

HCI, Solidarity Movements and the Solidarity Economy

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ABSTRACT

The financial crisis and austerity politics in Europe has had a devastating impact on public services, social security and vulnerable populations. Greek civil society responded quickly by establishing solidarity structures aimed at helping vulnerable citizens to meet their basic needs and empower them to co-create an anti-austerity movement. While digital technology and social media played an important role in the initiation of the movement, it has a negligible role in the movement's on-going practices. Through embedded work with several solidarity structures in Greece, we have begun to understand the 'solidarity economy' (SE) as an experiment in direct democracy and self-organization. Working with a range of solidarity structures we are developing a vision for a 'Solidarity HCI' committed to designing to support personal, social and institutional transformation through processes of agonistic pluralism and contestation, where the aims and objectives of the SE are continuously re-formulated and put into practice.

Author Keywords

Solidarity economy; social movements; digital civics;

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

INTRODUCTION

The financial crisis that has unfolded in Europe since 2008 has had a profound impact on national economies and local communities alike. This impact has been especially pronounced in states of Southern Europe, which have proved to be acutely vulnerable to global financial fluctuations. The resultant austerity imposed in the majority of EU member states has in turn transformed a financial crisis into a cultural and socio-political one. Moreover, this transformation has

had the most severe impact on vulnerable communities and populations. The subsequent deterioration of living conditions and deep distrust of political institutions has meant that citizens have taken "*the matter in their hands*" [10] and formed new social and solidarity movements (SMs). These movements, while struggling to mitigate the effects of austerity, have begun addressing everyday basic needs for food, clothing, education and health services by building voluntary-based solidarity structures. In doing so, these groups have developed and implemented innovative forms of "doing" social and solidarity economies based on social participation and self-organization and thus exemplifying an alternative to austerity [42].

In this paper we report on findings from nine months of engagements with the Solidarity Economy (SE) in Greece. With the establishment of a local lab in Athens, we sought to gain a deep understanding of Athens-based solidarity movements and develop a collaborative relationship with the intention of assisting the development of technologies that would support them in their day-to-day activities. Drawing on our participation in events and popular assemblies, interviews and informal discussions with key people in the sector, and field diaries we contribute to HCI concerned with the role of technology and digital tools in supporting progressive forms of social activism. We do this by providing insights that capture SMs' sociopolitical innovation through building an alternative economy based on solidarity; and by reporting the complexities at play in these groups' internal self-organization processes, as well as external collaborations with other movements and institutions. Our design implications provide a roadmap to embed values of solidarity, democratic participation and citizen empowerment in the systems that we design and build.

HCI, COMMUNITY ACTIVISM AND SOCIAL MOVEMENTS

The HCI research community has increasingly shown interest in exploring and understanding the role of communication technologies in both social movements [17,29,59,60] and community action [2,12,35,40,57]. Studies have focused on the way digital technologies have supported social movements' mobilization [11,59],

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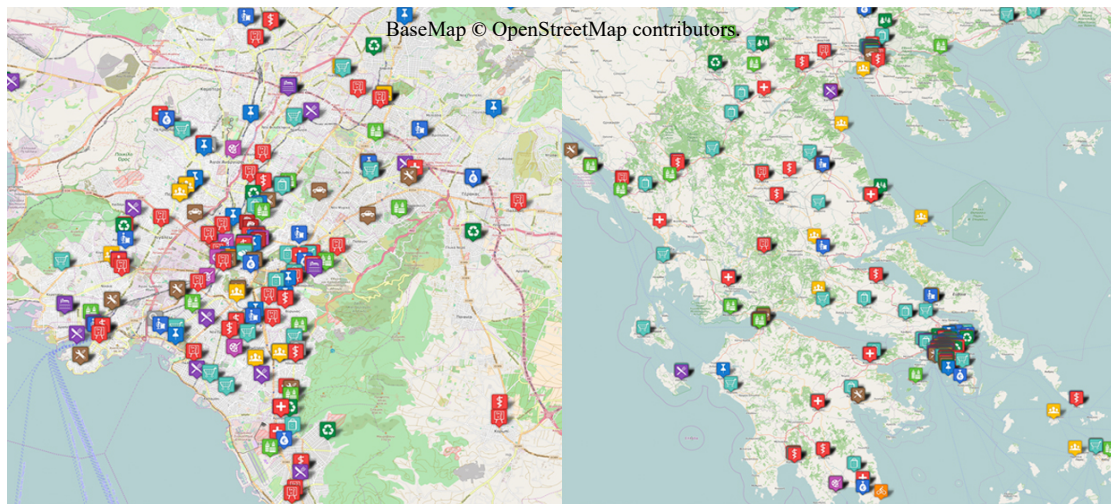


Figure 1: Indicative maps of SMs in Greece (right) and in Attica, Athens (left). Pins represent various types of SMs: social clinics, pharmacies, schools, time banks, no-middlemen goods distribution networks, soup kitchens, work cooperatives, alternative currencies etc. For an interactive version of the map see [52].

community organization [13,57] and crowdfunding [16]. Research has also explored the role of multimodal discursive spaces and political processes that underpin social movement formation, their values and activities in small [12] and large scale political action [17,26].

