as part of two PhD dissertations. The first case concerns the introduction of a digital tool in the highly skilled craft of watchmaking. The combination of the two approaches sheds light on the relational and performative nature of a robotic artefact. More precisely, this combination enables us to analyse the relationship between the introduction of the technological object into a specific artisanal practice and the apparently disparate elements of that practice, such as affective dispositions, used tools (traditional and innovative), material setups, and broad discourses about automation. The second case pertains to self-production practices in the Italian agricultural system. By applying both heuristic tools to specific and localized practices related to different nodes of the circuit, the researchers were able to observe how the mutual influence between practices related to self-production can generate common identities and representations of being a farmer. This mutual influence between production and consumption practices, identity, and representations also contributes to the emergence of new practices capable of protecting and favouring small-scale farming.

## Second Part

### 1. Prototyping an “Augmented” Tool for the Practice of Watchmaking: The TéléTweez

In this section, we will advance considerations addressing the prototyping of technological tools and their implementation in traditional working practices. The preliminary findings for this ongoing research project come from the ethnographic observation of researchers’ activities at *Institut des Systèmes Intelligents et de Robotique* (ISIR) in September 2018. These researchers also worked with informants for qualitative interviews.<sup>1</sup> The interviews were conducted with traditional watchmakers, namely the practitioners using the studied artefact.

The innovative tool we want to present and deconstruct, called TéléTweez, was developed at ISIR labs on commission by Percipio Robotics. It is a novel haptic interface resembling the conventional tweezers used in watchmaking. It allows a watchmaker to remotely control a robotic arm that assembles watches more accurately than is humanly possible. This artefact aims to fit into a proud traditionalist craftsmanship practice, with the intent of augmenting the competencies involved in it by introducing not only new materials but also new meanings. At the same time, it is connected with other artefacts and other practices, which together create a broad socio-technical system permeated by discourses and representations linked to the automation of working practices. To study this artefact, we turned our attention mainly to two fundamental issues. First, we focused on the social construction processes that characterized the prototyping phases through studying the relationship that exists between production and consumption and which entangles the two. Second, we studied the relationship among the artefact, the practice in which it is inserted, and the broader socio-technical system and cultural context to which it belongs. In our view, such cases require us to adopt a flexible analytical gaze without precluding the possibility of merging different heuristic tools. We saw in the opening of this paper how the nature and meaning of an artefact can be understood only if analysed within the practice in which it is inserted. A practice-based approach may help us to impose analytical order on the complex relationship among the materiality of the artefact, the competencies, and the meanings of the practice to which it belongs. In fact, we will see how its technical and physical properties are shaped by, and at the same time shape, the “human” and cultural properties of the practice in which it is used. It will be illustrated how the technological device is able to modify the elements that characterize the practice of watchmaking. By widening the gaze, this approach can also point out that an artefact always takes shape in relation not only to one, but to many other practices, situating itself in a broad nexus of practices, which constitutes the fabric of social reality. By attributing importance to dimensions such as identity and representation, the circuit of culture can help us to understand what role a working practice, along with its constituting materials, takes inside a broad social context, composed of many different practices. In short, the circuit of culture places the artefacts, and the overall practices in which they are involved, in a rhizomatic system of potentially infinite artefacts and practices. By culture, we also mean the set of legitimizing discourses that emerge from representations and are connected to the dimension of identity, orienting production, consumption, and regulation. Combining these two approaches can therefore help us analyze and locate a technological artefact within an entire socio-technical system, made up of discourses, regulations, and constellations of institutionalized practices.

#### 1.1. The Practice: Traditional and “Augmented” Watchmaking

Watchmaking is the art of making and repairing watches. Following the guidelines drawn by Shove and colleagues, we can see the elements that define this practice. This activity is traditionally carried out by artisans with specific skills, such as a remarkable ability to operate on tiny mechanical systems, and endowed with the artistic taste necessary to create objects in which beauty is usually more important than practical function. We know that knowledge is not the property of individuals, but a feature of groups with their material setups (Schatzki, Knorr-Cetina, & Savigny, 2001): skills are thus shared and

1. The data obtained through ethnography and interviews were collected during a study concerning the social construction processes of haptic interfaces, or devices which deliver artificial tactile sensations to the skin. These technologies can help users complete a task, augment or replace other senses, and add immersivity to virtual interactions (Culbertson, Schorr, & Okamura, 2018).

institutionalized through formal degrees at watchmaking schools; later, practitioners usually receive in-house training at the factory or service centre where they are employed. Despite the institutionalization of skills through training, a lot of the knowledge involved in the performance of this practice is corporeal and “tacit” (Polanyi, 1966), learned and situated in autonomous daily work (Viteritti, 2012).

There are some movements that can’t be standardized, because they’re not the same for everyone. I can tell you which points to touch, but I can’t define how you have to hold the tweezers. There are no correct movements, every watchmaker masters his own technique (Leonardo, watchmaker).

