From Facebook to the Neighbourhood: Infrastructuring of Hybrid Community Engagement

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Abstract. In recent years, social media have increased the resources that individuals and organizations are able to mobilize for the development of socially innovative practices. In this article, we engage with a naturally occurring development in a Trentinian neighbourhood to examine the cooperative interactions amongst members of a local community. The first author and local residents of the neighbourhood participated in online discussions, decision making, and physical activities that led to material changes in the area. The interventions are motivated by and based on the concept of Social Street that combines online interactions in a closed Facebook group with face-to-face meetings seeking to practically engage the collective in accomplishing certain immediate or ongoing needs. Over the course of two years, we studied this local instantiation of Social Street in Trento, Italy by way of an action-oriented (digital) ethnography. Through this work, we demonstrate how urban neighbourhoods might benefit from *hybrid forms of community engagement* that are enacted through a constant back and forth between online and face-to-face interactions. We further argue that the infrastructuring of local urban collectives should follow strategies that pay attention to the *multiple issues* in urban neighbourhoods and *people's attachments* to them. Overall, the paper reflects upon the challenges and configurations of participation that this form of community-work entails.

Keywords. Place-based communities; urban neighbourhoods; civic engagement; hybrid engagement; situated engagement; infrastructuring; social networking sites; Social Street.

1 Introduction

Online social networking sites such as Facebook have long been conceived as primarily global and virtual phenomena, (re-)connecting long-lost friends over longer distances online despite their geographical separation (Fuchs, 2008; Rheingold, 1993). Stepping away from notions of cyberspace, however, recent research has shown that, rather than only connecting those who live far apart, social networking sites are to a large degree used among close friends, family, colleagues,

and other close acquaintances who live in the same area and might see each other on a regular basis (Hampton and Wellman, 2003; Hampton et al., 2011a; Hampton et al., 2011b).

Online social networking sites, then, are far from being purely about overcoming geographical disconnection; online social networking is just as often a fundamentally local and situated practice. From connecting activists on the ground in social movements (Wulf et al., 2013), to local protest actions being coordinated with and documented for a local populace (Asad and Le Dantec, 2015), to civic discussions taking place about sites of local interest (Crivellaro et al., 2014; Korn and Back, 2012), social networking increasingly engages with the places where people live and the local issues that people face. What we see then is a move towards citizens appropriating technologies with global reach to serve local ends instead.

Social media, in our understanding, are sociotechnical infrastructures, enabling and fostering particular sets of practices, influencing how individuals communicate and interact with one another. For its users, Facebook as a prominent social networking platform has sunk into people's everyday lives, almost invisibly supporting the upkeep of their social relations. For many, Facebook has become infrastructure (Star and Ruhleder, 1996).

With this research, we suggest that the infrastructur-*ing* of local social networks—i.e., the (participatory) practices of actors to advance existing and build new infrastructures (DiSalvo et al., 2013, Pipek and Wulf 2009)—can play a key part in revitalizing urban neighbourhoods. In this context, the capacity of social media to bring neighbours closer together, create closer ties, and increase civic engagement through novel cooperative configurations, may help to address a wide range of challenges including urban decay, social isolation, and socio-economic hardship on a local level. In relation to this, the potential of social media to support new forms of interaction and cooperation among individuals has already been noted in the literature (e.g., *Participatory Culture* in Jenkins et al. 2006; *Netarchical Capitalism* in Kostakis and Bauwens, 2014).

The interest of our own work lies in servicing somewhat disadvantaged communities and providing scope for community integration through popular social networking sites and local interventions in physical neighbourhood spaces. This presents both a social and a technological challenge: How can social networking sites encourage integrative goals? And what kinds of phenomena does this technology need to support to do so?

In this article, we report an in-depth, long-term ethnographic case study, that reveals what the infrastructuring by and of local urban communities from the bottom up can look like. The case in question was a *naturally occurring development*, with local citizens reviving their neighbourhood by appropriating Facebook's group feature according to the collective's needs, and therefore provides a concrete example of the local opportunities afforded by popular social

networking technologies. The study in question is based on two years of action-oriented (digital) ethnography in a neighbourhood in Trento, Italy between October 2014 and September 2016. It traces a local instantiation of a larger global phenomenon: Social Street.

At its core, Social Street follows a concept that suggests new social interactions among neighbours, starting off online and moving to face-to-face shortly afterwards. In Social Street interactions are initiated via a closed Facebook group that is dedicated to a particular street or neighbourhood. The global movement devoted to the idea states its purpose to be "to promote socialization between neighbours resident in the same street in order to build relationships, to interchange needs, to share expertise and knowledge, to implement common interest projects, with common benefits from closer social interaction."[1] The founder of Social Street, which was first established in Bologna in September 2013, posted his guidelines for replicating it on a website, thereby facilitating its spread to numerous other contexts. By 2016 there were almost 400 Social Street initiatives in Italy alone (Cabitza et al., 2016) and it has now begun to be adopted in other countries as well, .such as Chile, Brazil, New Zealand, Germany, and the USA.

In this paper, we report in detail on a Social Street established by and for residents around a particular residential street in Trento. To the best of our knowledge, Social Street as a phenomenon and a novel social practice remains virtually unstudied (Cabitza et al., 2016 being the sole exception).

The study provides two central contributions regarding the infrastructuring of hybrid community engagement in urban contexts. First of all, we argue that local social collectives might enhance their efforts to bring about positive change in urban neighbourhoods by utilising *hybrid forms of community engagement* that are enacted through *a constant back and forth between online and face-to-face interactions*. The result of such an approach, we will show, is an increased awareness of and engagement in both online and offline spheres as well as potential material outcomes through interventions in the physical spaces of a neighbourhood.

Secondly, we argue that local urban collectives that are facilitated by social networking technologies such as Facebook might often be better understood not as communities but as *networked publics* in which common activities and engagement in neighbourhood issues are informed through difference rather than homogeneity. The result of such a framing, we suggest, is that the infrastructuring of local urban collectives would be best off following strategies that pay attention to *the multiple issues and people's attachments to them* that might first bring a public into being.

In sections 2 and 3, we first present foundations and related work. In section 4, we provide details on methods, outlining our action-oriented (digital) ethnography and the empirical materials we gathered. In section 5, we offer some background about Social Street overall and about the specific context in which Social Street

[1] http://www.socialstreet.it/international/info-english/

was established in Trento. In section 6, we present the case's findings in-depth. The findings are then discussed in section 7, giving particular attention to the interweaving of online and offline activities in hybrid community engagement.

2 Foundations

Our work is based on three conceptualizations: (1) *Infrastructuring* as a bottom-up approach to engaging local communities and understanding technological interventions and interactions with stakeholders (2) *Neighbourly togetherness of place-based communities* and *community engagement* using Social Street as an exemplar of how this can be accomplished on the ground (3) *Situating and materializing of online activity* as novel means of better interweaving SNSs with local neighbourhoods.

2.1 Infrastructuring

In this context, infrastructuring has two key features: Firstly, infrastructure serves as the sociotechnical substrate that underpins and enables action, engagement, and awareness within a neighbourhood. Secondly, the participatory practices of infrastructuring can guide both strategy and practice in the real world by building the capacity of actors to advance existing and build new structures, thereby servicing the first concern.

For a long time, research has seen infrastructure as static entities fixed at the point of design (see Pipek and Wulf, 2009, for an overview). Subsequent research has shown infrastructure to be about ongoing processes and purposeful activities—a shift from *being* infrastructure to *doing* infrastructure (Star and Bowker, 2002). Infrastructure reflects the interdependencies between technical and social contexts and are fundamentally concerned with local practices (Star and Ruhleder, 1996; Pipek and Wulf, 2009; Monteiro et al., 2013): "An infrastructure occurs when local practices are afforded by a larger-scale technology which can then be used in a natural, ready-to-hand fashion" (Star and Ruhleder, 1996). The design of infrastructures needs to accommodate non-local constraints (Monteiro et al., 2013). This is addressed in *infrastructuring* by "re-conceptualizing one's own work in the context of existing, potential, or envisioned IT tools" (Pipek and Wulf, 2009, p. 469). The participatory practices of infrastructuring have emphasized the guided capacity building of stakeholders as opposed to designing for present issues (Björgvinsson et al., 2010; DiSalvo et al., 2013; Karasti, 2014; Le Dantec and DiSalvo, 2013). Infrastructuring captures "the work of creating sociotechnical resources that intentionally enable adoption and appropriation beyond the initial scope of the design" (Le Dantec, 2013). The work of infrastructuring does not need to be carried out by professional designers external to the field, but can also be understood as an 'in-the-wild' activity that native members of the field are doing

unto and together with others (Dittrich et al., 2002; Karasti and Syrjänen, 2004; Wagenknecht and Korn, 2016).

In *emergent* environments characterized by spontaneous collaboration in novel and changing settings infrastructuring faces specific challenges (Reuter, 2014). Empowering cities, neighbourhoods, local communities, and their respective stakeholders through purposeful activities of infrastructuring is seen as being essential for the well-being and resilience of local communities (Daly et al., 2015). Using a case study of the implementation of Social Street in one particular neighbourhood we shall be looking at how infrastructuring can bring about these goals in actual practice.

2.2 Place-based Communities and Community Engagement

A social group is commonly referred to as a community if a group of people share similar interests regardless of online or offline environments (e.g., Carroll, 2012; Lave and Wenger, 1991; Rheingold, 1993). Central to the concept of community is that 'something' is shared and that members have an attachment to this shared interest. A community further exhibits some form of togetherness around this shared issue. A sense of community translates into "a feeling that members have of belonging, a feeling that members matter to one another and the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan and Chavis, 1986).

Social Street is an intervention in a local neighbourhood community. Typically confined to the people living in or doing business on a particular street and its immediate surroundings, a Social Street is defined on the scale of a neighbourhood or smaller. To describe the kinds of togetherness—or the lack thereof—observable in local neighbourhoods, we mobilize concepts of communities of place as a theoretical lens (Carroll, 2012; Foth, 2006). The shared interest of people living, working, recreating or doing business within a community of place is the local, geographical environment. The neighbourhood as a common environment is a place inscribed with various meanings and understandings (Harrison and Dourish, 1996). Throughout the article, we will use the terms 'communities of place' and 'place-based communities' as synonymous. We use the terms to refer to forms of communal togetherness in local neighbourhoods. Place-based communities are the types of communities that, in our case, are augmented and expanded by the opportunities offered by SNS and Social Street interventions.

In his seminal book "From the Neighborhood to the Internet," Jack Carroll (Carroll, 2012) discusses the nature of a contemporary, place-based community. His conception of community is based on a historical analysis of the concept of community and decades of research bringing networked ICTs to local communities. Carroll (Carroll, 2012) suggests a conceptual model of community that consists of three facets: community identity, participation and awareness, and social support

networks (see Table 1). We employ this widely-used model in a similar way to Carroll to assist in understanding the connection between technologies and communities, and the infrastructuring of hybrid community engagement.