Studies have also examined the particular role of social media in large scale social movements, the Egyptian and Tunisian revolution [10,59,60], the EU social forum [46], the Occupy movement [11] and the Umbrella Movement in China [29]. Authors here have argued for examining and paying more attention to the often ‘invisible’ micro-dynamics, divergences, practices, tasks and actions, which underpin movements’ activities and that are often omitted from the literature [29]. In this respect, authors have argued for the necessity of doing “on the ground studies” in order to gain a thorough understanding of the practices and the potential role of ICT in these political processes [29,59].

Other authors have poured considerable efforts into the way interaction design and HCI might support community action in everyday life [13,28,38,49,54], as well as in environmental [2] and health activism [40]. Like social movement studies, this work also requires a very thorough understanding of the context in order to develop systems that can support meaningful community practices and action [40]. In this regard, Aoki et al. have explored the role of ICT in respect to the decision making processes and strategy alignments across activists’ groups concerned with environmental issues [2]. Yet, other authors have advocated for an agonistic approach when designing for everyday social movements and community action—suggesting that fostering spaces of conflicting multi-vocal collectives have significant potential to engender alternative forms of social innovation [7,38].

With this paper, we build on and extend this work by providing an in-depth analysis on the work and processes of

SMs’ self-organizing practices and the impact of their work in everyday life within a SE. From our insights, we provide guidelines for the design of systems for the solidarity economy, while also drawing deeper implications for HCI concerned with its role in social movements and more broadly in forms of community activism and social innovation.

CONTEXT

The economic crisis precipitated a drastic change in the stratification of Greek society, intensifying social inequality, exacerbating the threat of poverty and creating a new underclass of outcasts in large urban centers. The cumulative shrinkage of GDP by 25% from 2008 to the end of 2013 led to a dramatic spike in unemployment [51], which resulted in national demonstrations. The protests of 2008 in response to the imminent global financial crisis and to the privatisation of public spaces in Greece, were one of the first events that gave rise to the Greek solidarity movement in its current form. Indeed, it was around that period that a civic drive towards self-organisation, self-management and self-empowerment began to emerge with the (informal) establishment of several self-managed spaces, social centres and local citizen initiatives [31]. These events also formed the ground for what became the occupation of the Syntagma square in the summer of 2011 and the initiation of grassroots collectives whose goal was to address basic needs while raising issues of democracy and social justice [31,43]. Syntagma square events, aligned with the Spanish ‘indignados’ and as well as a host of other ‘occupy’ movements around the globe, were an experiment of horizontal democracy and empowerment through participation and self-organisation [31].

Following the summer of 2011, these practices, self-managed spaces and self-organising collectives—what we refer to as *solidarity movements (SMs)*—began to spread across Athens as a broad spectrum of state and non-state

actors mobilized to provide social support to those most affected by the economic crisis. Thus, “*the movement spread out into the social fabric, with neighborhood assemblies [...] spreading alternative economic practices such as consumer co-operatives, ethical banking, exchange networks and many other such forms of living differently*” [9]. The role and position of SMs in society is twofold [3,42]: firstly, through collective organization, they cover every day basic needs for food, clothing, education and health services, thus operating as a buffer mechanism in the face of a collapsing welfare and public service; and secondly, they exemplify physical spaces where practical alternatives to austerity can emerge, be contested and re-worked through experimentations with alternative forms of economy through solidarity, participation and organization [3,5]. Indicative examples of solidarity structures in Greece include: time banks, no-middlemen goods distribution networks, soup kitchens, work cooperatives, social clinics and pharmacies, solidarity schools, alternative currencies, self-managed factories and artist collectives. At this time, various sources suggest the existence of around 400 SMs (see Figure 1). To give an indication of the scale of these movements and their operations, according to [1], in Attica there are: 40 solidarity clinics in Greece, with an average of 46 volunteers per clinic, and receiving regularly around 2000 visits per clinic per month; 47 food solidarity structures and 21 solidarity kitchens with around 56 volunteers per group, which for example, in 2014 distributed 4318 parcels of food fortnightly; 45 without middlemen goods distribution groups with more than 5000 tons of distributed products for the years 2012-2014.

METHODOLOGY

Already familiar with the sociopolitical context in Greece, we have been engaging with solidarity movements since November 2015. Adopting an Action Research approach [25], the first author (a Greek national) moved back to Greece and established a local digital civics lab (Open Lab: Athens) in order to engage and develop long-term partnerships with SMs, towards the co-creation of processes, novel technologies and tools that might benefit their day-to-day activities.

Over the course of the last nine months, the first author engaged with over 13 solidarity structures, including: three solidarity clinics and pharmacies; one soup kitchen network; two ‘without middlemen’ grocery cooperatives; two self-managed factories; two self-organised refugee camps; one time-bank network; one solidarity school; and one collective—Solidarity for All—serving as a communication hub for the SE. Engagements with each of the movements typically entailed: initial meetings; targeted follow-up discussions; participation in assemblies; IT support meetings; and participating in the groups’ events. In this paper, we report on and draw from data gathered across all of these engagements including over 500 minutes of recorded meetings and semi-structured interviews, our experiences participating in SM assemblies, events and

volunteering sessions, notes from participatory observations, semi-structured interviews and informal discussions. In the next section, by following a thematic analysis approach [8] on this dataset, we report insights where we consider how the SE is practiced as a form of human economy, its internal self-organising mechanisms through popular assemblies and coordination committees and its relation with other economic actors such as the public and third sectors. Names of structures and people have been anonymised.