A fundamental aspect of this practice is the set of meanings attributed to the tools which are often customized according to the personal preferences of the practitioners themselves. Words like *craftsmanship* and *customization* are very common in the world of watchmaking, and they are directly related to the final product created in this practice: the luxury watch.

People are willing to spend so much money to buy mechanical watches, although they are much less precise than the cheaper quartz ones. Because craftsmanship binds the clock to the idea of human genius, and gives it a sense of uniqueness, even by virtue of those inaccuracies. So, I think automation won’t have an easy road in the watchmaking industry, or at least not in luxury companies (Leonardo, watchmaker).

Following industrial revolutions, automation has changed the way in which technology production is conceived; however, high-end watchmaking can hardly be realized by automation, because small batch production requires a flexibility that automation cannot achieve at a reasonable cost. Moreover, the ability to manipulate objects of small dimensions is extremely difficult to automate. The micro-world, however, is far beyond human perceptive capabilities due to the limitations of the human eye (Lu, 2016). But with innovative prototypes of *cobotic* systems — a neologism referring to the cooperation between humans and robots — we are gaining access to micro scales to handle tiny gears and springs.

## 1.2. The Prototype

Applying this technology directly to watchmaking, French micro robotic company, Percipio Robotics, in collaboration with ISIR, proposed a tool to teleoperate micro-assembly tasks. In the first phase of development, the semi-automatic system was composed of a joystick, a user interface that conveyed motion commands to a robot assembling micro-components of the watch on a platform. As operators are trained for years with conventional tweezers, the use of the joystick was not intuitive. This, among other problems, highlighted the presence of discrepancies between the rhetoric of enrolment to the use of this technology and the experience of actual usage (Wilson, 2003). The artefact was intended to change the practice of watchmaking without really understanding the practice itself, privileging management-held priorities such as seeking efficiency and reducing margin of error. Engineers considered the possibility that conflicts of scripts could emerge between the culture of traditional watchmaking and the prescriptions of the ideal practice of “augmented” watchmaking. To overcome these problems and to properly identify user needs, Percipio involved professionals in the field of watchmaking. In this second phase of development, the objective was to recreate a working interface that was as similar as possible to the traditional one. Engineers chose to design a novel haptic interface that resembles conventional tweezers in order to provide intuitiveness. They called it TéléTweez.

The electronic tweezer, like the previous joystick, allows remote control of a robotic arm that reproduces the pinching movement of the tweezer and assembles watches more accurately. The underlying idea behind the creation of these *cobotic* systems was to “transcribe the user’s expertise into the robotic control loop” (Sakr, Daunizeau, Reversat, Regnier, & Haliyo, 2018). In some sense, we can say that these new artefacts aim to make tacit knowledge explicit through digitally defining gestures and embodied skills.

The big picture was to make watchmakers try this device, and let them do the typical movements they usually do with the tweezers. The idea was to record the movements, and also to record the force they applied, et cetera (Thomas, ISIR engineer).



Fig. 3. The haptic tweezers. Picture was taken by the author at ISIR labs.



4. Overview of the teleoperation setup. (a) The slave device consists of a piezoelectric microripper equipped with high precision silicon tips

Fig. 4. The TéléTweez cobotic system

The focus on this second prototyping phase was on improving the performance and productivity of practitioners, promising to “augment” ill-suited human natural abilities<sup>2</sup> — that is, touch and sight that can scarcely handle small dimensions and long hours of work.

We increase their capabilities on their work. We can allow them to decrease the size of the objects and make things tiniest, or the contrary... They can also block the pieces without applying any muscular force: this prevents excessive fatigue during a long time, and maybe we can decrease the musculoskeletal problems (Sophia, ISIR engineer).

Another aspect to which they have decided to pay attention is versatility. First, the producers highlighted that TéléTweez can also be used as conventional tweezers. Second, “since it is tweezers-based design and is compatible with conventional usage, the interface is not limited to watchmaking but can be used in a wide range of micro-manipulations” (Sakr, Daunizeau, Reversat, Regnier & Haliyoet, 2018). “The prototype does not work on its own, but as part of a dynamic assemblage of interests, fantasies and practical actions, out of which new socio-material arrangements arise” (Suchman, Trigg, & Blomberg, 2002).

Although user tests in controlled settings have not yet been performed, the prototype has been tested by potential users during several demonstrations at trade shows, where practitioners from the watchmaking industry and other micromanipulation-related fields were asked to try out the prototype and give feedback. From these demonstrations, engineers noticed that the table on which the prototype was tested created frustration for testers since it differed too much from what is used by watchmakers in their daily working routine. An arm positioning deck similar to those traditionally used has thus been integrated with the purpose of facilitating the posture that practitioners are accustomed to and of recreating a familiar material setup. This way of involving potential users comes close to what Lucy Suchman calls “co-operative prototyping” (Suchman et Al., 2002).

