Socio-Technical Collaboration to End Homelessness: A Case Study of Perspectives on the Value of Interorganizational Cooperation for Data Sharing

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This paper explores data and information sharing efforts among local government and nonprofit organizations that serve people experiencing homelessness as part of the City of Austin’s Continuum of Care. These collaborations can be viewed as socio-technical interaction networks that connect people, organizations, and data. Data collection included 31 semi-structured interviews with stakeholders from local government and nonprofit organizations. Results focus on the human value of cooperation. Three common areas defined how cooperation influenced interorganizational collaboration: obtaining funding, using resources efficiently, and providing effective service. These results reveal the frictions and disjunctions that occur as cooperation is understood, valued, and motivated differently among the different organizations. Implications for theory include that cooperation is an important value meriting further attention in social psychology literature on human values. Implications for practice include that organization leaders should have a nuanced understanding of how shared values can foster productive interorganizational collaborations.

Keywords: human values, homelessness, case study approach, interorganizational collaboration, continuum of care

How can different organizations working in the same problem space align around shared goals while also maintaining distinct identities? This paper presents a case study exploring how local government and non-profits in Austin, Texas have established socio-technical collaborations involving sharing data and information to maximize their collective efforts to empower people experiencing homelessness. Homelessness encompasses a range of lived experiences, from 1) housing instability to reintegration from incarceration, 2) couch-surfing to street homelessness, and 3) from episodic to chronic homelessness, across which individuals move to, from, and across dynamically. The experience of being homeless, regardless of the length of time, often results in detrimental consequences for individuals and negative social interactions with the community. Laws criminalizing panhandling, camping, loitering, and eating in public spaces increase the risk of people experiencing homelessness entering the criminal justice system. Communities experiencing an increase in homelessness often experience conflict around locations of shelters and where people experiencing homelessness are allowed to spend time. There are complex reasons underlying this discord, primarily based in differing viewpoints on representations of homelessness as well as class, history, and power dynamics within the community (Nooe & Patterson, 2010). People experiencing homelessness may be thought of as fading from visibility to society at large (Koepfker, Mascaro, & Jaeger, 2014), but community-led efforts, such as those in Austin, engage with this vulnerable population and help advocate for them. Access to technology and data management can have a significant impact on how well these organizations communicate, operate, and provide services to people experiencing homelessness. In this paper, we draw upon the concept of socio-technical interaction networks from the field of social informatics. “A Socio-Technical Interaction Network (STIN) is a network that includes people (including organizations), equipment, data, diverse resources (money, skill, status), documents and messages, legal

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arrangements and enforcement mechanisms, and resource flows” (Kling, McKim, and King, 2003, p. 48). The range of government and non-profit organizations collaborating to serve people experiencing homelessness, and their use of data in particular to better serve this community, represent the complex interaction of the social and the technical (Meyer, 2014), and the interesting aspects occur at the interface between how people within organizations collaborate around data. We begin by exploring the elements of these interorganizational collaborations, including the Continuum of Care (CoC) and the value of cooperation. We then describe our interview-based approach and present our results. We then discuss how our results add to the existing literature and conclude with implications for theory as well as for practice.

**Background**

**Interorganizational Collaboration.** Many cities advocate for collaboration between organizations to accomplish larger community-wide goals, assuming that coordinated resources will result in positive outcomes; however, coordination, effort, and effective leadership are all required to facilitate success. This type of coordination between organizations from different sectors of society has become prevalent in various cities as they recognize that homelessness cannot be fully addressed by any one organization or sector (Jang, Valero, & Jung, 2016). Many different types of organizations share a common goal of ameliorating homelessness, ranging from secular government organizations to faith-based organizations, which have played an increasingly active role in addressing homelessness (Nooe & Patterson, 2010). Formal collaborations are often expected or required by federal funding agencies. Gulati, Wohlgezogen, and Zhelyazkov (2012) articulate cooperation and coordination as distinct, complementary elements of collaboration in strategic alliances. Coordination represents the tactical methods of accomplishing the collaboration, while cooperation represents the intrinsic value of proactively working together to accomplish shared goals. Given the importance of cooperation in establishing and maintaining effective collaborations, there is a need for further research on how organizations with partially overlapping goals can effectively cooperate (Jang, Valero, & Jung, 2016), particularly in the context of a societal grand challenge such as ameliorating homelessness.