Facet	Description
Community identity (attachment)	Members experience the ideal of a community by sharing values, episodes, traditions, and experiences of local and global events; sharing a sense of belonging and emotional connection; experiencing community membership as part of who they are; being committed to and believing in the community's capacity to thrive and develop.
Participation and awareness (engagement)	At least some members enact shared identity through collective activity, including initiative and innovation in community practices. Members feel and observe that one can have an impact on community decisions and initiatives (self-efficacy), and come to regard the community as sustainable and efficient (collective efficacy). A less active form of participation is maintaining awareness of community activity.
Social support networks	Community members typically play a variety of roles. Often, multiple types of ties can be observed between members. Members provide and reciprocate social and material support through a multitude of different types of ties. The community is a relatively densely interconnected subnetwork of the societal social network.

Table 1. A conceptual model of community (reprinted from Carroll, 2012).

As stated in Carroll's model, a *collective identity* is fundamental to contemporary community. Members evoke and experience community identity by sharing values and traditions. They feel a sense of belonging and share an emotional connection. Experiencing community membership as part of who they are, members develop a sense of attachment to the community and are committed to and believe in the community's capacity to thrive and grow. Through *participation and engagement*, some if not all members enact shared community identity. These active members become known and visible through their conduct and contributions to the community. Other members see that it is possible to have an impact on community decisions and initiatives, and they come to regard the community as sustainable and efficient. Lastly, members play a variety of roles, each entailing its own activities and characteristics. Members interact with one another in a variety of ways, thereby creating a multitude of different types of ties to other members of the community. So, as a consequence of community identity and participating in local events, a community can become a relatively densely interconnected and multiplexed *sub-network* of the societal social network.

Carroll already has multiplexed support networks as a part of his model. Research emerging from Latourian media studies recognizes the central role played by networked ICTs such as social media (and other networking technology before it) for contemporary urban practices in physical communities (de Lange and de Waal, 2013; Hakken et al., 2016; Teli et al., 2015; Varnelis, 2012). Departing from idealistic notions of community as being "too reminiscent of small-scale and local ways of life", advocates from media studies argue for a perspective of 'networked

publics': "groups of people who convene around a shared 'matter of concern' in entities that may be more fleeting, composed of differences rather than being based on sameness, and organized in distributed networks rather than in 'natural' social bonds of locality, class, ethnicity, cultural identity, and so on" (de Lange and de Waal, 2013). In adopting a networked publics approach, Michiel de Lange and Martijn de Waal seek to avoid "the anti-urban ideals of localism and 'small-is-beautiful' implied by community models" (ibid.). They take issue with the emphasis that notions of community often place on small scale interaction, locality, homogeneity, and consensus formation. Instead, de Lange and de Waal seek to create "room for managing differences" through the "networked peer-to-peer" and many-to-many communication that SNSs and other social media provide (ibid.).

This view of place-based communities that are increasingly mediated and augmented by ICTs (including smartphones, mobile data, and social media) is widely supported by research over a number of decades. Already in the 1990s, a notion of virtual communities emerged. Virtual communities were conceived of as being predominantly rooted in 'cyberspace' (online) and largely independent of 'real-world' (offline) social interactions (Fuchs, 2008; Rheingold, 1993). Research from the 2000s onwards began to theorise hybrid spaces and networked communities of place, with offline communities being suffused by digital layers and social interactions that were also taking place online (Gurstein 2000; Cabitza, 2016; de Souza e Silva, 2006; Rainie and Wellman, 2012). For example, Cabitza et al. (2016) talk about 'network communities of place' as communities that are "neither necessarily only 'virtual', nor only 'physical' but rather are 'hybrid': interactions among their members are promoted by a networking technology and occur both in cyberspace and in real settings of gathering and meeting" (Cabitza, 2016).

Notions of both 'virtual' and 'hybrid' communities have traditionally been formulated around binary relationships, with them being either distinct from offline social relations or acting as an additional but separate layer on top of offline social interactions. Only more recently has research started to understand online and offline spheres as fundamentally interwoven with and co-constitutive of local, place-based communities (e.g., Dourish and Bell, 2011; Jurgenson, 2012; Korn, 2013). Jurgenson (2012) argues that the digital or online world can no longer be seen as existing in parallel with and independent from the 'real' or offline world; the digital community activity cannot be separated from physical, cultural, social, political, and historical aspects of local place. Dourish and Bell (2011) wrote "[t]he technologically mediated world does not stand apart from the physical one within which it is embedded; rather, it provides a new set of ways for that physical world to be understood and appropriated" (p. 132).

This interwoven perspective is the one we follow. Based on these conceptualizations of place-based communities, we are interested in how the geographical neighbourhood community is mediated by technology such as social

networking sites through which people engage with various types of activity or at least become aware of it. We want to examine more concretely how social relationships with others are formed and maintained, and just how a shared community identity is developed in interwoven online and offline environments.

2.3 Situating and Materializing Socio-Digital Phenomena

Efforts to both situate and materialize (socio-)digital phenomena in the physical world constitute a growing trend in the study and design of technology. The goal is to make 'stuff' that was formerly geared towards being situated in unlocated, virtual online spheres open to fresh kinds of experience.

In the terms we outlined above, situated technologies are sociotechnical infrastructures that take the local specificity of place-based communities into account. Research focused on situated technologies (Khan et al., 2012) seeks to spatially align people's engagement and interaction with their actual whereabouts in a neighbourhood (Korn, 2013). Spatially situated engagement seeks to emphasise the relevance and meaning of local concerns that envelop people as they move through the world. Vis-à-vis globally-constituted online domains such as SNSs, a focus on situated engagement emphasises the provision of more locally relevant offerings to citizens. The goal is to physically, socially, and culturally situate digital engagement opportunities via such platforms within the environment itself (Korn and Voida, 2015). Situated approaches negate the limited understanding of 'hybrid' as amounting to two parallel spheres of online and offline connection, and seek to reconnect the supposedly virtual and spaceless with the physical and the located.

Building on this work, a further emergent trend is to materialize local community interactions—some of them previously conceived as only taking place in digital spheres— by giving them new presence in the physical world. The assumption is that the material presence of engagement opportunities and/or their outcomes may incite further engagement. Material artefacts have long been of central concern to CSCW, for instance in studies of coordinative practices (Schmidt and Wagner, 2002). Through ubiquitous and tangible computing, they have re-emerged as being of concern for social computing and human-computer interaction as well (e.g., Dourish, 2004). Under the programme of materiality, phenomena previously conceived as primarily digital or virtual are questioned and re-interpreted in the understanding that all such phenomena underlie physical and material characteristics—both in their emergence and how they are eventually perceived and experienced (Blanchette, 2011; Wiberg et al., 2013).

Materialization of online social activity, then, studies the ways in which community members can make and/or experience online activity as physically graspable and perceptible. Interaction design increasingly engages with the materialization of socio-immaterial phenomena. This can happen: productively, for

instance through digital fabrication and maker culture (e.g. Ludwig et al., 2014; Tanenbaum et al., 2013); by visualizing otherwise invisible phenomena in our environment such as radio waves (e.g., Arnall, 2014; Arnall et al., 2013); or by highlighting the actual physical and material character of things like 'the Internet' or 'the Cloud' that were previously coanceptualized as being predominantly digital phenomena (e.g. Dourish, 2015). In the context of our own work, we take materialization as a programme addressed to bringing the socio-digital phenomena taking place on SNSs back into the physical neighbourhoods' people inhabit.

3 Related Work: Social Networking for Place-based Communities

Based on the above foundations, the presented case study builds on two strands of previous research: (1) community engagement mediated by social networking technologies and (2) situating and materializing such online engagements within the physical environment that neighbourhood communities inhabit. However, it also extends upon these core interests by providing empirically grounded insights that have come out of direct observation of a naturally-occurring real-world intervention where the whole focus was upon hybridizing, situating, and ultimately materializing online and offline, virtual and physical community interactions.

With regard to community engagement being mediated by SNS, it should be noted that for some decades now there have been significant efforts to create social computing systems that can bridge between local spaces and online spheres. Early seminal examples from the 1990s like the Santa Monica PEN system or the Blacksburg Electronic Village were already providing novel networked communication facilities to local communities (Carroll and Rosson, 1996; Rogers et al., 1994). Community networks, as per Carroll (2014), are "virtual community infrastructures in which members can also regularly encounter and interact with other members face to face [while, at the same time,] internet-mediated interaction and collaborative activity can augment and enhance what members do by traditional means" (p. 25). Over the years community networks research has sought to address the development, deployment, and evaluation of networking technologies and services for local communities across extended periods of time by providing services such as online discussion forums, local news and events, blogs, email accounts, and, more recently, by drawing upon smartphone and social media-based systems (Carroll, 2012; Carroll et al., 2015; De Cindio and Schuler, 2012; Foth, 2006).

In other related research, social media systems for neighbourhood communities (both mobile and web-based) have been widely studied (Asad, 2015; Crivellaro, 2014; Han et al., 2014). This body of work has centred upon investigating particular issues such as local social movements (Crivellaro, 2014), local political

participation (Asad, 2015; Vlachokyriakos et al., 2014), and crisis management (Kaufhold and Reuter, 2016; Reuter et al., 2013). Outcomes of this research have ranged from generating awareness of local issues (Han, 2014) through enabling debate and discussion (Asad, 2015) to motivating and rallying for action (Crivellaro, 2014), with Facebook and Twitter receiving particular attention for the role they can play in moving from mundane local interaction to the shaping of political action. A strong lesson here is that social media channels can effectively support not only social movements dedicated to larger political shifts but also collectives that deal with very local matters of concern.

In a complementary trend a number of dedicated SNSs for local neighbourhood communities have emerged over recent years. These have included: i-neighbors.org (ceased in July 2015), EveryBlock.com and NextDoor.com in the USA; StreetLife.com in the UK; Peuplade.fr and MA-residence.fr in France; and VicinidiCasa.co and Condomani.it in Italy. An emphasis here is upon the ad hoc creation of digital platforms, though these are often developed by designers and private companies (Masden et al., 2014), with open-source forum and blog platforms being much less visible (though beneighbors.org (available in English-speaking countries) (López and Farzan, 2015) stands as an exception).

When it comes to situating and materializing online activity in a community context a number of strategies have been adopted. These include situated public displays (Ludwig et al., 2017; Schroeter et al., 2012), mobile and location-based technologies (e.g. Bohøj et al., 2011), and ubiquitous computing embedded in the fabric of neighbourhoods (e.g. Vlachokyriakos et al., 2014). Occasionally these seek to also materialize local community activities. For example, Kuznetzov and Paulos (2010) designed small digital sensor blocks that people could physically attach to objects of interest and collect data about the local environment. Korn and Bødker (Korn and Bødker, 2012) explored how printed signs with location-specific QR codes placed at sites of interest could reconnect those sites with the digital discussions about them. Others again have augmented things like posters and public surveys to support the expression of local point of view (see Vlachokyriakos et al., 2014 and Golsteijn et al., 2016). Across all of these endeavours there is an interest in not just augmenting engagement with digital technology but also resituating this engagement in the physical and material spaces inhabited by communities.

Against these various pre-existing bodies of work our own research is making use of a *naturally occurring phenomenon* that remains virtually unstudied (Cabitza et al., 2016 being the sole exception)—i.e., the use of Facebook to set-up a Social Street movement in a particular locale. This enables us to examine in some detail just how situating and materializing hybrid community activity can be accomplished using pre-existing resources that are not tied to any particular research agenda, and the role these can then play in enabling and facilitating thriving local communities.