### 1.3. Widening the View

Following this last consideration, we can say that the representation that has been made of this project, although limited to a specialized field, explains how the identity of the *cobotic* device aligns with a wide system of discourses related to emerging technologies common to other “augmented” practices and other research communities. This aspect is not casual, given that, as Latour said, the inscriptions become stronger as they are inscribed into a larger heterogeneous actor-network (Monteiro & Hanseth, 1996). This crystallization of inscriptions is thus achieved through orders of signifying practices that let representations relating to this field seem as if they are “regular” or “natural.” We could say that it is a form of regulation, which can be disputed at any time (Thompson, 1997).

This reflection on representation leads us to think about another aspect that is properly highlighted in the circuit of culture. According to Stuart Hall, identity can be described as “the way in which different groups and types of people (from producers to consumers) associate and are associated with discourses made around the artefact” (Hall & Du Gay, 1996). Identity and representations are closely related as, for example, when the latter are linked to ideologies carried out by social groups. In this case, we talked about the goal of partially automating an ancient professional practice. In the case of TéléTweez, full automation was not the main target. The semi-automation guaranteed by *cobotics* was the preferred route for two reasons. From a purely practical point of view, human cognitive flexibility makes it possible to manage any unforeseen event that current autonomous systems would not identify, such as the presence of dust in the gears. Additionally, in a fully automated system, there would be no craftsmanship to give “luxury” status to the final product: the watch.

From a pure marketing view, companies build watches not to give you the hour, but because they’re mechanical jewels. If they’re done by robots, there is no value added by the human, and they won’t be able to sell anything. Maybe Swatch can do it, which is a mass consumption and not a luxury company. But you can’t have luxury brands doing fully automating

2. The goal to “augment” competences, perceptions and, ultimately, the boundaries of human condition up to equate the latter — in the most extreme visions — to technology, is usually attributed to post-humanist ideologies (Bostrom, 2014).



Fig. 5. The workbench designed by ISIR engineers

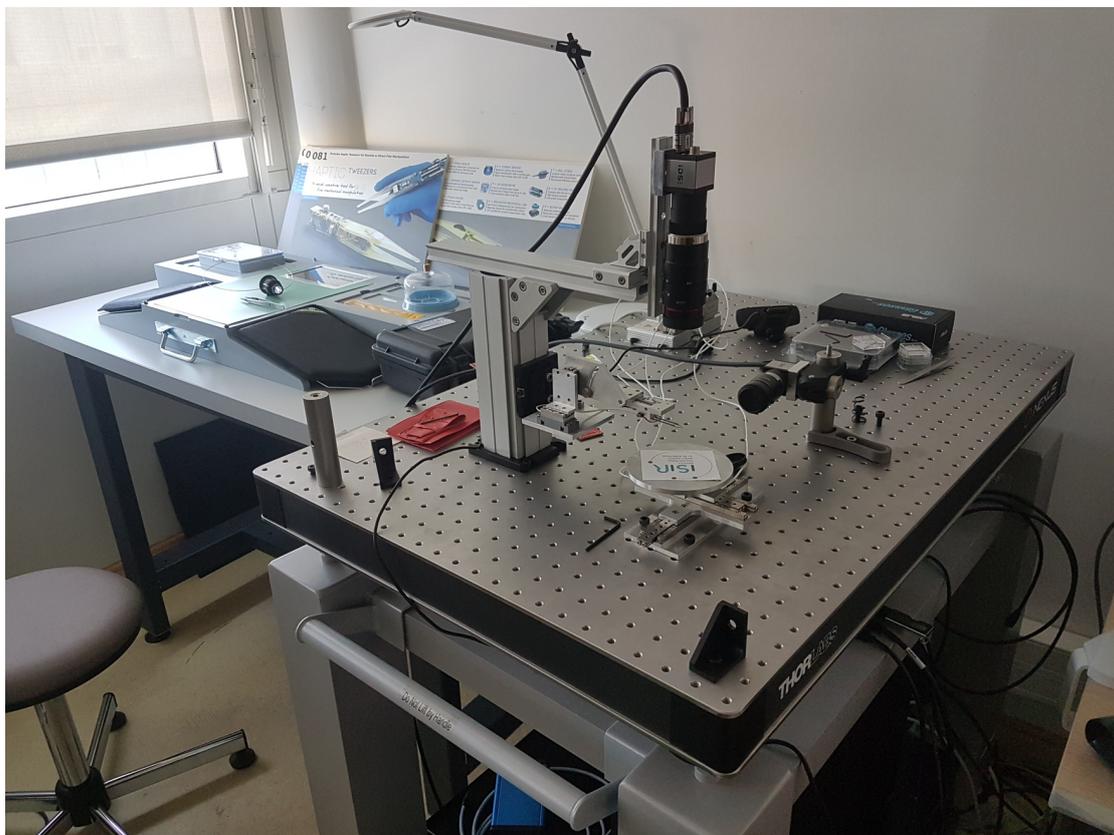


Fig. 6. The assembling robotic platform

watchmaking. Because at the end of the day you pay for the craftsmanship (Thomas, ISIR engineer).

