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Alternative Food Networks and 15-Minute City. Rethinking food distribution to foster sustainable urban transformation

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Keywords: *Accessibility, proximity, sustainability, food supply chain, policy-making, governance*

Parole chiave: *accessibilità, prossimità, sostenibilità, filiera agroalimentare, politiche, governance*

Mots-clés : *accessibilité, proximité, durabilité, chaîne d'approvisionnement alimentaire, élaboration des politiques, gouvernance*

1. *Introduction*

This research acknowledges criticalness of urban sustainability and aims at discussing new models for urban development. By relying on 15-Minute City (FMC) and on Alternative Food Networks (AFNs) concepts, it is meant to understand eventual urban sustainability transformation processes via contributions given by bottom-top aggregational experiences. Promoting more sustainable urban supply chains of food is favourable for providing high-quality food in cities on one side, and, on the other side, it is helpful to stimulate more participative urban policy-making processes (Matacena, 2016). To achieve this result, it is necessary to create sustainability-oriented food networks that may challenge the mainstream food supply chains; in this framework, it is questioned whether a "re-connection" of producers and consumers, would stimulate in-neighbourhood connections and participation. The research investigates if the urban inhabitants' will of participating into AFNs may stimulate local participation for in-neighbourhood changes, towards FMC. The research foresees qualitative analysis grounded in the context of the City of Turin. Semi-structured interviews are carried out in Barriera di Milano and Crocetta neighbourhoods.

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2. *The urban complexity*

According to Batty, cities consist of complex systems: energies-expensive, displaying patterns of inequality and intensively competing for spaces (2008), and implicitly privilege specific neighbourhoods instead of others (Holston, 2009). This centre-periphery condition, where the core area gains advantages over external areas, foresees the existence of a powerful centre, in contentious coexistence with an external periphery, that determines the creation of an ambivalent environment where flows of resources and power move univocally from the peripheric areas to the city centre, while, the other way is characterised by people flows only; this condition creates a more or less evident subjugation that deeply affects urban liveability (Von Gizycki, 1973). Although belonging to the same territory, spatial features obstacle urban inhabitants in a way that impose a different relational structure; they are no longer part of the collective actor that features a unique *milieu* (Dansero, Dematteis, 2023). Rather, they are excluded, or *segregated*, from a variety of everyday choices and opportunities (Gopinathan, Altbach, 2006) (de Souza Briggs, 2005). More detailly, the segregation consists of spatial separateness that leads to general societal exclusion mechanisms (Cassiers, Kesteloot, 2012). Individuals who are geographically impeded to stay close to the city centre, experience lack of possibilities below multiple perspectives.

For the purposes of this research, it is made referring to large cities located in the Global North. They are featured by a condition for which the existence of fully featured centres, in contrast with segregated peripheries, creates an imbalance also in terms of food availability (Kühn, 2015). Indeed, centre-located inhabitants can often purchase high-quality well-produced food more easily than peripheric inhabitants; this depends on the "supermarket redlining" condition, which consists of the tendency for grocery and fruit suppliers to avoid the low-income neighbourhoods with perceived low demand, limited purchasing power, and higher operating costs (Eisenhauer, 2001). This situation leads to the systemic condition of food insecurity that cyclically worsens; indeed, those who are poor are often stereotyped as unable to take nutritionally adequate food choices, «due to lack of money and/or nutrition education, making them passive objects of such discourses» (Allegretti, Fiore, 2022, p. 100) (Glaze, Richardson, 2017). Hence, food poverty often derives from, and leads to, urban accessibility poorness in terms of opportunity and space (Mackay, 2019). In other words, those who suffer from food insecurity, are not only income-poor, but they are also asset-poor and social relations-poor.