MAKING THE ‘SOLIDARITY ECONOMY’

Solidarity as a counter-austerity practice strives to empower the disempowered through the forging of new social relations and bonds between people within and across solidarity structures. It is about understanding the other in order to give and receive support, and to form reciprocal relations and alternative horizontal self-organization practices. According to Jean-Louis Laville, solidarity when seen as an alternative economy can be defined as having two dimensions: the socio-political and the socioeconomic [23:225–235]. The socio-political dimension is an alternative form of participatory democracy while the socioeconomic—a hybrid between non-monetary and no middlemen economies—operates between reciprocity, redistribution and the market [23,27:25–41]. Below, we report our experiences on how these two dimensions are enacted in solidarity practice in Greece. The names of SM members have been anonymised.

Solidarity economy as a ‘human economy’

The solidarity economy is understood in a number of ways by the extremely diverse actors in this sector. They operate as informal social networks and self-help groups, which have neither a formal organisational structure nor are registered with any official authority. Due to the multiple and diverse political orientations and actual practices of these schemes, no definitive classification can be created. Nonetheless, SMs share a set of values that distinguish them from the practices of the dominant economy: they build communities based on cooperation and collaboration rather than competition; they are based on mutuality and reciprocity in bold contrast with isolation and atomization; they exemplify an alternative model of self-organization based on direct democracy and horizontal participation rather than centralised control; and they encourage pluralism and diversity as opposed to imposing a global monoculture. SMs do not reject the state and the markets; they do not try to break away from capitalism; rather, they disagree with its current configuration [44]. Attempts to form a SE are attempts to shed light upon “this blind spot in order to look for new frontiers between the economy and politics” [23].

Ultimately, SE attempts to reconfigure relations, both material and social [4]. This is reflected for example through the attempt of many goods distribution networks and no-middlemen cooperatives to change the relations between production and consumption [42]. Example actions include the assessment of farmers’ practices against SMs’ standards and values (e.g. fair trade practices, labour rights etc.) and

the circumvention of intermediaries and the establishment of personal relations between producers to consumers. As a member of a time bank network tells us, the SE aspire: *“an economy of needs not markets, to better social relations, towards an everyday struggle, with our own conditions”* [member of time bank network].

Most groups try to cover their needs through mainly non-monetary donations (e.g. equipment and tools) and skill sharing practices. Deprivation of financial, political and human resources undermines efforts by these structures to scale up their activities. However, close co-operation among solidarity networks and collectives facilitates resourcing their activities. For instance, in some cases local solidarity networks engage in economic transactions acting in co-operation with non-profit organizations; in the social clinics sector, doctors prescribe medication for uninsured individuals by adding it to medication prescribed for insured individuals; municipal authorities tolerate occupations of public buildings and the creation of new autonomous political/economic spaces; and others. The exchange of resources and know-how between groups contributes to the formation and reproduction of the SE.

A fundamental part of SE is its pedagogic and political awakening (i.e. raising political awareness) character. For example, being part of a time bank network that allows skill sharing between members provides a practical experience of an alternative organisational practice and economic relation: *“When you give things to apolitical people they see it with scepticism [...] you need to change this mentality of equivalency [between market economy and SE] so that we will equate your work with someone else’s [...] and stop people from thinking ‘how much would what I do cost outside [i.e. when done professionally in the market economy]’”* [member of solidarity school]. So being part of such a network enables members to reflect on a different economic relation in society, one that puts solidarity and collective well-being first. Key to this pedagogy of participation in the SE is enabling people through awaking political consciousness. A key member of a soup kitchen network explains: *“it is not just a matter of feeding people; we are cooking with people, we cook, we live and we eat together; it’s a lunch with our fellowman on the street. [...] This is about awaking consciousness. The giving is more important than the taking”* [member of soup kitchen network]. Here an iconic figure, a key person within one of the biggest food distribution networks in Greece, explains how enabling someone to give to a fellow man is more important than someone receiving help, as it puts the SE in practice by awaking political consciousness for the effects of austerity politics and neoliberal economics and as a result has a proliferative effect.

SE is continuously under reconfiguration through these movements’ internal self-reflection processes and creative tensions. This involves the pursuit and formulation of the movement’s identity, moulded by internal decision-making

processes, political beliefs and party affiliations, and partnership with organisations from various sectors that define the scale of collaborations. In this regard, every ‘transaction’ that takes place in the SE (e.g. a collaboration with a research lab or accepting resources from a foundation) supports, extends but also reshapes and reinvents the SE. Such transactions aim at satisfying temporal human needs. For example, the current manifestation of a solidarity movement as a school, clinic, time bank etc. is only a solidarity movement’s temporary response to the current needs of the people and local community. As human needs change, these movements adjust their practices and reassess the ways with which they address everyday problems: *“[...] we didn’t get together to create a voluntary school; the school was the outcome of an alternative political action and this movement might create something different in the future and that’s how a solidarity group should work”* [member of solidarity school]. Here a member of a solidarity school explains how the volunteer-run school is not a means to an end but it’s a manifestation of a political action that might change form based on the human and societal needs that will have to be addressed.

Time bank networks are good examples of how the SE attempts to reconfigure social and material relations. New members of a time bank register by completing a skills form. This allows them to help according to their capacity to do so. When a ‘service’ is being fulfilled, for example a teacher delivering a class, or a lawyer helping with bookkeeping, these services are being written down, which allows the group to see how active each sector is and try to balance services among people. This has to be done carefully in order to avoid transferring ‘market logic’ to solidarity spaces while giving stimuli for people to participate:

“An impersonal time bank for me is the worse. Its transferring the market logic to non-monetary economy. If we build our non-monetary interactions with market references and rules, it’s like we burn an opportunity” [member of time bank network].