However, among practitioners, there is the awareness that in the future, with more advanced systems as in other non-craftsmanship-related sectors, full automation is a plausible outcome.

We are as most traditionalists, reluctant to innovate. And then the idea of being replaced by a machine, or that a machine can have similar skills to mine is... annoying. And I tell you this from a young person who has a whole working life ahead, and who sees these risks as possible (Leonardo, watchmaker).

The sense of annoyance experienced by the interviewee with the idea of being compared to a robot opens a window on the affective dimension of the practice of watchmaking. As we saw in the opening of this paper, the cognitive and affective dispositions through which individuals respond to their environment are informed by some pre-reflexive moral intuitions, called general understandings, which are of a social nature and are embedded in practice. These general understandings serve as incentives to participate in the practice and constitute what is commonly called "motivation" (Reckwitz, 2017, p. 120). What drives the watchmakers to be enrolled in the practice is, first of all, the pleasure they feel in the handicraft typical of artisanal jobs, or the almost intimate relationship with the materiality of the tools and of the product of their own work. Furthermore, they are motivated by the satisfaction of improving their bodily and intellectual abilities, aiming at mastery through the creation, with their own hands, of objects that are a concretization of aesthetic human genius. Finally, they feel a strong sense of exclusivity by being part of a niche that keeps its traditions intact for centuries. However, this sense of belonging coexists with an idea of the uniqueness of one's work, which is reflected in the self-customized tools and in the irreproducibility of mechanical watches.

Given that practice is organized around this order of affects, a question arises: What remains of the practice when the motivations that characterize it are affected? Can an "augmented" version of watchmaking continue to recruit practitioners if a technological artefact, which is somehow not compatible with the general understandings that have always provided the teleological structure of the practice itself, is introduced? Perhaps this new version of the practice will recruit new types of practitioners, who feel more inclined to align themselves with different discursive frameworks. Although the engineers have not elaborated in-depth reflections on this topic, they seem to be aware of the fact that becoming promoters of total automation could be risky.

The risk with automation is to remove from workers the only thing that makes them valuable. Because, theoretically, with a robot, any clumsy watchmaker can become as good as a talented master. So, is there any value in human work, at the end of the day, if you don't acknowledge the very intense training they need to master their practice? In my opinion, it's still interesting to have a human-centric process, because you rely on brain flexibility. Well, we'll see until neural networks and deep learning will really start to catch on (Thomas, ISIR engineer).

The union of the two approaches has allowed us to shed light on the relational and performative nature of technological objects. We have seen how one artefact, the *TéléTweez*, can connect different practices and, at the same time, demonstrate how the practice can relate different artefacts. Finally, we have illustrated how the introduction of a new artefact in the practice of watchmaking has allowed us to analyse the relationship between the overall configuration of the practice and its general understandings, relating the apparently disparate elements of practice, such as affective dispositions, used tools, material setup, and broad discourses about automation. The observation of these links has allowed us to problematize through a new perspective the nodes of the circuit of culture, considering them as elements in continuous transformation.

## 2. Self-Production Practice in Italian Farmer Agriculture

In this section, we will investigate self-production practices in the context of Italian small-farmer agriculture. Self-production is one of the bundles of practice that composes the Alternative Food Networks

(AFNs) in which small farmers participate. AFNs are based on local action and proximity, both at socio-economical and spatial levels between consumers and producers. Their purpose is to build new economic and productive strategies encouraging alternative and sustainable ways to live and produce local, self-made food (Barbera, Dagnes, Salento & Spina, 2016; Corrado, 2010; Nigh & González Cabañas, 2015). In this field, we can observe production practices adopted by small farmers linking private life to work and economic processes. Studies on alternative and circular economies have shown that changing consumption practices influences lifestyles. Networks, in this sense, are set in motion by individuals to support the activation of new consumption and production practices, that foster awareness, critical thought, and responsibility toward “the social” (Bertell & Aime, 2013).

We analysed 17 interviews of farmers involved in the Italian association of World Wide Opportunities on Organic Farms (WWOOF), a network that promotes organic agriculture and a sustainable way of life through work-hospitality exchange. Farmers who are part of the WWOOF Italia are often involved in other AFNs and participate in local activities. The assumption behind this research is that farmers’ participation is practice-based more than value-oriented. Through the combined-approach proposed in this paper, we overcome the emphasis on values shared by individuals, examining how the self-production practice recruits farmers and involves them in AFNs. Combining practice theory and the circuit of culture, it is possible to observe the cultural turn which has affected self-made food production practice over time. We consider the role of self-made food production practice as part of the small farmers’ lifestyle choices, affecting not only private lives but the economy as a whole. Literature defines “self-sufficient agriculture” as small-scale agriculture with a primary aim of self-sufficiency through self-production; it is conceived of as a way to realize freedom and autonomy (Bertell, 2016) in subscribing to philosophies such as the “back-to-the-land” philosophy (Wilbur, 2013). Indeed, self-production in food affects not only the individual life and the environment, but also consumption and representation. Self-produced food is

seasonal, always fresh, organic, local both in terms of production and exchange, and promotes the predilection of native species and restoration of ancient seeds. “Good Food” is also synonymous with an idea of agricultural labour as a tool for personal growth, a creative activity that allows you to develop individual aptitudes and inclinations” (Brombin, 2015, p. 472).

