COORDINATING SERVICE PROVISION IN DYNAMIC SERVICE SETTINGS: A POSITION PRACTICE RELATIONS PERSPECTIVE

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ABSTRACT

How is continuity of service provision supported in dynamic service settings (DSS) when interactions span space and time, and are being increasingly infused by technology? We explored this question through our eighteen-month qualitative study of the DSS of UK mental health. We found that the pattern of interaction that emerges is constantly reconfigured through processes of spanning time, stretching space and through distributed agency. Further, we found that service provision does not only occur among work roles with clear (cross)organizational links but also through diverse interaction among current customers and their friends, as well as customer-to-customer interactions. We characterize such service provision which is not anchored to any service organization as being *extraorgnizational*. Further, we highlight the importance of the history of interactions and how trust built through diverse interactions in the past may influence trust building in current interaction. To explain our findings we introduce the concepts of "position-practices" and position-practice relations (PPR) to theorize how diverse interaction among dispersed actors contributes to service provision continuity in DSS. We develop a conceptual process model which identifies processes of spanning time, and the stretching of space by which the PPR web of service provision is dynamically reconfigured, and with what consequences for both our case as well as other dynamic service settings.

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INTRODUCTION

Service provision is a demanding challenge to organizations operating in Dynamic Service Settings, such as health, law, education, childcare and consulting (Nembhard & Tucker, 2011). Achieving and maintaining continuous service provision in DSS requires multiple actors in different roles, both within and across organizations, working together (Gittell, 2006; Alter, 1990) and with customers (Okhusen & Bechky, 2009: 495; Gittell, 2011: 406), such as doctors, nurses, and patients in a healthcare service setting. However, not all individuals that contribute to continuous service provision in a DSS can be identified in roles. And not all individuals interact within organizations; some might be found outside the boundaries of any organization (e.g. friends of a customer) and even interact through online platforms. This suggests that existing literatures drawing on role-based approaches to coordination have not accounted for unexpected actors interacting across space and time in novel ways, with unpredictable consequences for (future) service provision, for customers and for the organizations involved. How this diverse interaction among dispersed actors contributes to coordinating and, thus, supports continuous service provision in Dynamic Service Settings needs to be understood.

Current scholarship puts forward a strong argument that work activities can be coordinated through "the interactions that occur while individuals enact roles" (Bechky, 2006: 8). From role-theoretical perspectives, interaction among individuals-in-roles (such as doctors, nurses, patients) enables coordination because roles enjoy clear boundaries, well-defined responsibilities and pre-assigned activities (Bigley & Roberts, 2001, Griffin, Neal & Parker, 2007). Specific roles are typically accountable for the delivery of a service; for example, a doctor- nurse- assistant bounded "role set" may be accountable for health service delivery in a hospital (Valentine & Edmondson, 2015: 406). Within a role set, the individuals in roles have clear links and reporting relationships which further supports coordination

(Okhusen & Bechky, 2009; Valentine & Edmondson, 2015). Accordingly, role-theoretical perspectives support that worker-customer interaction improves service dynamics (e.g. Albertsen et al., 2014; Gutek, 1999; Gittell, 2002b; Gittell & Douglass, 2012; Bond & Gittell, 2010; Cramm et al., 2014; Cramm & Nieboer, 2012, 2014a, b), and that coordination effects are improved through worker-worker interaction within an *intra*-organizational role set (e.g. Gittell, 2002a; Gittell et al., 2008; 2015; Gittell, Seidner & Wimbush, 2010; Gittell, 2001), and worker-worker interaction within an *inter*-organizational role set (e.g. Gittell & Weiss, 2004).

We add to current scholarship through our 18-month field study (2009-2011) in the DSS of UK mental health. Failing to maintain continuity in service provision in this DSS may not only result in a record of poor performance for an organization, but also in adverse outcomes for specific patients, with a knock-on effect on their future well-being and the broader community. As we demonstrate through our data, continuous service provision was supported by interaction within intra- and inter-organizational role sets, which we observed. However, we were surprised to additionally observe that multiple actors' actions unexpectedly interlock despite not having specified organizational or cross-organizational links, e.g. former customers (e.g. past patients) and friends of customers. Importantly, this interaction was *also* directly aimed at the intended outcome of maintaining the continuity of service provision for specific, current customers. Existing scholarship, with its focus on clearly defined, intra- and inter-organizational role sets, cannot adequately explain these observations. Nor does existing research adequately account for our observation of variation in the pattern of interaction that would otherwise be sufficient to achieve service continuity. As our study is longitudinal, we also noted that some of the variations in the pattern of interaction in the DSS of our study are ephemeral, while others are not. Either way, this variation was consequential for service provision, for the patients and the organizations

involved in this Dynamic Service Setting. Furthermore, because earlier influential empirical works typically examine role-based interaction among physically collocated actors, as on film sets (Bechky, 2006), hospital units (Valentine & Edmondson, 2015), and airports (Gittell, 2001) existing research does not help explain work in our empirical setting where actors do not all interact in real time and may not share the same physical location, but rather do so through social media and other technological platforms (Barrett, Davidson, Prabhu, and Vargo 2015).

Our study therefore, poses a puzzle to understand how the continuity of service provision is supported in DSS through interaction that spans (physical and virtual) space and time, often through technology, and even though a pattern of interaction may vary over time. In order to make sense of findings, to which existing research cannot offer sufficient explanation, our article demonstrates the importance of integrating insights from role-theoretical perspectives with those of practice-theoretical perspectives (Schatzki et al., 2001; Nicolini, 2013; Whittington et al, 2006; Feldman & Orlikowski 2011). We adopt, advocate and illustrate a practice approach – the Position-Practice Relations perspective [hereafter: PPR; Giddens, 1984; Stones, 2005] – which provides the theoretical handholds that facilitate a reconsideration of agency, temporality, spatiality and the role of technology. Its distinctive features further enable us to articulate the processes by which variation emerges over time in any pattern of interaction, which we labeled as processes of spanning time and stretching space. We found that the implications of the constant reconfiguration of the pattern of interaction on future coordinating efforts in DSS, was profound. The insights enabled by the adoption of the PPR perspective are developed into a conceptual process framework, and provide theoretical contributions as well as offering new research avenues for future work.

First, we add the notion of PPR to the toolkit of organizational theorists interested in roles, role-based interaction and role-based coordination, particularly in an area of increasing

economic importance - Dynamic Service Settings. To explain how continuity of service provision is supported in DSS when interaction spans space and time, and is being increasingly infused by technology, researchers –we argue- must additionally account for the ever-changing situation (because of the evolving customer needs), for individual agency, and for agency distributed in time and (both physical and digital) space. Our article demonstrates how the PPR notion allows researchers to understand, examine and address the puzzle generated under the conditions encountered in our field study. Our PPR perspective highlights the importance of the history of interaction and - in an interesting twist - also highlights how trust built through diverse interaction in the *past* may influence trust building in current interaction.

Second, our findings bring practice theory to bear on role-based perspectives, thereby bringing together the two theoretical areas. In this way, our findings signify theoretical linkages between practice theory and role theory and provide a set of clear implications of adopting a position-practice perspective for conceptualizations of interaction to support service provision. We therefore offer a complementary point of view for role-based theorists interested in service settings and in coordinating in service settings, contributing to current conversations in the literatures on relational coordination theory (Gittell, 2006; Gittel, 2011), service relationships and service interactions (Gutek, 1999; Conlon et al., 2004). By doing so, we extend the practice view on role-based coordination (e.g. Bechky, 2006), encompass and go beyond theorizing only specific types of role-based interaction and their reciprocal interrelationships (e.g. Gittell & Douglass, 2012; Ple, 2013; Gittell, 2002b) and demonstrate that service provision does not only occur among work roles with clear (cross)organizational links but also through diverse interaction among current customers and their friends, as well as customer-to-customer interaction. This suggests that service provision does not have to be anchored to a(ny) service organization and could be characterized as *extraorganizational.*

Below, we first review the existing literature on role-theoretical perspectives on interaction and then present our perspective of practice-position relations to address the puzzle posed by our field study. We then describe the research setting and the details of the research design. From our longitudinal data, we present how multiple actors coordinate their efforts in our DSS towards service provision continuity. We then discuss how our findings contribute to our understanding of role-based interaction, role-based coordination, and the role of PPR in extending these literatures. We also provide boundary conditions for our study and future research directions.

MAINTAINING SERVICE PROVISION IN DYNAMIC SERVICE SETTINGS

Coordinating activities among multiple service workers within and across organizational boundaries, while simultaneously tailoring these activities to the emerging needs of the customer (i.e. patient), with the purpose of maintaining service provision for the specific customer, is a novel challenge facing service settings (Okhusen & Bechky; 2009: 496; Gittell, 2011).

Different aspects of this challenge have motivated various groups of contemporary scholars. According to the theory of relational coordination, which examines relating for the purpose of task integration under conditions of reciprocal interdependence, uncertainty and time constraints (Gittell, 2006), repeated interaction between workers such as those characterizing DSS, would over time generate stronger relationships among those interacting and thus avoid adverse consequences to service provision (Gittell, 2002: 1410; Gittell, Weinberg, Bennett, & Miller, 2008; Gittell, Weinberg, Pfefferle, & Bishop, 2008). For the literature on "service interactions", the repeated worker-customer interactions such as those typical of DSS, would over time generate "service relationships" (Gutek and colleagues, 1999; 2000; e.g. visiting the same physician over a period of years). The history of these interactions and the expectation of future interaction lead to "high-quality service delivery",

as proposed by Gutek (1999: 219) and demonstrated in Conlon and colleagues (2004). Both streams of literature draw the conceptual link from repeated interaction among actors (albeit primarily focusing on different actors), to maintaining service provision in settings that share DSS characteristics.

These literatures are role-based, because the interacting actors are perceived to be in 'roles', or "activity-based positions that can be assumed by anyone with the necessary training" (Valentine & Edmondson, 2015: 405). For Gutek (1999), the "customer and workers get to know each other as role occupants" (p. 219). For relational coordination studies, the reciprocal interrelating between workers (Gittell & Weiss, 2004; Gittell & Douglass, 2012), is examined through the relationships among service workers occupying specific roles (e.g. doctors, nurses, assistants; Gittell et al. 2008, 2015). Role-based interaction is thus perceived as crucial to support service provision in settings that share DSS characteristics. We therefore focus on the contributions of this body of research to our understanding of how efforts towards continuous service provision are coordinated in DSS, while highlighting the ways in which it does not adequately account for our field study observations.

Existing Research on Role-based Interaction in settings that share DSS characteristics

A key contribution of existing research based on role-based perspectives, is the demonstration that interaction – either within an *intra*-organizational role set or within an *inter*-organizational role set – enables coordinating and thus supports service provision.

In settings that share DSS characteristics and intended outcome, scholars have frequently examined interacting actors who are in roles linked with a focal organization (i.e. in worker roles; in the role of the current customer) and, thus, are perceived to interact within an *intra-organizational* role set, typically because this specific set of roles (e.g. one doctor, two nurses, two assistants) might be explicitly tasked with the delivery of a service (e.g.

Valentine & Edmondson, 2015). Interaction among service workers within a focal service organization was the initial focus of relational coordination theory in care groups and hospitals (Gittell, 2002a; Gittell, Weinberg, Bennett & Miller, 2008; Gittell et al., 2015; Gittell et al., 2010) and aviation (Gittell, 2001). Other scholars have focused on *interaction between service workers of a focal service organization and current customers*, which is perceived to lie at the heart of organizational life in a range of service settings (Albertsen et al, 2014; Gutek, Bhappu, Liao-Troth, & Bennett, 1999; Gutek, Cherry, Bhappu, Schneider, & Woolf, 2000; Gittell, 2002; Skaggs & Huffman, 2003). This worker-customer interaction is even used as the defining characteristic of DSS by Nembhard and Tucker (2011), and the focus of Gutek and her colleagues (1999, 2000) in a variety of settings including cruise ships (Conlon, Van Dyne, Milner, & Kok Yee, 2004). Across studies, individuals-in-roles interact within an intra-organizational role set, with the aim of achieving and maintaining service provision (continuous medical care; on-time flight departures; etc).

As recent literature suggests, however, it makes a difference to service provision dynamics when studies additionally account for interaction with roles outside the focal service organization (e.g. Bond & Gittell, 2010; Derrington, 2012; Cramm et al., 2014). Expanding the *intra*-organizational "role set" of previous empirical studies, Gittell and Weiss (2004), for instance, examine interaction among workers *within* a hospital (pp.134-139) and, also, interaction among hospital specialists and specialists working for 'external partners' of the hospital (e.g. in the roles of family doctors). In other words, the authors examine interaction between *workers within a focal organization and workers in other service organizations* within an *inter*-organizational role set. Importantly, the authors find that this interaction contributes to improved service delivery (p. 147).