**The Continuum of Care (CoC).** Similar to other cities across the US, Austin participates in the CoC approach to addressing homelessness, which is a regional organization that coordinates access to federal funding. In Austin, this effort is led by ECHO (Ending Community Homelessness Coalition), a non-profit organization that manages collaborations between the area’s providers of services, shelter, and other resources serving people experiencing homelessness (ECHO, 2021). ECHO manages a data sharing platform known as a Homelessness Management Information System (HMIS) to coordinate resources and work, which is similarly recommended by the US Department of Housing and Urban Development (HUD). The CoC program was created by the McKinney-Vento Homeless Assistance Act and the Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act to fund nonprofit, government, and other organizations serving people experiencing homeless in a particular area (Jang, Valero, & Jung, 2016). Legislation specifically authorized categorizing the homeless population by social characteristics and vulnerabilities. For example, priority funding was given for individuals who were labeled as single mothers, disabled, mentally ill, recovering addicts, and domestic abuse victims (Hoch, 2000). The population of people experiencing homelessness is not homogenous, and there has been an increased awareness for an array of services and interventions to meet the needs of the various subgroups (Wong, Park, & Nemon, 2006). Previous research has found that the usefulness of information resources available to people experiencing homelessness is related in part to the flexibility and portability of those resources (Woelfler et al., 2009). Information intermediaries, such as ECHO, are key to communicating and providing resources to this population, yet they experience significant barriers, including access to open data, uncoordinated information systems, and limited data capacity of community based organizations, as well as tensions related to disparate access to data, the tendency of existing infrastructure to exclude the concerns of partner organizations, and the limited usefulness of data being collected (Yoon & Copeland, 2020). The majority of organizations working to serve homeless populations do not seek only temporary solutions but ultimately aim to move affected individuals and families out of poverty permanently (Hoch, 2000). The underlying assumption in promoting CoC networks to reduce and eliminate homelessness is that cooperation is inherently good and the most effective way to address this complex issue (Jang, Valero, & Jung, 2016).

**Cooperation as a Human Value.** Human values, or “what a person or group of people consider important in life” (Friedman, Kahn, & Borning, 2006, p. 349), are a concept that spans fields including but not limited to advertising, anthropology, human-computer interaction, information studies, management, political science, psychology, science and technology studies, and sociology. Values are formed early in life and are slow to change during adulthood (Hitlin & Piliavin, 2009). Values are trans-situational and can be used to explain attitudes and behavior (Schwartz, 2007). Cheng and Fleischmann (2010) conducted a meta-analysis of twelve value inventories across these fields, and identified values found in multiple value inventories. In the Personal Values Questionnaire inventory (England, 1967), cooperation is defined as a “soft” value for managers. In the Shared Values in Organizations inventory (McDonald & Gandz, 1991), cooperation and diligence are tied as the most salient values in the business environment. Thus, cooperation can be seen as something to be valued (or not) in and of itself. Human values also serve as factors that promote or inhibit cooperation. Zhang et al. (2009) surveyed participants in public-private partnerships and found that shared values can facilitate cooperation. Similarly, Fleischmann (2003) found that for-profit and non-profit organizations with distinct core values can build strategic partnerships by latching onto peripheral values. In this paper, we explore the role of cooperation as a value in fostering collaboration among different stakeholders providing services to people experiencing homelessness.