4 Research Questions and Approach

This research examines how Social Street was constituted as an emergent social practice, drawing out how people living in a common neighbourhood communicated, engaged, and networked with one another in new ways. In relation to this, our research questions were: How did community members see and experience social online activity in the physical space of their neighbourhood? How was online activity made manifest in the community's environment? And how can online activity be physicalized or materialized?

To answer these questions, we will be looking at a particular instantiation of a Social Street in Trento, Italy. Hybrid engagement within this place-based community was an ongoing process that needed to be explored over longer periods of time and with an in-depth internal perspective. As outlined in Section 2.1, this approach was informed by (participatory) infrastructuring (Björgvinsson et al., 2010; Le Dantec and DiSalvo, 2013; DiSalvo et al., 2013): active stakeholders in a concrete field setting shaped and helped us understand hybrid community engagement, building members' capacity to administer interventions in the local neighbourhood.

4.1 Research Framework: Action-oriented Ethnography

Our research method was comprised of observational practices that were conceived as *action-oriented (digital) ethnography*. Digital ethnography combines observations of face-to-face as well as online phenomena (Mörtberg et al., 2010; Murthy, 2011). Action-oriented research methodologies are based on the conviction that social research is not a mirror of reality in social-scientific theory, but a continuous interaction with the research object, a process comprised of actions and guidelines for actions that should be analysed, taking into account the perspective of the researcher as well (Ledoux, 1981; Minardi and Cifiello, 2005; Hearn et al., 2008).

The ability of the ethnographer stands—by using Geertz's words—within "their capacity to convince us that what they say is a result of their having actually penetrated (or, if you prefer, been penetrated by) another form of life, of having, one way or another, truly 'been there'" (Geertz, 1988). The active involvement of one of the authors in the Social Street in Trento started on September 2014 (see Figure 1). Initially she was not pursuing an active research agenda, but rather had decided spontaneously to take part in the initiative—as an interested neighbour and following an invitation from one of the initiators. However, in October 2014 she decided to explore hybrid engagement mechanisms in Social Street as part of her Master's thesis. Even after submitting her thesis a year later, her involvement as a member-researcher continued and was ongoing even after she left the area by continuing to observe the Facebook group online from afar.

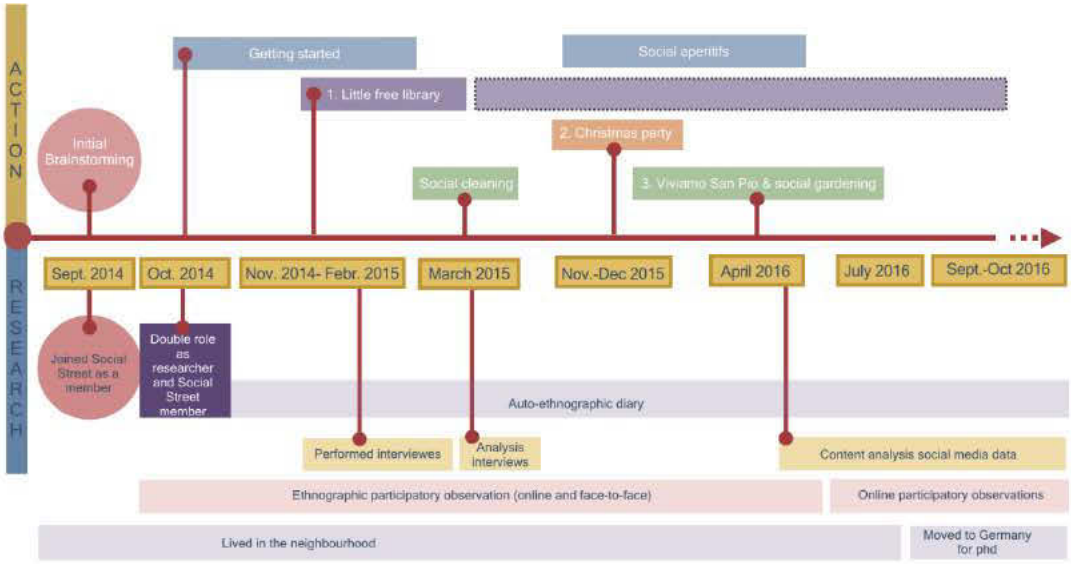

Figure 1. Timeline of the action-oriented digital ethnography. The upper part shows the actions developed by Social Street members. The lower part shows the research activities—in particular, the data collection and the involvement of the researcher in the field.

4.2 Data Collection: Field Diary and Interviews

To reconstruct practices in the field, different data collection methods were used (see Table 2 for an overview).

Data Collection Method	Quantity
Field observations (field diary)	2014 = 85 days 2015 = 175 days 2016 = 145 days
Individual interviews	18 interview
Focus group-style brainstorming sessions (with 8-9 people each)	15 sessions
Social media observations (posts between October 13, 2014 and September 20, 2016)	2014 = 117 posts 2015 = 250 posts 2016 = 285 posts
Members of the Facebook group (as of September 20, 2016)	602 members

Table 2. Overview of data collection methods and materials.

In 'ethnographic action-oriented research' (Hearn et al., 2008), the researcher is immersed in the reality being studied as both an observer and as an actor. One of the driving tools were therefore field notes in the format of an auto-ethnographic diary that enabled the tracing of a longitudinal process. Data collected from the diary was used: (1) to reflect on the group's actions, (2) to structure the interviews, and (3) to conduct the analysis. After three months of initial fieldwork within the group, 18 one-to-one interviews with a total recording time of 19 hours and 24 minutes were conducted. These took place between February and April 2015. The

18 interviews involved seven residents in the neighbourhood who were participating in Social Street; eight long-term residents who were not registered to the Facebook group; and three members from the Public Administration (one of whom was also resident in the neighbourhood). The interview sample was structured to reflect the composition of the local neighbourhood—both by age and gender—and was based on snowball sampling.

ID	Date	Pseudonym	Age and gender	Role
#1	11/02/2015	Mr. Brown	50-68 Male	Public Administration
#2	12/02/2015	Mrs. Rose	50-68 Female	Public Administration
#3	13/02/2015	Mr. Black	50-68 Male	Public Administration
#4	24/02/2015	Marine	30-49 Female	Social Street active member
#5	25/02/2015	Lucas	Older than 68 Male	Long-term resident
#6	26/02/2015	Tristan	30-49 Male	Long-term resident
#7	27/02/2015	Fulvia	15-29 Female	Social Street active member
#8	27/02/2015	Matisse	30-49 Male	Social Street founding member
#9	28/02/2015	Sylvia	15-29 Female	Long-term resident
#10	28/02/2015	Julian	15-29 Male	Social Street member
#11	02/03/2015	Mario	50-68 Male	Social Street active member
#12	04/03/2015	Monet	15-29 Male	Social Street member
#13	05/03/2015	Virginia	30-49 Female	Long-term resident
#14	09/03/2015	Emily	50-68 Female	Social Street active member
#15	10/03/2015	Ben	Older than 68 Female	Long-term resident
#16	10/03/2015	Jane	Older than 68 Female	Long-term resident
#17	12/03/2015	Annette	Older than 68 Female	Long-term resident
#18	16/03/2015	Tanja	30-49 Female	Social Street active member

Table 3. List of interviewees with basic demographic data and their role in Social Street.

In our subsequent analysis, we employed "open" coding (Strauss and Corbin, 1998), i.e., gathering data into approximate categories to reflect the issues raised by respondents based on repeated readings of the data and its organization into "similar" statements. These categories are reflected in the structure of the results section. The analysis was originally conducted in Italian so the quotes selected for this article have been translated into English by the authors.

4.3 Social Media Analysis

Although our primary results stem from the qualitative analysis of our ethnographic material, we also analysed the online activity on Facebook quantitatively. This quantitative social media analysis is mainly for supportive and illustrative purposes, giving a broad overview of the Social Street activities on Facebook. Table 4 provides an overview of the online activity forming the basis for this analysis.

	2014	**2015**	**2016**
Posts	117	308	285
Comments	260	799	987
Active Members	118	250	301

Table 4. Overview of online activity per year, including number of posts, comments, and active members.

To collect this data, we used both Sociograph[2] and Grytics[3], two popular social media analysis tools that provide insights regarding groups, posts, members' statistics, and membership lists. To obtain the data from a Facebook group, one has to be a group administrator. Insights from this quantitative analysis are interleaved with our qualitative insights in the results.

5 Some Background Context

In this section, we will be providing some important background details regarding both the origins of Social Street as a phenomenon and the specific context in which it was established in Trento. This information will then be drawn upon throughout the subsequent findings and analysis.

5.1 Social Street and its Origins

Originating in the city of Bologna in 2013, Social Street aims to support social relations and community activities in urban contexts that derive from initial interaction in a closed Facebook group. In this section, we describe the Social Street concept and how it first arose. The case study itself will be looking at a particular instantiation of Social Street in Trento, Italy.

5.1.1 The Social Street Concept

Simple guidelines for starting a local Social Street can be found on the website www.socialstreet.it and are paraphrased here in translation:

1. The first step is to create a Facebook group, and name it according to a specific format ("Residents in <street or square name – city name> – Social Street"). Setting a "closed" restriction policy is recommended in order to protect the privacy of people joining the group.
2. The second step is to promote the Facebook group in shops and mailboxes along the street, using flyers to announce the creation of the group, its aims and the link. Involving shopkeepers and businesses along the street and asking for their cooperation in exhibiting the flyers may also encourage them to advertise the project.
3. The third step is to wait for the first members to join, which is when the interaction will start online. At this stage, it is important to keep the group and the interest of the members alive, for example by creating photo albums of the area or talking about particular aspects of interest.

[2] See http://sociograph.io/

[3] See https://grytics.com/

4. Last but not least, members should propose some activities or face-to-face meetings that will help to bring the discussion to their neighbours.

The attention generated by this phenomenon in Italian newspapers and TV news, with the founder explaining the Social Street guidelines and 'ideology' on the website, represented the seed which allowed this simple idea to spread and be applied in different contexts. These were mainly urban areas, central or suburban neighbourhoods and it resulted in different outcomes depending on the specific engagement of the people involved.

5.1.2 The Social Street Phenomenon

The first Social Street was founded in September 2013, thanks to the initiative of a resident in Via Fondazza in Bologna. According to news reports about the origin of Social Street, the founder was a journalist and a graduate in Business Administration, who moved to the city of Bologna with his wife and son in 2010. Once relocated, the family rarely had any opportunity to connect with other residents in the area. The journalist originally came from the countryside around Lucca, where he experienced neighbourhood life in a different way: "everyone knew and helped each other." Once in Bologna, he realized that human relationships were different there; there was distrust, suspicion, sometimes even indifference (Ganugi, 2014). Walking along the street, however, he often heard the cries and shouts of other children so, with the intention of finding a playmate for his son, he and his wife decided to open a Facebook group called "Residents in Via Fondazza – Bologna". To promote the group in the neighbourhood, he printed some flyers and distributed them in the streets, pinning them on the rubbish bins and walls, and slipping them into letterboxes. Some shopkeepers even offered to exhibit them in their shop windows. Within two weeks the number of subscriptions to the Facebook group had reached 93 members, with membership continuing to grow month after month (Ganugi, 2014). At the time of writing, in March 2017, this particular group comprised more than 1,300 members.