A second key contribution of existing research is found in the few rare empirical studies that simultaneously examine worker-customer and worker-worker interaction within

an organizational role-set. One such study, Ple's (2013) examination of banking service provision, has demonstrated the 'influence' (p.3) of worker-customer interaction *on worker-worker* interaction. The reverse 'influence' is discovered in Gittell (2002a). Since DSS are characterized by both, these studies expand our conceptual horizons by demonstrating the need to account for the *interrelations* of different types of role-based interaction when examining service provision in DSS. Building on this insight, relational coordination theory has recently expanded to include a focus on worker-customer interaction (e.g. Parsons, 2012; Cramm & Nieboer, 2014a, b), with Gittell and Douglass (2012) calling for the study of interrelations among types of interaction (p.716).

Existing research has provided important evidence for the significance of different types of role-based interaction (worker-customer, worker-worker within a single organization, worker of one organization with worker of other organizations) in supporting service provision in settings sharing DSS characteristics. However, we must add to existing insights to adequately account for our field study observations, as we elaborate in detail below.

Some difficulties with existing scholarship

Within a role set, role-based interaction helps role occupants coordinate their efforts because roles have clear reporting relationships (Bigley & Roberts 2001: 1287) and because "people [role occupants] know whom they are working with and how to find each other (…) and everyone together has a collective responsibility for interdependent work" (Valentine & Edmondson, 2015: 407). This powerful understanding underpins the tendency for empirically examining interaction in intra/inter-organizational role sets where actors have readily visible links (e.g. reporting relationships) to one another (workers, and/or customers).

In our field study, we observed that there were no clearly defined links between some actors who were nevertheless implicated in the continuity of service provision (e.g. past

patients, neighborhood friends) often through their activity of social media platforms (e.g. a chatroom) or through activity outside any organizational space (e.g. the neighborhood park). Indeed, we would be challenged to position this interaction within any typical inter/intra-organizational role set. Which may explain why we still know very little about how this diverse interaction may contribute towards maintaining service provision in DSS and how it might even interrelate with well-studied types of interaction, such as worker-worker. This, we argue, poses a limitation to understanding how service provision is maintained in DSS for three main reasons.

First, if scholars start their investigation from the assumption that all significant decisions of whom to account within, or exclude from, the role set have been made in the past or by some higher authority that decided the boundaries of who is relevant and who is not, and the "links" between them, then we may perceive actors as being in a situation where they are stuck with only a pre-specified selection to choose from, deploy or enact in their efforts to coordinate towards continuous service provision in DSS. Although studies do not rule out the possibility of variability or change in the pattern of role-based interaction because of the "agentic dimension" (Emirbayers & Mische, 1998: 975), they do not adequately explain how actors (in roles) might selectively recognize, locate, and implement change in their ongoing and situated interaction. Indeed, this variability in the pattern of interaction over time is precisely what we observed in our field study of 18 months. Recent calls to study the personal in role-based relationships (Gittell, 2011, pp. 405-406) underline this limited awareness of agency and situatedness in existing work.

Second, repeated worker-worker interaction, repeated worker-customer interaction and repeated interaction among workers of one organization and another organization are each separately suggested to support the maintainance of service provision, as discussed above. But if the highest levels of performance are achieved when interrelating is *reciprocal*

as Gittell and Douglass (2012) theorize – and Ple (2013) and Gittell (2002b) support – then these arguments may be extended to propose that *reciprocally interrelating* through all these different interactions, would further support service provision continuity in DSS. And, therefore, it follows from the same arguments that *excluding* interaction either comfortably situated within an inter/intra-organizational role set (e.g. worker-current customer) or not (e.g. the interaction we observe in our field study among past patients and current patients), may have the unintended consequence of excluding important insights on how the continuity of service provision is maintained in DSS.

Third, if interaction continues being examined primarily in geographically limited role sets where role actants interact face-to-face and in real-time (e.g. on a cruise ship; Conlon et al., 2004), this ignores a powerful trend in the delivery of services which are increasingly moving out of organizational spaces (e.g. the hospital) and into non-organizational spaces (e.g. the community in our field study), often supported through ***technology*** and social media platforms. The well-established benefits of physical co-location (copresence; Mead, 1934; Goffman, 1963) on enabling coordination (Okhusen & Bechky, 2009), have had the inadvertent outcome of maintaining the focus of the scholars in this stream of research on face-to-face interaction taking place in organizational spaces.

Our field study therefore, poses a puzzle to understand how actors coordinate their efforts in DSS towards maintaining service provision, despite the spread of interaction across (virtual and physical) space and time through technology, and even though the typical pattern of interaction may change over time. Since current scholarship does not go far enough to examine distributed agency, temporality, spatiality and technology in interaction that supports coordinating in DSS, we find it helpful to advance a practice perspective on interaction to understand our findings.

Bringing in the notion of Position-Practice Relations to account for agency, spatiality, temporality, and technology

We propose that the Position-Practice Relations lens (Giddens, 1984; Stones, 2005) helps us tackle the puzzle of our field study, i.e. how distributed agency, temporality, spatiality and technology in interaction contribute to the pattern of interaction that supports coordinating within DSS.

First, the Position-Practice Relations [PPR] lens directs attention to the *practice* that actors in position-practices collectively perform. The concept of "position-practices" recognizes that all interaction 'depends upon the "positioning" of individuals in the time-space contexts of activity' (Giddens 1984: 89). While "position-practices" are frequently associated with roles (Coad & Glyptis, 2014: 146; Cohen, 1989), this concept stresses the *practice* that might not inhere in roles. In so doing it helps us to understand how actors coordinate their efforts in DSS, as it is shifts the emphasis away from pre-specified intra- or inter- organizational role sets to the *practice* that links these agents across time and space in position-practice relations (Stones, 2005; Coad, Jack & Kholeif, 2015). Such a focus is an appealing approach to understand how actors coordinate their efforts in DSS when not all actors share explicit (cross)organizational links.

Second, when individuals are in position-practices in relation to a specific task (e.g. the continuity of service provision), it follows that they are also located in a web of 'relations' among position-practices, referred to as a *PPR web* (Coad & Glyptis, 2014; Stones, 2005). Within any PPR web, "interactions… are produced through the agency of social actors'' (Cohen, 1989: 2) and are "necessary for actors to coordinate their actions with others" (Coad & Herbert, 2009; found in Coad & Glyptis, 2014:147). As a result of such continuous interaction among agents in "position-practices" within this PPR web, the PPR web itself changes over time. This perspective, therefore, recognizes both agency as well as

the importance of temporality in shaping the pattern of interaction over time. Further, recent work (Coad & Herbert, 2009; Greenhalgh & Stones, 2010) has highlighted that technology, which has been largely ignored in existing scholarship, is a critical element of position-practice relations and technology mediated interaction may (re)shape PPR webs.

We contribute by combining role-based and practice-based views to better understand how multiple actors coordinate their efforts in dynamic service settings which are increasingly infused with and depend on technology for service provision. Earlier work (Bechky, 2006) has adopted a practice-based conception of role-based interaction. However the actors in Bechky's (2006) temporary organization (film sets) are in very close physical proximity to one another and do not interact with customers but rather only within an intra-organizational role set (director, grip, actor, etc). Further, in Bechky's (2006) research setting and analysis there is less of a focus on longitudinal observations of variation in the pattern of interaction. By examining the PPR web in the context of our empirical study, we can explain the variation observed in the typical pattern of interaction which we observed over time and, importantly, the empirical and theoretical implications of this variation on the continuity of service provision. In other words, in this article we address the research question: *How does diverse interaction among dispersed actors contribute to coordinating and, thus, supporting continuous service provision in Dynamic Service Settings?*

METHODS

The Dynamic Service Setting of Mental Health Care

Being a chronic illness, mental health is a typical DSS, characterized by continuous worker-customer interaction with the intended outcome of maintaining service delivery over a period of time extending to years. In this setting, service workers are specialized and highly interdependent with each other within a service organization and across other service organizations, some having a mental health focus while others may not (e.g. educational

services). Maintaining the continuity of patient care in these conditions is further challenged by the fact that patient needs vary over time, often significantly. As such, mental health is an ideal setting to study how actors coordinate their efforts in a DSS as they share similar characteristics to other DSS such as law, education, childcare and consulting.

The Empirical Context of Mental health care in the UK

Across the UK, young people under the age of 18 may access mental health treatments at the publicly funded organizations called "Child and Adolescent Mental Health Services", or CAMHS. Our study took place in a specific geographical area of the UK where the local CAMHS organization catered to a population of wide socioeconomic, ethnic and urban-rural heterogeneity. This CAMHS is typical of under-age public mental health service organizations in the UK, in terms of its organizational processes and treatments, as it offers specialist care to young people such as counselling, psychological therapies, family therapy and community support. We consider this CAMHS as the *focal service organization*, its employees as CAMHS *service workers of the focal service organization*, and the patients as *current customers*.

Research Approach

This paper draws on qualitative data collected between November 2009 and March 2011 (1.5 years) within the geographical "catchment" area of CAMHS. Consistent with other practice-based studies (e.g.Mazmanian, 2013; Nicolini, 2011; Orlikowski & Scott, 2013), our study draws on multiple qualitative methods: documentation, observations and interviews (we present these in detail). Through these methods, our efforts aimed to identify those activities that would be considered as relevant to the composition of the *practice* of mental health service provision. Our focus on the routine or daily activities that are performed in the context of mental health is inspired by practice-based theorists (e.g. Dougherty, 2004;

Nicolini, 2011: 606; Mazmanian, 2013: 1230; Orlikowski, 2002: 255),[1] and our emphasis on human activities in a specific area is informed both by the purpose of our study and by the need to make an analytical "cut" (Barrett, Oborn, Orlikowski, & Yates, 2012).

Data Sources

We followed an emergent strategy for data collection. Initially, research access was facilitated by a research grant with the local mental health "Trust" (a public organization that includes CAMHS) as the designated partner. We used a "snowball technique" (Lincoln & Guba, 1986) to identify research participants outside CAMHS (see Table 1). Informed consent was acquired by individual research participants.

[Insert Table 1 about here]

Observations. Our observations were conducted "in the natural context of occurence" (Adler & Adler, 1994), which in our study spread across multiple research sites (described below). We catalogued all our field observations so that, over time, we believe that we relatively covered the range of typical activities (Barley, 1990) in mental health provision.

Physical sites of the focal service organization. Initially, we were non-participant observers in 13 out of the 15 physical sites of CAMHS, of which we observed a sub-set (n=3) for thirty non-consecutive days to deepen our immersion in the field. We attended two 'team meetings' in one of the CAMHS units, lasting about 90 minutes each and further attended two 'referral assessment sessions' in another CAMHS unit, lasting 60 minutes each. Additionally, we observed seven "service improvement initiatives" which typically lasted 1 to 3 hours and took place in an informal setting -- over pizza, coffee and usually in late afternoon. They were organized by groups of patients and their carers or by CAMHS workers. Participation was voluntary and ad-hoc. One was monthly and would last 3 hours,

[1] We consider as 'relevant' those recurrent human activities that are recognized by and collectively meaningful to multiple actors in the specific context of the practice of mental health service provision in our geographical area of study. This definition is deeply grounded in the work of practice theorists emphasizing 'situatedness' (Feldman & Orlikowski, 2011, p. 1241; Nicolini, 2011), 'intelligibillity' (Schatzki, 2012, p.3) and 'collective meaningfulness' (e.g. Dougherty, 2004, p.49).

bringing together 26 to 30 participants: 3 CAMHS service CAMHS workers, 7 current CAMHS service users, 14 carers or family members of current CAMHS members, 2 past CAMHS service users, and 2 carers or family members of past CAMHS patients. For our study, these provide rich observations on the activities of multiple actors within CAMHS (e.g. team meetings) and outside CAMHS (e.g. pizzeria). Notes from these observations were copious (134 pages), often verbatim and anonymised, and followed up with interviews of observed participants. We later extended our observations to other sites, physical and virtual.

Physical sites of other service organizations. We observed the physical sites of other organizations that became relevant to our study, sometimes accompanying workers to their work appointments and often speaking to them in the halls and common areas around offices.

Organizational virtual sites. We observed specific online sites that were brought to our attention by research participants as "virtual places" where current and past CAMHS patients interact: NHS Choices forums, Pinpoint, Public Opinion, and Moodzone.

Other virtual sites. Our attention was drawn by current CAMHS patients to a forum on the popular social media website Facebook, which was created by and attracted a sub-set of past and current CAMHS patients from the specific UK region of our study. This forum was public (i.e. accessible to anyone with a Facebook account, which is free to acquire) from October 2009 to September 2011. We did not observe patients using these social media platforms per se, but we had access to the textual record of these activities through the "history line" of each social media platform, which offered what we have called "a frozen record" of activities that occured even months prior to our study. This provided us with a wealth of data around the online and offline activities of current and past patients.