This response was triggered by a discussion about an ‘unsuccessful’ centralised time bank for all municipalities in Athens. This time bank was based on an online platform that didn’t require solidarity structures to be formed in physical spaces, and as a result making the exchange of services impersonal while creating a more ‘formal’ environment which strictly equated how much someone gives to how much someone takes. This ‘transferred market logic to non-monetary interactions’ which fails to advance the SE as an alternative to market economy. As a member of a time bank network explains, the imbalances between the give-and-take in this local time bank (for instance a teacher volunteering more hours than a lawyer) are being at least partially liaised through the members’ participation in popular assemblies and the governance of the collective:

“So in order to balance these things, how much someone gets with how much someone gives, we decided to have

assembly meetings when they can decide reciprocal actions of socio-political nature, not for us but for people outside. This adds another motivation of reciprocity” [member of time bank network].

Assemblies and Self-organization

A fundamental part of the SE is self-organisation through horizontal participation. For most movements self-organisation is achieved through regular thematic or general popular assemblies which take place in a group’s ‘house’—a physical space where these groups meet regularly and operate, which can be a public space leased free by the local council, squats and abandoned buildings, or private spaces rented through a group’s solidarity fund. Some solidarity structures arrange various subgroups that meet in separate assemblies and others have one tactical general assembly per week. Example subgroups include groups specializing in: communication, logistics, volunteer coordination and others depending on the SM (e.g. a clinic may have a doctors’ and a pharmacists’ assembly). The choice of approach primarily depends on the number of people involved in them or political, cultural and ideological justifications for such configurations. For example, popular assemblies for a solidarity school include meetings about the schedule for the next few months, discussions about meeting the needs of the schools (e.g. whiteboards), discussions about actions to support the local community (e.g. running festivals, organizing seminars), self-reflections of how the structure operates and the level of satisfaction of the students and parents etc.

These assemblies are in general open to the public, except for the ones that have a good reason to be closed – for example the meeting of doctors of a clinic to discuss a particular case (even though there are groups that are very introvert and as a result not as open to the public). In the majority of the schemes, recipients of social support participate in the popular assemblies and take an active part in their running. Indeed, this is a key characteristic of the SE in Greece: people might start movements for self-help purposes (e.g. unemployment) and members that receive support (e.g. visitors of social clinics) become more and more involved in their running by participating in assemblies, cultural events, etc. In addition to helping vulnerable populations, this contributes to the spreading of SE values and practices.

Decision-making in these meetings is achieved through horizontal participation, either through voting or unanimously, depending on the values of the group (e.g. ideological and cultural trajectories) but also depending on practical limitations such as the size of the assemblies. Key members of each group that had a central role in initiating a structure, typically play the role of coordinators in order to facilitate discussions. Other mundane jobs include creating preliminary agendas and taking minutes, which are typically done by people who have the will and skills to do them. Some

of these groups operate by using a system of rotating roles in which training and skill sharing is pivotal.

Even though the impact of these groups’ activities on society and on vulnerable populations (e.g. 2000 people visiting social clinics per month) prove their success, this experiment in self-organisation, fueled by the idiosyncrasies of the financial and sociopolitical crisis in Greece, is not easy to realize. For example, one of the coordinators of a solidarity school describes us the internal conflicts of such structures: *“It’s a struggle of internal associations, it’s a power struggle, there is a space being claimed here”* [coordinator of solidarity school]. Considering that some of these SMs have operated for the last 5-10 years without fixed hierarchies, these difficulties act as barriers for the further reproduction of solidarity in other physical spaces or for their long-term sustainability.

Many of the people that we engaged with cited the lack of more complex processes for facilitating horizontal participation in popular assemblies as wearying the movement. For example, in a discussion about the processes that are followed in popular assemblies, a key member of the solidarity school talks about these difficulties: *“Direct democracy and horizontal participation is not an easy task, and also it is not something that we have to “sanctify” [...]. You appreciate the role of an institution [referring to a more structured organisation] when you find yourself in these situations and you need to make decisions through these meetings [i.e. popular assemblies]”*. Here a member of the time bank network refers to the lack of regulations for various roles and the lack of more explicit methods to allow decision-making to be achieved. This lack of regulations or of a ‘statute’ for the group allows the formation of obscure hierarchies: *“when you are in an association, a partnership, a political party, a construct that has members, you operate with what the statutes provide you with as a member. Which you can cite, it is a tool, it is in some cases a mandate of justice. A more libertarian group like ours is more susceptible to manipulation [...]”* [member of time bank network]. ‘Manipulation’ here refers to the possibility of someone to guide the group towards specific decisions due to the absence of a statute for members’ participation.

However, the dynamic and fluid character of self-organisation that results in the creation of temporary and obscured hierarchies is also a driver for members’ engagement, as members constantly reassess their roles while reconfiguring the movement itself. As a result, participation in a popular assembly is understood and experienced as *“taking something back”* or as a more complex reciprocal give-and-take relation. In a conversation about this complex reciprocal relation, one member of a solidarity school explains how these assemblies should also allow the further refinement of the decided actions outside of these meetings as *“not to exhaust the assembly”*. For example, the details of events such as festivals, or the availabilities of people for scheduled activities.