"Via Fondazza" inspired many others both in Italy and abroad who wanted to undertake the same kind of project. In 2016, more than 380 Social Streets could be counted all around Italy (with more than 20,000 people involved only in the city of Milan). Further instances can be found in countries such as Germany, the U.S., New Zealand, Chile, and Brazil. Each Social Street can assume a unique social composition, pursuing different group purposes depending on the context in which it originated. General to all groups, however, are the social dynamics and the explicit goal of encouraging and increasing community relations in an urban context.

A core part of the Social Street concept is running it on two dimensions: Firstly, *online*, mainly on the wall of the Facebook group, which is used by members, e.g. for sharing information, expressing support, and offering to help other neighbours. Secondly, *physical*: for instance, going down the street, knowing your neighbours,

interacting with them, maybe just using Facebook as the initial medium for social contact. Initiatives organized in the physical dimension are manifold, from street parties and concerts to community walks, sports activities, book readings for children, and film festivals (Ganugi, 2014).

Social Street has a logo (see Figure 4, below) that everyone can use on their own "street" to publicize the initiative. The founder did not register Social Street as an "official brand." Instead, he explained on the website three core principles that a Social Street should follow: *Sociability* because "the primary purpose is precisely the reactivation of good neighbourly practices"; *Gratuity* because "we do not need money to greet our neighbours" and gifts remain the strongest element of aggregation; *Inclusion* because "neighbours should be recognized as such regardless of race, gender, religion, class and age", accepting them simply as *people* with whom we share the same living environment. Apart from these core principles, there is complete freedom of action based on the particularities of each individual Social Street (source: www.socialstreet.it).

5.2 Social Street in Via San Pio X, Trento

In our own case study, we shall be looking at the creation and operation of a Social Street in Trento: "Residents in San Pio X and surroundings – Trento" (Italian original: "Residenti in Via San Pio X e dintorni – Trento"). This encompasses a particular neighbourhood comprising the street of San Pio X itself and the immediately surrounding streets and follows the principles and ideas outlined above. In this section, we describe the neighbourhood itself, the local institutions that were main actors and able to legitimize civic initiatives in public spaces, and the people themselves who constituted their understandings of one another in a variety of ways.

5.2.1 The Urban Area: Physical and Social Transformations in San Pio X

The municipality of Trento is divided into twelve districts (Italian "Circoscrizioni") that are decentralized administrative bodies for civic participation and public consultation. The neighbourhood of San Pio X is located in the San Giuseppe-Santa Chiara district in the south of Trento (see Figure 2). San Pio X is commonly defined by its residents as the "ring road" linking the city centre with suburban areas.

> "Classic intermediary area between the historic centre and the suburb's area, it is the ring that separates the old town and the suburb (…) It is the one that always comes last." *[#3, Mr Black, February 13, 2015]*

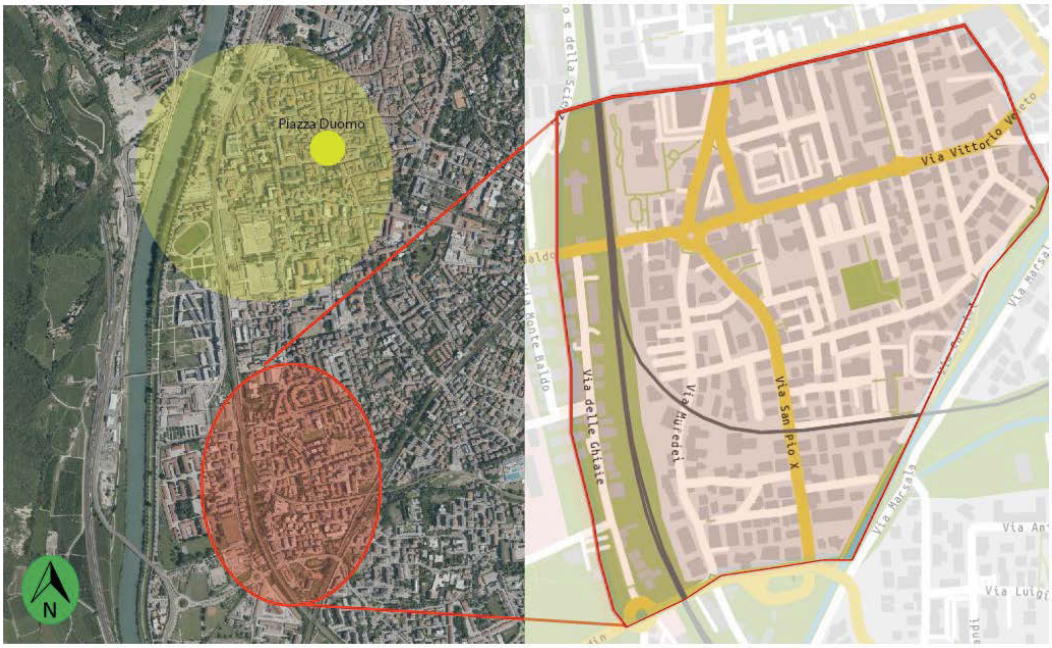

Figure 2. On the left, geographical map of Trento city. In red, the location of San Pio X. On the right, the territorial extension of Social Street San Pio X.

This area was exposed to intensive soil exploitation in the 1960s and 70s so that, with a strong focus on the construction of residential buildings, there were few public spaces for leisure and socialization (see
Figure 3).

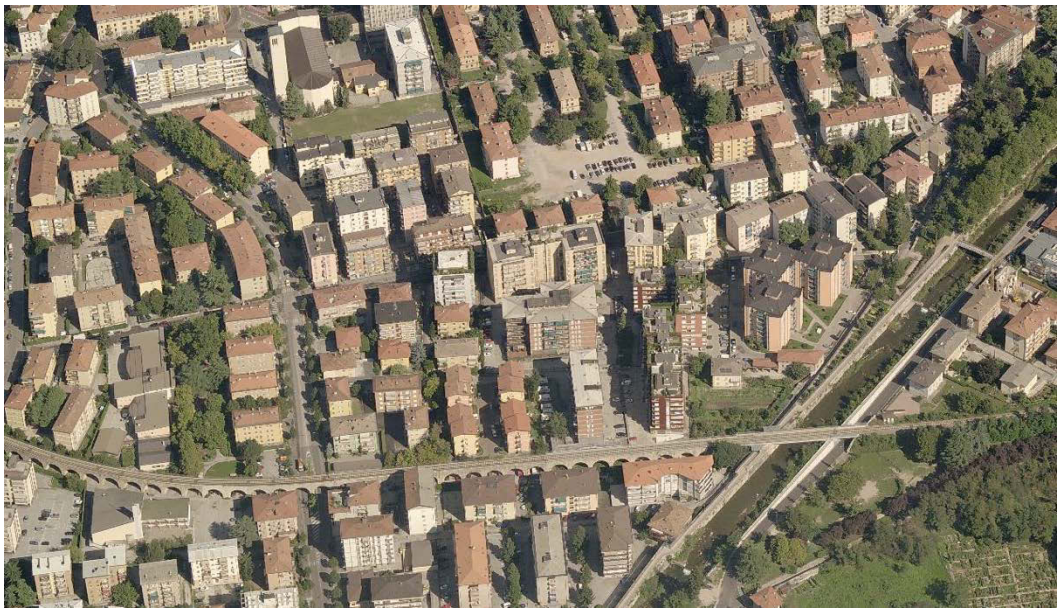

Figure 3. Aerial photo of the San Pio X neighbourhood. Source: http://webapps.comune.trento.it

> "If we look around, we realize there is a lot, really a lot, of people living here. If you look at it (the neighbourhood) from certain angles, see even here in via Matteotti, there are really huge buildings, and you wonder why all these people do not come out maybe not even for a short walk (…) my classmates or people of my age they changed district or even cites" *[#6, Tristan, February 26, 2015]*

The population density of this district is the highest in Trento. Italy's National Statistics Institute listed 17,459 residents in 2011 (15% of the municipal total). The population of San Pio X is around 3,500 people, which is 20% of the total district (Vlach, 2011). It was not only the physical neighbourhood that was exposed to drastic transformation; its population has also changed dramatically over the last 30 years. The presence of two major industries in the area brought in a first influx of migrants from southern Italy. Then the high percentage of social housing encouraged a second influx of international migrants, particularly from Eastern Europe and Northern Africa. Finally, the extensive development of the local university and the prospect of cheap accommodation "at the right distance" from the centre brought in a third wave of new residents: students from all around Italy and abroad.

5.2.2 The Policy: Local Institutions and Legal Tools for Civic Engagement

San Giuseppe-Santa Chiara District has its headquarters in the neighbourhood of San Pio X. Here, then, one finds the local institutions from which citizens demand service delivery, continuous improvement of living conditions, and long-term maintenance of the urban environment. Since 1999, the municipality of Trento has been at the forefront of promoting initiatives that involve citizens in the care of public spaces.

> "Since 1999 there was an initiative that tried to involve citizens in the management of a small green corner of the city to improve the maintenance but these experiences did not have big success (…) I talked to Professor Arena[4] who had worked on the Cooperation Agreements for the Common Goods, and he believed that we anticipated the time (…) with this year 2014 that initiative ("Adopt a flowerbed") was presented again precisely because one of the main points of the administration agenda is the involvement of the citizen." *[#1, Mr Brown, February 11, 2015]*

In fact, a number of legal tools between the municipality and citizenship are in operation. One of them, the *Cooperation Agreement* has the shared care and regeneration of the urban commons as its main goal. Cooperation agreements define the terms of cooperation, scope, and quality of citizens' interventions.

[4]Gregorio Arena is the president of Labsus, an association that has as its purpose the promotion of the subsidiarity principle of art. 118, paragraph 4 of the Italian Constitution. Labsus' research activities produced the *"Cooperation Agreements for the Common Goods*", presented in Bologna in February 2014, that favors the inclusion of citizens in urban governance. Every municipality can decide autonomously to adopt this legal instrument. The municipality of Trento adopted it in March 2015.

Through Cooperation Agreements citizens can make a proposal for collaboration and take care of a common good, or join one of the projects proposed by the city administration. Any proposal written by citizens must include a description of the project idea, the objectives the citizens wish to achieve, the duration of the intervention as a whole, the list of subjects involved and their commitments, and the support and resources required from the public administration.

Collaboration agreements might refer to a piece of land such as a flowerbed that needs to be maintained by gardening, a wall that needs to be renovated or painted, or a public space like a square or public building in which to run activities. Such agreements are part of the tool kit that citizens may use to impact the public space of the local neighbourhood in a physical sense.

In relation to all of this. members of the local administration wanted Social Street to be able to reach a broader range of citizens and to reactivate shared dialogues. In the words of *Mrs. Rose*:

> "just imagine that nowadays there are still many (people) who do not know what the districts are, what activities you organize and advertise. I tell you it's very difficult, because maybe now with this system [referring to Facebook] you manage to involve more people but you organize a meeting on a subject of great interest and you're there with fifteen or twenty people who are not representative of anything." *[#2, Mr Rose, February 12, 2015]*

At the same time, the citizen view was that "Social Street can be a social yeast and it can move the public administration. In May, we will have elections, I hope it will change something because I am quite sceptical about the action of administration" *[#11, Mario, March 11, 2015].* Citizens perceived Social Street as an opportunity to get their voices heard, an instrument that could stimulate the administration to provide more effective responses to the needs of the local community.