Interviews. In addition to numerous reflective conversations in the field, we draw on data from 58 interviews, ranging from 30 to 70 minutes.

Formal interviews (n=38) were recorded and transcribed verbatim. In the interviews to CAMHS workers, questions included: "Can you tell us what you *do* when you *deliver* mental health care to your patients?" To actors other than CAMHS workers, we asked: "Can you tell us what you *do* when you (your son, your daughter, etc) *receive*(s) mental health care?" We also modified two key research questions first designed by Sandberg and Pinnington (2009): "What other people are involved, and how are they involved when you are delivering (or receiving) mental health care?" and "What tools and equipment, are involved, and how do you use them when you are delivering (or receiving) mental health care?" (p.1151). The Sandberg and Pinnington (2009) study is similar to ours because it is practice-based, and hence we benefited from these two questions that the authors' used to "explore in detail the people and things involved in ways of practicing" (p. 1151). Following closely their approach to interviewing, we also sought to elicit concrete examples from participants through follow-up questions (such as, "Can you provide an example that illustrates more specifically how....?", p. 1151) and through what the authors call 'confirmatory questions' (p.1151), such as, "So if I understand you correctly you mean that...?". However, the focus of Sandberg and Pinnington (2009) is 'competence' in the context of corporate law, while our research investigates mental health service provision. Also, we used these questions with workers, customers and other members of their communities (e.g. carers), while Sandberg and Pinnington (2009) only address these questions to service workers (i.e. lawyers). Because of these two differences, we modified research questions and interview protocols accordingly.

Ethnographic interviews (n=20) as participants left meetings in a range of spaces typically focused on specific activities or issues at hand.

Documentation includes service/organization documents and patient documents. Memos and other documents were accessed through the CAMHS intranet with help from CAMHS workers. Patient documents included referrals, calendars and locations of care. Also, we

collected extensive documentation generated by CAMHS, such as schedules, meeting minutes, organizational information, best practice protocols, care guidelines, transition plans, policies, meeting minutes, and evaluation criteria. For service organizations other than CAMHS, we collected publicly available documentation and documentation that became available to us through participants.

Analytical Approach

The initial focus of our empirical, practice-based study was to examine the *practice of mental health service provision* in the geographical area of our setting. Therefore, Stage 1 of our analysis examines activities relevant to mental health service provision in the context of our study. Stages 2, 3 and 4 pertain specifically to the findings and discussion of this article.

Stage 1. We assembled on a timeline all the relevant activities that were collected through interviews, documentation and observations. We coded all our data together, a grounded theory strategy (Charmaz, 2006; Strauss & Corbin, 1998), and coded according to *when* they emerged in the practice of mental health service provision. This analysis identified the specific activities carried out in the practice of mental health service provision in the specific context of our study, thus grounding our study in the everyday, routine activities that are jointly performed by and collectively meaningful to multiple actors in a specific context.

First, this analysis revealed the significance of interaction in supporting the practice of mental health service provision. The notion of "interaction" surfaced early in our analysis, because it featured frequently in our participants' accounts of how they provide (or receive) mental health service and even more prominently in their explanations about how their efforts interlink with others' towards maintaining mental health service provision for current CAMHS patients, as in the representative example below:

[Interview, CAMHS therapist]
CAMHS therapist: An Autistic Spectrum Disability [ASD] child could not get his feelings under control. I highlighted to the parents that they need to do more 'visual aids' activities

with him at home to help him communicate with them and warn them about his bursts of anger. They did [this activity at home] and within three sessions there was a remarkable improvement in how our patient warned them about his anger. And we also need the parents in the room [at CAMHS] to do *transference work*, to take the information out with them to the home, because ASD children cannot do that very well, so the parents have to be in the room with the young person.

Interviewer: So what is transference work? I don't know really

CAMHS therapist: It's the work I do together with the parents, when they come here [in CAMHS]. It's sort of work. We talk together about how they can best support what the patient and I do *here* [points to the room around her] when the patient is *at home* with them, when they are at home *talking, joking, even arguing*.

Interviewer: And this is something everyone does?

CAMHS therapist: I would be surprised if someone doesn't [laughs]. It is important to keep those communication lines open and strong, otherwise we… you see we all are in this together and talking to the parents is key to our success as a [service] unit [at delivering mental health service].

Second, our first round of analysis highlighted that "breakdowns" in service provision were recurrent. These would prompt a pattern of interaction that was not typical either before or after those breakdowns. For example, during a breakdown, we would often code in our data that "CAMHS workers and workers of other service organizations reviewing/revising existing procedures and treatment activities". We coded 34 "breakdowns" in our dataset, using the following criteria: (i) the definition, by Lok and DeRond (2013), "when things don't go as planned or as expected" and (ii) whether a breakdown unsettles typical service provision for specific patients. Of these, we had recorded and/or observed longitudinally eleven (11).

Stage 2. At this point, we had noted the analytical promise of interaction and breakdown, although it was unclear how interaction supports service provision despite – or through- recurrent breakdowns. Holding on to our hunch that these constructs are significant (Locke, Golden-Biddle & Feldman, 2008), we sought out literatures that might help better understand how interaction supports service provision.

We turned to the existing literatures on role-based interaction as a "sensitizing instrument" (Howard-Grenville, 2007: 265). Through an iterative process of simultaneously

examining data and relevant literatures (Gioia, Corley, & Hamilton, 2013; Locke, Golden-Biddle, & Feldman, 2008), in another round of coding, we identified types of role-based interaction in our data. We focused on identifying and refining our description of each type of interaction, ensuring that each type was consistent across its multiple occurrences. We then categorized each type of interaction, by juxtaposition with those in the relevant literature (Suddaby, 2006: 634), and so we chose labels that reflect these literatures: Worker of the Focal organization with Worker of the Focal organization, Worker Focal with Worker of Other organization, Worker Focal with Current Customer.

Stage 3. Even after the Stage 2 analysis, we had not accounted for interaction that was obvious in our data and had an impact on service provision. For example, as described in the excerpt above, the interaction between the CAMHS therapist and the parents of the young ASD patient. This instance of interaction clearly contributes to coordinating service provision for the specific ASD patient. In fact, the absence of such interaction may jeopardize service provision continuity. Intrigued by similar observations, we further examined the distinctions between our empirical data and the insights generated by existing scholarship and identified the following areas in which existing literature was less helpful in making sense of our field study observations.

First we noted - similar to the parents of the ADS patient - multiple actors interacting without enjoying clear links with each other or with the focal service organization (CAMHS). These actors might be, for example, friends of the patient. Indeed, interactions between the patient and her friends were often cited in interviews as key for maintaining the patient's engagement with the service (coded in 34 instances). In total, we coded 132 such instances in our dataset, with the following criteria: (i) the instance of interaction occurs among actors not in direct link to CAMHS, or in a reporting relationship to one another (ii) this instance of interaction and the resulting activity is aimed at maintaining service provision for specific

current CAMHS patients. We observed multiple such instances of interaction in Service Improvement Initiatives (24 instances) and in informal settings (12 instances; e.g. pizzeria meeting of ASD families).

Second, we noted the absence of consideration of technology in current empirical accounts, as often existing studies on role-based interaction are concerned primarily with face-to-face interaction in real time. By "technology" we broadly refer to technology-based platforms: computer-, phone-, network- or internet-based. Yet, our data analysis quickly highlighted the significance of technology to enable interactions dispersed across the physical and virtual sites of our multi-sited empirical study. Examples range from the internet-based social media platforms such as the Facebook site of past and current CAMHS patients, to the workers emailing updates in real-time to a colleague who could not attend the ongoing CAMHS team meeting. We coded 111 instances in our dataset, with the following criteria: (i) technological platforms enable interaction aimed at the intended outcome of maintaining service provision for specific CAMHS patients (ii) actors draw on the historical ("frozen") record of past activity found on technological platforms, with the intended outcome of maintaining service provision.

Third, while analyzing data across breakdowns and over time, we were intrigued by the "modifications" that we observed happening during breakdowns to the pre-existing pattern of interaction. We sought to understand what effect this variation may have for maintaining service provision for the specific patients involved. Since our longitudinal data allowed for such an investigation, we re-coded our data to explore this direction further and noted two processes: (1) actors would go back in time in the patient's history, their own experiences, and knowledge of past similar incidents, while also try to imagine future possibilities of patient care for this specific patient in this evolving situation and (2) actors would seek interaction outside the typical organizational spaces and even in virtual spaces of their care,

in order to maintain service provision. We labeled the first process as "*spanning time*" and the second as process of "*stretching space*". These often overlapped but not always. Both often had the (unintended) consequence of including additional, unexpected actors, such as a past patient in the process of "stretching space", or the former councilor of the current CAMHS patient who is brought back into the fold in the process of "spanning time".

Stage 4. Our analysis in Stages 1-3 highlights that, the practice of mental health service provision (composed of activities, saying and doings of the participants to the practice) comes to be a practice through interaction. The pattern of interaction that supports coordinating among the multiple participants in the practice of mental health service provision, unfolds and changes over time, sometimes supported by technology, across physical and virtual, organizational and non-organizational spaces.

In tune with much recent inductive research, we subsequently drew on the concept of Position-Practice Relations (Cohen, 1989 and Stones, 2005; drawing on Giddens, 1984) to account for the situatedness of unfolding action across time, for spatiality, and the enabling role of technology and to help structure our interpretations. Through an iterative process between recent literature on PPR (e.g. Coad & Glyptis, 2014; Coad, Jack & Kholeif, 2015; Stones, 2015) and our analysis, we focused specifically on those aspects of the PPR notion that provide strong theoretical "handholds" to address the puzzle of our study. As we demonstrate, the notion of ***PPR webs*** in particular, offers a powerful lens to examine the processes by which agency, temporality, spatiality and technology come together towards the intended outcome of continuity of service provision. We provide more information about this final stage of analysis in the sections that present our findings.

FINDINGS

In the next two sub-sections we present findings from our longitudinal analysis of how diverse interaction support the coordinating of dispersed actors towards continuous service provision in Dynamic Service Settings.

In the first section, we draw on our interview, observation and archival data to display how actors in multiple position-practices interact within the PPR web of mental health service provision. This section is followed by an analysis in which we discuss how our theoretical perspective of Position-Practice Relations develops key aspects of agency, temporality, spatiality and the role of technology to advance our understanding of how interaction supports service provision in DSS.

In the second section we present our findings through two examples (Jonathan's and Anna's) that display chronologically how multiple actors in multiple position-practices interact to realize the intended outcome of maintaining the practice of service provision for these patients *over time,* during and despite the observed breakdowns. Following recent work (Nicolini, 2011; Deken, Carlile, Berends & Lauche, 2016; Jarzabowski & Le, 2017), we adopt the strategy of providing "representative narratives" (Deken et al., 2016), through which to "illustrate" (Jarzabowski & Le, 2017) our findings. Each of the two examples is followed by an analysis in which we further develop our key theoretical insights and extend these insights to account for distributed agency and the role of the technology enabled processes which involve *spanning time* and *stretching space*.

Interaction produced in a 'Position-Practice Relations' Web: *Where, Whom, When and How*

The intended outcome of maintaining continuous service provision for a specific patient, brings together multiple individuals in "position-practices" relevant to this task and, over time, creates a "web" of relations among them. *Figure 1* offers a visual of a "typical" PPR web of service provision for a specific patient (labeled "current patient"). As typical of recent

studies that visualize PPR webs (e.g. Coad & Glyptis, 2014; Greenhalgh & Stones, 2010), our visual foregrounds an "agent-in-focus" – in our study, the position-practice of the *current patient.*

[Please Insert Figure 1 here:
Visual of typical PPR web in Mental Health service provision]

Within this PPR web of service provision, "practice-positions" (depicted as "ovals" in Figure 1) are always in relation to the task of maintaining service provision for our "current patient". Position-practices typical in our setting are those of the "therapist to the current patient", the "nurse to the current patient", the "carers (mother, father) to the current patient", but also the "GP (family doctor) to the current patient" and the "school teacher to the current patient". Interaction among those occupying position-practices (depicted in Figure 1 with arrows), is produced through the agency of actors, situated in space and time and often enabled by technology (such as mobile phones, email, or social media platforms). We next offer multiple examples from our rich dataset.

Where: ***Interaction spread across organizational and non-organizational spaces***

For depression, anxiety and obsessive compulsive disorders, which are the majority of "presentations" in CAMHS [citation withheld to maintain anonymity of the organization], the "first line of defense is CBT [Cognitive-Behavioral Therapy]" (Interview, CAMHS psychiatrist). Through weekly appointments at a CAMHS unit, CAMHS patients and CAMHS workers engage in CBT activities that are "hands-on", as the goal is to "explore, together, different skills that the patient can use to change their daily actions, behaviors and feelings that are holding them back", then, patients "go home and practice, essentially, their homework" (Interview, CAMHS therapist).

