

# Emergence of organizing modes in collaborative spaces

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Organization theory describe the organization as a complex, dynamic, multifaceted and pluralistic collection of multiple actors, goals, interests and expectations (Cyert and March, 1963; Allison and Graham, 1971; Pfeifer, 1982; Scott, 1992). Since the early 1960s, a growing number of researchers have been interested in explaining the contextual conditions behind this complexity. This has been done, among others, by academics adopting an institutional theory perspective, who seek to understand the relationship between organisational structure and the everyday actions of organisational actors (DiMaggio and Powell, 1991; Friedland and Alford, 1991; Seo and Creed, 2002). They seem to have a consensus on the claim that complexity enables actors embedded in institutionalised organisational orders to make choices about how to act individually and collectively (Holm, 1995).

Early theories of institutional complexity were focused on analysing how one logic replaces another (Thornton and Ocasio, 1999; Rao et al, 2003; Reay and Hinings, 2005), but in recent years it has become increasingly popular to postulate that logics can translate (Battilana and Dorado, 2010) or coexist over time in the context of “institutional complexity” (Greenwood et al. 2011). Organisational actors' responses to complexity have been studied using the constructs of *institutional entrepreneurship* (DiMaggio, 1988), *embedded agency* (Seo and Creed, 2002), or *institutional work* (Lawrence and Suddaby, 2006). The literature on these issues makes a valuable contribution to understanding roles that organisational actors adopt when interpreting and problematising an ambiguous organisational context and then proposing alternative solutions to ambiguity. However, they focus on how social actors use resources to create new institutions or transform existing ones. In this thesis, therefore, I have chosen to use a different perspective - the perspective of emergence of organising modes. I have made this decision in order to move away from the assumption that the goal of social actors is institutional change. I decided instead to explore how their individual and

collective mode of organization is constructed neglecting potential effect of reconstructing the institutional environment.

The empirical context of my research are collaborative spaces. Collaborative spaces are workspaces of craftsmen, artists and manufacturers working as freelancers or creating micro-enterprises. They exemplify new forms of organising that differ from the traditional understanding of formal organisations. This is evidenced by their open membership and undefined boundaries (Ashkenas et al, 2002; Schreyögg and Sydow, 2010; Tsoukas and Chia, 2002). Whenever I write about collaborative spaces, I evoke the image of workshops within which there is a socially defined set of rules that influence the collective and individual activities of the makers using it (Parker et al., 2014). These are spaces that function in a similar way to coworking spaces with the difference that they are dedicated to manufacturing, construction, craft or high technology work. The terms most often used by its users themselves and labelled in science as „collaborative spaces” are makerspace, fab lab and hackerspace. Working in these organisations enables makers to benefit from technical infrastructure and support - moral, emotional, professional and financial (Fuzi, 2015). These organisations also connect dispersed economic actors through events, situations and, most often, the open access nature (Capdevila, 2015). They also have their impact on local economic dynamics by acting as a kind of incubator for entrepreneurs (Marx, 2016). Navigating such different functions is a daily practice and an ambitious aspiration for collaborative spaces. This makes this context relevant for exploring organisational complexity.

**The research problem** addressed in this thesis is the emergence of individual and collective action understood as modes of organizing in the context of collaborative spaces. In order to understand the process of construction of these modes, I adopted the emergence theory perspective. This allowed me to capture the dynamics of the process. Emergence theory assumes that social phenomena and processes are the complex result of the interaction of a number of underlying elements (Chalmers, 1996). Undertaking this assumption required a reflection on what elements constitute an organising mode. The analysis was conducted by considering the *institutionalized mode of organizing* - in other words "intertwined with institutional order". The authors of the concept (Machado and Burns, 1998) illustrate it by referring to a number of elements of social structure, such as organizing

principles, universal values, or sources of legitimacy, and a common practical understanding of them and the relationship between the two perspectives. It is these elements (which are, in fact, elements of institutional orders) that, in the analytical framework of my research, provide the basis for the construction of organizing modes. This dissertation arose from an interest in institutional theory, and in particular its use to explore the complexity of new organisational forms resulting from the social changes of the contemporary world. Thus, in my search for a construct explaining the mechanisms of coping with complexity, the theorisation of the hybrid organisation (Battilana and Dorado, 2010) came to my attention. It points to the existence of three mechanisms used by social actors to institutionalise individual and collective ways of acting: combining, decoupling and compromising.