5.2.3 The Citizens: Motivations among "Foreigners" and Local Residents

Marine, one of the more active members in Social Street, told us: "Social Street is definitely a very good way to get to know people, for living in my neighbourhood and not being alone because in the end, here at home I am alone. It is very important for me to have people I know close by to me" *[#4, Marine, February 24, 2015].* However, one day she chatted to an old resident of the district who strongly stressed to her that, in the Facebook group, there were not many people who grew up in San Pio X:

> "It is as if the "real residents" are spectators of what is being done by "outsiders", enthusiastic people who want to do stuff, this is, I don't know! Hmmm maybe over time it is true, it is difficult that an innovation came out of the blue, should be always someone who brings a new element." *[#4, Marine, February 24, 2015]*

Also, Tristan, an original resident of the neighbourhood, pointed out that Social Street was a "movement of those who come from the outside" *[#6, Tristan, February 26, 2015]*. He perceived Social Street not as an internal mechanism of the neighbourhood and its original inhabitants, but rather as something that was primarily led by those who had come there in recent years, mostly college students. These were seen to be people who were not surrounded by spheres of strong relationships in the area and who were not therefore likely to feel a need to belong, to know, to participate. Tristan described the Social Street movement as a "positive push" that might promote more intimate links between the inhabitants. However, for himself he "does not feel involved or even engageable" in the near future. His needs for socialization were already satisfied in other ways. It seemed that some of the original inhabitants "feel the need of the result", a sense of a tight-knit neighbourhood community, even if they did not see advantages in being directly involved in the process because they already had a network of relationships around them. At the same time, the new inhabitants were driven by the desire to give meaning to the space they inhabited because they lacked a structure of stable and lasting social ties in the area.

Tanja stressed how Social Street had become for her "a tool for concrete activities, to develop awareness, awareness on who lives around you, to leave a mark, a sign in the place where you live, not only for yourself but for the neighbourhood as a whole." …" *[#17, Tanja, March 16, 2015]*. Julian pointed out that "Social Street is important from the perspective of trust between everyone in the neighbourhood. Knowing your neighbours in the right way, not only that they share the same space with you, but you are involved in activities together, by doing something together you get to know them better, and it also improves in the future because you can also go on to trade together or help each other [...] yes, it is important, but then there is also the development of the neighbourhood itself, the cleanliness, the neighbourhood projects, accommodating everyone not only for one person or another." *[#9, Julian, February 28, 2015]*.

As we saw above, Social Street is promoted to be a possible means of aggregation for inhabitants of the same area, by promoting understanding and mutual trust, from an individual responsibility to collective actions and especially through "doing" that might have consequences/impact within the urban space. This view of Social Street and the pre-existing character of the neighbourhood and the potential motivations and tensions within it form the backdrop to the following section where we explore in more detail some of the findings that came out of the study.

6 Findings: Initiating Hybrid Engagement

We now turn to analysing the activities, interventions, and interactions that made up Social Street San Pio X. In our analysis, we are particularly interested in the ways in which online and face-to-face activities were interwoven and influenced each other. From their interweaving, we derive an understanding of *hybrid community engagement* in which material interventions in a neighbourhood are important elements to foster and sustain both online and in face-to-face interactions among neighbourhood residents.

First of all, we explore how the initiators applied the Social Street concept outlined above in the case of their own neighbourhood. After this we describe the interventions that were undertaken by Social Street members and the hybrid community engagement that resulted. Finally, we look at how the group of initiators appropriated Facebook as an infrastructure for Social Street.

6.1 Applying the Social Street Concept to a New Context

The Social Street "Residents in San Pio X and surroundings – Trento" was started in September 2014 by three friends, residents but not natives of the area. They comprised Matisse, 31 years old, who had been resident in the neighbourhood for 15 years; Monet, 28 years old, who had been there for three years; and Elena (one of the authors), 27 years old, who had only been in San Pio X for half a year at the time of initiation.

To activate the initiative, they followed the guidelines explained on the Social Street website, carrying out the following steps:

Creating the Facebook Group: The group was created on October 13, 2014. As required by the format, it was called "Residents in San Pio X and surroundings". "And surroundings" was added to the group name in order not to limit the initiative to the single street of San Pio X, but to extend the territorial delimitation to the neighbourhood as a whole.

Flyer designing and leafleting: Flyer content was decided in the course of several rounds of brainstorming in September 2014 (see Figure 4). The initiators wrote an introduction about themselves and the general aim of the initiative: "(…) The goal is to develop new ideas, think of new spaces and/or events and regenerate social culture in the district—a culture that arises from the bottom open for everything and to all" (translation by the authors from the Italian original). Via the flyer, neighbours were invited to gather more information from the created Facebook group. The initiators printed around 300 flyers and distributed them in public spaces like bus stops, park benches, bars and shops, and also posted them in residents' mailboxes.

Figure 4. Flyer of the group "Residenti in via San Pio X e dintorni – Trento".

Moderating the Facebook Wall: One month after the start, the online group had increased from three members to 72. The Social Street initiators also became the administrators of the Facebook group. They moderated the group by welcoming people who joined, asking new members to introduce themselves, and answering questions. In the first month of activity, the online group included 25 individuals who published content, 31 who commented on content, and 63 who reacted to content in various ways (e.g., liking). This activity amounted to a total of 59 posts, 112 comments, and 272 reactions.

Proposing face-to-face meetings in the neighbourhood: After two weeks of online interactions, the initiators proposed a number of social events ("aperitifs") in the neighbourhood bars for meeting members face-to-face. The first event was held on October 24, 2014 and many others were proposed throughout the two years of observation.

At the beginning, only the group of initiators assumed the role of administrators of the Facebook group. However, the group of administrators soon grew to ten, bringing in other people who had met at the various social events. With the exception of Mario, who was a 65-year-old retiree, the new administrators were mostly young students or unemployed workers aged between 27 and 35. The main role of the administrators was to moderate the content on the group wall and to participate in face-to-face events.

6.2 Hybrid Interventions: From Facebook to the Neighbourhood

At the core of our case study we present three interventions that emerged out of Social Street San Pio X that all arose naturally: a free little library, a Christmas

Party, and a community garden. These interventions were initiated, led, and carried out by Social Street members. They can be characterized as novel forms of hybrid community engagement because members' online interactions were intricately related to and intertwined with outcomes in the physical world and vice versa. They represent the outcomes of infrastructuring work by local members that was able to merge actors and resources in a co-creation process.

Figure 5 shows a timeline of the Social Street activities and interventions reported in this section. In total, the face-to-face activities that developed over two years involved 120 different participants. Our social media analysis shows that the online activities, in turn, involved 152 publishers and up to 426 active online members (including commenters and likers).

The first phenomena organized in a hybrid fashion were neighbourhood aperitifs, i.e., social events in various local bars. For each event, a flyer was designed by Elena. At each event the administrators met an average of ten members of the Facebook group (a total of 31 different people). They exchanged opinions about the experience and collected participants' interests and ideas. These early meetings resulted in there being eight 'active' members, most of them young adults, who were excited about Social Street's future possibilities. The administrators were also able to meet bar managers in the neighbourhood and consolidate relationships with them. One particular bar became Social Street's headquarters.

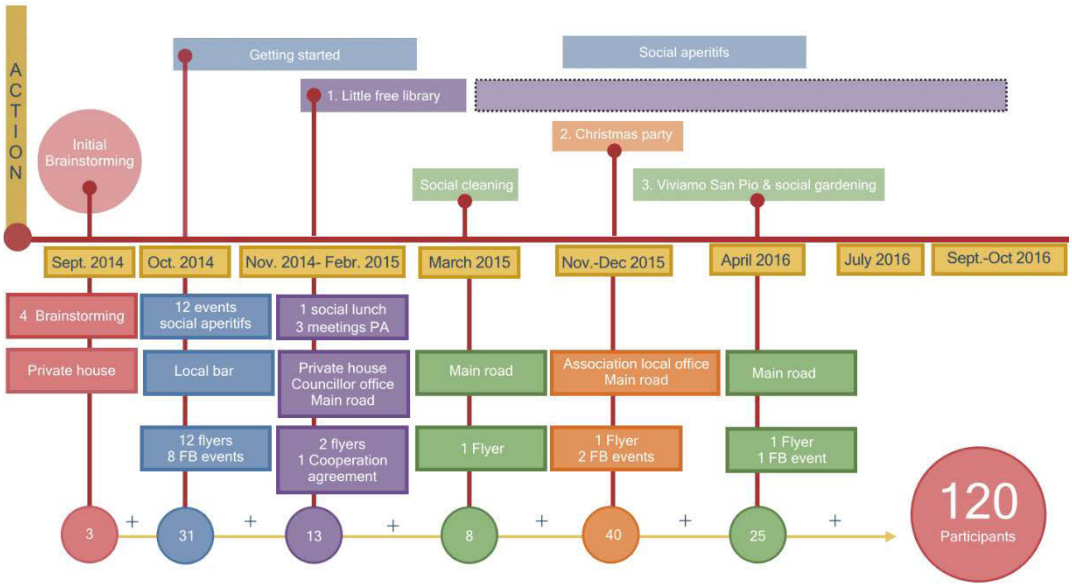

Figure 5. Social Street activity timeline. The upper part shows, again, the interventions developed by Social Street members. The lower part provides details for each activity/intervention—focusing on face-to-face activities—which includes information about: meetings organized, meeting locations, which artefacts were involved, and how many different participants attended.

These early events constituted the first face-to-face connections that in turn helped the Facebook group to grow and its members to move closer together.

6.2.1 Intervention 1: The "Free Little Library"

The first active initiative undertaken by Social Street San Pio X was the installation of a "free little library" on the main street San Pio X (Figure 7). An older lady suggested this idea on November 4, 2014 on the Facebook wall. Such a library had been her dream for a long time (see Figure 6, left). Members showed interest in this proposal by 'liking' and commenting below the post (15 likes and 20 comments). Within the comments, it was proposed that this idea should be achieved by recycling an old kitchen cabinet that one of the members had in storage (Figure 6, right).

Figure 6. (left): Free little library proposal: "Can anyone help me to accomplish this old dream?" (right): Comments for building the structure.

Three dedicated social aperitifs were organized to discuss the "free little library" and to plan the steps needed to carry it further. Every face-to-face meeting was reported back to the Facebook group. Through the Facebook wall, members also organized a dedicated 'social lunch', held at the home of one of the group members, in order to carry out some tasks on the project together. Thirteen members of the online group aged between 26 and 37 years attended this event. The participants got to know each other and engaged in discussions. After lunch, they split into small groups, some working on constructing the structure while others did the decoration and others again prepared a poster to fix to the cabinet door. Thus, on the basis of interwoven online and face-to-face interactions a physical artefact was created that could be placed on San Pio X to support the community as a whole. It was intended to be the first tangible sign of the existence of the online group in the physical world, the first step towards identifying the group on the main street itself. In Sylvia's words: "the environment around me became more familiar, because if I do something like bookcrossing [free little library] or meeting up to do something

together, organize a little party, it makes everything a little more... you feel you belong more to a place and I like that" *[#9, Sylvia, February 11, 2015]*. The advancement of the library's structure was, again, reported back to the Facebook group.