In Samantha's case, her Obsessive Compulsive Behavior [OCD] meant that this 15-year old was unable to have meals at school because she "refused to eat anything she had not

prepared herself or seen prepared in front of her eyes" (Interview, CAMHS therapist). CBT activities started with "blueprinting", which is "filling in a handout in which the patient and therapist together note down what the patient has done in the past, what worked and what not" (Interview, same). Then, Samantha took this handout home. It was Samantha's choice – at home- to "test, one-by-one" all the activities on the "what-worked-in-the-past-list", record what she did in a "journal" and return a week later (for her next CBT appointment) to review this journal together with her CAMHS therapist and "discuss each item's future potential" (Interview, same).

For Ginni, a 15-year-old patient diagnosed with anxiety and obsessive compulsive behavior, one of the CBT sessions involved the activity of recording Ginni's voice…

> …[d]escribing her absolute worst fears. Then [during the appointment] she [Ginni] listened to the recording on her earphones repeatedly, in order to heighten her anxiety levels, let them spike as high as they can be [Interview, CAMHS psychologist]

The same psychologist explained that this activity aimed to "let her [Ginni] see that she can actually calm herself down even when in the after-stage of superbly high levels of anxiety." In-between appointments, it was Ginni's idea to repeat this activity while taking a walk with her mother.

Similarly, Roger, a 13-year old with dog-phobia first "took hold of various dog-related items: a dog leash, a dog collar, a dog bowl, in here [the CAMHS appointment room] with my encouragement" (Interview, CAMHS nurse) and with time, "took on the daily activity of going to the park for 5 minutes every afternoon and gradually increase to 30 minutes" (Interview, same). As the park is usually full of dogs in the afternoon, this activity aimed to "desensitize him [to dogs' presence] and increase his confidence over time. He started first by going with his brothers [to the park]" (Interview, same).

Analysis of spatiality in interacting towards supporting continuous service provision

Samantha, Jo, Ginni and Roger, among other current patients on CBT therapy, interact regularly with CAMHS workers in the position-practices of (e.g.) the "nurse to Samantha/Jo/Ginni/Roger", to identify "target areas" to change, and each of them

experiments with various techniques to support the desired change, both within and outside the CAMHS appointment room (i.e. at home, while taking a walk, at the local park).

Indeed, without patient involvement and engagement within and outside the time and space of CAMHS appointments, mental health service provision cannot emerge. “To put it simply, if they don’t want to engage, we cannot make them engage and we certainly cannot make them want to change. They need to want it” (Interview, CAMHS psychologist). Multiple site observations and interview data also highlights that patients’ family members (carers, or foster parents) together explore ways to better support patient treatment, and they meet both within and outside the location of a CAMHS unit. For example, Ginni in the position practice of the “current patient” interacts with her mother (in the position-practice of “the mother of Ginni”) towards maintaining Ginni’s mental health service provision by taking walks together while Ginni listens to the recording of her worst fears. The agency of these actors, and in particular the current patient, is critical towards maintaining service provision in DSS, as we present next.

Whom with: ***Interaction produced through the agency of multiple actors in “position-practices”***

Samantha, Jo, Ginni and Roger present examples of how the patient’s active participation to the practice of mental health service provision shapes their (future) care. Each of them actively seeks treatment options, chooses to put time and effort into particular treatment options over others, and might reject alternatives. Each of them might actively recruit other participants (parents, siblings), passively allow them into or restrict from the activities aimed at maintaining the current patient’s mental health service provision. In turn, those participants (parents, siblings) choose -or not- how, when and with what intensity to participate in the activities to maintain Sam, Jo, Ginni and Roger’s continuity of care. As the examples of Samantha, Ginni, Jo and Roger illustrate, the *agency* of each and any of these multiple actors in position-practices is relevant to the task of maintaining service provision for a specific,

current patient. Further examples from our fieldwork strongly support the insight that interaction within a PPR web (the arrows in Figure 1) is produced through the agency of actors in position-practices.

Parents, siblings and friends of patients engaged in Cognitive Behavioral Therapy, as presented earlier, might choose to jointly enact the treatment activities with the patient, at home (e.g. going for walks, going to the park, doing breathing exercises, filling in a "blueprinting" handout, etc). Parents of patients engaged in psychoanalysis [a different type of therapy] might, for example, "hold containment" in-between sessions – the importance of this activity explained to us as follows:

> When Mia [current patient] leaves [the appointment room], she is usually confused, all over the place. All of our psychoanalysis patients, not just Mia. Psychoanalysis is quite intense, very deep, not just about skills but digging deep. She [Mia] might go home and tell the parents that I [CAMHS psychologist to Mia] was mean or that it is "boring". Of course, the young person has to be free to come to therapy or not. But if the parents cannot "hold containment" around Mia, to be consistent in their reactions and in their activities with her at home, psychoanalysis cannot work *here* [emphasis in voice, Interview CAMHS psychologist]

Similarly, the example below highlights how maintaining service provision is also supported by interaction – without involvement of CAMHS workers. This is the case of Lena and Fiona, two current CAMHS patients and friends, who:

> [We] both go to the same CAMHS unit, and quite often our appointments are at the same time, so we wait together and chat. It's funny how the techniques we learn in cognitive behavioural therapy sessions can be turned into something fun. We practice the techniques such as mindfulness, relaxation and color therapy together, though sometimes we find it hard to keep a straight face [Excerpt from online blog on a public website for NHS patients]

These two girls in position-practices of "current CAMHS patients" offer a colourful description of how they "share" therapeutic activities and highlight the positive effect this has on the care of each one of them. The interaction between these two "current patients", involving activities of "practicing mindfulness, relaxation and color therapy together", is likely to be in-between CAMHS appointments and at a non-CAMHS location, such as the school, or the girls' homes. Each individual in this interaction (Lena and Fiona) chose the other, and both have chosen these specific therapeutic activities to engage in together (e.g.

color therapy). So far, these choices seem to support both girls' continuity of service provision according to their own online account.

Lena and Fiona are current patients - but even *past* CAMHS patients would place themselves within the PPR web of current patients by volunteering to participate in activities targeting the current patients' continuity of care - as the following example illustrates:

[Extract below from observations at a CAMHS-organized service improvement initiative which took place at the specialist CAMHS eating disorders unit]

Hayne (*current* patient): So what do we, should we expect over the Christmas period

Liam (*current* patient): People will be eating a lot over Christmas and then they will be going on diets after Christmas [*Note: patient appears very concerned*]

Rebecca (*past* patient - volunteer): What I did back then was I distance [sic] myself from people talking about diets, I just avoid talking to them. I tell them that this is not what I want to be talking about and that is it. And also I stick to a meal plan over Christmas, so that I would gain weight and start thinking straight again *[Note: gaining weight is considered a positive outcome for patients diagnosed with anorexia]*

Liam (*current* patient): Then what about the meal plan?

Rebecca (*past* patient - volunteer): That, yes, I stick to it. There is a closing in the [CAMHS] unit over Christmas, they are minimum staff or something, not real closing but sort of. The first Christmas I did not know, it was unexpected. [So] request a meal plan in advance and also ask your nurse to add a bit extra to it *[explanation: more calories]*. It is better to have a bit extra so you don't feel like the poor kid at your family Christmas table. It goes against what you think you want, I know. [But] that's what I would do if I did it over again. Ask your nurse.

Additionally, parents and siblings might interact as well. During our days of observations at CAMHS units, we noticed that younger patients under the driving age would typically arrive to the appointment together with a carer, in the carer's car, and sometimes, with younger family members (e.g. siblings). Typically, when the patient entered the appointment room, carers and siblings would not leave the CAMHS unit, but instead would wait in Reception until the young person emerged at the end of the appointment, at which point they would all leave together. While waiting for 30 to 60 minutes every week at about the same time, the patient's carer(s) and even siblings were surrounded by other patients, carers and siblings similarly awaiting for appointments, often chatting with one another while waiting, exchanging views on patient care plans, care facilities, even specific CAMHS workers.

Similarly, we observed multi-family group meetings of parents, grandparents, siblings of current CAMHS patients, planned by family members themselves, with one person typically taking the lead to organize the logistics of such a get-together and others actively participating by showing up and even offering car rides to other participants.

More predictaby, CAMHS workers would constantly interact with the aim of providing care for patients. For example, on a weekly or bi-weekly basis, each CAMHS unit held a team meeting in which all CAMHS workers would discuss ongoing cases, such as in the one below [excerpt from our observations at a CAMHS team meeting]:

Jen (CAMHS therapist): Next case, that's me. I am wondering if we need to do some more parent-child work for this 12 year old. Child initially presented, the presenting issue was he was bullied in school and had lice in her hair and there was some abuse situation at home. The child has been in distress, not functioning well at school and has learning problems. Mother rather neglectful, blames the child a lot. But she [child] is thriving in our sessions, for six months now.

Diana (CAMHS psychologist, *not* directly involved in patient treatment): The father?

Jen: Ehmmm, out of the picture.

Diana: Perhaps why mother is blaming her [child].

Jen: She's not on ASD or ADHD *[explanation: not diagnosed with Autistic Spectrum Disorder or Attention Deficit Disorder]*.

Diana: The problem lies in the relationships and I bet the mum cannot cope with this child for her own reasons.

Jen: I thought that too, so I recommended VIG for them *[Video Interactive Guidance is a type of treatment activity where a camera is installed in the patient's home by the Local Educational Authoriy, not CAMHS, for a short period of time to 'capture' daily home life. This is then used as input for school activities and for future treatment sessions and care plans with CAMHS workers]*

Ellie (CAMHS psychiatrist, *not* directly involved in patient treatment): VIG is appropriate, it will bring in more evidence, it seems an appropriate intervention.

Jen: The mother said it is too much for the whole family, but I will recommend it again. The problem is, things keep bouncing back every time we make progress.

Diana: Don't give in yet, ask again, recommend it and explain what it is and how it will be useful to them, for them all.

These interactions among CAMHS workers were planned in the sense of being regular (ever two weeks) and having clear expectations of participation and format. There even was a clear protocol of what accounted for a "red" situation, i.e. "a situation of

significant risk to be reported and discussed as soon as possible" (quote from protocol). Yet, after observing these meetings we were surprised that it was difficult to predict which cases each individual CAMHS worker might decide to bring forward in this meeting, and how each CAMHS worker might argue in favor or against a specific decision-path.

Additionally to the frequent ad hoc and planned (e.g. team meetings) interaction among CAMHS workers, we observed that activities supporting a patient's mental health care would emerge from multiple CAMHS workers interacting with GPs, social workers, charity workers, educational psychologists, school teachers and other service CAMHS workers from organizations other than CAMHS – even with the "lead" of a football camp for teenage girls, as in the example below:

Henry (CAMHS lead and CAMHS nurse): anyone else? Other cases to discuss?

Jane (CAMHS nurse): My patient with the breast cancer mother, Jannelle, she, well, I have an appointment with the Football Academy to see IF [*with emphasis*] she can go.

Henry: When?

Jane [goes through her handheld calendar]: March 1st. So the plan is, she had lots of CBT and a bit of psychodynamics work with Laura [CAMHS psychologist]. The Football Academy is quite intense for three weeks away from home. So I'm meeting with the 'lead' of some sorts at the Football Academy and then also with their 'councillor' to make sure things are in place, what CBT activities she will do while there because I will not see her here for almost 4 weeks, and we [the CAMHS nurse, Football Academy 'lead' and councillor] need to form a back-up plan.

Henry: Sounds interesting! Good, next?

[Notes from observing a bi-weekly team meeting at a CAMHS unit]

This example illustrates that any worker of another service organization may work together across organizational boundaries, through emails, planned or ad-hoc phone calls and face-to-face "professionals' meetings" (as called in the field by CAMHS service providers) on CAMHS premises, or on the premises of the other service organization (e.g. the Football Academy in the previous example). It was the choice of the patient to disclose to Jane that she intended to attend the Football Academy (alternatively, the patient could have just

"disappeared" for three weeks, leaving Jane surprised and worried). It was a choice of Jane (CAMHS nurse to patient) to bring this to the attention of the other CAMHS members attending the bi-weekly team meeting reported above. In the end, it was Jane's commitment to provide as much support as possible to this current CAMHS patient that led her to arrange a meeting with the Football Academy lead, going far beyond her call of duty.