Self-production, for this reason, also influences identity through the creation of new ways to forge links with consumers and other producers.

In the first sub-section, we use practice theory from a historical perspective with the aim of understanding self-production practice. The second sub-section describes how practice theory and the circuit of culture can be combined to understand how farmers promote a sustainability turn founded in production practices.

### 2.1. Searching for the Specific Features of the Self-production Practice Nowadays: A Diachronic Approach

The analytical tool elaborated by Shove et Al. (2012) is useful to understand meanings associated with self-production practice. Moreover, it helps us to observe how historical context informs practice. As pointed out by Schäfer et Al. (2018), “the regular performance of practices keeps them alive, but is also responsible for their transformation. Transformations can come about through changes in the arrangement of elements — how they fit together.” Since self-production practices are well-studied in literature, we can reconstruct transformations involving farmers’ methods and purposes over time. This section demonstrates how self-production practice evolved from the traditional farmer agriculture model to contemporary self-sufficient agriculture. For this purpose, we consider the role of the technological progress involving food production from the middle of the last century, which results in so-called conventional and intensive agricultures, as shown in Figure 7.

In traditional farm-hold management the link between production and consumption is instrumental, using all the resources in a “closed-cycle” system (Caillavet, Guyomard & Lifran, 1994).

Nonetheless, both technological transformations mark the starting point of a new food production model able to satisfy emerging needs related to the improvement of living conditions in developed countries after World War II. The intensive production model replaces the internal resources, thus improving

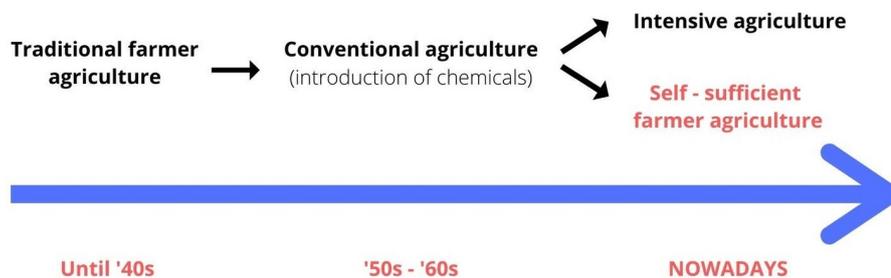


Fig. 7. Farmer agriculture evolution in the last Century

performances and benefits. Although, the small farmer agriculture model still holds, new strategies must be developed to safeguard the environment and the role of small production in the extant capitalistic and globalized society.

Compared to traditional farmer agriculture, self-production practice is still fundamental in the small farmer agriculture and seems stable over time, attesting to the resilience of the farmer agriculture model (Van der Ploeg, 2018). Nonetheless, even if the three spheres are connected to each other, there have been transformations involving meanings, competencies, and materials. We can observe the influences among them by elaborating a dynamic tool, as shown in Figure 8, according to the theory of practices elaborated by Shove et Al. (2012). We have assigned to the self-production practice three different moments that characterized the history of farmer agriculture in the last century, considering that “transformations of daily practices are a result of a co-evolution and/or re-configuring of several interdependent elements within complex socio-technical systems” (Schäfer et Al., 2018, p. 5).

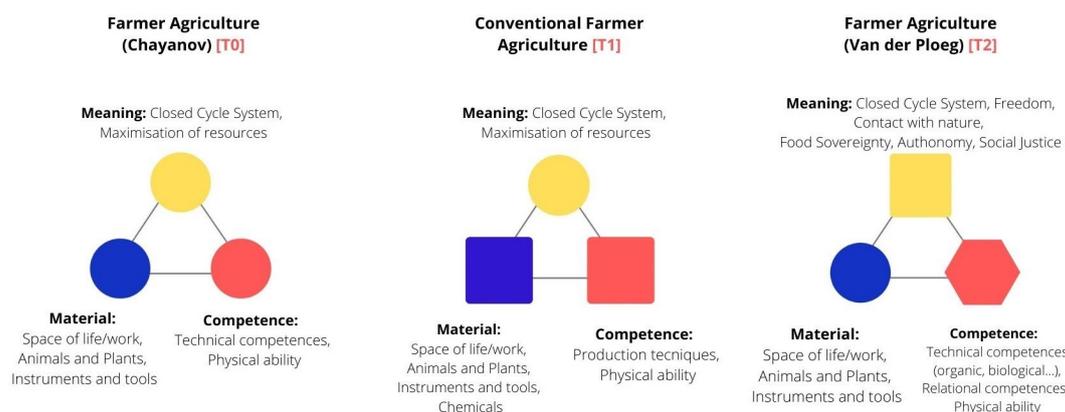


Fig. 8. The dynamic analysis of self-food production practice using the *Theory of Practices* by E. Shove