A week after the social lunch, one of the group administrators launched an online survey to decide where to place the free little library and two possible options were identified: private or public space. Choosing a private space might have resulted in fewer bureaucratic delays than a public space. However, one of the online group members pointed out the opportunity to participate in the "Adopt a flower bed" scheme. This legal instrument, sponsored by the council, meant the furniture might be installed "for free" on public land, in exchange for caring for the surrounding area.

Figure 7. Four Social Street San Pio X administrators with the original founder of Social Street who came from Bologna for a visit. In the background the "free little library".

While Social Street members were still discussing the location of the library, a member of the council, Mr. Black from the Department of Roads, Parks, Gardens and Heritage contacted one of the administrators via a private message on Facebook. As a resident of the area he had joined the Facebook group during November 2014. In the message to the administrator, the councillor communicated his willingness to support the initiative. Through this contact, group administrators were introduced to Mr. Brown, the technical staff member responsible for interventions of urban interest. Mr. Brown finalized the action by signing the agreement for "Adopt a Flowerbed". He also provided physical materials to utilize in the construction of the library (Figure 7), namely a support for the library made out of concrete and recycled from an old trash bin, and a shed recycled from an old children's play house.

Thanks to the active support and willingness from the local government, just three months after the group had conceived the proposal the free little library was installed on San Pio X on February 4, 2015. It was installed along the main road, between a bench and a fountain, in a space identified by Elena who posted pictures online of three others different places. Members voted their favourite by liking on the pictures. They further committed themselves to taking care of the surrounding flowerbeds ad required by the Cooperation Agreement. The dialogue with local institutions created a direct relationship with the public administration and consolidated relations of trust, which were important for accomplishing future activities.

Figure 8. Social Street members in front of the free little library.

After its installation, teachers from an elementary school brought children to visit the library on several occasions, explaining the importance of reading books and taking care of common goods. Being members of the Facebook group the teachers were able to explain to their students the process of the installation and the meaning of Social Street. The little library became an important element of the neighbourhood and a subject of discussion amongst residents, connecting people of different ages.

Two years later, the free little library also became a vehicle for community memorialisation. Mario (an interviewee in this research and an administrator of Social Street), who sadly passed away. Around twenty residents and friends

decided to attach a memorial to the library, thereby celebrating his memory within the neighbourhood (Figure 8). A related online post stated: "Yesterday we met to celebrate the life of Mario. Our little house is now also a place in which love and memories cross".

Sparked by activities in the Facebook group and going back-and-forth between Facebook and face-to-face interactions, the free little library became a physical meeting place for neighbours, an educational example for children, and a symbolic place for residents and friends.

6.2.2 Intervention 2: Christmas Party

On November 13, 2015 one of the members proposed on the Facebook wall decorating the neighbourhood with Christmas lights:

> "Good morning, with the approaching Christmas holidays I was thinking for several years that it would be nice to have some Christmas lighting in San Pio X too, how about trying to achieve this thing?"

The post received 37 comments by 8 different members. One of them was a shop owner along the main road who replied: "As a merchant of San Pio X I can say that we have been interested in this issue for years ... from the distant 1994. But, unlike the old town, in San Pio X Christmas expenses would be borne by us ALL (traders) A really EXAGGERATED spending!!! And you cannot even imagine how we have fought against this injustice. Back then, the mayor told us that the historical centre is "the parlour of the city". But trying again, it costs nothing. Or maybe we can make a big whip-round for buying lights!"

One of the group administrators proposed a meeting to discuss the idea face-to-face. One local association offered its headquarters for this meeting, since some members pointed out that bars were too loud for organizing initiatives together.

In the first meeting, two administrators of the group attended and they expected to meet the person who proposed the idea. However, she did not join the meeting. However, others did: two mothers with their daughters who did not participate in the online discussion, three young members of another local association supporting people in need, and the shop owner. Two more meetings followed the first one. Participants realized that it was too late for them to be able to install Christmas lights in the neighbourhood and ultimately too expensive. So, they decided to organize a Street Christmas Party instead (Figure 9).

After the meeting, the idea of the party was discussed with the Facebook group whilst reporting the meeting's summary. The interweaving of online and offline allowed them to modify some details of the party, such as the time scheduled, so that it could meet the needs of mothers and kids.

Figure 9. Neighbours at the Christmas Party.

Many members put effort into realizing the party: The young members of the association organized dances and games for kids; the shop owner offered her private toilet and electricity to connect speakers for the music; the mothers were in charge of involving other parents from the elementary school; the Social Street administrators created a flyer and coordinated all the actors involved.

Almost 40 residents joined the afternoon event on December 18, 2015. This was one of the most successful initiatives of Social Street San Pio X in terms of the number of participants. It also exhibited a higher diversity in active participants compared to other events: families, a local association, and shop owners. This story shows how unexpected the interactions among members can be when leaving open the ways people might participate by keeping members informed back and forth between Facebook and face-to-face meetings.

6.2.3 Intervention 3: Community Clean-up and ViviAMO SanPIO X

Building on an earlier event, Tanja, a local resident who was active in the Facebook group as well as at face-to-face events, proposed and organized a full weekend of community clean-up and social gardening in April 2016. It was suggested they call the whole event #ViviAMO San PioX (Italian wordplay: live and love San Pio X). The community clean-up on Saturday morning involved 15 participants. A "social gardening" activity on Sunday afternoon involved 20 neighbourhood kids and six members of the Facebook group (Figure 10).

Figure 10. Social Gardening under the train rail bridge along San Pio X in April 2016.

Tanja proposed identifying one or two flowerbeds within the neighbourhood that needed intervention because they had been abandoned and/or were not well managed. She posted some pictures of four flowerbeds and asked the group to vote for their favourite. Twenty people voted by "liking" the picture and/or commenting on the post. The winning flowerbed in the contest was located under the railway arches that cross the neighbourhood, which had been subject to recent renovation but which still lacked greenery and flowers. Tanja also called the Public Administration who allowed them to run the activity using one again the scheme "Adopt a flowerbed". Neighbours decorated the flowerbed with 30 hydrangeas provided by a social cooperative expert in urban gardening who decided to support the group.

Because the flowerbed did not have a water connection, Social Street administrators left plastic bottles, a notebook, and a pen in a box. They designed a flyer explaining the initiative and asked people to contribute by watering the plants, noting the date, and signing their name in the notebook (Figure 11).

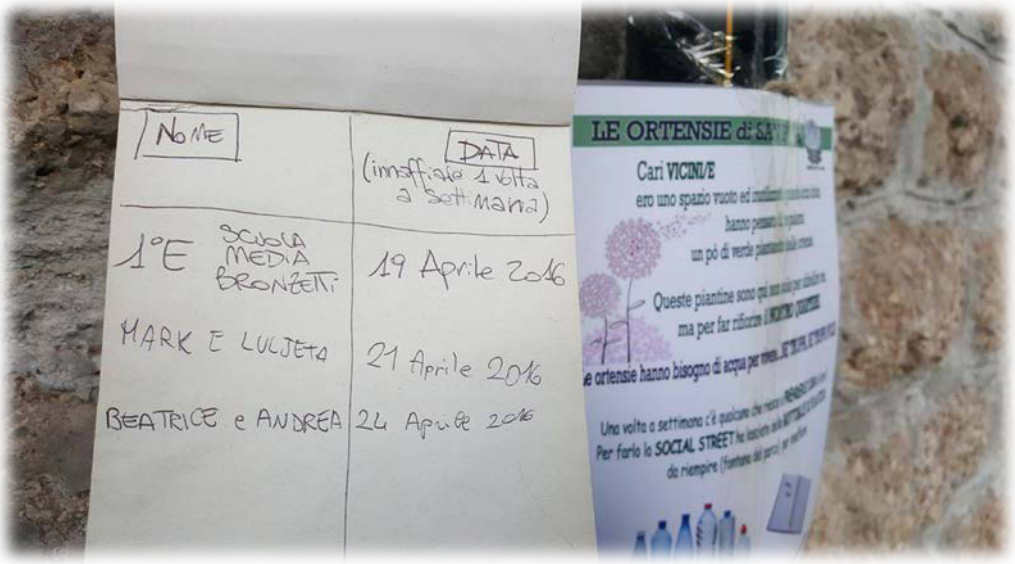

Figure 11. Flyer explaining the initiative, and notebook with the status of plant watering.

Figure 12. Post related to the social gardening. Post translation: "Coming back home, now, I saw two kids watering the plants of our flowerbed under the arcade. It was awesome."

After a month, the public administration decided to plant hydrangeas in two more flowerbeds under the arches and to provide a water supply for all three of them. However, even though there was now a water supply, some of the residents (especially kids) kept watering the plants with bottles and signing their names in the notebook (Figure 12), which now contains more than 40 contributions.

To sum up, we have described three hybrid interventions that resulted directly from participants' engagement in Social Street. Thus, the Facebook Group activated with Social Street can be understood as a socio-technical resource that supported a new form of civic engagement. The Social Street approach, interweaving online and offline dimensions, was able to activate actors and resources around a common concern that was largely focused upon taking care of an urban space. In each of these interventions we have seen how a specific person promoting it, who was then supported by a group of people and with the discussion taking place both online and offline. This in turn provided an opportunity for engaging new actors and new ideas in the co-creation of hybrid artefacts.

Participation and the awareness of neighbours was facilitated initially by flyers being distributed in the physical world. Ultimately, however, it was the activities themselves that served as catalyst to attract new residents into the online group. It should also be noted that the participation involved not only residents but also the Public Administration who actively supported the group in several concrete ways.

6.3 Appropriating Facebook as Infrastructure

Over time the Facebook Group has been used as an everyday tool to engage the neighbours. For Facebook users, the platform has now sunk into their everyday life, supporting the upkeep of social relations. It has become infrastructure. Social Street members and, in particular, the administrators have sought to appropriate Facebook for neighbourly interaction and neighbourhood interventions by applying the most common Facebook features. In this section, we therefore describe some of these features. We particularly highlight three things: (1) the "filter", (2) guidelines for the group's main Facebook wall, and (3) "event discussion pages". Along the way, we will also look at some of the underlying consequences and challenges they encountered.

6.3.1 Filtering New Subscribers to the Facebook Group

Social Street was created with the purpose of encouraging socialization among neighbours in the same area. Being resident, domiciled or having some other stake in the area (e.g. commercial, association etc.) is therefore a requirement for being accepted in the Facebook group. The enrolment of a resident in the Facebook group starts with them sending a request for admission.

In the case of San Pio X, after six months of activity over which the number of members constantly increased, administrators decided to implement a "filter message" to send to all potential new members:

> "Before approving your request, it would be interesting to know your reasons for applying. For us it is important that you answer these questions: - do you live in the area? - Or did you ask to join the group out of curiosity or for other reasons? (Please specify)—do you live in other areas or other cities? This group was created to encourage active participation of local residents. By active participation we mean participation both online and in person: meetings, activities or simple exchanges of opinion and so on and so forth. YOU are also Social Street!" *["filter message" for admission to the Facebook group, translated from Italian]*

As can be seen from the above message, the filter's purpose is to monitor that a person has indeed some stake in the area, that the person is interested in the initiative and to encourage more active participation. Since April 2016, Social Street San Pio X has had a single "gatekeeper": Glory. She sends the filter message and answers from people who are not residents in the area but who seem to have a good reason for joining are copied into an internal administration chat. These

individual requests are then discussed collaboratively. A major outcome of the filter message was that newly enrolled members tended to present themselves to the group on the main wall and to thank the group for having been accepted. This increased the total activity of the main wall and the interactions among members (Figure 13).