Analysis: Agency towards supporting continuity of service provision

Over 18 months, we noted interaction with the patient's carers, such as the mother walking with Ginni as part of her CBT "homework" and the brothers going to the park with Roger as part of his "homework". By shifting our attention to the *position-practices* which these actors enact in relation to the task of maintaining service provision for specific patients, we can account for actors such as "parents", "carers", "siblings", "school friends", and even "other current patients" (see visual in Figure 1). These position-practices are linked to one another and to other position-practices (the nurse/psychiatrist/teacher to the specific patient) through the practice of mental health service provision for specific patients (e.g. Samantha, Jo, Ginni and Roger, in some of the examples above). Interaction among the actors in these position-practices generates and emerges within a web of position-practice relations (depicted in Figure 1). This interaction is produced by the agency of individual actors – not only the current patients (e.g. Ginni, Roger, Jo) but also actors who choose to be (brought into) the PPR web of a particular patient (e.g. the past-patient of CAMHS, Rebecca, who volunteers to meet and talk with current CAMHS patients). These actors in position-practices in relation to the position-practice of the current patient choose how to contribute (or not) to the maintenance of this current patient's PPR web (e.g. Jane, the CAMHS nurse to a current patient, goes above and beyond the call of duty by arranging to meet the Football Academy lead which her patient will be attending). Many other similar examples from our longitudinal

fieldwork illustrate how people in position-practices, through their agency, produce the interaction that supports the PPR web of care of particular patients.

How and When: ***Interaction enabled through technology***

Our data supports that, although most of the interaction is enacted face-to-face, during working hours and on CAMHS premises, other interaction would typically occur in-between treatment appointments, over the phone and email. On one occasion, a CAMHS therapist describes how he would routinely add the date of the next therapeutic session in Joanna's (CAMHS patient) mobile phone calendar:

> Just before each session ended, I would make sure that she [the patient, Joanna] had her next session's time/date logged in her cell phone's calendar. She and her boyfriend would "move around a lot in the area", meaning that they would often sleep over in friends' houses or at his parents' house, or you name it. [Interview, CAMHS therapist]

Joanna would thus receive a reminder from her phone's calendar the day before each session and she would, according to the CAMHS therapist, not miss sessions regularly. For Joanna, missing a session would trigger her anger and worsen her symptoms. By using technology that Joanna already owned (her phone), the therapist and Joanna together agreed on a way to solve a common problem in the smooth provision of mental health service.

But interaction towards supporting mental health service provision was also enacted in virtual spaces. During our observations at one of the CAMHS units, a CAMHS nurse showed the researchers on her work email account, a string of messages from a patient. As she explained, this "shy" patient would "not say a word in therapy, but write an essay over email" (Informal interview, same). The patient would send these long emails in-between official CAMHS appointments, at all times of day and night, often during weekends. However, she explained, the patient and herself had an understanding that she would not respond on the same day and would not be available over the weekends. In their next face-to-face appointment at the CAMHS unit during working hours, the nurse would print out their virtual correspondence and discuss the key issues. Thus, these virtual interactions of the CAMHS current patient and his nurse were enacted in-between appointments, out of working hours and

outside CAMHS premises, yet clearly contributed towards maintaining mental health service provision for this specific patient.

In other cases, though, the *past* activities of *past* CAMHS patients may be equally important:

> If you are thinking of taking on the X module [type of treatment] with Dr. X [name of CAMHS psychiatrist], think again. Better off with our 'lovey' [nickname that CAMHS patients used to refer to another CAMHS psychiatrist]

This comment was posted on the same online networking site by a past CAMHS patient, and it was followed up ("Liked") nine months later by two current CAMHS patients, which we know because of their participation in other discussions on the same online site. This technology-enabled interaction brings together the past and current patients through time to explore options and treatment activities aimed at maintaining a "current patient's" service provision. Over the one year in which we observed this online site, we noted several instances when past and current patients would interact, often in real-time (as evidenced in the time-stamps of their consecutive online posts), by texting and posting pictures relevant to their care, seeking advice and supporting each other through their treatment activities.

Analysis: Interacting through technology across space and time to support continuity of service provision.

In the context of mental health in the UK of the time of our study, service provision emerges through the recurrent interaction among the actors in practice-positions linked together across space and time, through their common goal of service provision to a specific current patient. This interaction would take place face-to-face, as well as distributed across virtual and physical organizational spaces, generating a PPR web of service provision for the specific patient. Our data supports that technology-enabled platforms would support the PPR web, by enabling interaction among actors in "position-practices" that would otherwise be unable or difficult to interact. While Loane and D'Alessandro (2014) offer an insightful study of online patient-to-patient interaction on an online networking site, we additionally include temporality, spatiality, and real-time interaction to address an emerging situation (e.g. a

change in patient health). In Figure 1, we choose not to discriminate between interaction modes (digitally-mediated/face-to-face; dyadic/collective).

Summary. This section displays the web of position–practice relations relevant to the practice of mental health service provision for current patients of CAMHS. The next section teases out how and why the position–practice relations in this web (and, thus, the web itself) change over time. Although Figure 1 serves well to illustrate the various position-practices through which actors interact in relation to their common task, this two-dimensional figure fails to capture all of the elements of position-practice relations because it has no time dimension and appears rather static. It is particularly less effective in capturing temporality, which is crucial for maintaining service provision for specific patients such as Jonathan (discussed below) whose needs evolve over time. Therefore, the next section attempts to capture variation over time in the PPR web's typical interaction pattern through Figures 2a - 2b and 2c-2d.

Maintaining Service Provision through the Processes of Spanning and Stretching

Our mapping of position-practice relations within the PPR web of mental health service provision revealed a rich and complex picture. In this section we display illustrative examples in which we chronologically follow how a patient's PPR web is reconfigured over time. We organise our evidence to discuss how a PPR web is reconfigured in response to the presently evolving situation. We also identify the outcomes of such reconfigurations on maintaining service provision for the specific patient and the structural context of the PPR web.

Reconfiguring the PPR web of Jonathan's mental health service provision

Jonathan is a patient with anxiety, whose PPR web of mental health service provision is depicted in Figure 2a. His parents' divorce made him distrustful of new people in his life. In March 2010, when his CAMHS therapist had to "let him slowly off her caseload [i.e. stop treatment with him] because she was going part-time, he announced that he would "stop

treatment altogether rather than engage with a new therapist" (Interview, CAMHS nurse and care coordinator to Jonathan). To respond to the ambiguity of that situation, multiple actors coordinate their efforts towards maintaining service provision for Jonathan, such as the CAMHS workers in this excerpt from our observations:

Tina (CAMHS lead and specialist mental health nurse): Ok, we understand the issue, and I wonder if there are other ways to engage him back. Is he motivated still to get an education? We can maybe use the motivation for education as motivation to get better so he can return to school. Remember ***Natalia*** [a *past* CAMHS patient; our emphasis]?
[Some others in the room nod positively]
Jen (CAMHS nurse and care coordinator to Jonathan): Yes, he is still motivated in his studies
Diana (CAMHS therapist): Can we email him? Skype?
Jen: Mum says he is into skyping but never before with us
Diana: I can try
Tina: Let's see if we can come up with any other other ways to engage, he needs to get some, any, experience of success with Diana and that [should] booster his confidence to engage again [with a CAMHS worker/Diana].
Jen: if not?
Diana: What can "MIND" do for him? He once had a councillor there before he joined us. We might need to "refer" him back to someone he knows and trusts *[MIND is a mental health charity, a service organization different to CAMHS]*
Jen: I need to find out, I don't remember, it must be in his initial CPA *[the Care Programme Assessment document that was completed during Jonathan's initial assessment and offers a written record of Jonathan's patient history]*.

In this CAMHS team meeting, Jonathan's CAMHS care coordinator (Jen) and others not directly involved in Jonathan's care until then (Tina and Diana), explore ways in which to re-engage Jonathan within CAMHS (e.g. through skype, through email, through appealing to his educational aspirations) and potential options for Jonathan's future service provision outside CAMHS (i.e. for Jonathan to work with a service provider of the mental health charity called "MIND"). In a follow-up interview with Jen, she describes the flurry of activity that followed:

Jen: We had a checklist of things to consider going back in time almost 10 months that he [Jonathan] had been with us [CAMHS unit], to see whether we could locate his old councillor in MIND.
Interviewer: And what's the list?
Jen: For me, to go find the CPA and see under the "history section" what if anything we could use to deal with this, ehm, crisis. He was just adamant that he does not want to work with Diana: It is true that his previous worker [Maria] was and is one of our best and they had created such a lovely relationship. It is a pity Maria has to

cut down [her work hours], but it is what it is. We need to make do with what we are given sometimes and Jonathan needs care and support by an expert.

Interviewer: and so you found the MIND councillor?

Jen: Not me, *Jonathan's mother did [our emphasis]*. She found him and she asked him to contact me. I don't know how she found him. Then he contacted me and *we did a handover to him.*

Interviewer: We?

Jen: Maria and Jonathan met with him here and handed over. It was quite fast, within two weeks? Maybe. I think Jonathan's mother was here too but I am not sure she was in the meeting.

Interviewer: So what now?

Jen: Now? Well it's obvious. Jonathan is not on our caseload any more. Not for now anyways. He might return later. For now his needs are dealt with the councillor appointments [MIND councillor] but if his anxiety deteriorates the mother said – and this is the right thing to do – Jonathan will be re-assigned to our caseload. We have this 12-month "return" policy.

In a later interview, Tina (CAMHS unit lead) confirmed that indeed the "handover" took place in early January and the patient record indicated that Jonathan had been transferred to the care of a MIND councillor *[Notes from March 22, 2010]*. We depict this transformed PPR web in Figure 2b. Next, we analyze the process by which Figure 2a changed into Figure 2b.

--PLEASE INSERT FIGURES 2a and 2b about here---

Reconfiguring the PPR web through a process of spanning back in time and imagining possible future configurations

As we observe the action unfold in Johnathan's case, we note how the multiple actors within this PPR web (Jen, Diana, Jonathan's mother, and all in that CAMHS meeting) recognize that this particular situation at hand (Jonathan disliking the substitution of his nurse) unsettles the existing PPR web (line 1). In response, they direct their efforts towards maintaining service provision for Jonathan through – what we have labelled - a *process of spanning time*, backwards and towards the future.

This process captures how actors in position-practices within the PPR web of service provision for Jonathan (Jen, Diana, Tina) compare Jonathan's evolving situation against the background of their past experience – for example, of a *past* patient, Natalia (see line 4). They account for the history of interactions that has informed the existing PPR web, by refering to

the written record of Jonathan's care (the CPA, lines 18-20). By doing this, they direct their attention to a time before Jonathan was even a customer of their service organization. Through this process, these actors in position-practices within Jonathan's current PPR web of service provision, reactivate the past by re-incorporating to the current PPR web what might be described as an "expired" position-practice relation (that between Jonathan and Jonathan's "old" MIND councillor, lines 16-17, 40-41).

This process also captures how actors in position-practices within the current PPR web direct their efforts towards locating new possibilities for Jonathan's care, thus again engaging in the process of spanning time, but into the future. They consider multiple alternative possibilities, and evaluate these possibilities in relation to their past experience and Jonathan's current needs (lines 3 and 8). They decide to focus their efforts towards rekindling the relationship between Jonathan and his "old" councillor from the charity MIND.

Outcome and implications. The outcome of the process of spanning observed in Example 1, is a reconfiguration of the existing PPR web of Jonathan's service provision. First, because the focal service organization is not CAMHS any more, but MIND. Second, because a new position-practice has emerged within the PPR web supporting Jonathan's care: "Jonathan's MIND councillor".

In Jonathan's example, we also note that these reconfigurations necessarily require a process of *rebalancing* the PPR web. As the actors in position-practices within the existing PPR web strive for maintaining Jonathan's contiuity of care, they have shifted the physical location of his care (from CAMHS to MIND), removed existing position-practice relations (e.g. between Jonathan and Jen, his CAMHS care coordinator) and rekindled another position-practice relation (between Jonathan and his "old"/former councellor of a year ago). Further activity is therefore required to ensure that Jonathan's care continues, starting with the handover meeting between Jonathan, Maria (his CAMHS nurse) and the MIND councillor

(lines 36-37). This stresses the importance of examining the dynamics of PPR over time and within PPR webs, rather than each PPR independently and ahistorically.

Reconfiguring Anna's PPR web of service provision

A patient called "Anna" finds out that her regular nurse is about to move away and she is offered a substitute nurse which Anna, apparently, does not work well with. We know of this because Anna turned for advice to the participants in an online group of current and past CAMHS patients, who claim to be from the particular geographical area of our study. Below, the excerpt of Anna's online conversation on one of the social media platforms that enabled the interaction among current patients (like Anna) and past patients:

Anna (current CAMHS patient): Let's raise hands: who is going to be at the next [service improvement initiative] meeting?
Faye (current CAMHS patient): Not me, too far
Lina (past CAMHS patient): Exam season. But I am on messenger most mornings if you want to chat about sth [something] specific????
Anna (current CAMHS patient): Yay, Like. I loved my sessions with Mary [CAMHS nurse] but I am given now some devil-woman called Helena [CAMHS nurse]. How about that?
Lina (past CAMHS patient): We can do that, sure, me too, ask away. Helena was mine too. What's up? *[Comments continue until Lina and Anna arrange for a call.]*
This real-time interaction leads to setting up a call between the current and past patient (Lina and Anna) to share information on the "new" nurse proposed to Anna (Helena).