A key process in the organisation of popular assemblies, and one that also signifies the group's internal power structure, is the setting of the assembly's agenda. The agenda determines the issues to be contested at these meetings, but also the ideological, political and societal framework in which these issues are to be discussed. For example, as a key figure in a social clinic explained: *"The public assembly takes all the decisions, you won't tell a doctor how to do their job but you will tell them who to accept, so the assembly decided that we welcome uninsured, impoverished, and unemployed; this was later changed to add the low-paid pensioners with specific characteristics"*. Here, a member of a social clinic, describes how the values of the solidarity clinic define a framework within which the clinic operates and all subsequent decisions are being made. Similarly, a key member of a solidarity school describes how assembly attendees are given *"a well specified frame in which we can decide, through the documents we give them, which coordinates the meetings towards specific actions"*. Here 'the well specified frame' refers to the preparation that a core group of people must do in order to prioritise the needs of the group. By doing so, as in the clinic above, they make sure that the core values of the group are reflected in the operations that they prioritise and put for discussion (e.g. how the scarce funding should be spent, proposing reciprocal actions for the local community etc.). Nonetheless, through participating in many of these assemblies, we observed how the agenda is created dynamically by participants during these assemblies.

Finally, as key tool of the SE, popular assemblies are considered an important vehicle for the members' political education (as also discussed in [43]). Political education through engagement, both within and outside the assembly was a recurrent theme in discussions. For example, here a member of a time bank explains how through popular assemblies, *"you upgrade the political role of citizens with everyday references. You try to get people to understand that the assembly is a tool, not a political theory."* [member of time bank]. In contrast to political theories and far-reaching ideological discussions, an assembly is a practical manifestation of a citizen's role in the SE.

All in all, the common space in which these meetings are held and its configuration; the mutuality and reciprocity between the members of the group; the lack of explicit hierarchies which allows for a continuous reconfiguration of power relations; the uncertainty of the size of the assemblies and the people that join them; and the dynamic alteration of the agenda during the meetings; create an 'arena' which, even though disagreements are manifest, allow for the productive confrontation between divergent viewpoints.

Coordination and Synergies

Solidarity structures were initiated after the occupation of the Syntagma square the summer of 2011, and as a result they were the products of a social mobilization. As such, the facilitation of synergies between solidarity structures is

fundamental for the perpetuation of its social movement character and for the spreading of the SE values in society. These synergies are being mainly achieved through: social networks, with geographically neighboring structures collaborating for covering their needs and exchanging know-how and resources; coordination committees, which are meetings organized between various solidarity structures of the same sector (e.g. all the social clinics meeting once per month to discuss the sharing of medicine etc.); and through the 'Solidarity for all' network, a communication node among solidarity structures for the sharing of expertise and resources.

The 'Solidarity for all' (S4A) network plays a key role in facilitating this communication between structures of the SE. S4A was initiated in 2012 (funded by Syriza political party, currently in government) as a communication node among solidarity structures for the sharing of practical expertise and resources. As one member of S4A describes the network's goal as *"to create a node of communication of all these collectives without us being 'the networking' because we were created later than these collectives [...]. We were trying to make spaces, we don't have a coordination role, we couldn't anyway our position is very sensitive, but we create spaces and meetings that the solidarity movements can come together and coordinate by themselves"* [member of S4A]. S4A's contribution to the SE is significant in creating the connections between solidarity structures that share the same values and practices.

For example, one of the people we met in the solidarity school describes how in trying to work together with another school: *"[...] communication is hard, they don't want to, because they want to keep their independent character, they want a political party/organisation with a solidary face. That's one example. There are other schools that are just a façade, so essentially they don't exist"* [member of solidarity school]. This diversity between the groups originates from diverse political cultures and social movements in Greece that are distinct from SMs (e.g. parliamentary left, anarchist movements, autonomous movements etc.). These differences in turn impact the ways in which solidarity structures interact with the state and other institutions (such as S4A), as well as the agencies from which they seek resources. As a result, in some cases solidarity-making becomes a site of internal contestation itself which creates impediments for synergies.

S4A is trying to facilitate communication while also maintaining the solidarity structure's independent and decentralised character. However, it faces difficulties that originate in tensions created when social movements interact with such state (or pseudo-state) institutions. One coordinator of a social clinic described this as *"an overgeneralisation of the possibilities of synergy and cooperation, [...], that if we work together we can move this thing forward. What I learned is that this is an oxymoron for the autonomy that we want to exist in these structures"* [social

clinic coordinator]. Here our contact talks from experience about the difficulties of cooperating with significantly diverse groups within the SE, and how these synergies can in some cases come in direct contrast with the autonomy of these groups.