The responsibility for the lack of diversified food choices lies with retailers because they do not intend to expand food variety; in supermarkets, even traditional food tends to disappear in favour of universalised consumption patterns that ensure higher profits (Kennedy, Nantel, Shetty, 2004). Literature largely assessed such a condition; due to the expansion of supermarkets and retailers, which rely on long and complex supply chains, food distribution is now subjugated to markets' wills. In theoretical terms, according to Wiskerke, this depends on three mutually reinforcing processes that occurred in last decades (2009). The 3-phases long process consists of: *disconnecting*, meaning that links

between the manifold actors involved in the food production and consumption are weakened; *disembedding*, this phase implies that sites of production and distribution gradually lose influence over the quality and nature of goods; finally, *disentwining*, by which supermarkets pursue an intense specialization in the supply chains that disconnects production chain's actors (Wiskerke, 2009) (Dansero, Pettenati, Toldo, 2016). To counterbalance this situation, efforts should regard a *relocalization* of food processes, meaning to give strong territoriality to food in all parts of production and distribution supply chain (Hendrickson, Heffernan, 2002). Evidently, this operation depends on the system awareness and its capacity to set up new strategies that deal with food and urban issues to set up solutions that may be effective in addressing both areas of intervention.

Innovative opportunities may arise by combining urban spaces accessibility solutions from urban studies and sustainable food production and distribution solutions from food studies. It is necessary to «conflict with the current dominant model, based on a centralized control of food networks, unequal access to land and resources and a growing commodification of urban space» (Fantini, 2023, p. 63). This entails taking into consideration the approaches that mean setting up sustainable cities by granting people the autonomous and independent opportunity to meet needs and accomplish duties within short distances (Luscher, 2022). In other words, new modern processes of urban governance are necessary, and the field of food planning shall be considered paramount (Morgan, 2013).

3. *Shaping perspectives*

Urban liveability primarily relies on consistent levels of societal cohesion and interactions; moreover, environmental sustainability is extremely relevant as well. Nonetheless, cities affected by long commuting times, resulting in intense traffic pollution, do not match any "liveability" target (Zaheer Allam, Nieuwenhuijsen, Chabaud, Moreno, 2022). In other words, if the intention consists in ameliorating the mentioned spheres, it is necessary to set up human-scale cities, meaning to plan environments specifically designed for accomplishing people's needs in proximity.

Already in 1929, Perry proposed relevant reflections in terms of proximate urban liveability, addressing the extra-traffic close to schools, and debating the necessity of a "Neighbourhood Unit"; in detail, Perry suggested the creation of «arterials along which through traffic could move rapidly at the boundaries of the neighborhood unit», and «residential streets, designed primarily for use by neighborhood unit residents» (Perry, 1929, p. 487). By increasing the number of pedestrians-only (or pedestrians-mostly) streets, it expected to improve the general liveability of neighbourhoods (Hoshford, Beairsto, Winters, 2022). In this framework, the 15-Minute City (FMC) approach may provide interesting solutions.

FMC foresees unsustainable urban spaces becoming more sustainable by stimulating little effective changes at neighbourhoods' level. FMC defines some key features that neighbourhoods should include to be sustainable and

liveable within a 15-minute-long distance by bike or walk from the urban individuals' houses. In brief, the features consist of easy access to fresh food, healthcare and other institutional services; then, affordable houses should exist in every neighbourhood; third, urban inhabitants shall be able to experience clean air and green spaces (C40, 2020).

Some criticise this set of services because too pre-defined; nonetheless, the model is valuable because it is suitable for adaption to people's demands according to their specific needs. Hence, targeted efforts should regard the capacity of providing proper political floor to urban inhabitants; in other words, it is essential to comprehend how to address all essential changes if cities are poorly capable of including citizens within the urbanization process. Indeed, as Professor Moreno affirms, cities fail to match citizens' needs because the inhabitants are not involved in decision-making processes and cannot demand positive changes; instead, urban inhabitants mostly tend to adapt to cities' transformations (Moreno, 2024). Nevertheless, the responsibility of such a severe exclusion does not belong to the people; rather, it must be deputed to the urbanisation process, which cannot, or does not intend to, include democratic bottom-top suggestions. In other words, urban residents do not possess relevant tools to make practical political proposals regarding their conditions.