We soon found out that this was not the first time Anna had turned to Lina when Anna is faced with a dilemma, as we see in the interview extract below with Lina:

Lina: What we did was skype or Live [free online video applications] eating lunch and she [Anna] was in [name of town] and I was in [name of a different town] and we had lunch "together" during my lunch break because I was working of course
Interviewer: And why this?
Lina: Ok, it sounds funny but lots of us [past CAMHS patients] 'buddy' with others *when they need it*, we "eat together" that's not uncommon. We first met at one of these [name of service improvement meeting] and she [Anna] told me of the breakup [with her boyfriend] and I knew it was bad news.
Interviewer: Over skype? Others eat "together" over skype?
Lina: That's what we could do, that's what we did then. Whatever works. We didn't always talk sometimes we just turned on skype and ate and [said] very few words.

Interviewer: And that's what you did on [date of excerpt from social media site]

Lina: No, that was another thing, different case. That was about Helena. Not about the ex- [boyfriend of Anna]. That was months after the boyfriend breakup. The boyfriend breakup *was a problem because he was doing stuff [activities] with Anna* and then he was gone for other reasons and then *she was left with a void*. It happens though. *It happened to a few girls I know. [Italics ours]*

Interviewer (laughs) Ok, ok. So two troubled periods and you were there for both for her?

Lina (laughs): Ok yes I guess not me alone, I don't know [if others were "there" for Anna during the "troubled" periods] but I don't think so.

Interviewer: And in-between?

Lina: I don't know about in-between. I wasn't there, I was on the [name of online site] so I was "there" but not involved like interacting with her, just in the background sort of until the message you saw popped up [on the online media site] and it was like a call, like she was calling and a bunch of us responded I don't remember how many now I need to check. But you see, not constantly "there" just when needed. [*Interview with Lina, after a service improvement initiative in a CAMHS unit]*.

This interview and the follow-up interview with the CAMHS therapist to Anna (who also organized the multi-family service improvement initiative), confirm that Lina and Anna met at one such meeting in the CAMHS unit, then reconnected virtually on the online media website of past/current CAMHS patients. From the online site exerpts (which have been modified to protect anonymity) and the interview of Lina (above), it appears that Anna and Lina shared a history of interaction, both virtual and face-to-face, on and outside organizational spaces.

Reconfiguring the PPR web through a process of stretching across virtual and physical, organizational and non-organizational spaces

The action unfolding in Anna's case captures the process by which she actively seeks support by past CAMHS patients.

In the first instance, Anna decides to attend a non-compulsory multi-family group meeting organized within a CAMHS unit by a CAMHS therapist. In this event, about 24

current and past patients, as well as past patients' family members come together. Lina decides to volunteer in the same event. Lina is by then a 20-year old living and working in a different town while attending college. She has been invited to this multi-family group meeting to inspire current patients with her recovery.

During this face-to-face event, Anna approaches Lina in private and tells her about her breakup with her boyfriend. With Anna's parents working until 5pm every day, Anna's boyfriend had agreed to walk home with Anna from school every day at 3 or 4pm. After they arrived in Anna's home, he would sit with Anna at the family kitchen table and encourage her to eat her afternoon snack. This repeated activity was key for Anna's continuous recovery. It was very important for Anna to receive regular meals. Her boyfriend's presence in those crucial after-school hours gave Anna's parents the assurance that Anna would be supported through the afternoon meal. Lina is aware of this everyday activity which is common among current patients and their significant others (boyfriends/girlfriends). Lina is therefore alarmed by the news of this breakup, as she recognizes the threat to Anna's continuity of care because "it happened to a few girls I know" (line 72). In other words, Lina recognizes that the particular situation at hand (Anna's breakup) unsettles Anna's PPR web of service provision because it takes away the "position-practice relation" between Anna and her boyfriend. Drawing on her own history as a past CAMHS patient and on her lived experience, Lina supports Anna's mental health service provision by recurrently "having lunch together" (line 58, 66) through Skype, a technological platform that is not provided for nor endorsed by CAMHS. Through this platform, Anna and Lina would interact outside any type of organizational boundaries, with no official links other than their position-practice relation which developed as their efforts were directed towards maintaining mental health service provision for Anna. Also important is that the interactions unfolding over time in Anna's case are sometimes due to Anna's agency (she tells Lina of her breakup), and sometimes due to

the agency of actors other than Anna (e.g. her boyfriend breaking up with her, Lina volunteering to the CAMHS group meeting).

In the second instance, Anna once again actively looks for support from other patients. What has changed is that, this time, Anna chooses not to attend the multi-family group meeting which still takes place every month in the CAMHS unit premises. Rather, she decides to turn to the online site of past and current CAMHS patients to which Lina has introduced her. These multiple actors who are often not interacting in real-time, nor through any official relationship, direct their efforts towards supporting Anna's continuity of service provision. The interaction unfolding over time in Anna's case takes place on the virtual space of a public networking website, among current and past patients who share an online "friendship", even if they might be strangers to one another in real life, out of working hours and without involvement from any organizational actors (CAMHS workers or other workers). Each of these current and past patients chooses to create, participate in and continue participating in this online friendship through the particular online platform. These observations highlight how continuity of service provision is facilitated within PPR webs by agency which is distributed across technology-enabled virtual spaces.

Outcome and implications. The outcome of the process of stretching across virtual and physical organizational and non-organizational spaces illustrated in Anna's case is a reconfiguration of the existing PPR web of Anna's service provision. In the first instance, because the boyfriend breakup took away a position-practice which apparently was significant within the PPR web of Anna's service provision as his absence "left a void" (line 71; see visual in Figure 2c). Similar to "the boyfriend", Lina is another actor without an organizational link to Anna, who nevertheless chooses to bring herself in a position-practice within the PPR web of Anna's care. In the "position-practice" of the "past patient", Lina repeatedly interacts with Anna over Skype and "messenger" (two online free platforms for

video calls). This variation over time is depicted when juxtaposing Figure 2c (Anna's PPR web in December) and Figure 2d (Anna's PPR web in January).

--PLEASE INSERT FIGURES 2c and 2d about here---

This reconfiguration of the PPR web of Anna's service provision, stretching across virtual space in interacting with Lina, has further implications for the continuity of Anna's service provision. The PPR web depicted in Figure 2d is also unsettled when a "new" CAMHS nurse to Anna ("Helena", line 49-50) is introduced to the web. We do not know what that last messanger meeting between Anna and Lina entailed. However, we know it was consequential to Anna's care because Anna accepted Helena as her "new nurse", a "position-practice" contributing to mental health service provision.

These rippling implications were largely hidden away from actors in organizational roles who were also occupying position-practices within the PPR web of Anna's mental health care, such as "the CAMHS therapist". In between the two breakdown episodes there was a period of "a couple of months" during which "things had returned to normal" for Anna's service provision (see interview with Lina), presumably the typical PPR web. As the CAMHS therapist involved in Anna's care explained:

> As far as I am concerned and this service too [CAMHS unit] we have no idea that anything changed around that time. I know that she [Anna] had trouble dealing with the breakup and it is part of growing up to be able to fall in and out of love with grace. How she dealt with it? We kept our regular meetings and then I think she grew out of it (questioning tone)"

From this interview, it was clear that this actor (CAMHS therapist), who frequently interacted with Anna in her CBT activities in CAMHS, was nevertheless unaware that Anna was being simultaneously supported through her virtual interaction with non-organizational actors, namely Lina in the position-practice of the "past patient".

Summary.

Jonathan's example illustrates how multiple actors' efforts reconfigure the PPR web of Jonathan's mental health service provision through a process of spanning back in time and imagining possible future configurations. Anna's example presents how the PPR web of her care is reconfigured through a process of stretching across virtual and physical, organizational and non-organizational spaces. By chronologically ordering related episodes and the resulting changes in the PPR of Lina's service provision, we aim to attend to the temporal connectedness of episodes over time (Pettigrew, 1990) and to highlight that the two processes recur over time, are generated in response to earlier efforts generated through the agency of participating actors and have consequences for future efforts. Within each process, we additionally highlight agency, spatiality, temporality and the use of technology.

Jonathan and Anna present excellent examples of how actors actively direct their efforts towards the intended outcome of maintaining service provision. They do so, through the processes of spanning time and stretching space. This activity may also have the (unintended) consequence of the emergence, rekindling, or introduction of "position-practices" in relation to the current patients' service provision, *thus* reconfiguring the PPR web of service provision to a specific current patient. Importantly, as Jen's interview reveals, the MIND councillor (a new or rekindled "position practice") is purposefully brought into the PPR web of Jonathan's service provision by Jonathan's mother - and not any CAMHS worker. Similarly, Anna might be said to have "recruited" Lina (past patient) into her PPR web of service provision. Accounting for distributed agency, i.e. for individuals in position-practices within the PPR web of specific patients, allows us to understand how multiple actors who are not comfortably located solely within an intra- or inter-organizational role set, nevertheless, bring together their efforts towards maintaining service provision for a specific patient over time.

DISCUSSION

In this paper we examined how diverse interactions across dispersed actors contribute to coordinating continuous service provision in DSS. This research question emerged and was motivated by our field study observations which were not addressed in existing role-theoretical literatures on interaction in Dynamic Service Settings (e.g. Gittell, 2006; Gittell & Weiss, 2004; Gutek, 1999; Conlon et al., 2004; Manski et al, 2014; Scholmerich et al, 2014; Ple, 2013; Gittell, 2002). As these streams of current scholarship focus on examining interaction among a set of roles with intra/inter-organizational links, we were puzzled to understand in our health service study how multiple actors' actions unexpectedly interlocked, despite not having official (cross)organizational links (e.g. past patient/grandmother of current patient), and how all this diverse interaction contributes to maintaining the service provision for a patient. Our study generated novel insights as to how multiple actors actively re-configure the pattern of interaction over time, and in so doing, coordinate the service provision of the patient. Specifically, we highlight the role of agency, technology, spatiality and temporality in enabling multiple actors new or different ways of interacting in coordinating service provision for specific customers over time.

A Process Framework for coordinating service provision in dynamic service settings

We contribute to the current scholarship on role-based interaction by drawing on our findings to develop a conceptual process framework (see Figure 3) of how a PPR web of the DSS of healthcare is reconfigured over time through agency distributed in time and over space in meeting evolving customer needs. This framework explains variation and the implications of this variation for maintaining the continuity of service provision. It further illuminates the processes of spanning time, stretching space by which the PPR web of service delivery for a specific patient is dynamically reconfigured, and with implications for our healthcare case and more widely to other Dynamic Service Settings.

[Insert Figure 3 about here:

A Process Framework of coordinating service provision in dynamic service settings]

Existing literatures have highlighted the challenge facing workers of service organizations to coordinate their efforts across specialties and with workers of other service organization as they strive to deliver a service (Adler, Kwon, & Heckser, 2008; Gittell et al., 2008; Sinha & van de Ven, 2005, Gittell, Sidner & Wimbush, 2010). Recent work has additionally highlighted the challenge facing actors in specific roles (e.g. lawyers, doctors, academics) in Dynamic Service Settings (e.g. healthcare, education, consulting and law) to coordinate their efforts not only with their colleagues, but also with the customer (e.g. client, patient, student; LeBaron et al., 2016; Gittell, 2011; Faraj & Xiao, 2006). In our field study, we noted the multi-faceted challenge of coordinating efforts with colleagues, also with the customer, and additionally among grandparents, friends, past patients, and schoolmates. We conceptualized all these interacting agents as occupying "position-practices" in relation to the common task of maintaining service provision for a specific patient (e.g. "grandfather *to current patient Jonathan*"). We thus perceive these actors as enacting a position-practice within, and interacting with other position-practices within, the Position-Practice Relations web [PPR web] of the *practice* of service provision of a specific customer/patient (Figure 3, arrow a). Thus, their interaction supports the continuity of coordination of service provision for the specific customer/patient. We often noted that failure to coordinate efforts among organizational and also non-organizational actors (e.g. friends of the patient) holds consequences for the continuity of care of the current patient. As our findings have demonstrated (and Figure 1 illustrated) the activity within a PPR web may often not involve interaction with/among workers of any organization, as in the example of the two current patients interacting at home and the example of the current patient's mother interacting with the mothers of other current patients in a pizzeria.

At any given time, the PPR web reflects the history of interaction among those enacting position-practices within this web, configured by the distributed agency of these actors, situated in time as well as (physical and virtual) space. This PPR web is not static, as illustrated in our fieldwork examples of Ginni, Jo, and Roger's cases. A PPR web is not static, but rather continuously and dynamically shaped by the purposeful agency of those individuals participating in position-practices within the PPR web and the history of interaction among them, reflected in Figure 3, as arrows "b". It entails a degree of plasticity that allows for ongoing reconfigurations without disrupting the flow of the practice supported by this PPR web (in our case, the practice of mental health service provision).