In order to unravel the research problem of the thesis, I posed the question of **how the process of emergence of organizing modes is constructed in collaborative spaces**. However, the answer required asking a number of supporting questions. The first of these was: **what modes of organizing and institutional orders emerge in these organisations**. This is a question that explains the organisational complexity of makerspaces, hackerspaces and fab labs. This, in turn, raises the question of **how organisational actors act in relation to competing organising modes and institutional orders**.

I carried out the research presented in this thesis over a period of four years (2018-2022). I chose the instrumentarium of organisational ethnography to investigate the issue. This choice allowed me to collect sufficiently rich and detailed data to make theoretical generalizations about the interrelated processes of institutional orders and modes of individual and collective action in the complex context of collaborative spaces. Moreover, this instrumentation supports the abductive logic of theory building on which the analysis presented in this thesis is based. I conducted participant observation in Polish and British organisations. I have also improved the corpus of the data with document analysis. In total, I conducted twenty-one interviews, observed three organisations and analysed thirty-eight documents (NGO statutes, newsletters, project documentation). This combination of sources was necessary to create a coherent account encompassing two levels of analysis - individual (evident in the exploration of organising modes) and organisational (evident in the exploration of institutional orders).

The primary outcome of the dissertation focuses on answering the main research question (how the emergence of organizing modes in collaborative spaces is constructed). I postulate that the emergence of organizing modes is a multidimensional process, which I define by referring to the concept of the agency of organizational actors. The meaning of human agency have been debated by philosophers and scholars since the dawn of time. They first focused on the tension between individual action and structural constraints of the environment, but later discovered that the interaction between these two realities is much more nuanced. In this thesis, I propose an approach according to which agency is expressed in decisions that result from practical action, specifically, in the organisation of activity undertaken to achieve makers personal goals and objectives. Agency, in the light of the results of this thesis, is the involvement of actors in action by reproducing and transforming structures resulting from the interplay of habits, judgements and goals in response to problems in a changing context. In discussing the results of my work, I cite Emirbayer and Mische's (1998) theory of agency. My dissertation become an empirical verification of this theory. I would like to stress in this regard that I am not referring to agency theories developed in economics (such as positive agency theory or Kenneth Arrow's statements).

I ground the subject of this thesis in organisation theory. Since the vision of organization is very fragmented in this field and it is difficult to find unambiguous definitions (Gibson, 1997), I justify this by referring to the concept of partial organization (Ahrne, Brunsson, 2011) defining an organization as one in which various incomplete combinations of the following elements are present: membership, hierarchy, rules, control and sanctions. The presence of all these elements, according to the authors of the theory, defines a complete organisation, while in a partial organisation one or several of the elements may not be present.

I reflect on the modes of organizing in collaborative spaces from the perspective of organizational complexity, which in this case is the starting point for considering the diversity of institutional orders and organizing modes interdependent on them. Thus, I refer to the concept of complexity that illustrates an organization as "*a set of entities linked together by a complex set of institutionalized and enduring relationships*" (Buckley, 1967, p.38).

In analysing modes of organising I look at how social rules in collaborative spaces are constituted into institutional orders and vice versa. I understand the process of organising not as a managerial activity, but as a repertoire of social practices. The notion of modes of organizing is a good lens for analysing them because in addition to organizing modes, it also includes the perspective of how they are constructed and deconstructed based on rules, norms, positions, or social roles derived from institutional orders (Machado, Burns, 1998).

*A mode of organizing* is, in the light of my work, an *institutionalized way* of individual and collective action (Machado and Burns, 1998). Its institutional character means that each mode is constituted and regulated on the basis of a system of social rules that make up a particular institutional order or multiple orders and operates in terms of the resulting rationality.