Acknowledging this critical issue, a curious solution arises if AFNs are considered. Concretely speaking, AFNs are made up of essential elements that aim at challenging the usual supply chains' structure; by removing intermediaries between producers and consumers, food supply chains are shortened, better connected, and made more transparent. (Brinkley, 2018). The crucial feature of AFNs relies on their capacity of stimulating environmental sustainability without demanding investments and efforts in new means or infrastructures. In brief, they are «rooted in particular places, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practices, and enhance social equity and democracy for all members of the community» (Feenstra, 1997, p. 28).

The potential of AFNs to distribute local food in cities well resonates with FMC's principles. FMC demands to re-localize food systems, reduce food miles, and foster resilience within urban neighborhoods (Relocalize, 2024). Given their strengths, AFNs can be instrumental in this transition. Indeed, the current scale and cost-effectiveness of other in-cities food-related sustainable activities alone cannot support the entire city population. AFNs, instead, can fill this gap by distributing hyper-local food supplies directly from food production sites to consumers' doorsteps. Eliminating the logistical distances between distribution centers and supermarkets, by optimizing routes to deliver essentials to multiple homes in one trip, this model not only reduces the carbon footprint associated with the last mile of food delivery but also embodies a significant step towards sustainable urban living (*ibidem*). Moreover, the emphasis on proximity in the FMC is not only desirable for access to urban amenities but can also influence new consumption patterns. Studies during the COVID-19 pandemic lockdowns showed an increase in local food production and consumption, highlighting the potential for AFNs to support the FMC vision (Allam, Nieuwenhuijsen, Chabaud, Moreno, 2022).

The leading theory behind the present research lies in the belief that urban inhabitants may be political participants in urban transforming processes if AFNs are adopted systemically in urban neighbourhoods to gather people. The two pieces are linked by the capacity of reciprocally providing an answer to each other's missing piece; indeed, although both FMC and AFNs stand upon convincing theoretical grounds, they both miss accomplishing specific pieces. On one side, FMC lacks in aggregating individuals and providing specific social spaces where individuals may produce urban proposals; on the other side, AFNs do not possess specific strategies to reach more than a few individuals and do not foresee fixed urban areas where consumers can meet and exchange ideas. Numerous individuals, moreover, perceive AFNs as poorly trustable due to a lack of transparency and reliability. Even if "alternative", networks are sometimes perceived to prefer focusing on the economic values of food rather than on stimulating positive interpersonal relationships. Hence, if AFNs consist of a voice raised in the clash between the market and society, food networks should become alternatives to supermarkets in economic and human terms (Corsi, Barbera, Dansero, Peano, 2018; Navin, 2015).

4. *The empirical research*

4.1 *The research question* – In the present research, FMC and AFNs are put in relation by the question: «How do Alternative Food Networks contribute to set up the 15-Minute City?». This acknowledges the limits of cities in terms of sustainability and aims to comprehend whether FMC may be stimulated by relying on shorter food chains, AFNs. This work begins where previous research arrested; Zoll affirmed that «regarding the further societal implications of AFNs, the results are mixed, with a perception of a rather limited potential to drive social change beyond the individual AFN project» (2017, p. 108). Although some information was collected regarding a "limited potential", the outcomes did not provide sufficient clarity to consider AFNs explicitly incapable of undertaking scaling-up paths and politically influential processes. The lack of clarity relies on the missing connection with the potential implications for stimulating more sustainable urban environments. More precisely, AFNs have been investigated *per se* with no explicit reference to the role of food networks in conditioning urban framework liveability (Sacchi, Stefani, Romano, Nocella, 2022).