The first moment [T0] is referred to as farmer agriculture in early Nineteenth century. Chayanov

elaborated in the 1920s a model in which farmer agriculture is seen as a bearer of modernity and marked by a specific ratio that goes beyond the pursuit of profit (Van der Ploeg, 2018). Reading the Chayanovian model through the practice approach, self-production appears to be a practice whose meanings are related to the survival of farm and family. The balance between family consumption and family work depends on individual actions and affects the size of the farm: the need of land grows with the increasing number of individuals within the household.

Thus, the dynamic analysis of self-production practice in the farmer agriculture field illustrates that "recrafting practices... aims to reduce its negative effects" (Schäfer et Al., 2018, p. 6). In fact, practice co-evolves with the experience of practitioners and technological progress. After World War II, the switchover from arms to chemical industry encouraged the spread of chemical fertilisers and pesticides. During the 1950s [T<sub>1</sub>] individual farmers balanced the use of chemical and organic fertilisers with the use of internal resources from the farm (Van der Ploeg, 2018). Unlike in the first scheme, self-production practice in conventional agriculture is influenced by a technical improvement, which affects the material (and consequently the competence) sphere and effects a re-assessment of the balance among meanings, materials, and competencies. This transformation leads to a consideration of further developments which resulted from the efforts of contemporary farmers' networks in attempting to reclaim the role of farmer agriculture and to build more sustainable economies as a response to climate change.

The intensive production methods have created emerging unsustainability and new risks, but, these risks have been counterbalanced by new demands for food sovereignty, quality, food safety, environmental protection, both from consumers and producers. Exemplifying responses to these risks and demands, the third moment [T<sub>2</sub>] represents the contemporary small farmer agriculture, affected by a cultural turn that involves food and its production.

In my opinion [self-production] is a fundamental step to go out of all the logics of industrial job, because you need people, and talents... and therefore yes, self-production is fundamental to me (Alberto, farmer).

As previously seen, the farmer's job is associated with the aim of self-sufficiency and freedom, but it is also inspired by environmental principles and ethical consideration.

When you make a choice like this, the job becomes your life, it becomes part of your life. I mean, the work completes your life, and there is no more difference between your work and your life... Thanks to this, you create a different relationship between yourself and the whole being (Marcello, farmer).

As noted by Brombin, "ethics and aesthetics are set around the concept of self-production and self-sufficiency. This serves to distinguish good food from bad food, and becomes a true marker of a green identity" (Brombin, 2015, p. 474).

We produce about 60-70% of what we consume. We buy very few things, outside... perhaps there is a moment in which we don't have potatoes, and then we must buy potatoes... yes, I buy potatoes from my neighbour, not only because I know where they are from, but also because it's handy. Because potatoes are there, my neighbour makes them and I buy them from him, rather than going to the supermarket (Carlo, farmer).

In this way, food embodies the same meanings related to the practice of self-production which give meaning to production choices. As shown by Figure 8, the transformation of meanings implies the re-evaluation of the material's role in building practice: such materials involve ancient seeds, animal labour, old growing methods but also new approaches to preserving nature and health, such as organic, holistic, synergistic, or biodynamical farming. Rediscovering or reinventing production methods coming from the peasant tradition aims to re-affirm the nature value in co-producing food: as underlined by Van der Ploeg (2018), agriculture could be seen as the encounter between the social sphere and the material sphere.

Another [important] thing is another conception of time, for sure. Another conception of the use of your body. Of the relationship with the seasons (Giovanna, farmer).

The importance of materiality in building culture in the rural field has historical evidence in the forms of customs to celebrate agricultural cyclical moments, such as the harvest time in ancient Greek and Roman society or the festivities during the sprout of the plants in Mesopotamia (Buttitta, 2006, p. 33). Moreover, the spiritual side of materials in agriculture is linked to specific cultural patterns imparted through generations, influencing social knowledge as well as social practices. As Reckwitz observed,

a specific social practice contains specific forms of knowledge. For practice theory, this knowledge is more complex than "knowing that." It embraces ways of understanding, knowing how; ways of wanting and of feeling that are linked to each other within a practice... This way of understanding is largely implicit and largely historically-culturally specific (Reckwitz, 2002, pp. 253–254).

Looking at the cultural and technological transformations involving food and agriculture, today, it is possible to observe an integrative respectful approach about nature and work, which is reflected by production practices, requiring not only practical and physical competencies but also environmental and social awareness.