**Method**

This paper describes how and why an interorganizational arrangement collaborates to achieve a common goal. In this case, we present results exploring how multiple, heterogeneous, organizations share data and information to better serve people
experiencing homelessness. The results presented in this paper represent a single key theme from an ongoing interview data collection that is part of a larger mixed-method study. Our parallel data collections include surveys and interviews with people experiencing homelessness and quantitative data analyses. This paper focuses only on the theme of interorganizational coordination; for example, in another paper, we explore the theme of infrastructural justice (Slota et al., 2021). For this paper, we drew inspiration from the case study method (Yin, 2012). Specifically, in this analysis, we embrace the open-ended nature of the case study approach. The study design, data collection, and data analysis are described in detail below.

Participants. This study focuses on the experiences of stakeholders within government and non-profit organizations working with those on the homelessness spectrum in Austin, Texas. The research team chose a qualitative approach to collecting this data in order to draw deeply from the lived experience of those directly engaged with providing services to people experiencing homelessness in the Austin CoC. Participants were initially approached following recommendations from key informants from the City of Austin who were collaborating on this research. Following this initial group, we made use of snowball sampling (Noy, 2013), to build upon the unique social knowledge of our participants in identifying key individuals and organizations to approach. Snowball sampling, in Noy’s (2013) conception, can be a “dynamic embodiment of social knowledge” (340) that allows research to be guided by informal, or even invisible, social relationships and structures in identifying persons of interest from the disparate, yet collaborating, organizations that we were studying. As such, we had no formal criteria for inclusion or exclusion, with participants identified through their participatory or leadership roles in the CoC.

Design. We conducted 31 semi-structured interviews of approximately one hour each, balancing pre-existing questions with flexibility allowing the interviewer to follow-up or ask for clarification on answers as needed. This format allows researchers to collect answers to specific questions as well as understand how key participants working within this interorganizational arrangement think about their work and construction of reality (Yin, 2012). We structured these interviews according to critical incident technique (Flanagan, 1954; Morrissey, 2015), asking each participant to describe an ongoing project or experience, as well as one that they would characterize as successful and one that could have been more successful or did not resolve in a satisfying way. We also asked about collaborations among services, the use, value, and barriers to information and data sharing, and means of self-assessment such as internal metrics and necessary grant reporting.

Materials. We analyzed the transcribed interviews inductively using thematic analysis (Braun & Clarke, 2006). We selected this method of data analysis because it is highly versatile when describing rich qualitative datasets through both deductively and inductively identifying patterns within them. In early reviews of the data, the two lead authors identified descriptions of various projects, their outcomes, and the resources that made them possible, as well as barriers to success. These broad categories became our initial codes, which guided our further iterative rounds of coding as the two lead authors sorted and coded the data, applying additional codes and subcodes as needed. Next, we reviewed and assessed the codes and subcodes to generate overall themes, which we in turn reviewed to ensure they accurately represented the dataset. The research team agreed to organize and present the data using these themes, including descriptive quotes for each. Among the initial themes we discovered were those related to the role of values and intrinsic motivations in structuring and supporting the efforts of the service providers and local government agencies. To further explore these values, we used Cheng and Fleischmann’s (2011) meta-inventory of human values to develop a set of codes to identify and characterize value-laden statements present across these interviews. In addition, we used England’s (1967) Personal Values Questionnaire and McDonald and Gandz’s (1991) Shared Values in Organizations Inventory to examine the value of cooperation more closely. Through this coding, we found the value of cooperation to have a central, orienting, and structuring role in how our participants approached their work. This theme related closely to how participants valued cooperation, and how their collaborative engagement both structured and was structured by that value. In the following sections, we report, discuss, and elucidate on this theme.