4.2 *The context* – Turin was historically built from the centre to external areas. It experienced an industry-led growth[1] in 20th-century (Miletto, 2002), and further developed building neighbourhoods all around the city centre. The city grew up with a clear spatialisation of zones, strongly demarcating the centre and the periphery; for this reason, although more than 1 million people

[1] To understand the growth of Turin in 20th century, see Miletto, 2002

inhabit the entire urban area, Turin hosts most relevant facilities and services mostly in central neighbourhoods. In practice, this translates into different life conditions between peripheric neighbourhoods and central ones. Indeed, the average life expectation in Barriera di Milano is 75-77 years, while in Borgo Po, the life expectation reaches 81.5 years (Barbera *et al*., 2021)[2]. The socioeconomic differences imply great recourse to non-accredited private health structures for richer individuals in centre; while peripheric inhabitants, who are often poorer, cannot afford the same expenses, and their lives are severely affected (Gnavi *et al*., 2020). The deprivation index of Turin pictures a clear and persistent imbalance between the centre and the periphery, in favour of the centre (Gnavi *et al*., 2020).

The present research regards two neighbourhoods of Turin: Barriera di Milano and Crocetta. Both are accessible in maximum 15 minutes by bike (fig. 1). Crocetta is chosen because it is in the centre of Turin, it is perceived as a luxury neighbourhood, and newspapers even define it as "a little big dream" (Mole24, 2019). Regarding food availability, there is one farmers' market, and some food retails are available all over the neighbourhood; they cover rather well the neighbourhood's surface. More than 340 small or medium shops exist in Crocetta, but that less than 5 big retails are present (Torino2030, 2021).

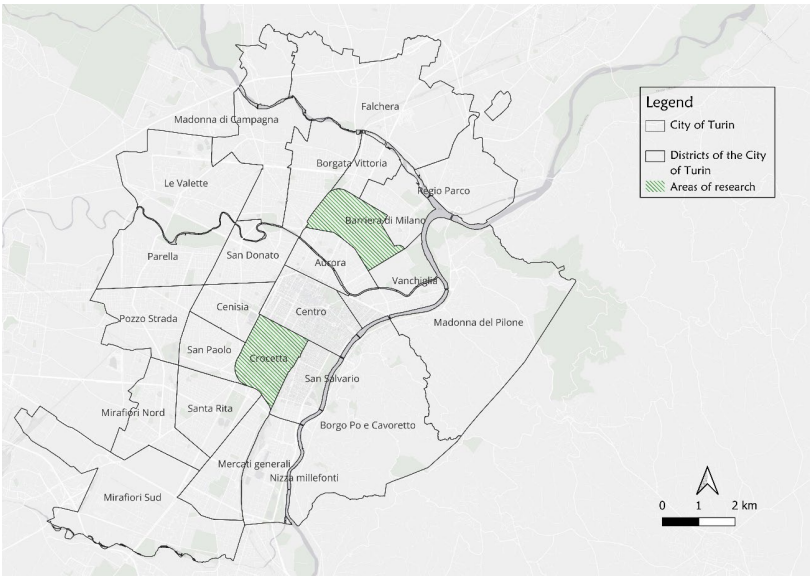


Fig. 1 – Districts of the City of Turin.

Source: Author's elaboration from data of Geoportale of Regione Piemonte.

[2] It is relevant to underline that Barriera di Milano and Borgo Po are not significantly distant. Nonetheless, they are strongly perceived as the periphery, on the one hand, and as the centre, on the other one.

Barriera di Milano is chosen because it was known as the heart of the working-class and proletarian society of Turin, due to the presence of migrants from the South of Italy before, and from the North of Africa later. Because of the migration phenomena, the neighbourhood is often perceived as "dangerous" (TorinOggi, 2021). Although located relatively close to the City centre, Barriera di Milano actually hosts several facilities and services less than its addressed counterpart. In particular, regarding the transports' means, it is remarkably evident that Barriera experiences fewer stops and facilities than Crocetta; moreover, large and well-covering cycling paths lack considerably.