Figure 13. Example of member's introduction. Post translation: "Thank you for welcoming me in this group! I believe that initiatives such as these ones are the future ... I hope they will expand like wildfire throughout the city because we need to recover some closeness, complicity and solidarity! Thanks again..."

The application of the filter message was not, however, free from challenges. Due to restrictive policies on how Facebook displays private messages from people that are not already friends, not everyone actually sees the message sent from Glory. For example, if you send a private message to someone who is in the Social Street group but not one of your Facebook friends, they will receive your message in a folder called "others" without further notification. Consequently, they are likely not to see the message at all, reducing the chances of one-to-one contact and more immediate engagement. According to Glory, as many as 50% of potential members do not see and therefore do not reply to the message. Yet among those who do read the message, maybe as many as 80% are residents in the area. What this makes clear is that, by not being explicitly deigned to support neighbourhood engagement, Facebook may serve to actively inhibit the creation of more personal and direct contact between neighbours, hindering the third level of the community goal of building identity.

6.3.2 The Main Wall and its Guidelines

Once members have been accepted in the Facebook group, they can post, like, and comment on the group wall, interacting with other members at any time and from anywhere. Over the course of two years of study, the group counted 152 publishers, 168 commenters, and 353 reactors for a total of 556 posts (302 status updates, 75 links, 141 photos, 33 'events', 8 videos), 2046 comments, and 4030 reactions (see Figure 14). Within this two year period, 426 different *active* members were identifiable and the group counted 602 *subscribed* members at the end of the observation period. Based on these numbers, Grytics also revealed the rate of engagement amongst members: 92% of the 710 posts were either reacted to or commented on (85% reactions; 56% comments).

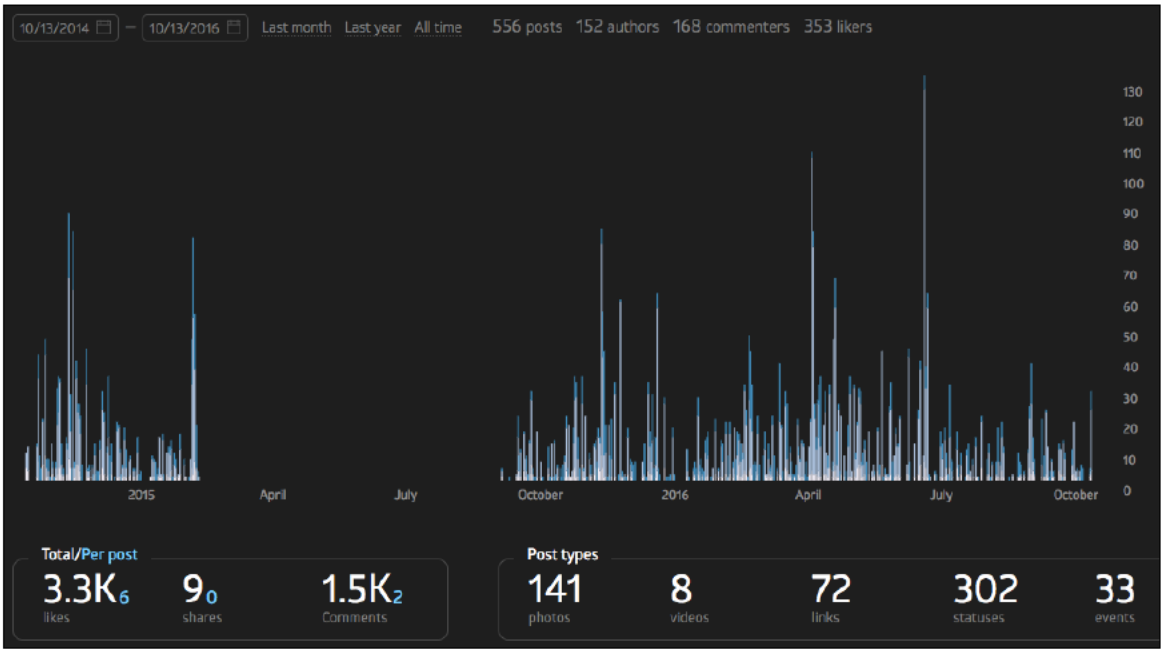

Figure 14. Posts created by month between October 2014 and October 2016. (The gap around April and July 2015 presents a period of very low activity during the summer holiday period without any interventions planned.) Source: Sociograph.

Figure 14 shows how the online activity in the group coincided with the interventions detailed in section 7.2: November 2014 and February 2015 (the free little library); December 2015 (the Christmas party); and April 2016 (#viviAMO San Pio X). June 2016 also registered a peak of activity, which related to another intervention that we have not had space to discuss in this paper.

The description of the group and the page's info section are used to display the overall goals of the community and to provide conventions on how to behave or utilize the existing infrastructure. In January 2015, the administrators introduced a "fixed post" which appears at the top of all other posts. The fixed post was used to introduce the purpose of the group and outline the group's conventions and usage guidelines. These "usage guidelines" ran as follows:

> "This main wall should not be used for advertisements. Social Street does not put forward any political, religious, or ideological vision of any kind. It brings together people with the sole criterion of proximity between residents of the area. Attention: You can promote free events/activities in the surrounding area or events in other areas for groups with common interests. So please do not fill the wall with off-topic posts." *[fixed post with usage guidelines, translated from Italian]*

After the introduction of the usage guidelines, the group no longer received any advertisements or other off-topic posts. Based on clustering of the posts within the group they can be divided into four main categories: informational, instrumental, expressive, and planning.

- "Informational content" refers to posts in which members inform, notify, or even warn other residents about specific issues in the neighbourhood, e.g., stolen bikes, vandalism, etc.;
- "Instrumental content" (Figure 15, left) are posts in which members ask for and/or offer something that can be exchanged physically, e.g., a vacuum cleaner, a hammer, etc.;
- "Expressive content" refers to posts in which members ask for and/or offer moral support, i.e., listening, humour, complicity, trust - emotional feelings that cannot be exchanged materially and mostly lead to discussion;
- "Planning content" (Figure 15, right) are posts in which members discuss the resources, time, and energy invested in the design and organization of initiatives aimed at improving the local area.

Figure 15. (left): Instrumental content example: "Does anyone have a hammer to lend me for a couple of hours?" (right): Planning content example: An update on developments and negotiations for an intervention.

On average, informational content received less likes from members than other types of content, but led to major discussions among participants (i.e., a discussion about drinking water from the tap received 18 comments). Planning content (about

60% of all posts) received the highest percentage of likes. Here discussions involved mostly only administrators and active members who were also engaging face-to-face. These members committed themselves to keeping the Facebook group up to date by summarizing and reporting back any developments made during face-to-face meetings (see Figure 15, right). The Facebook group was therefore not only used as an informational channel but also as an organizing tool. Face-to-face meetings were organized and prepared through the Facebook group. At the same time developments coming out of those meetings were not kept offline. Maintaining Social Street principles, developments were always reported back to the silent mass of members on Facebook, enabling ongoing scope for participation amongst currently less active members in future stages of an intervention. We see this cycle of proposing online, meeting face-to-face, and reporting back as an early indicator of novel practices of hybrid community engagement.

6.3.3 Event Pages for Discussions

A major limitation of Facebook for the Social Street group has been that discussions around individual topics and interventions cannot be clustered and grouped together. Such discussions frequently clogged the group's main wall and became convoluted with other activities taking place on the wall. At the time, Facebook did not provide any forum-like discussion feature. Therefore, administrators proposed the creation of 'discussion events' by repurposing Facebook event pages for discussing a particular topic. So 'discussion event' pages did not necessarily correspond to actual events, but served only to collect a discussion around a specific theme in one place.

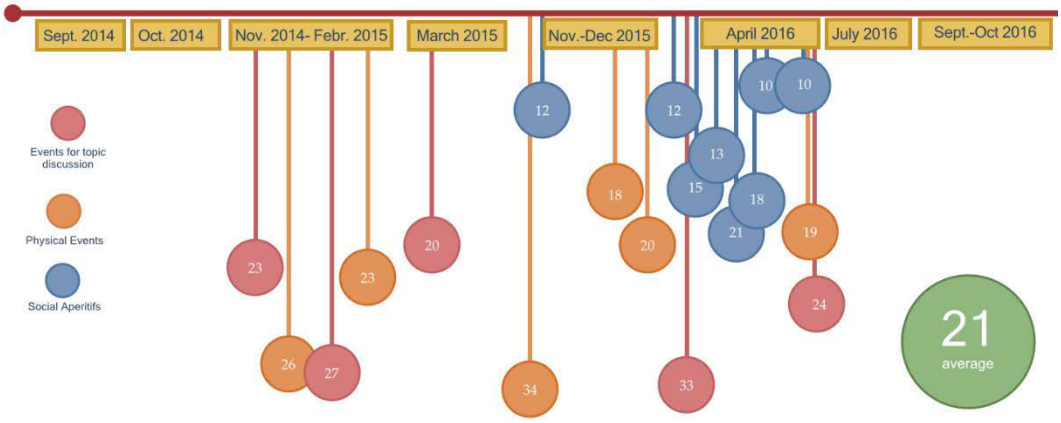

Figure 16. Overview of different types of events created in the Social Street group (discussion events, face-to-face meeting, social aperitifs). The numbers indicate the number of participants that clicked "participate" or "maybe" and consequently received updates from the event page.

When a new 'discussion event' was created, Facebook automatically invited all members of the group to take part. Anyone who wanted to join the discussion could then click on "participate".

Over two years of interventions, five event pages for topic discussion were created—along with several event pages for actual events (8 social aperitifs and 6 larger face-to-face meetings; see Figure 16). Appropriating events functionality in this way provided an efficient means for administrators to manage the content. However, this too presented some usability challenges. Some members did not post on the event pages but continued to just post on the main wall. Administrators therefore had to post the content twice to keep everyone informed. Moreover, the automatic invitation only worked for up to 250 group members. For larger Facebook groups, administrators had to invite members manually. Administrators soon realized that 'discussion event pages' reduced the chance of reaching those members who had a lower rate of engagement, in particular those who do not visit the group often. The main wall seems to be the most efficient place to post content if it's going to reach a broader audience. Discussion events work better for more active participants.

To sum up, by opening the Facebook group, the initiators appropriated an infrastructure that served as sociotechnical substrate enabling different levels of engagement, awareness, and action among neighbours. The work of infrastructuring was entangled in technical and social dimensions and came to directly shape the neighbourhood's appropriation process.

7 Discussion

In this section, we discuss our findings. We argue that in order for a collective to accomplish material impact in the neighbourhood, an interweaving between online and offline dimensions is necessary. This constant exchange sustains hybrid engagement, which is characterized by a continuous enrichment of contributions and awareness among participants. We also suggest a more critical lens for interpreting hybrid engagements in urban place-based communities, avoiding potentially misleading interpretations and evaluating them prematurely as failures.