As our process framework shows, because the PPR web is shaped by the distributed agency of those agents in position-practice relations within it, it is constantly unsettled (see arrow c). When unsettled, the flow of the practice supported by this PPR web (in our case, mental health service provision) is temporarily disrupted, leading to what Yanow and Tsoukas (2009) have labelled as "breakdown". When a breakdown occurs, we observed that actors in position-practices within this PPR web purposefully direct their efforts towards maintaining continuity of service provision. In Jonathan's example, we observed that the councillor of a charity organization ("the MIND therapist") is identified by CAMHS workers as a potential new actor for Jonathan to interact with going forward. The mother of Jonathan actively seeks out this councillor. This example illustrating how various actors in "position-practices" within Jonathan's PPR web seek to maintain service provision by interjecting a new position-practice into the PPR web (i.e. the MIND therapist), so reconfiguring the existing PPR web during a breakdown.

The effects of such purposeful activity are consequential because its consequences shape dynamically the conditions of Jonathan's care going forward as represented by Figure 3, arrow f. In Jonathan's case, such purposeful activity during a breakdown incident is

consequential for actors in the focal service organization, as it means that Jonathan is no longer their patient. It is consequential for those occupying other position-practices within the PPR web of Jonathan's care, because they need to withdraw from the PPR web (e.g. the CAMHS therapist to Jonathan). Alternatively, actors may reaffirm the existing typical PPR web, so continuing to occupy position-practices within it and thus continue to support the PPR web and the activity within it. This was the case of Anna who interacted with Lina "as and when needed" to maintain service provision. Therefore, actors in position-practices within the PPR web may further reconfigure the PPR web as suggested by Figure 3 (arrow b).

In sum, arrows [b] and [f] in Figure 3 illustrate that a PPR web is not stable once attained; rather it is continuously configured and reconfigured. We theorize and illustrate that the reconfiguration of the PPR web is both the cause and consequence *(hence the double-headed arrows)* of specific position-practice relations that shift, disappear (e.g. when a "position-practice" is no longer in the web) or are introduced into the PPR web (e.g. the "past patient"). As the PPR web unfolds through the diverse interaction of multiple actors in position-practices, these shifts in specific PPRs are consequential. Our work additionally shows *how* a PPR web for service provision is constantly reconfigured and, in so doing, provides a more fluid and dynamic understanding of PPR web emergence and variation. In this way, we provide insight as to how and why the pattern of interaction between actors in position-practices supports and maintains service provision for specific patients, as it evolves over time.

Contributions of a Position-Practice perspective to role-based interaction.

Theorists who have examined interaction in settings that share DSS characteristics have demonstrated that *role-based* interaction is clearly a fundamental part of organizing (e.g. Gittell, 2001; Gittell; 2002; Gittell et al., 2010; Conlon et al., 2004; Valentine & Edmondson, 2015). Role-based interaction is perceived to emerge within 'role sets' (Valentine &

Edmondson, 2015) whereby individuals in various roles are bound together with the aim of delivering a service, and/or individuals are brought together in their roles as customers and workers (Gutek, 1999; Conlon et al., 2004; Cramm et al., 2014; Bond & Gittell, 2010). By integrating role based perspectives with practice theoretical approaches, we contribute to our understanding of interaction towards maintaining service provision in DSS.

First, our findings add in important ways to existing studies which tend to examine one type of role-based interaction (e.g. Skaggs & Galli-Debicella, 2012; Gittell, 2010; Conlon et al., 2004), whether this be the study of online interaction among patients (e.g. Loane & D'Alessandro, 2014), or interaction between workers and unofficial caregivers (Weinberg, Lusenhop, Gittell & Kautz, 2007), or interrelations between two types of role-based interaction (e.g. Ple, 2013; Gittell, 2002a).

Importantly, our research makes the case for moving from an identification of separate types of role-based interaction, to a discussion of *interaction in practice.* We go beyond existing work which tends to focus on one type of role-based interaction (e.g. online, or offline; patient-to-patient or patient-to-worker) or dyadic relationships (e.g. worker-worker interaction; worker-customer interaction) to account for *diverse* interaction within a web of "position-practices". Such interaction is diverse in the sense that it is face-to-face, *and/or* technologically-enabled, organizational *and* non-organizational, *reciprocally interrelates* and contributes to the maintenance of service provision over time for specific customers. These position-practices are linked together across time and space - through the practice of service provision - into "position-practice relations" within a web. We contribute the notion of a PPR web to evoke the image of a pulsating and rhizomatic world of relations among "position-practices". Analytically, the notion of PPR web gives us a pragmatic indication of how to study this empirically by starting with an "agent-in-focus" (as shown in Figure 1). The approach makes different position-practice relations tangible and further develops the idea

that in order to understand and represent how service provision is maintained in DSS, we need to understand the constant reconfiguration of PPR webs, and how these are embedded in, draw on and are different to other structures.

By examining interaction within PPR webs (rather than inter/intra-organizational role-sets), we argue that scholars should feel free to direct their attention outside any organizational boundaries. It is critical to account for interaction across organizational boundaries and with non-organizational actors (mothers, online or school friends, neighbours), as continuity of service provision is supported through interaction within PPRs of non-organizational actors. Our study demonstrates and puts forward the argument that a PPR web of service provision for a specific individual does not *have to* be anchored to a(ny) service organization and indeed might be characterized as *extraorganizational*. This insight has significant implications for organizations, and for their role in service provision when operating in a DSS.

Second, scholars have recently recognized that interaction that matters to service delivery is not only among work roles with clear (cross)organizational links, but also interaction among current customers and their friends (e.g. McColl-Kennedy et al., 2012), and customer-to-customer interaction (among others, Loane & D'Alessandro, 2014). This emerging understanding suggests that roles might be a restrictive concept to understand the diversity of interaction that matters to service provision. We instead advance the concept of "position-practices" in our analysis and theorizing, thereby extending the use of this concept which is compatible with existing understandings of role (Coad & Glyptis, 2014) and at the same time expands beyond them. Our findings illustrate that some position-practices may overlap with roles, while others do not go beyond the organization and in time. Yet, importantly, *all* these "position-practices" are brought together in relations through their joint participation in a practice such as service provision for mental health in the UK). Without

adopting the concept of "position-practice" we would be challenged to articulate the patterns in relations between agents over time in the practice of service provision, and some of these agents might not even be visible to us.

Third, our study adds to existing role-based literatures by highlighting the need for caution concerning the ease of substituting individuals-in-roles. In role-based perspectives, focusing on role-based relationships, "substitution" between individuals enacting the same role would be expected (Okhusen & Bechky, 2009: 476) and in fact found to be positive for coordinating (Bechky, 2006). Yet, our findings highlight the challenge of role substitution and how individuals are not necessarily easily interchangeable for effective continuity of service provision.

As such, we contribute to an understanding of the interplay between role-based relationships and personal relationships among individual participants, a research direction which is acknowledged as needing further consideration (Gittell, 2011: 400), in three ways. First, we stress that the person (in the role) matters. Not only do personal characteristics (Coatsworth-Puspoky, Forchuk, Ward-Griffin, 2006) and demographic characteristics of the person-in-role (Gutek, 2000) affect the quality of service provision, but they also affect the likelihood of substitution among individuals-in-roles. Further, substitution is made difficult because individuals do not have the same history of interaction with the customer/patient, nor – importantly – with other actors in the PPR web of service provision (see Figure 3, arrow b). It also suggests that scholars need to look broader than the individual-in-role to propose whether a substitution might effectively support service provision in a specific PPR web. Third, we find that trust between a current customer and a worker is a significant element (e.g. Gutek, 1999), and is built over time and through repeated interaction (Gutek et al., 2000). Trust among people in roles, is well-understood. Our work builds on and extends earlier literature which has not explicitly accounted for the trust built in the past by other

customers, and how trust generated in the past between a past customer and a worker may influence the building of trust between the current patient and the (same) worker. This example shows that a broader range of influences such as the trust built from others' repeated interaction can provide confidence and comfort to an individuals' understanding of a role-based relationship before it even occurs. A key insight that interaction that took place in the past may additionally bring together agents linked in practice through space and time opens up new and exciting avenues for future research.

Bridging research implications.

Service management. Recent work in the service management literature by McColl-Kennedy and colleagues (2012) have emphasized the perspective of the patient and the different "roles" that patients endorse in their care journey (e.g. "my role is to comply"), and has pointed to the value of practice theory. We extend the emerging interest in practice perspectives in service studies, by providing an approach based on position-practices to understand how interaction supports coordinating in service settings. Our study adopts a position-practice relations perspective (Giddens, 1984; Stones 2005) and reveals the significance of 'non-organizational' activity in coordinating the practice of mental health service provision.

Coordinating. Our study provides empirical support and furthers our understanding of relational coordination and coordination in general. First, earlier work in relational coordination (Gittell and Weiss 2004; Weinberg et al. 2007) has recognized that coordination across time and space can be achieved among those in non-hierarchical and extraorganizational roles such as 'informal caregiver roles'. Building on earlier practice-based studies that highlight the dynamic and processual nature of coordinating (among others, Faraj & Xiao, 2006; Bechky, 2006; Kellogg et al., 2006; Jarzabowski, Le & Feldman, 2012; Jarzabowski et al., 2015), among multiple organizational actors in roles (e.g.

reinsurers; doctors; product developers; advertisers), our position practice perspective contributes an alternative conceptualization as to how roles are dynamically evolving and are negotiated through everyday practice.

Second, our work shifts the research to focus on the dynamics of diverse interaction instead of interactants in pre-identified roles or role-sets. This reveals the processes of spanning time and stretching space through which coordinating is supported and continuously reconfigured. In this way, our study provides a valuable perspective in theorizing how diverse interactions are brought together - and evolve together - over space, time and distributed participation to support coordinating in dynamic service settings.

Third, our work contributes further insights to practice-based studies that examine coordinating across space (e.g. global financial market in Jarzabowski, Bednarek & Spee, 2015). The focus of such studies is on organizational actors (the reinsurers within companies) and the firm's technology (their common tools and "scoping" technologies). Instead, the notion of a PPR web of service provision, which we put forward, stretches across and beyond the existing organizations to the wider dynamic service setting and enables us to probe new "sites" (Schatzki, 2005; Nicolini, 2011). For example, non-organizational social media platforms had unexpected consequences for the emergence and evolution of patterns of interaction in understanding the phenomenon of our study. Coordination scholarship could further benefit from additional attention into the new "sites" revealed to us through a PPR lens.

Practice breakdowns. Our findings on how a PPR web rebalances during a breakdown are of direct interest to scholars intrigued by "practice breakdowns" (Nicolini, 2013; Lok & DeRond, 2013; Yanow & Tsoukas, 2009; Sandberg & Tsoukas, 2011). Other scholars have highlighted the importance of breakdowns as an everyday phenomenon (Heapy, 2013) and some practice scholars (Nicolini 2013; Lok & de Rond 2013) have recognized the importance

of breakdowns in practice for shedding light on the web of connections within which practices operate. Our study highlights that, as actors become reflective of breakdowns that may be developing in their service, this can lead them to be aware of the service context in which everyday activities are performed within this practice and how these activities might be changed (cf Van de Ven & Sun 2011).

Our study adds to this existing conversation by revealing the processes through which a practice breakdown may be navigated – the processes of "spanning space" and "stretching time". The process of spanning time involves reflection on past interaction from the perspective of the present time, but also projection as to future interaction, brought about by imagining possible consequences. The process of stretching space involves the mobilization of interaction in a purposeful manner regardless of organizational boundaries, through any possible access to physical and digital spaces. If practices are conceptualized as supported through a PPR web (as we propose in our article), then our insights on how breakdowns in the practice of service provision are navigated are transferable to practice breakdowns beyond those encountered in the context of our study.

Conclusion

In this article, we draw on the notion of "position-practice relations" to extend theory on role-based interaction in Dynamic Service Settings, which are characterized by continuous interactions between customers and workers. This notion additionally accounts for the ever-changing situation in service contexts, for individual agency and agency distributed in time and (both physical and digital) space. As such, it enables us to understand and theorize how the actors we encountered in our study coordinate their efforts towards maintaining service provision for specific customers. We draw on a Position-Practice Relations perspective to address an empirical puzzle, and by doing so contribute theoretically to the literatures on

role-based interaction and role-based relationships, demonstrating the potential in integrating practice theoretical perspectives with role-based perspectives.