Digital technology is seen as a possible mediator. Indeed, one of S4A's first actions was to make an online platform that allows various groups to create their own pages and maintain an online blog, while also geographically mapping these structures. Even though this platform serves as a useful database for the solidarity sector in Greece, it is rarely used by solidarity groups themselves, which choose to maintain their own Facebook pages or WordPress sites. One of the members of a solidarity school talks about the role of technology for collaborations:

"What I am trying to explain is that it is not about making a big network or a big umbrella and it will just work, there are so many political issues and you don't know to whom to talk to, you move on with the ones that are willing to. It [technology] is good for massive things to happen [e.g. better coordination between the movements]. For example, with the work that we do, coordinating the self-organised schools in Greece, we now understand which ones are solidarity schools (with a political thinking), who has an understanding of volunteering which is a bit, my hobby or something to talk about with my friends etc. [...] The technical part [technology] is necessary to get evolved, but it needs to evolve in parallel with the other. We need to advance our political communication the very basic communication; what we are, where are we aiming at, why, how do we want this to work; dynamically but also in a propellant way." [member of solidarity school]

This member here talks in the context of creating such platforms to enable synergies between SMs, taking S4A's online geographical mapping of these groups (similar to the one in Figure 1) as an example. He describes how such systems are problematic as they don't dig deeper into the real issues that prevent various solidarity structures from collaborating, such as the diversity of values, internal decision-making practices and motivations. In the end, it is about identifying the groups that work for the spreading of the SE while finding ways to work together in a decentralised and independent character. This becomes particularly challenging as the identity of these structures and the understanding of the SE change dynamically.

Solidarity movement and institutions

The relation of solidarity structures with the state, the local councils and other third sector organizations depends on a structure's ideological and cultural trajectory and values. The groups and people that we engaged with were generally encouraging collaborations with local councils. In some cases, and when there is political will from both sides (solidarity structures and councils), the council supports these groups through allowing them to be based in public buildings, paying utility bills such as the electricity or

internet, donating resources, raising visibility of these structures' work etc. In general, however, the relation between local institutions, the state and solidarity structures is very complex and it changes dynamically. For example, one of the solidarity schools is based in a low rise building that was given to the group to use by the local council after local citizens' struggles. Since then and after the elections, the local council has changed and its support is not as strong: *"Unfortunately for the local council they don't want to be linked with the group because they cannot understand this kind of social politics that is produced here and this cannot be produced by the council"* [member of solidarity school].

The relation with the state is complex because of these groups' reformist character: in addition to helping fellow people through various actions, they target the reform of local governance models and the public sector and this creates tensions: *Structures are reformist; they are not the tools of the revolution, not trade unions, not substitutes of the state, or of the lack of [economic] liquidity"*. A member of a solidarity school talks about the relation of the movement with the local councils: *"The coexistence of an institution, the council, with the people's assembly is necessary. That's why I believe that the local councils need to change how they work, it needs to be a mixture of the institutional with people's participation. The councils need to drive these movements but also allow a percentage to be decided by people's assemblies"* [member of solidarity school]. As a result, a solidarity structure's role in society is transformative rather than substitutive:

"The dynamic of a solidarity structure can be greatly multipliable. I mean, the reflection of the social ties and relations, not for profit, but for creating points of reference and a social transformation; not as a substitute [of the public sector]" [member of social clinic]. It is about covering the holes that the lack of public sector funding and austerity politics has created while transforming the public sector to match these structures values: *"These are systemic holes that we are engaged with, trying to re-signify things but really what we do is covering insufficiencies which, however, we want to cover them in all levels, political and ideological; this is what we want"* [member of solidarity school].

It is not only the transformative function of SMs, but also the tension between substitution and transformation of the public sector, that can be seen more clearly in the health sector. Social solidarity clinics and pharmacies accept patients with no insurance that can't get access to the National Health System (NHS) and as a result these structures can seem to be replacing the public sector. In this case, campaigning for access of everyone to the NHS and raising visibility about cases of patients excluded from the NHS becomes fundamental for such transformation to take place. For example, one of the people we met from one of the biggest social clinics in Greece explains how at least the rhetoric of the government about access for everyone to the NHS changed after the social clinics' activities:

“[...] due to the political pressure that this and other social clinics put [to the state] from January 2014 onwards [...] also because we had a patient that died while we had already called the ministry of health [...] and from that point the government started to talk about access of everyone to the NHS [...] there is a huge underfunding of the NHS so whatever the legal framework there is a complete destruction of the NHS. These days even the insured ones cannot get their medicines, they go to the hospitals and they don't afford to give them their medicine, so the result is more or less the same [...]” [member of social clinic]

Indeed, this dual character of the SM, as both a buffer for immediate needs and as a form of resistance to the imposed austerity politics, is one of its key characteristics: *“The work that we do here is dual, 50% is what you see here, the other 50% is about the struggle for the rights of our patients which is the only way that there can be an important change [...] the appropriate funding of the national health service, the employment of staff etc.” [member of social clinic]*

Also interesting is the distinction of this ‘fourth sector’ of economy from what is typically understood as the third sector; a distinction that influences the extent of possible collaborations. Our experiences align with work such as Rakopoulos [44] and Arampatzis [3] which suggests that the third sector and the NGOs are seen by SMs as “welfare middlemen” [32] and as a result serving aggressive markets against the state. Without disregarding the critical work of the many organisations of the third sector in Greece, the third sector is regarded in these solidarity structures as “a benign form of capitalism” [44,45] that masks the politico-economic causes of the crisis and as a result pursues contradictory goals. However, in a number of cases solidarity groups become formal organisations (e.g. NGOs or cooperatives): *“Many solidarity groups do that [establish NGOs] in order to exist because unfortunately there is a huge legal gap in cases like ours, so you become something that you are not, take a form of something that doesn't represent what you do and what you believe in, we can't work here with a management board, with a president, it can't happen, it is against everything” [member of time bank network]*

DESIGNING FOR THE SOLIDARITY ECONOMY

The work of SMs exemplifies an alternative form of economy, an economy driven by human rather than market needs; an economy based on relations that recognize the interdependency of our lives, while transforming them to embody care and mutual respect rather than exploitation. In our findings, we show how this new way of thinking about and enacting social and material relations has implications for decision-making practices, coordination between different structures operating in the SE and in collaboration with formal public and third sector institutions.