For what concerns food availability, in terms of food-related shops presence, Barriera di Milano hosts large farmers' market too; moreover, according to the same source of data used before, the neighbourhood, located in the North part of Turin, hosts 378 retail activities and more than 15 supermarkets or hypermarkets (Torino2030, 2021). As a result, in purely terms of availability, Barriera di Milano seems to provide a sufficient variety of food shops. They are mostly located within the major streets of the neighbourhood; nonetheless, given the high number of retails, Barriera shows a rather good coverage.

4.3 *Methodology* – The research debates the following hypothesis: at first, if people perceive to inhabit in FMC condition; hence, if sufficient amount of services is present; secondly, if they perceive sufficient high-quality choices within mainstream supply chains, or, rather, if they would adopt other food purchases behaviours; then, the role of AFNs is tested as perceived positive stimuli for the inhabitants to participate in the socio-political life of the neighbourhood of belonging.

Qualitative methodology is used to carry out the empirical research (Yilmaz, 2013), and 30 semi-structured interviews are taken in the neighbourhoods of Barriera di Milano and Crocetta. 15 individuals per neighbourhood are selected by purposive sampling (Etikan, 2016); in other words, participants are selected for the specific contributions they can bring.

Interviewees are people between 30 and 70 who have inhabited Barriera di Milano and Crocetta for ten years at least. To guarantee equal gender representation, the individuals are asked to self-express by the possible choices: "Female", "Male", or "Prefer not to say". Moreover, participants are asked about their job occupations aiming to collect opinions from different backgrounds.

Participants are adequately informed about the research, and clear information before the interviews is provided. Freedom of choice, both initially and within the interviewing process, is also granted. Anonymity and confidentiality of the participants are preserved, avoiding revealing the names and identities in all the research phases (Arifin, 2018). The interviews take place indifferently in person and online; the choice of the modality is up to the participants. All interviews take place between February and April 2022*.

In order to interpret and comprehend data, thematic analysis is done to reveal relevant patterns (Alhojailan, 2012, p. 40). More precisely, by a primary codes' identification from the data and a successive collection of the most relevant categories, categories are displayed to provide answers to the research questions (Amanfi, 2018).

5. *Data analysis*

The "Boxed display" technique is used «to highlight a specific narrative considered important and frame it in a box» (Verdinelli, Scagnoli, 2013, p. 364); the purpose consists in outlining some points of relevance in the more extensive speeches, meaning to juxtapose and compare sentences stated by different interviewees (Verdinelli, Scagnoli, 2013). In detail, following tables display the most relevant contents of the interviews. Answers are aggregated according to the significant discussed topic ("Highlights from grouped answers" column), then collected in the "Categories" column and finally gathered in the "Key themes" column. In order not to repeat similar answers, interviewees are gathered in parenthesis; hence, answers are accompanied with numbers of participants who expressed similar concepts. Displayed answers are not exact quotations; they consist in the synthesis of concepts expressed by respondents. Sentences are rephrased to ensure sufficient gathering as well as the highest respect of people's original answers.

Tab. 1 – Boxed display of answers of Barriera di Milano participants.

Key themes	Categories	Highlights from grouped answers
Local liveability	Several services are available in proximity Presence of services	Yes, the neighbourhood is liveable in 15 minutes (N. 5, 7, 8, 10, 15). There is the San Giovanni Bosco Hospital, which is the second largest hospital (…). We have green spaces likewise Parco Colletta, in Barriera we could almost sell green spaces (N. 1, 2, 7, 9, 12). In the area, there is an intercultural centre that promotes some cultural initiatives of aggregation, but communication is lacking; it reaches few people (N. 3, 5, 6, 12, 14). There are some issues which usually characterise peripheric districts; nonetheless, the people are very nice (N. 1, 3, 7, 8, 9, 10, 11).
High-quality food availability	Supermarkets rarely offer truly sustainable products AFNs products are generally better for freshness and overall quality	I do my shopping at the market in Piazza Foroni, at the Coop in Piazza Respighi, and in some local stores (N. 1, 3, 7, 10, 12, 14). I sometimes buy at the market because there are fresher products that are not packaged. These purchases are, of course, more sustainable, not always more convenient, but generally speaking they taste better than the ones that you find at the supermarket (N. 1, 3, 7, 10, 11). Supermarkets try to convey a sense of sustainability to the consumer to be competitive and not because of a true intent (N. 1, 2, 3, 8, 9). I live in a community, and we take part to two SPGs, which allow us to cover almost every need. In terms of diet, we can have an omnivorous or vegetarian diet; for the vegan diet (N. 5, 10).