When someone acts, all actions have a consequence, also on what they produce, and on relationships with other people... Of course, I am more inclinable to purchase, or to supply some products I don't have from people near to me, because I know how they work and therefore we are in a more positive connection. Then, we cannot do everything in this way, but we do the more we can (Alberto, farmer).

If social practices are considered to be "a better target of intervention for sustainability policy than 'behavior,' 'choice,' or technical innovation alone" (Spurling, Shove, McMeekin, Southerton, & Welch, 2013, p. 4), it is useful to observe that as one element changes, it affects not only a single practice, but also the other practices to which that element is connected.

## 2.2. Self-Production as a Practice between Practices: Re-thinking the Circuit of Culture using Theory of Practices

Self-production is not an isolated practice in the farmer's life or in the AFN context, but it is part of a network of practices, which help to develop and disseminate schemes, ideas, other practices, and social networks into alternative ways of producing, consuming, and marketing. The aim of this section is to explore the relations that tie self-production to social-economical context, thereby underlining the opportunity to use the circuit of culture and the five processes through which "meanings are made and shared within and among cultures" (Leve, 2012). Each of these processes, however, consists of multiple, interrelated practices of sharing materials, competencies, and meanings. Considering practices as events that occur in everyday life, we can consider also the identity building process taking place through practices, as everyday life choices, participation in groups or networks, and ways of self-representation.

In order to understand how to create a more sustainable social and environmental system, the circuit elaborated here, including the theory of practices model and thinking of processes as made up of practices, helps us to observe the interrelations and the influences inside the practice system. Therefore, we are able to analyse the relationships among materials, meanings, and competencies in practices and among practices. *Processes* and *practices* are not synonymous: when we speak of practices, we must consider the role of routine which, in the reproduction of practices, allows us to observe recognizable patterns in the activities done by individuals in different times, ways, and spaces.

Replacing production as process with the practice of self-production, we observe how this change generates different identities, representations, norms, and forms of consumption inside the AFNs. This is particularly important because

in contrast to conventional food enterprise development, AFNs are faced with a wider range of possible operational destinations... In general [while] agro-food systems have well-defined sets of roles, models of interactions, trajectories, development stages... AFNs must find a path that allows them to compete in the system that has been designed for

other types of goals — thus they have to creatively identify materials and resources within local contexts and use them to their advantage (Grivins, Keech, Kunda & Tisenkopfs, 2017, p. 343).

The debate on prosumerism, the overlap of production with consumption, has underlined the capability of consumers to produce and to cultivate meanings within different AFNs. Through the model we designed in Figure 9, one can observe the contribution enacted by small farmers in enriching AFNs starting from their local context, habits, and routines.

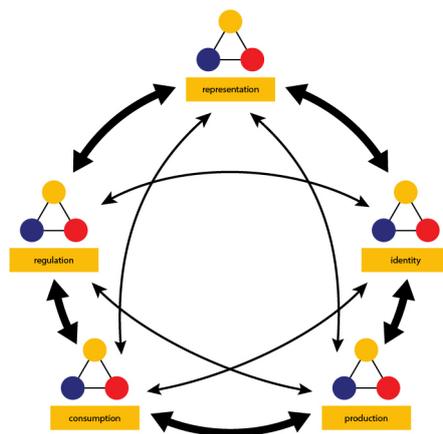


Fig. 9. Re-thinking the Circuit of Culture using Theory of Practices

Given the observed ties around production, we can consider the influence of identity in affecting the involvement of the self-production practice.

We may say that in my life the speech about to make things by yourself, to make the garden, isn't it? To make honey, to take care of your animals, from a biological point of view has been so natural... because [in my family] we ate the same vegetables we produced, the same honey, the same meat. And so, there was an absolute attention to hold them clean, not to give them medicines, try to save them with natural methods (Lucia, farmer).

In this way, the routine coming from family tradition influences recruitment into the self-production practice, enriching meanings and affecting materials and skills of the practice.

Consumption also impacts involvement in self-production practices, evaluated in terms of ethics, values, beliefs, and meanings. The importance of quality of food leads consumers to prefer production methods that are deemed to be as natural as possible. In this sense, we can consider self-production in the context of food as a practice born of consumption.

Interacting with the market is necessary not only to make use of a farm's surpluses, but also to support farmers when the farm cannot cover all the family needs. In this case, identity and production affect consumption in terms of consciousness. For this reason, it is preferred, wherever possible, to exchange with people who frequent same markets.

All the things that I don't produce, like oil, or flour... but there are some cheeses, some milk, sometimes. I know that there are people who produce these things in a certain way. So, I can exchange with some acquaintance or friend, because perhaps they don't have what I produce, and so we exchange our products (Giacomo, farmer).

Networks built upon self-production and self-produced food create, in this way, the conditions to build new consumption materials, such as new informal market spaces adopted by AFNs, and to enrich the consciousness around meanings and know-how associated with consumption.