Below we discuss how HCI is positioned in such complex, lively and diverse hubs of social innovation. We discuss how we might support solidarity economies through designing for transformation; how HCI design and technology might

accommodate and harness the productive, dynamic and conflictual dimensions of movements’ self-organization practices; and more broadly, we ask what a Solidarity HCI might look like.

Designing for transformation

At the center of SE is the belief that people are capable of developing their own solutions to economic problems through the collective production and distribution of resources and services. Fundamental to this is the collective debating and (re)envisioning of how this production and distribution should be actualized. In this sense, SE is not a “blue-print” for how an alternative economy should operate, but “a collective process of imagination and creation that continually seeks connections and possibilities while holding on to its transformative commitment” [27:28].

Our research has highlighted the transformative nature of SMs through: the cultivation of political awareness and political education through participation; the transformation of economic relations to prioritise solidarity and collective well-being; and the transformation of the public and third sector institutions to reflect SE values. For us, SE practices for us point to greater questions for Digital Civics and HCI researchers concerned with how to effectively support and sustain social movements [17] and community action [20,39,50,58]; questions around whether and how should HCI be supporting the sustainability of existing SEs and their spreading in other contexts; and questions on whether technology can play a role in facilitating public institutions to scaffold and sustain SMs’ formation.

Previous work has shown the lack of institutional and social infrastructures to support activist groups advocating and organizing for change [12,41,53]. At the same time, social media technologies (e.g. Facebook) provide some organizational spaces for these groups to discuss and organize for action [12,29,46], even if this is limited to information dissemination and forum-like discussion pages. Beyond this however, digital technology has not yet responded to the challenges of dealing with the complexity of the transformational character of SE.

Yet research in HCI and elsewhere has begun to explore the potential for digital platforms to be transformed into a fully cooperative relational model [48]. In addition, HCI researchers are developing digital commissioning platforms that aim to re-configure relations between citizens and institutions by providing ways in which citizens can self-organize to identify their community needs and eventually co-design services to meet them (e.g. [6,22]). While these are noteworthy projects that begin to tackle ways in which HCI can play a role in scaffolding the formation of citizen movements, they arguably still operate on assumptions that do not fully contribute to the co-creation of human economies. Indeed, as we have seen in the example of the time-bank system, the transfer of a market logic into non-monetary interactions retains market rules that misconstrue the values of the SE aiming instead at developing radical

alternatives to neoliberal economies. Beyond platform cooperativism, designing for SE processes requires HCI to begin envisioning, debating and actually contributing to the building of alternative economies through the systems and tools that we create. Such systems should support cooperation and reciprocity of various actors while allowing the constant co-creation of collective identities through direct democracy and horizontal participation. We call on HCI to move away from a market logic to a logic of *human relations and ongoing transformation*.

The fundamental goal of SE is the transformation, rather than elimination, of the public sector. In Greece, this is achieved through creating a ‘point of reference’ through SMs’ everyday practices and ongoing struggle. This has implications for the design of systems that enable relational models of service provision [22,39,47], as even though existing models enable the creation and delivery of services, they might also run against SE values by replacing rather than reforming the public sector. For example, technology to support social clinics should, in addition to facilitating mundane operations, also raise political awareness and advocate through visibility and transparency about the consequences of the lack of open access to the NHS and struggle to reform it. As a result, any form of technology for relational infrastructures if it is to serve the SE must take into account the SE’s transformative goals.

Designing for contestation

Our experiences of SMs’ internal processes of self-organisation (i.e. popular assemblies) point to the lively and productive dimension of contestations where collectives with divergent ideologies, visions and cultures, united by common values, continuously (re)formulate their collective identity. This however, does not come without disagreements. Dissensus is prevalent, especially when divergent (micro)political projects come into play. From our participation in these spaces, we contend that it is how these disagreements are contested that exemplifies an alternative model of democracy and self-organization. At its core, it is a model of ‘radical democracy’ [30] which allows movements to enact solidarity while also dynamically reformulating the groups’ collective identities. Drawing from Chantel Mouffe [36,37], these assemblies can be understood as spaces of *agonistic pluralism* in which different political projects can be contested, discarded or formed; spaces where ‘radical democracy’ is being experimented with. Consensus is of course fundamental for the enactment of solidarity practices; nevertheless, it takes the form of a ‘conflictual consensus’—a consensus based on the temporal and dynamic power relations within groups, through shared core values.

In line with previous work [7,19], we also highlight the necessity of designing for agonistic spaces, while also pointing to the challenges involved in the context of SMs in Greece. Our insights show how the lack of explicit

hierarchies, a ‘statute of participation’ and the constant reconfiguration of roles and agendas present significant challenges for developing design processes and systems that can accommodate and sustain such horizontal practices. We might imagine not only ways in which technologies make visible the pluralism of perspectives and practices [7,14,38], but also to document them in ways that can be utilised dynamically across times and assemblies. Also, we might come up with online or situated systems that favour temporariness, informality and fluidity as opposed to permanence. Yet whatever technology and intervention we might design, we must also be mindful and resist attempts to normalise and regulate activities and relations in the SE.