Institutional order is a system of rules that defines the positions and relationships of actors, determines the conditions of their participation in interactions and their rights and obligations to each other, as well as their access to and control over strategic resources (Burns and Dietz, 1997). The institutional orders consist of following elements: universal values, normative basis, organising principles, actors' social positions, sources of legitimacy, goals and basis for decision-making.

It can be said that organising modes and institutional orders are concepts describing different constructs, which are however interdependent on each other and can only be considered in relation to each other.

The thesis is constituted by three parts: theoretical, empirical and methodological. The theoretical part consists of two chapters. The first presents an extensive literature review of contemporary organisational theories and collaborative spaces. The second, on the other hand, is devoted to organisational complexity, including modes of organising, coping mechanisms used by social actors in the face of complexity, institutional orders, as well as emergence theory. The theoretical part, although diverse, provides a concise summary of the most important trends in the aforementioned fields of scientific inquiry. It is also necessary in order to show the connections between the different strands and the validity of considering them on the grounds of one research project. It also points out the gaps in the existing body of scientific literature on collaborative spaces. Two most important gaps are: (1) the exclusive

conclusions concerning the activity of makers in collaborative spaces and (2) the lack of papers devoted to institutional orders existing in these organisations.

The empirical part of this thesis is an illustration of the research material collected by conducting interviews, analysing documents and carrying out participant observation in Polish and British makerspaces, hackerspaces and fab labs. It consists of one chapter. In subsections 6.1, 6.2, 6.3 and 6.4 I descriptively identify the institutional orders of collaborative spaces. The analyses conducted for this research project indicated the three orders: market, community and network, and led to the description of additional elements of institutional orders that do not constitute an epistemologically unified whole, by I refer to them as institutional order of makers. In subsection 6.5, I elaborate on the topic of organizing modes and draw attention to the elements of institutional orders from which they are constructed and the coping mechanisms of complexity that organizational actors employ. Modes of organizing I outlined in the paper are: networking, informal exchange, access to resources, scaling, and collaborative problem solving. Chapter 6.6 is an exploration of the process of emergence. There I present the main outcome of this thesis - postulate that modes of organizing are constructed by organisational actors' agency directed 'towards the past', 'the present' and 'the future'.

Through my analysis, I explore the influence of the institutional context of an organisation on the ability of social actors to develop agency. I postulate that it depends on the presence of elements of different orders in the organisation. Nevertheless, this paper does not adopt a dichotomous view of agency as opposition to structure. Instead, it defines the process of emergence of action on the temporal-relational framework of agency. This framework is contained in social interaction processes based on the past (in terms of habits and beliefs about the world), but also oriented towards the future (in terms of the ability to imagine alternative possibilities) and towards the present (in terms of the ability to contextualise alternatives taking into account current conditions). Indeed, agency theory is most often applied to economics (e.g. Jensen and Meckling, 1976). Economic assumptions however are not always relevant to organisation theory, especially when the research is conducted with constructivist paradigm. Papers about organisations or institutions has for a long time a simplistic understanding of agency that does not even take into account how organisational actors are able to work on the institutional context to promote their interests.

Contemporary understandings of agency are much more expansive what exemplify the concept proposed by Emirbayer and Miche (1998), which I refer to when theorising the results of my own research. This dissertation provides an empirical verification of this concept. Agency is understood in its light as a process of interplay between beliefs, aspirations and practical "ongoing" action.

The theoretical background of this work, among many constructs, are contemporary concepts of organisation. One of these is meta-organisation. Ahrne and Brunsson (2011) describe it in the context of an organisation whose members are other organisations rather than individuals. Meta-organisations create an environment in which their members can pool their resources and information, interact with the wider social context, build their market potential or defend their interests through lobbying. Interestingly, most of these tasks are reflected in the projective agency of the producers involved in the modes of organising I identified. Moreover, all of them involved both collective actors - micro-enterprises and start-ups - and individual actors - manufacturers. In some of the organising modes (such as the collective problem-solving mode) the participation of individual actors emerged on the basis of a different set of values and organising principles than the collective actors. However, this did not change the fact that the aspirations inscribed in the projective agency of different types of actors were based on the same elements of orders. Following this criterion, it can be assumed that the notion of meta-organisation can be defined more broadly, not only in the context of member organisations but also of individual actors or freelancers. This also raises the question of whether a cognitive framework that takes into account the nature of collaborative spaces as meta-organisation could lead to new ways of understanding this social reality.