Well, we always try to build some network of collaboration. We say that the relationships that we establish are always... I mean, from the sale, to the purchase of the beasts, simply it is however a relationship between equals. Then this is a collaborative relationship, et cetera, based also on the respect of work, and of the others, and of my own work. Here we say, that this is really the way to have relationships with others. And from here, all the other things that'll come, will be good (Marta, farmer).

The relationship among production, consumption, and identity influences regulation practices. One of the most relevant cases is that of the Participated Certification. This alternative certification system has been created by consumers and producers in local markets with the aim of avoiding the institutional method. Moreover, the need to create this system has been conceived in order to protect small producers both from bureaucracy and high taxation. The ability to generate this system derives from a shared understanding of the difficulties and of the potentials of a small producer to create something that is not only self-produced.

Through this use of the circuit, it is possible to observe the interaction among the individual elements of practices, and how the continuous negotiation among them produces the redefinition of living and working conditions, of meanings, and of norms.

The combined-approach using the theory of practices and the circuit of culture has allowed us to understand how a practice changes over time, affecting the other practices to which it is related. As we saw in the first subsection, when one element changes, it influences the whole practice. In this sense, it is possible to observe how the cultural turn in agriculture derives from the influence of meanings on skills and materials. In the second subsection, we observed in depth the complex relational system of self-production practice in the context of AFNs. We have underlined the mutual interactions among practices and defined a continuous transformation process involving people, their daily activities, and their relations with the market. Through this combined approach, we can understand practice in all its complexity, considering the recruitment into practice as connected to, and dependent on, other practices.

## Conclusion

In this contribution, we have advanced some considerations about the advantages that can derive from studying phenomena of material culture using a combination of two heuristic tools, namely the circuit of culture and the theory of practices, as proposed respectively by Du Gay et Al. (1997) and Shove et Al. (2012), respectively. We have compared the two heuristic tools and highlighted those points that would make them compatible and usefully integrated. In particular, we highlighted that both groups of scholars are aware of the need to explain specific and daily practices. Moreover, we learned that they wish to accomplish this task without forgetting the connections of these practices with the phenomena, knowledge, rules, and teleological orientations that go far beyond single practices and that constitute the ties among people, artefacts, non-human agents — in a phrase, "the social" itself. The most recent advances in the theory of practices demonstrate how authors are committed to gaining a more precise sense of the cultural activities that underlie practices and provide a common cultural framework to social actors.

The circuit of culture elucidated the connections among practices, and among arrangements of practices. Since it is designed to highlight the complex of processes to which practices give rise, the circuit of culture was helpful also in understanding which parts of a practice are more likely to influence the agents in others. The circuit, therefore, fostered an understanding of power's effect on practices. The practice theory tool on the other hand allowed a deeper understanding of the emotional work done in the practice. Moreover, it highlighted the linkages among cultural activities, materials, and practitioners' competencies as well as the role of those linkages in reproducing and transforming practices. Finally, the comparison of these two heuristic tools allowed us to discriminate between practical events disappearing in the flow of the enactments and practice as entities and broader processes.

In order to prove the efficiency of our comparison, we used these tools to explore two case studies related to a technological artefact and a type of agricultural cultivation. This combination allowed us

to deconstruct the objects and their material properties by analysing them as they are used by people in everyday life — in this specific case, in working or prosuming practices. More broadly, it has allowed us to understand the relationship among the artefacts, the practices in which they are inserted, and the broader socio-technical system and cultural context of discourses, regulations, and constellations of institutionalized practices to which they belong.

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**Emanuela Mora:** University Cattolica del Sacro Cuore, Milan (Italy)

 <https://orcid.org/0000-0003-0906-9074>

 [emanuela.mora@unicatt.it](mailto:emanuela.mora@unicatt.it)

Emanuela Mora is Professor of Culture and Communication Sociology at the Faculty of Political and Social Sciences of the University Cattolica del Sacro Cuore in Milan. She is director of ModaCult (Centre for the study of fashion and cultural production), and director of the PhD School in Sociology at the same University. She is Co-editor in chief of the *International Journal of Fashion Studies*. Since 2004 she has worked on the theme of sustainable fashion and consumption, both in Italy and abroad. Among her books: *Fare Moda. Esperienze di Produzione e Consumo* (Bruno Mondadori, 2009); *Fashion Tales. Feeding the Imaginary* (with M. Pedroni as eds., Springer, 2017).

**Eleonora Noia:** University Cattolica del Sacro Cuore, Milan (Italy)

Eleonora Noia is a PhD student in Sociology at the University Cattolica del Sacro Cuore in Milan. Her research investigates the nexus between practices and networks within the context of the small farmer agriculture in Italy.

**Valentina Turrini:** University Cattolica del Sacro Cuore, Milan (Italy)

Valentina Turrini is a PhD student in Sociology at the University Cattolica del Sacro Cuore, Milan. Her research focuses on the connections between media, sensoriality and society. She is currently writing a dissertation on the social shaping of emerging technologies that digitalize tactile sensations. Her interests include media-related practices in urban space.