Even though collaboration across solidarity groups is fundamental for sustaining and reproducing the SE, coordination across groups has been so far challenging. Despite S4A’s attempt to enable synergies, tensions emerge from the desire of the groups to both be part of a bigger collective movement and to maintain autonomy. In some cases, these divergent and dynamic political identities, all struggling to formulate a collective identity for the SE lead to the creation of potentially ‘antagonistic relations’ [37]. Any technology to support such synergies should acknowledge the possibility of antagonisms to emerge¹ and facilitate the creation of spaces in which such antagonisms can be transformed to agonistic ones based on the common values of the SE. Technology was positioned critically by participants, not only as failing to accommodate the variety of identities of solidarity groups and their decentralised nature, but also as failing to foster opportunities for proactive and dynamic relations across different groups.

Previous research suggested an approach to social networking sites as technologies of affiliation, alignment, and identification [20], and how mapping tools could support different advocacy groups connecting to one another through their values and political actions [2]. What our experiences and insights show though, is that even if groups might be affiliated through the same values and political actions, SMs have significantly different identities, which are always in the process of becoming. Systems (like the S4A website) can be seen as technology that tends to “brand” or in some way “fix” an identity *for* groups, thereby negating the always becoming nature of SM identities. More broadly, what emerged from our insights is that designing for contestation and agonism necessitates the recognition of SMs’ identity formation as an ongoing endeavor constantly shaped in dynamic terms. Technologies and systems should thus support and sustain the SMs’ micro and macro dynamics within and between SMs and between movements and other institutions.

Solidarity HCI

SMs’ commitment, passion and drive in their endeavour of re-distributing the “seeds of solidarity” through action (e.g.

¹ Also discussed in [15] as counter-publics digital democracy

“doing” solidarity in practice) show the extent to which social movements can be bearers of values of communal living and goals around which institutional values can be transformed [10]. Our experience of working with SMs—beyond our concern for how technology might support their actions—also led us to reflect more broadly on what a Solidarity HCI might look like. That is, how HCI practice might embed the values of SE in systems that it develops.

Authors have developed ways for thinking and talking about the politics embedded in any systems’ design [18,20,33] and begun to search for ways in which to examine the unintentional consequences of our work. Feenberg [21] talked of the need to look beyond technologies’ intended primary functionality—technology also entails secondary effects, which are not necessarily designed for. Yet, these secondary effects are actually how technologies have their greatest impacts [21,56]. Arguably, many HCI systems promote and sustain a logic that is adverse to principles of solidarity—fostering individualism, the simplification of human relations [55] and a market logic with significant negative effects on social welfare and justice [48].

Authors engaged in HCI work and elsewhere strongly advocate for intervening in the injustices and economic exploitation effected by neo-liberal technologies [24,34,48]. We argue that this should be HCI’s first step towards adopting SE’s ethos in design and towards the search for radically different directions, not just metaphors, for the research and for the technologies we build. Here, we hope HCI researchers can be inspired as much as we are by the work of solidarity movements. We invite HCI researchers and institutions to begin to imagine what would it mean to embed the logic and values of solidarity both socially and economically in the systems we build. We ask, what would HCI design and technology build to “spread the seeds of solidarity” as both primary and secondary effects.

Besides such critical questions around the values embedded in the systems that HCI builds—we also need to reflect on our role as researchers, and the methods, timescales and processes we employ when working with social movements and communities of action. Here, HCI researchers have begun to critically reflect on what it means to work in socio-political and economic contexts [17,29,59]. Kow et al. have pointed to the dangers inherent in working with social movements and Dimond et al. have described the emotional and political commitment that working in such contexts demands [17], and yet other researchers have depicted the hardship experienced in working in context with high level risks [59].

Researchers in these contexts who, like us have taken an action-oriented approach towards the co-creation of knowledge and technological responses to needs, have reflected on the way collaborating with social movements requires them to take a “political stance and become aligned with those who we are conducting research with” [17]. It is undeniable that through our intellectual, practical, and

emotional investment in working with solidarity structures and with the establishment of our presence in Greece, we sought to begin exploring one way in which we can commit to working with movements beyond the limited timescales of conventional projects. Our approach however, should not be considered as a panacea for any context of civic significance, but on the contrary, a call for an increased awareness of the political and economic power relations of the contexts that we engage in. We invite HCI researchers working in these contexts to begin to engage in deeper reflections on what it may mean to work in this way, in order to begin envisioning, debating and actually building alternative sustainable economies for an HCI committed to solidarity as a way of life.

CONCLUSION

In this paper, we have presented insights from our ongoing on-the-ground engagements with SMs in Greece. We have provided an in-depth examination of their sociopolitical practices as well as how alternative socioeconomic models are shaped in practice. Based on our insights, we have contributed guidelines for the design of systems that support SMs’ practices and reflect their values. Such systems should mirror and accommodate the movements’ commitment to personal, social and institutional transformation, as well as spaces of agonistic pluralism, where aims and objectives for the solidarity economy are continuously re-formulated and put in practice.

Finally, we highlighted the significant potential for HCI to meaningfully engage with these spaces of social innovation and design technologies that support civic action effectively and responsibly. That is, how HCI practice and HCI researchers might be bearers of values of solidarity and radical democratic participation through the systems that we conceive and build.

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