AFNs ineffectiveness in fostering aggregation	AFNs imply higher in-neighbourhood interactions Lack of knowledge towards AFNs	In joining AFNs, I also perceive a complicated aspect related to the social sphere. Goods collection is much more intimate, and forces you into a certain circle; not everyone is willing to have this social experience (N. 1, 5, 8, 10, 12). The problem is that these experiences, must be based on groups of people who are already coordinated; moreover, not everybody trusts producers who do not sell in supermarkets because they are poorly connected. If, instead, they were united into a sort of union, everything would be easier (N. 1, 8, 12, 15). I would go to learn about new ways of living and consuming; basically, I would want to understand if and how I can change things in my daily life (N. 2, 6, 7, 11).

Source: author's elaboration from interviews data, 2022.

Tab. 2 – Boxed display of answers of Crocetta participants.

Key themes	Categories	Answers from grouped answers
Services in proximity	Several shops, but expensive. It is not entirely liveable.	Crocetta is a quiet neighbourhood, but on Saturdays and Sundays, it empties completely. From Friday to Monday there is nobody around (N. 2, 3, 5, 8, 10, 12). Crocetta is quite a rich neighbourhood, with some particularly residential and luxury areas; the most luxurious area is the pedestrian area, surrounded by big mansions, in front of Politecnico (N. 3, 7, 10, 12, 15). It is a neighbourhood that has many services such as stores and various things. Unluckily, it is known as rich; as a result, stores are automatically more expensive (N. 5, 8, 9, 11, 14)
High-quality food availability in neighbourhood shops	Supermarkets display unsustainable behaviours. Neighbourhood food shops provide expensive but better food.	The city has moved towards a direction of unsustainability because it has preferred to invest in large shopping malls rather than in neighbourhood stores; now, there are a few large supermarkets against the previous majority of neighbourhood shops (N. 1, 5, 8, 15). Even if I like the place where I live, I have a lot to say regarding how the neighbourhood is governed and how it is changing (N. 2, 8, 9, 10, 11). Local stores are traditional and, consequently, are automatically intentioned to preserve the environment by seasonality; then, fruit and vegetable stores sell only typical seasonal things; so, they do not negatively impact on the environment (N. 2, 3, 5, 10, 14, 15). I think we are satisfied with AFN's offers. We handle some items like meat, fish and oil more easily, likewise others that are stored. It gets more complicated with things that go out of date sooner; for example, vegetables have big limits (N. 5, 10, 15).

AFNs provide a cheerful floor for aggregation	In-group food-related purchases proposals are more appealing. Food consumption may become a more social experience.	There is also the farmers' market in Porta Palazzo. It is also interesting from a folkloric point of view, and it is nice to go and see it. It proposes stuff that I do not see in the area where I live (N. 1, 7, 11, 13). I often attend Crocetta market; it is a nice aggregation experience: it is an extraordinary market on Sundays; in general, I go because it is diverse and super attractive (N. 5, 8, 9, 10, 15). I often carry out purchases, especially sustainable ones, only if recommended by friends. Consequently, if they organize this experience, I may join it. The social aspect is relevant (N. 1, 2, 6, 7, 11, 14).

Source: author's elaboration from interviews data, 2022.