Results

Systematic review of the data revealed two distinct and opposing attitudes toward the value of cooperation for its own sake. Many participants expressed positive attitudes toward cooperation, such as “I think that collaboration has really helped…We're trying to reach out to other agencies, and we're trying to build these collaborations and relationships. So, I think that has made my job easier.” However, some were not convinced that cooperation was inherently helpful or beneficial in all cases. “Collaboration is overrated…The strong nonprofits are supposed to collaborate with the weak nonprofits. Like, I don't have time for that.” Going beyond this simplistic binary, we found three common areas where how cooperation was valued influenced interorganizational collaboration: obtaining funding, using resources efficiently, and providing effective service. A salient factor across all aspects of cooperation was the importance of shared values.

Funding Eligibility. First, to be eligible for many types of funding, federal policy requires that organizations providing service to those on the spectrum of homelessness provide evidence of valuing cooperation beyond their individual site. This requirement rewards collaboration between these organizations and drives participants to exhibit cooperation to obtain financial support. One participant explained:

“The NSF has recently started funding under what they call that “coopetition” model... And one of the ways you can demonstrate being successful is by collaborating with the other smaller projects...We collaborate all the time with like 50 other agencies and organizations that use our learning centers where we have joint funding.

Some participants, however, recognized that the collaboration requirement to receive certain funding created additional barriers. “So that's kind of where we're at with the different organizations. I don't think there's a lack of wanting to participate... it's resources and then of course the red tape that sometimes kind of blocks things.” Our participants’ organizations often have different orientations in terms of subpopulations served, services offered, and broader motivations. These orientations and values may come into conflict with those of other organizations or of funding agencies, which may add their own sets of requirements and constraints. For example, different funding agencies may have different expectations for privacy protections or different outcome
measures, which increases the complexity for the cooperating organizations. Participants expressed frustration with these constraints, but also acknowledged the importance of working together to obtain funding. These cooperative efforts to seek and leverage funding resulted in both positive and negative outcomes.

**Efficient Use of Resources.** Second, many participants expressed valuing cooperation as a way to help organizations use their limited resources more efficiently, with sharing of data and information mentioned most frequently. For example:

I would say that data has played a key role in terms of the very beginning of this organization, because we all, obviously, share our data. We utilize a single database because that allows for tracking with the clients, making sure you know that they're getting all their needs met, and that they're not traveling…they are truly, you know, sticking with one organization. And that data sharing, I cannot overemphasize that. Because we use it in real time to inform the work and improve the work.

However, not all organizations found sharing data and resources to accomplish their shared goals to be effective. Differing goals, strategies, and tactics were all identified as barriers that arose when more than one organization attempted to work together and share resources. These included budgeting, time-management, approaches to data management, and other ways of engaging that did not align. One program organizer explained:

I have found that it's very difficult to get people to think about how they repurpose existing resources…get them to think and operate differently. Where you don't have to keep adding people you can reap, retool existing resources to achieve the same outcomes without exorbitantly increased costs, which are prohibitive to making that program something that could function in a broader geographic area more effectively.

This sort of shared work was often found to be burdensome, especially when it came to the responsive sharing of current data. Among the community-based organizations participating in the CoC, several smaller, or less resourced, organizations reported only a single individual (often not even full-time) who was responsible for all tasks related to data and the interface with HMIS. Sharing of data, especially very recent data, become for many such organizations an unmanageable quantity of work for that individual. The difficulty the above program organizer expressed in finding the means to repurpose existing resources itself may have been a significant cost to such organizations. While participants related a need for further, and more current, knowledge sharing, this data sharing itself could be, to some community-based organizations, a significant resource drain, prompting a challenging balancing act between participation and effective delivery of service, as we further discuss in the next section.

**Effective Delivery of Service.** Third, participants in interorganizational collaborations often mentioned the importance of cooperation to effectively provide service to their clients. For example:

[Best Single Source Plus is a] brilliant community collaboration. I feel really, really proud of that…. I think doing it in partnership with multiple organizations…[it] together the aspects of good homeless services, the best single source to help a person with what they're experiencing, [and] the agency that is most fit to understand the underlying causes that led to your homelessness, which is critical. And this has had a phenomenal success rate of helping people get housed and stay healthy.