7.1 Materializing Outcomes through Hybrid Engagement

Arguably, the central aim of the original Social Street concept was to get to know neighbours face-to-face. Hence it placed emphasis on initiating face-to-face meetings soon after having connected on Facebook. For Social Street, then, Facebook is only a vehicle, a stepping stone for face-to-face encounters; connecting with neighbours online is not an end in itself. Social Street San Pio X proceeded along these lines. The group's intention was not merely to have a place for discussing neighbourhood matters online. The intention was *to meet up and do things face-to-face* in order to create community togetherness and develop interventions with (material) impact in the area.

The approach toward hybrid interventions that emerges from our study builds on, but also departs from previous research that has been engaged in materializing online activity in the domain of civic engagement (see section 3). In order to bridge or connect online and offline spheres, previous research designed and introduced novel material artefacts (e.g., Korn and Bødker, 2012; Kuznetsov and Paulos, 2010; Vlachokyriakos et al., 2014). The aim with these artefacts was to connect online discussions with physical places and people on the street, to enable participation in online discussions by people on the street, and/or to create awareness of online discussions of local relevance in the physical space.

However, instead of introducing an artefact that does the bridging in service of the online sphere, in the case of Social Street San Pio X it is the interventions and activities themselves that progress in an intertwined online—offline process. This *hybrid online—offline process of community engagement* enabled the production of material outcomes in the neighbourhood such as the free little library, the Christmas party, and the flowerbeds and gardens.

We characterize this hybrid process of community engagement, based on the three interventions, as *a constant back and forth between online and face-to-face interactions* (see Figure 17): Ideas are proposed online, activities advertised offline, discussions held online, face-to-face meetings instigated online and carried out offline, developments reported back online, and interventions eventually carried out and implemented offline and, in turn, documented and celebrated online—all in turn in leading to greater awareness and engagement both online and off. The tangible and material interventions introduced in the physical spaces of the neighbourhood themselves incited further engagement in future online and offline action and interaction. These hybrid interventions enacted through a constant back and forth are similar to but also go further than other examples one can find of activists using social media to rally for their causes (Asad, 2015; Jungherr and Jurgens, 2013). While activists similarly invoke social media in the preparation, during, and after protest actions, their aims are divided between gaining attention in the online and the offline (or geographically located) spheres.

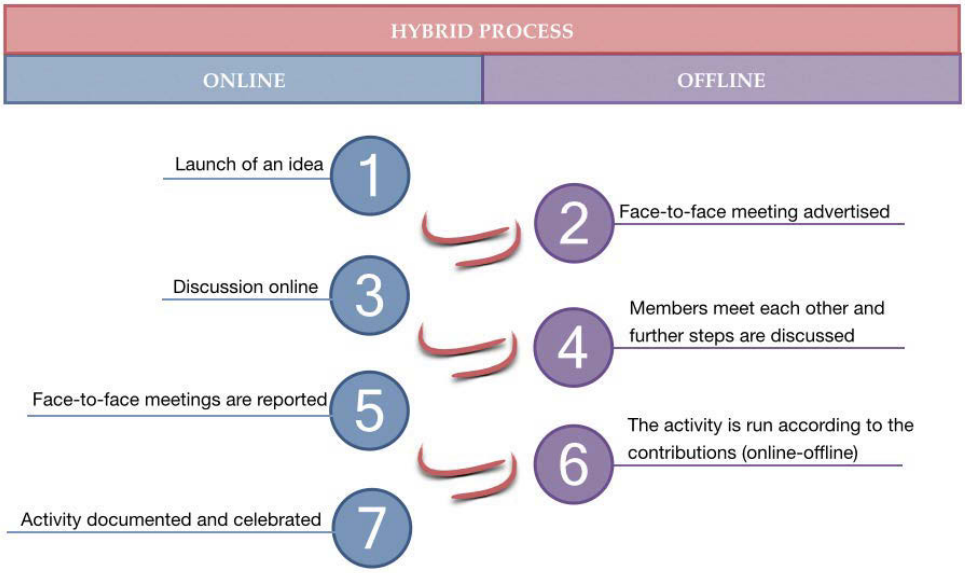

Figure 17. Hybrid community engagement is enacted through a constant back and forth between online and face-to-face interactions.

This constant process of going back and forth helped to create visibility in the physical spaces of the neighbourhood (thereby addressing 'regular' neighbours) as well as with the members of the Facebook group (through retention and activation). Online, the main wall represents the place where members can stay informed about the activities of Social Street. The continuous interweaving between online and offline spheres allowed those who could not be present at the meetings to still contribute to the process. In this way, the online and offline are complementary and ensure a continuous enrichment of contribution. Offline, the Facebook group became visible not only through its flyers but also its physical interventions. The visibility and awareness of group activities resulted in increases in membership and engagement for future online and offline activities.

7.2 The "Ideal of Community"

Success or failure? This is the question that sooner or later plagues any social movement. Did Social Street have a measurable impact in the neighbourhood? Has it attracted participation from a range of residents and other stakeholders? Has it been worthwhile for its administrators? Did it satisfy their desires for togetherness, connectedness, and a shared identity? And, on top of all this, is Social Street a sustainable enterprise? Questions such as these need not only be reflected against the actors' original motivations and their express aims. The answers also very much

depend on what one takes Social Street to be—i.e., which type of perspective one invokes to assess its impact.

While the three interventions arguably had some kind of impact in the neighbourhood, when invoking Carroll's (2012) model of community some answers to the above questions might appear negative. Participation in and awareness of collective activities was certainly visible; and multi-layered social support networks were certainly activated und utilized. Social Street successfully engaged various types of stakeholder in various roles and in various degrees of participation and engagement (see Figure 18).

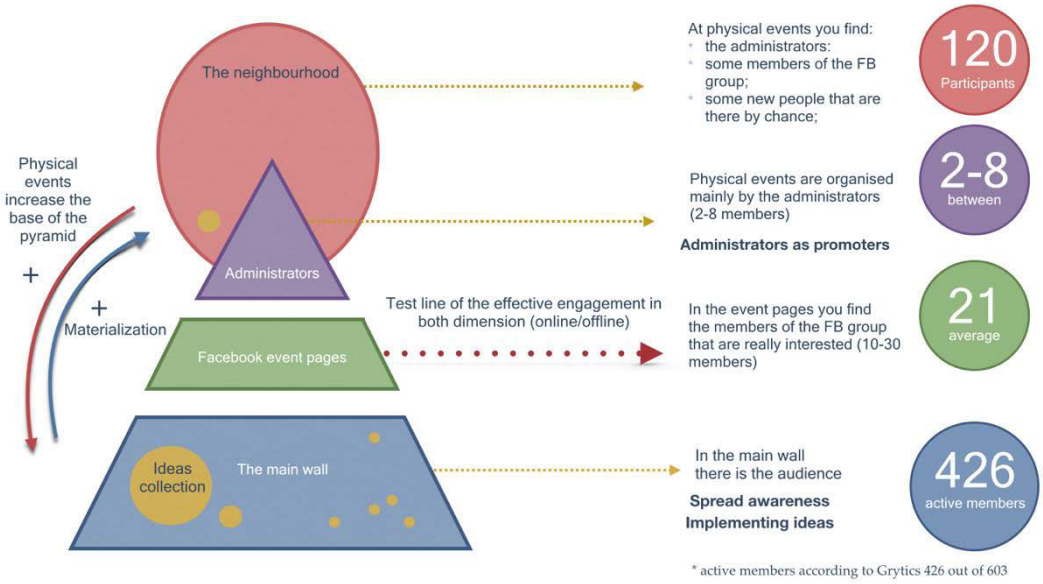

Figure 18. Degrees of participation and engagement in Social Street San Pio X.

What was arguably not so visible in this instantiation of Social Street was a shared community identity. We pointed out at the outset that there exist diverging interests and motivations among long-term residents and new residents who have relocated to the neighbourhood fairly recently (such as the Social Street founder or the San Pio X administrators). Social Street administrators and long-term residents did not share the same interests in belonging, connectedness, and neighbourly togetherness. The "ideal of community" enacted through shared values and traditions was not the core of this Social Street.

However, while the lack of a coherent community identity might hastily be construed as a 'failure', it could also be attributed to the approach and perspective taken for initiating and organizing Social Street. Any notion of community unavoidable comes with a particular set of ideals. De Lange and de Waal (2013), for example, critique idealistic notions of community as being "too reminiscent of small-scale and local ways of life" (sec. 3), overly emphasising homogeneity and consensus formation. As we already learned from the background section (esp.

section 5.2), San Pio X—like many other urban areas—is not a homogeneous neighbourhood.

De Lange and de Waal and other media studies scholars suggest it is beneficial to understand contemporary urban neighbourhoods in terms of networked publics, as "groups of people who convene around a shared 'matter of concern' in entities that may be more fleeting, composed of differences rather than being based on sameness" (de Lange and de Waal, 2013, sec. 3). Activating such a cohort requires slightly different strategies. In the view of Le Dantec (2016), infrastructuring with networked publics demands that one pay close attention to a multiplicity of issues and the different attachments individuals hold toward these issues. There are different possibilities in detecting shared issues as early indicators for publics based on ICT (Ludwig et al., 2016).

Adopting a networked publics framework for an infrastructuring approach, our intervention with Social Street might be seen, in the words of Le Dantec, as twofold: as an analysis of "how these publics come to be—the degree to which *they are designed* through intervention—and an account of the generative action publics take—the degree to which *they do design*" (Le Dantec, 2016). Action-oriented researchers and activists, then, should be cautious when interventions are framed as 'community' efforts. They should critically reflect how such framings may be in play when observing, analysing, and/or intervening in urban social movements, not buying into notions of 'community' as a predominant lens too quickly.

8 Conclusion

Our study of a naturally occurring phenomenon in a Trentinian neighbourhood provides two central contributions regarding the infrastructuring of hybrid community engagement in urban contexts.

First, we argue that local social collectives hoping to have some impact in urban neighbourhoods might benefit from *hybrid forms of community engagement* that are enacted through *a constant back and forth between online and face-to-face interactions*. We have seen that this kind of approach may result in increased awareness and engagement in both online and offline spheres as well as potential material outcomes through interventions in the physical spaces of the neighbourhood.

Second, we argue that local urban collectives that are facilitated by social networking technologies such as Facebook might benefit from a framing not as communities but as *networked publics* in which common activities and engagement in neighbourhood issues is informed through difference rather than homogeneity. The result of a publics framing might be that the infrastructuring by and of local urban collectives would be better off following strategies that pay attention to *the multiple issues and people's attachments to them* that a networked public may be articulated around.

This paper is one of the first studies of Social Street in the scientific literature. It provides an ethnographic account of the practices and outcomes of the hybrid online—offline approach that the concept of Social Street embodies. In future research, we wish to explore further how hybrid forms of community engagement—the back and forth between online and offline—may be supported through the appropriation of features provided by social networking platforms, both now and in the future. Further research also needs to explore the mechanisms involved in accomplishing this in more detail—e.g., the role of administrators, the effect such initiatives have on them, engagements with other territorial stakeholders such as public administration, local associations, and other social cooperatives, and so on.

We have shown at length how the establishment of Social Street San Pio X has unfolded over time and on the ground. Whilst it might be hard to formally assess its status as a success or failure, the vibrant continuation of San Pio X up to the present day says something in itself.

Acknowledgements

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