6. *The results*

6.1 *The data validation process* – Given that, as interviews were carried out, information recurred, a situation of theoretical saturation occurred. According to Morse, this situation consisted in «the phase of qualitative data analysis in which the researcher has continued sampling and analysing data until no new data appear, and all concepts of the theory are well developed, (…) and their linkages to other concepts are clearly described» (2004, p. 151). The theoretical saturation should not be conceived as a problematic context; instead, it gives trustable confirmation regarding the validity of the collected results (Guest, Bunce, Johnson, 2006, p. 60).

6.2 *Some answers* – Regarding FMC liveability, Barriera di Milano and Crocetta inhabitants perceive good services in proximity and fewer essential facilities to be available in larger closeness. Within this distance, the individuals of the two neighbourhoods share similar feelings towards the availability of high-quality food products. They do not consider large retailers sustainable; interviewees believe supermarkets to address sustainability targets only for greenwashing purposes. Moreover, although large retailers provide cheap food to attract customers, interviewees consider it qualitatively worse.

Research participants would carry out more sustainable purchases but do not know how to get informed regarding food-related experiences that differ from the mainstream supply chains of food. Few individuals attend neighbourhood markets or farmers' direct sales. More precisely, both in Crocetta and in Barriera di Milano, some individuals participate in some AFNs; nonetheless, a clear awareness regarding the importance of taking part in AFNs does not exist; some interviewees are doubtful regarding AFNs to be more sustainable than supermarkets.

Lastly, about the in-neighbourhood possibility of significant political commitment, there is overall doubtfulness; individuals do not perceive themselves as potential actors in the urban decision-making processes, although they manifest the intention to be involved. Regarding AFNs in detail, individuals perceive the networks as purely food-related experiences, which regard higher high-quality

food availability only; nonetheless, there is no specific perception regarding the opportunity of positive political implications pushed by AFNs joining.

Given the presence of several AFNs, such as farmers' markets and others, the City of Turin can rely on several distributors of high-quality food. Nonetheless, the networks are not actively involved in any policy-making process of the City. They cannot stimulate any significant change within Turin inhabitants' behaviours, and they do not provide aggregative spaces to start paths of awareness-raising among individuals.

For this reason, creating an AFNs union or consortium, as some interviewees affirmed, as a political interlocutor in the urban government, might be beneficial. The new entity would respond to multiple needs at once; in terms of high-quality food availability, AFNs may rely on a systemic network to spread their products; then, AFNs may challenge large distributors' advertisements; hence, AFNs may increase their appeal and challenge the mainstream large distributors' narratives. Further, the consortium would stimulate an AFNs scale-up process; more precisely, transparency and reliability may be ensured. This would be helpful to fill information gaps asked by urban inhabitants. Moreover, by creating a consortium at the City level, AFNs may acquire formal political implications, and, addressing the decision-making level, an AFNs consortium may be positive to stimulate FMC creation; indeed, if FMC is meant as an in-proximity liveable neighbourhood, the politically-involved consortium may provide an aggregational social floor for inhabitants to foster in-neighbourhood transforming experiences: in other words, by relying on AFNs, the food-buyers may turn into aware individuals who actively participate to the life of the neighbourhood and carry out in-neighbourhood policy-making processes that would generate positive impacts for the city.

7. *Conclusion*

The research explored urban sustainability through the lens of the FMC model, which advocates for a more sustainable approach to urban development. This model is particularly relevant when considering AFNs. These have the capacity to drive localized changes that align with the principles of FMC, fostering closer-knit, self-sufficient communities that reduce reliance on extensive food supply chains and altogether might promote more sustainable living environments.

An in-depth theoretical investigation of the connections between AFNs and FMC has been developed with the purpose of determining if scientific literature had already addressed this relationship. The investigation revealed that the connection had not been thoroughly explored. Consequently, it was necessary to fill this literature gap.