These effective collaborations often took place where organizations with parallel goals worked together to manage an excessive demand on their services or resources. In these cases, there was little competition for clients, and collaborators were able to work together effectively to distribute strain across the collaboration. Despite many participants mentioning such positive experiences while working with other organizations to provide services to those experiencing homelessness; however, there were aspects of organizational values that presented roadblocks when collaborating to serve mutual clients.

So it's tough, right, because we never want to advocate for any agency to overshare about a client. But you know, when we have a release of information on file, and it's just maybe not the exact right release of information, where we could technically talk about the data, but there's an extra step that for a particular agency needs to occur in order to feel the most safe about sharing data. It does provide a, you know, a barrier to getting that client or keeping the client in services that they may need.

In the above quotation, cooperation was carefully weighed against the protection of what might be sensitive data, and the interviewee related how their organizations made use of formal mechanisms for release and protection of data. These mechanisms, though, delay information sharing that might be necessary for prompt delivery of time sensitive services, such as delivery of medical records needed to obtain necessary medication. In this, we see values related to data security, liability, and privacy in tension with the value of cooperation, resulting in barriers to effective delivery of services across that collaboration. It is these values tensions that further highlight the need to identify shared values between collaborating organizations, as we will further discuss in the section.

**Leveraging Shared Values to Achieve Inter-Organizational Cooperation.** Effective inter-organizational cooperation requires converging around shared values and focusing on points of agreement rather than points of disagreement. One participant expressed this by saying, “I definitely think... everyone having a shared vision of what goals that you have, a common understanding of the subject matter...I think those are some hallmarks of a good collaboration.” Another participant contrasted the importance of shared values with the financial advantages of inter-organization cooperation, saying:

For me, successful collaboration means buy in and regular engagement and sustaining the passion for this and checking in with each other and supporting each other as the staff doing this work. But also finding a way to have this guiding 'why' that's bigger than the economics of it.

Much like in the last section, this participant recognized the need for coordination of values between collaborating organizations. Such shared values can lead to productive synergy in accomplishing organizational goals, but inter-organizational collaborations do not always work smoothly. One study participant noted, “Having been in the public health space for a long time, organizations can be very, very territorial. And you know, not without reason, because resources are scarce...That
Our findings reveal frictions and disjunctions that occur as cooperation is understood, valued, and motivated differently among the organizations from which we drew participants. However, these moments of difference also highlight how coordination might be more effectively achieved. Where cooperation is motivated and valued similarly between organizations, even if only partially, that can serve in a role like that of a boundary object (Star & Griesemer, 1989), enabling broader coordination and collaboration even when other values and organizational cultures are not shared (Fleischmann, 2003). For example, religious organizations may have many areas of disagreement with governmental organizations, but if they share the goal of reducing homelessness, they can successfully cooperate by bounding their collaborations to focus on this shared value. It is understood that our values are deeply embedded in the technologies we create (Friedman, Kahn, & Borning, 2006; Winner, 1989), and that is not limited only to our computational tools; this is also true is the ways of working we put into place. Similar to the work of Jang, Valero, and Jung (2016), this study found that interorganizational networks have positive impacts, including enhanced capacity, efficient use of resources, and sharing of ideas and information. However, further research is needed to analyze the value of cooperation in formal bodies, such as coalitions and CoCs, as well as information collaborations involving religious organizations or other local groups providing services alongside larger agencies. In addition, research is needed into the value of cooperation in resource sharing agreements, including both data and financial resources.