In conclusion it is impossible not to talk about the limitations of the research conducted. I would like to emphasise that although qualitative methods have many advantages, they do not offer representativeness, so I am not entitled to generalise the results obtained to the makers community in general. However, this has more impact on the practical implications of the thesis, than on its theoretical output, which centres around the issue of agency as a factor that constructs the emergence of organizing modes.

Furthermore, most of the research data was collected through individual interviews. There is therefore a risk of over-representation of intentions based on projective agency. The respondents of my research are certainly aware to varying degrees of their personal values and the work they do in relation to them. A procedure that was intended in this research to minimise the risk of narrating an unobjectified world as perceived by social actors was to combine interviews, document analysis and observation. However, since the COVID-19 pandemic prevented me from conducting a longer study, the material from observation is less abundant than that collected with the other two sources.

From a **practical** point of view, the results of this study can help managers involved in collaborative spaces to expand their offerings to manufacturers. Collaborative spaces should support entrepreneurs to scale their business or enter the market. Based on collected data, I can claim that part of the makers is interested in, but mostly as experts in craft or technology they don't have the necessary competences to operate on market. Which is also evident from my data - purposefully organised crowdsourcing is a proven and good tool for increasing the heterogeneity of makers' entrepreneurial knowledge.

Another important **practical implication of** this research is the risk of conflict associated with the barter cooperation often undertaken in collaborative spaces. The data collected shows that in some cases it did not work as a good basis for cooperation and led to internal conflicts. Community managers in co-working spaces should be prepared to facilitate possible conflicts or to set the conditions for cooperation in the pre-barter phase.

A final **practical** indication I would like to point out is that networking between makers was much more often used as a modus operandi in those organisations, that had tools to present the needs and values of makers. Such tools (mobile apps containing information about makers' projects, network documents showing the need for tools or open project repositories) increased makers' knowledge of the diversity of projects in the organisation and were the basis for subsequent relationships and interactions.

This dissertation provides interesting insights and contributes to science. I am nevertheless aware of some issues that should be raised in **future research**. I think that the marketisation of makers activities deserves attention, which I have addressed by describing

one mode of organising which is scaling up. However, since the objectives of my thesis were broader, its focus could not remain a deep exploration of this issue. I also believe that further analysis of emergence itself deserve attention. Through my research I have distinguished one constituent element that constructs this process - it is agency. I was able to document it on the basis of my data. However, there are probably more elements and perhaps capturing them requires a differently constructed cognitive framework.

Finally, I think it is worthwhile to analyse the impact of the structure of a collaborative spaces on agency. On the basis of a partial organisation definition I have referred to, that the open nature of membership, the lack of control and sanction mechanisms, the small number of rules and the non-hierarchical nature have a significant impact on the ability of makers to act in an agentic way. Perhaps a comparative analysis involving the juxtaposition of extreme case studies differentiated by the conditions mentioned above could deepen the understanding of agency in organisational theory.

In conclusion, I hope that this dissertation provides value to knowledge about collaborative spaces. They are usually described either from the perspective of user benefits - access to technology, emotional or professional support (Van Holm, 2015, Fuzi, 2015) or in terms of social outcomes - deregulation of the labour market or increasing the economic potential of cities (Reuschke et al, 2015; Ross and Ressia, 2015). On the one hand, within a structural perspective, collaborative spaces are studied in terms of degree of specialisation, types of users and business models (Dougherty, 2012; Assenza, 2015). On the other hand, researchers embedded in the network perspective pay attention to the processes of shaping cooperation and the level of individualism (see '*working together alone*', '*working together as equals*', Spinuzzi, 2012). All these perspectives highlight the theme of social relations and action within a particular social order. However, no research has emerged that addresses the complexity of the institutional order of makerspaces, hackerspaces or fab labs. The institutional orders and organizing modes identified in this thesis are the first such analysis of collaborative spaces. They therefore have the potential to be the basis for further research within institutional theory.