In detail, by carrying out empirical research in the City of Turin, inhabitants of Barriera di Milano and Crocetta were interviewed regarding potential role of AFNs in urban transformations. Interviewees from both areas manifest a notable lack of trust in large retailers' sustainability claims, which are widely perceived as greenwashing. Residents believe that supermarkets prioritize

marketing over genuine sustainability efforts and consider the low-cost food offered by these retailers to be of inferior quality. It is worth nothing that this skepticism affects AFNs too, because they perceive hard to understand if AFNs provide real high-quality, locally-sourced food or not.

For this reason, a final policy recommendation has been produced. The creation of an AFNs consortium meant to give political relevance to AFNs and the food-related experiences in the City of Turin, would be helpful to produce two politically relevant results. On one side, it may provide concrete support in scaling inhabitants' needs up to the decision-making level; on the other side, the consortium may rely on the AFNs know-how and knowledge, to support the City of Turin in accomplishing urban development objectives, helpful to become FMC.

Future work should investigate political implications of the AFNs concerning their contributions to creating in-neighbourhoods aggregational opportunities.

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Alternative Food Networks and 15-Minute City. Rethinking food distribution to foster sustainable urban transformation

This study focuses on 15-Minute City (FMC) model as a potential approach to ensure urban liveability regardless of the neighbourhood of belonging. To understand potential ways to implement the FMC, the study addresses the role of food purchases in cities as potential floors to aggregate individuals; more detailly, relying on Alternative Food Networks (AFNs) as high-quality food suppliers, the research intends to comprehend their implications in FMC stimulation. After a literature review regarding AFNs and FMC correlation, the study carries out empirical research meant to juxtapose the two themes. By adopting qualitative methodology, the AFNs' positive role in stimulating the FMC implementation is tested, via semi-structured interviews, made in two neighbourhoods of the City of Turin, Barriera di Milano and Crocetta.

Alternative Food Networks e 15-Minute City. Ripensare la distribuzione del cibo per favorire una trasformazione urbana sostenibile

Questo studio si concentra sul modello 15-Minute City (FMC) come approccio di sviluppo urbano utile a garantire maggiore vivibilità nelle città indipendentemente dal quartiere di appartenenza. Per comprendere quali percorsi possono essere intrapresi per promuovere una partecipazione degli abitanti dei diversi quartieri nei processi decisionali relativi all'implementazione della FMC, questo studio discute il ruolo degli AFNs come ambiti utili a favorire sensibilizzazione e aggregazione nei quartieri. Dopo una rassegna della letteratura circa la correlazione tra AFNs e FMC, si svolge una ricerca empirica volta ad indagare la percezione di alcuni cittadini. Attraverso una serie di interviste semi-strutturate, si discute il ruolo degli AFNs nello stimolare l'implementazione della FMC; l'indagine è realizzata in due quartieri della città di Torino, Barriera di Milano e Crocetta.

Les réseaux alimentaires alternatifs et la ville des 15 minutes. Repenser la distribution alimentaire pour favoriser une transformation urbaine durable

Cette étude se concentre sur le modèle de la ville de 15 minutes (FMC) en tant qu'approche potentielle pour assurer la viabilité urbaine indépendamment du quartier d'appartenance. Pour comprendre les potentiels de mise en œuvre de la FMC, l'étude aborde le rôle des achats alimentaires dans les villes en tant qu'étages potentiels pour agréger les individus ; plus précisément, en s'appuyant sur les réseaux alimentaires alternatifs (AFN) en tant que fournisseurs d'aliments de haute qualité, la recherche vise à comprendre leurs implications dans la stimulation de la FMC. Après une revue de la littérature concernant la corrélation entre les réseaux alimentaires alternatifs et les FMC, l'étude mène une recherche empirique destinée à juxtaposer les deux thèmes. En adoptant une méthodologie qualitative, l'objectif est de tester le rôle des AFN dans la stimulation de la mise en œuvre des FMC, par le biais d'une série d'entretiens semi-structurés, réalisés dans deux quartiers de la ville de Turin, Barriera di Milano et Crocetta.

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