Limitations and Future Research Directions. This study is limited by its focus on only the city of Austin, TX, and their CoC. Similar research needs to be done cities of different sizes across the US in order compare finding and get a more complete view of the value of cooperation in this context. This study focused on interorganizational collaboration with the goal of ameliorating homelessness, but the value of cooperation could be studied in a range of interorganizational collaborations studying widespread social issues and grand challenges, such as education, public health, sustainability, and issues regarding policing. In addition, this work focused on service providers and their experiences of cooperation but collecting data from individuals from served communities would add dimension and robustness to the understanding of the value of cooperation. In our larger project, we are currently conducting surveys and interviews with people experiencing homelessness to understand their perspectives on what services and information about services would be most valuable to them. Finally, additional research into how individuals and their personal values interact with organizational values would be beneficial.

Conclusion

This research presents a study of collaboration in Austin, Texas among nonprofit, community based, and governmental organizations that share resources in the combined effort to ameliorate homelessness. We found that frictions and disjunctions occur within these partnerships as cooperation is understood, valued, and motivated differently within various organizations, but that alignments and positive outcomes result as well. Implications of this research for theory include the recognition of the value of cooperation beyond the context of traditional business management. This study found cooperation to be an important

‘territorialness,’ it interferes a lot of times.” Another participant expressed frustration toward the expectations around collaboration:

We don’t demand that the semiconductor industry collaborate. We don’t demand that the auto industry collaborate...The culture at [our organization], which is a faith-based organization that leans heavily – [in a] not proselytizing way -- into the gospel of Jesus Christ is not going to be able to culturally collaborate with a secular-based organization. Yet we can intersect at a point and then do our thing at that point and then move on to the areas that we’re different about.

The above statement presents a very interesting perspective from the leader of a religious organization collaborating with many, primarily secular, organizations around providing services to those experiencing homelessness. This participant also felt significant external pressure to collaborate, a pressure that they felt was more intense or pointed in this environment than in other areas of work. For them, cooperation was both valued and mandated, and strategies through which they might make it work become of central importance to their overarching organizational goals. In this situation, it would be expected to find significant contrasts in organizational values and goals, but this participant was able to find ways to effectively collaborate across this divide. Differing organizational values, as related by this participant, needed to be both understood and managed for collaborations to be effective. This understanding served to enable collaboration where unexposed or undiscussed, conflicting, values might otherwise result in unproductive tensions – a lesson that may well apply in other interorganizational arrangements, as we will discuss below.

Discussion

Underlying the CoC concept is the idea that a diverse hierarchy of organizations can work together for social improvement (Hoch, 2000), and this study found that assumption to be true. In addition, beyond required interorganizational cooperation to obtain federal funding, many organizations work together to use limited resources to more efficiently and effectively deliver services to people experiencing homelessness. The CoC approach to ameliorating homelessness has at its core the notion of coordination and collaboration among government offices, community-based organizations, and other service providers such as landlords. While it was perhaps to be expected that, among the engaged stakeholders within the City of Austin’s CoC, cooperation would be a key value, these interviews revealed a layering of concerns intersecting and parallel to cooperation that are both consequential and heterogeneously motivated. Cooperation based solely on the incentive to work with other organizations in order to receive federal funding was not seen by participants as a ‘win’ for individual organizations and was sometimes even viewed in a negative light. However, cooperation motivated by its potential to enable more effective delivery of services to target populations was actively embraced by individuals, who spoke of this type of cooperation as beneficial and satisfying. Understanding how cooperation is valued and motivated provides insights as to how it structures and is structured by organizational cultures and concerns and provides key leverage for enabling productive collaboration and coordination of work.
human value which calls for further study within the field of social psychology. Implications of this research for practice includes the need to intentionally leverage the value of cooperation within and between all types of organizations working together within the CoC, focusing on the shared goal of reducing homelessness rather than on areas of misalignment or disagreement between groups. Leaders cannot expect the requirement for organizations to collaborate will automatically result in positive outcomes; instead, it is vital to emphasize to those working within these organizations the efficiencies yielded through sharing resources and improved outcomes for the individuals being served, highlighting the larger purposes and goals of cooperation.

References