Reconciling societal and economic dimensions in entrepreneurship: the role of fablabs

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Summary

This article analyzes the incentives and obstacles that reconcile the societal and economic dimensions of openness in fablabs. It draws on a comparison of two cases in France and Canada. We aim at a better understanding of the intertwinning of economic and social dimensions during the conception of a fablab adapted to local communities. We compare how the founders experiment with the strategic actors to design an open lab adapted to the makers objectives while fitting into the territorial ecosystems.

Introduction

Fablabs are open labs where you can experiment with digital tools. Conceived as social innovations and thanks to their relative openness, they encourage local entrepreneurship. What are their factors of success ? What are those that explain why the balance weighs more on the economic *versus* social side?

Quebec and France have strong traditions in social and solidarity economy. They have also an historical culture of DIY (di-it-yourself). Albeit the affirmations of von Hippel (1988) on users who innovate in open source, tinkerers may also patent their inventions since their have some motivation for entrepreneurship. We chose to compare two emblematic places for their social and economic dimensions: the Artylab of the University of Quebec at Trois-rivières in Quebec Canada and the Faclab of the University of Cergy-Pontoise in France. Their comparison makes it possible to question the role of a number of contingency factors. We will explore in particular: (1) the history of the place and its networks; (2) the objectives and values of the founders and their translation into the more or less social positioning of the project; (3) the forms of animation implemented; (4) the type of governance and (5), the environment and the degree of openness to the public.

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Theoretical and methodological frameworks

Our results are based on literature and field studies in French (E. Lhoste) and Canadian (C. Fonrouge) fablabs between 2012 and 2017 (Lhoste and Barbier, 2018, 2016, Fonrouge, 2018, 2019, 2020) . We mobilize the actor network theory and the concepts of organizatio studies.

Case studies

   1. **UQTR's Artylab in Trois-Rivières, Canada**

Artylab is a project of the Université du Québec à Trois-Rivières (UTQR). It started in 2018 under the double impulse of two teachers belonging to very different universes: Mylène Gervais, Professor in the Department of Arts and François Gauthier, Professor and Director of the School of Engineering. The first is a specialist in screen printing. Two universities (Montreal and China) used his skills to use and train students to operate a digital screen printing machine. Having two technicians who support the students in their handling of the machines without digital control and having free rooms, she has the idea of setting up the Artylab project. At the same time, François Gauthier has students working on the existing fablab offer in Quebec. They are teaming up with the director of the School of Management and offering a questionnaire in 2019 to the entire university community – nearly 15,000 people – on the interest of having a fablab. 729 respondents, 71% of whom say they are interested. A project group was set up at the initiative of the management with the Dean of Studies and Georges-Martin Caron, Assistant Vice-president, Administration and Finance, who acted as coordinator. The city of Trois-Rivières has a population of nearly 135,000 and is located at 1:30 am from Montreal. It is known as a capital of stationery and has provided newsprint for all of North America. There is a shift from paper mills to high value-added paper. The city wants to take an entrepreneurial turn and says it is very interested in the implementation of the Artylab project which would be a pilot of a larger project of collective workshop with the school of engineering, entrepreneurship and the department of arts. The city's interest lies in the fact that no other fablab exists at the moment – except for a project in an artists' cooperative. It is the openness to the community that would encourage the city to finance the project. However, through the foundation of the UQTR, four criteria are stated to justify the investments in infrastructure of the collective workshop of the fablab type: (1) open access to all citizens; (2) the link with the student entrepreneurship centre; (3) guarantees of self-financing of the operation and finally (4) an insurance of transverse work between the departments of the university.

The situation is thus presented at the start of the fablab: (1) the territory welcomes a variety of actors who have skills that could be gathered but which are currently disjointed; (2) the actors share the aim that digital learning and collaboration are part of the mission of universities; (3) there is a common will to make the city take an entrepreneurial turn. However, the entrepreneurial culture is still weak and the networking between actors remains to be done. There is a discrepancy between the ageing population and the new economic development bodies in the city, such as the Innovation District, which are in good economic health and are frequenting the

This first case shows that the economic dimension is mainly attributed to entrepreneurs, new and small structures that break with the tradition of large businesses in the area.