Towards the end of our study we observed the embedding of position-practices into roles, with the development of a newly constructed organizational role of the Peer Support Worker developing over time and becoming a part of the overall organizational structure. Future research could usefully assess the effect of the transition from a position-practice to a work role on interaction within the PPR web, and within the official intra/interorganizational role set tasked with service provision

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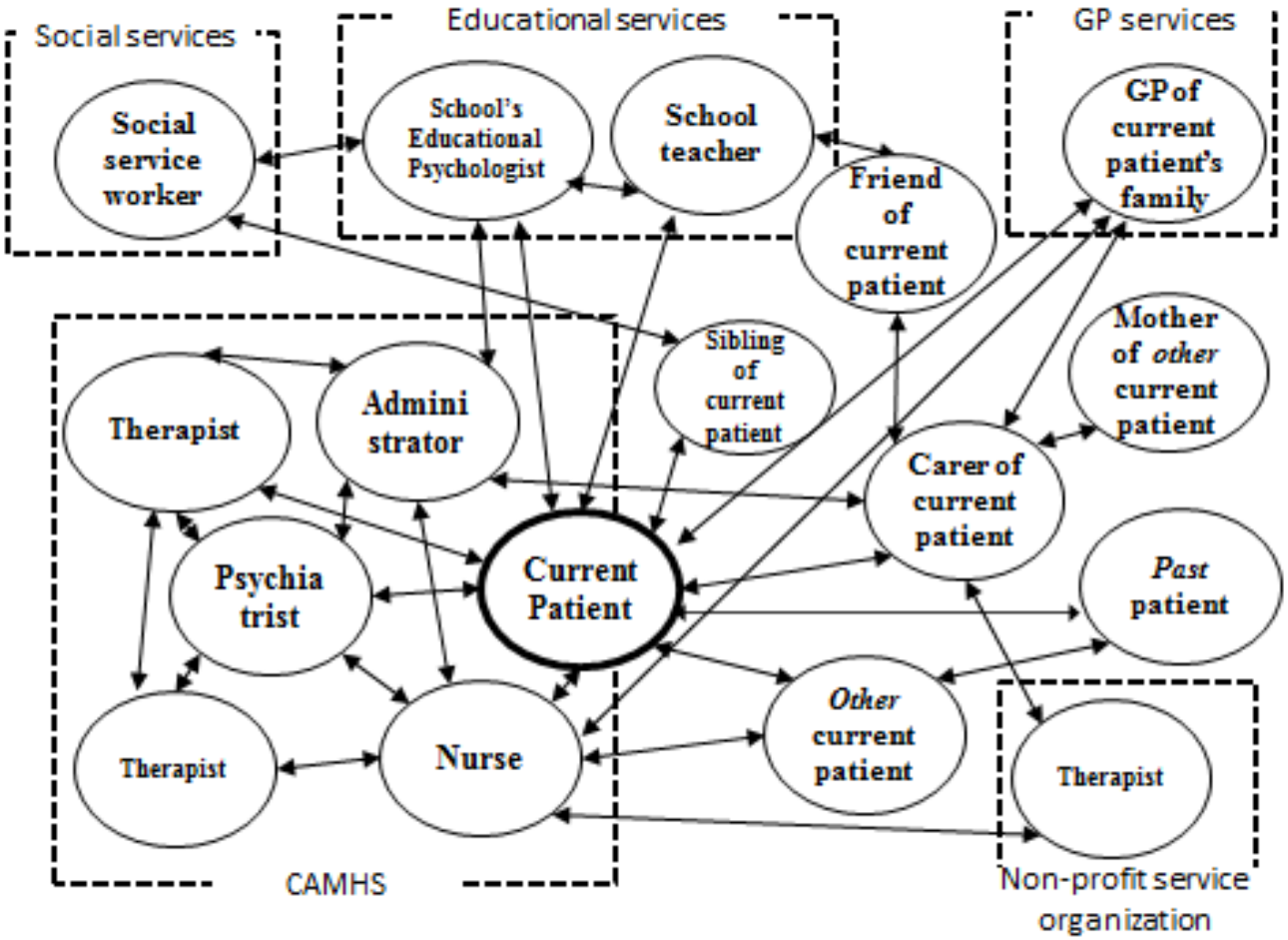
Table 1. Research participants and data collection methods

Research participants	Interviews (number)	Documents (archival or contemporary)	Observations	
			In-person	In digital spaces
Workers in the focal service organization				
CAMHS employees: therapists, psychologists, psyhiatrists, information officers, service managers, receptionists, nurses.	✓ (26)	✓ (both)	✓	✓
Current customers in the focal service organization				
Current CAMHS patients	✓ (10)	✓ (both)	✓	✓
Past customers of the focal service organization				
Past CAMHS patients	✓ (6)	✓ (archival)	✓	✓
Workers in other service organizations				
In the social services of local county council: social service workers, managers	✓ (6)	✓ (both)	✓	
In the local educational services: teachers and school nurses	✓ (3)			
In local voluntary sector services: Volunteers, therapists and managers	✓ (4)	✓ (archival)	✓	
Participants not employed by a service organization	✓ (3)	✓ (both)	✓ (incl. 3 focus groups of 20 + participants each)	✓
Patients' carers, parents, siblings and friends				

FIGURE 1: Visual of Typical Position-Practice Relations Web in Mental Health Service Provision in the setting of our study



FIGURES 2a and 2b: Variation Over Time in the Position-Practice Relations Web for *Jonathan*'s Mental Health Service Provision

FIGURE 2a: PPR web, March 2010

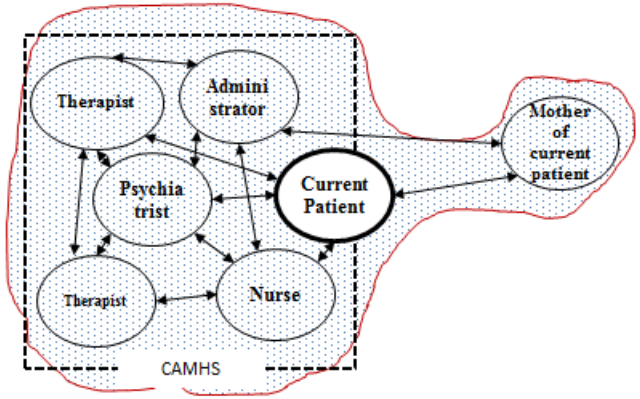
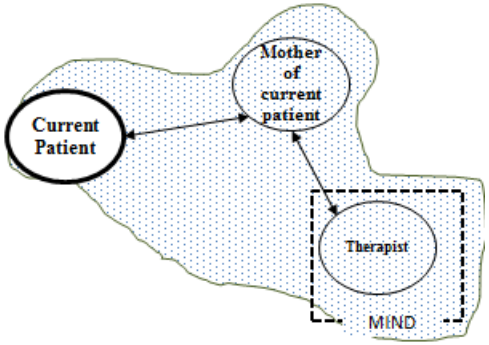


FIGURE 2b: PPR web, April 2010



FIGURES 2c and 2d: Variation Over Time in the Position-Practice Relations Web for *Anna*'s Mental Health Service Provision

FIGURE 2c: PPR web, December 2010

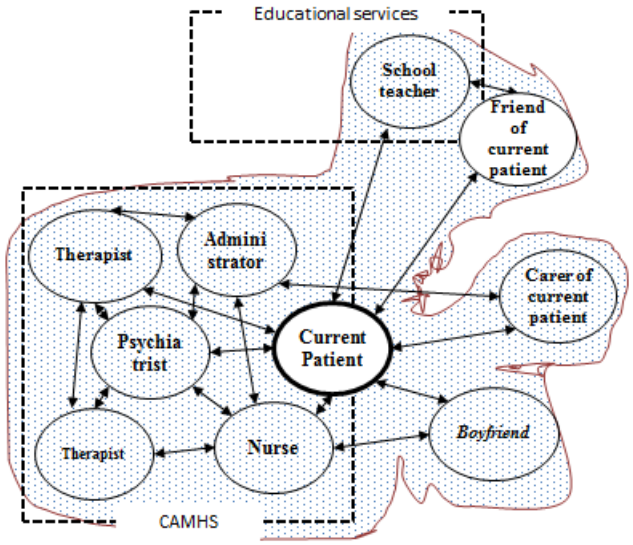


FIGURE 2d: PPR web, January 2011

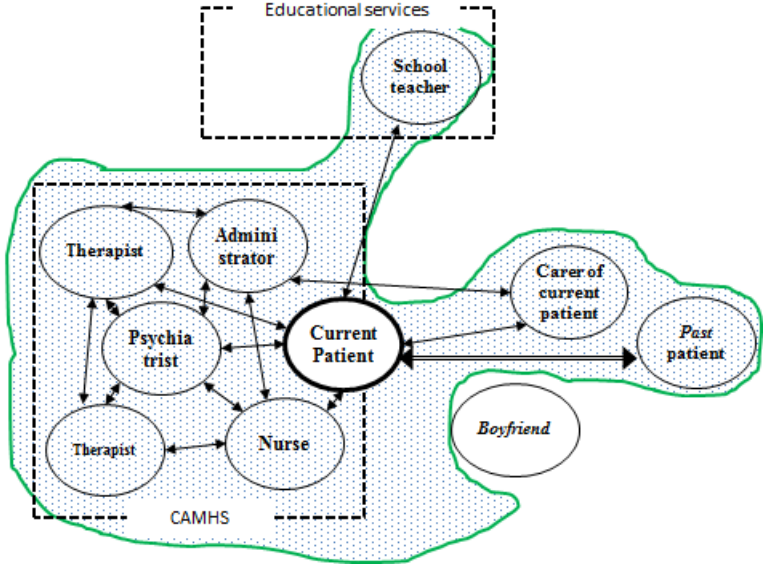
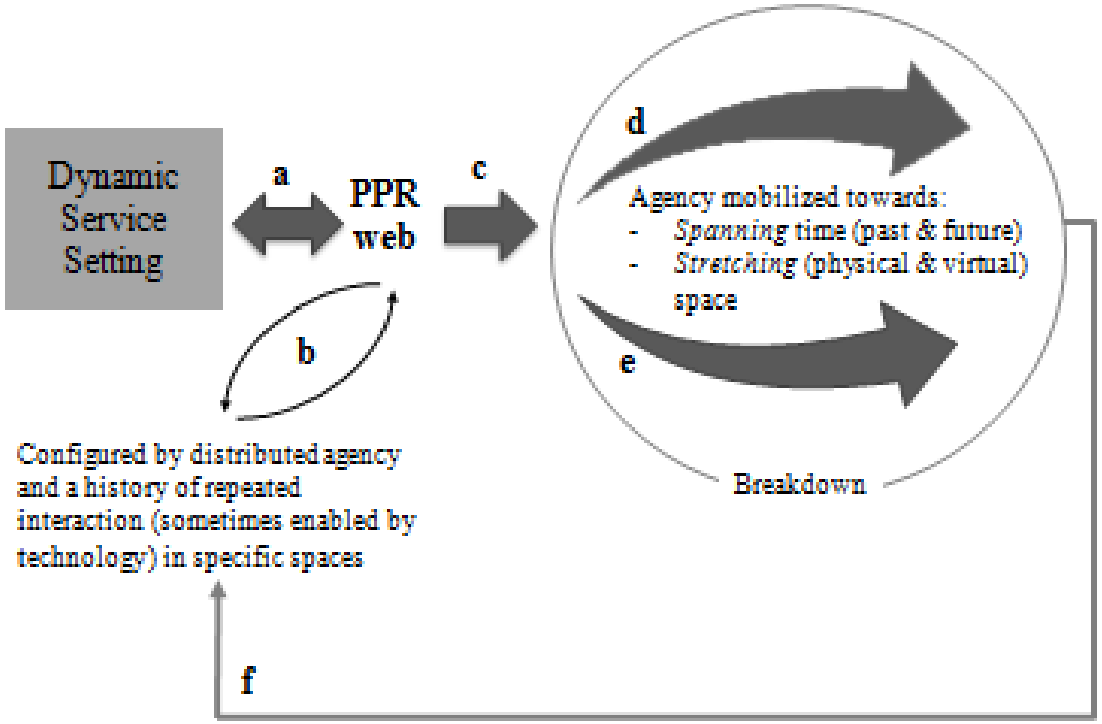


FIGURE 3: A Process Framework of coordinating service provision in dynamic service settings



KEY TO FIGURE 3

[a] The PPR web of the practice of service provision of a customer emerges within a Dynamic Service Setting

[b] is a double headed arrow to denote that the PPR web is both the cause and consequence of distributed agency and a history of repeated interaction among individuals in position-practices.

[c] The PPR web inevitably breaks down

[d] During a breakdown, the PPR web is reconfigured, as the actors in position-practices mobilize their agency towards the process of spanning time

[e] During a breakdown, the PPR web is reconfigured, as the actors in position-practices mobilize their agency towards the process of stretching space

[f] The processes of spanning time and stretching space shape the (future) PPR web which in turn holds consequences for the configuration in which the PPR web emerges.

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