2.   **The Faclab of the University of Cergy-Pontoise in Gennevilliers (France)**

The Faclab is located within the Genevilliers site of the University of Cergy-Pontoise, a remote area from the city centre. It has been open since 2012. Whithin five years, the Faclab has become patronized by a rather diverse population that included residents of the city. This urban integration happened gradually thanks to the action of members of the maker community and the incentives of successive fabmanagers.

The Faclab was founded by two teachers who do not describe themselves and do not assert themselves as entrepreneurs. Howvere, both have had entrepreneurial experience in the digital professions. They claim that they were missionned by the University Dean to experiment with the operating methods of a fablab open to outside audiences. At that time, the network of French fablabs had about twenty fablabs in diverse locations (Lhoste and Barbier, 2016). The Faclab played an important role as a strategic spokesperson. For a long time, it has been the only academic fablab open to the public. With the contribution of the founders of the other fablabs, they organized the visit of the Prime Minister's Office in 2013, visit that initiated public policies in favor of fablabs. It is also the Faclab that had its first employee fabmanager and organized the first professional curiculum for fabmanagers. While contributing to the structuring of a national network and the opening of the university world to fablabs, the founders of the Faclab have entrusted the fabmanager with a mission of facilitator. He was to connect the members of the makers' community and encourage them to connect the fablab to other worlds through their own networks and by participating in the City's cultural events (sustainable development week for example). Through these distributed activities, these networks have succeeded in articulating heterogeneous worlds and bringing together institutional actors at the local and global levels.

Thus the worlds (and the words) of the DIY culture have gradually become part of the urban landscape of Genevilliers. The founders of the Faclab seem to have set themselves the mission of preserving the open innovation regime and the diversity (of services, social practices and objectives) that make the originality of generic fablabs (Lhoste and Barbier, 2016) while adapting its specificity to both the university and the community.

Conclusion

Fablabs are rooted in an already existing form of organization that influences the balance between social and economic dimensions. Beyond the variety of origins, our results suggest that the more open a fablab is to its surroundings, and/or the more its animation is distributed among the maker community, the more the social dimension is present and allows the appropriation by all. However, the fine comparison of these two fablab trajectories also shows that, especially in this type of third places with very local anchorage, the social and economic dimensions are tighly woven.

These various activities depend on the objectives and interests of the designers, the users who use the fablab (which areformatted by the modalities of opening and arrangement of the premises), their structural environment and the types of relationships they have with that environment. As time goes on, the scenarios fit into the values, norms and rules that exclude users whose expectations and

representations do not fit with the fablab in the making. This work contributes to a better understanding of how social and economic dimensions can be articulated for the benefit of a project rooted in the local landscape. This comparative work should be further developed.

Main bibliographical references

Callon, M., Law, J., 1989. On the construction of sociotechnical networks: Content and context revisited. Knowledge and Society 8, 57–83.

Fonrouge, C., (2018), "Les fablabs et l'émergence de figures alternatives de l'entrepreneur", *Projectics / Proyéctica / Projectique*, 2018/1 (n°19), pp. 41-55. https://doi.org/10.3917/proj.019.0041

Fonrouge, C., (2019) "Fablab: what interest for the entrepreneur?" Revue Internationale de Psychosociologie et de gestion des Comportements Organisationnels (RIPCO), special issue "l'organisation digitale", vol. XXV, No. 61, pp. 83-103https://doi.org/10.3917/rips1.061.0083

Fonrouge, C. (2020). Organizational levers and the choice of monitoring indicators to reconcile social and entrepreneurial dimensions in a fablab: the case of the Digilab de Shawinigan in Quebec. *Organizations & Territories, 28*(3), 53-61. https://doi.org/10.1522/revueot.v28n3.1083

Lhoste E.F. (2020) Can third parties open up the research and innovation system to civil society? Action Papers: June 2020 publication. https://www.cairn.info/revue-cahiers-de-l-action

Lhoste, E., Barbier, M. (2016). Fablabs: the institutionalization of third-place hacking soft. Knowledge Anthropology Review, 10 (1), 43-69. https://www.cairn.info/revue-anthropologie-des-connaissances-2016-1-page-43.htm#

Actors to be involved in the session

Laurent Ricard, Director of the Faclab at the University of Cergy-Pontoise in Genevilliers

Pascal Minguet, Digital Mission Officer for the Burgundy-Franche-Comté Region

Geneviève Fontaine, director of the TETRIS cooperative

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