Societies **2014**, *4*, 428–445; doi:10.3390/soc4030428

OPEN ACCESS

societies

ISSN 2075-4698

www.mdpi.com/journal/societies

Article

Managers' Identification with and Adoption of Telehealthcare

Jane Hendy [1,*], Theopisti Chrysanthaki [2] and James Barlow [3]

[1] Department of Healthcare Management and Policy, University of Surrey, Guildford GU7 7XH, UK

[2] Department of Health Services Research and Policy, London School of Hygiene & Tropical Medicine, 15-17 Tavistock Place, London WC1H 9SH, UK; E-Mail: theopisti.chrysanthaki@lshtm.ac.uk

[3] Department of Management, Imperial College Business School, Imperial College, London SW7 2AZ, UK; E-Mail: j.barlow@imperial.ac.uk

* Author to whom correspondence should be addressed; E-Mail: j.hendy@surrey.ac.uk; Tel.: +44-1483-684743.

Received: 31 March 2014; in revised form: 21 July 2014 / Accepted: 31 July 2014 / Published: 14 August 2014

Abstract: This paper presents managerial attempts at implementing telehealthcare. Our longitudinal, ethnographic case studies document both successful and failed implementations across five health and social care organisations in England. We draw on theories of organisational identity, sensemaking and sensegiving to highlight how managerial organisational identities can inhibit the uptake of digital health technologies. Managers who strongly identified with their current role at work felt threatened by the intended change; a telehealthcare mode of care delivery. When a strongly identified workforce agrees with this assessment, managerial and employee sensemaking and sensegiving coalesce, forming a united front of resistance that prevents further adoption of the innovation.

Keywords: telehealthcare; identification; sensemaking; organization

1. Introduction

A key agenda for governments worldwide is how best to care for older people, whilst limiting the demand for expensive hospital and nursing home beds. One solution is the development of digital technologies that support care remotely, often in the patient's own home; commonly called telehealthcare. Despite a strong policy push and the espoused potential of this technology, uptake has

been slow with health services yet to show that implementation of digital health technologies can result in a significant and sustainable shift in care services from hospital to home [1].

We have been conducting research into the progress of the UK's telehealthcare programme since its inception [1–3]. In terms of understanding and changing this position, the UK has taken a strong lead, particularly with the commissioning of the largest randomised controlled trial of telehealthcare services; called the Whole System Demonstrator programme [4]. Our results from this study have yielded mixed results [5–8]. The findings presented here represent another untold facet in telehealth story by considering how staff tasked with adopting this new technology responded to this demand.

Health services constantly need to innovate and evolve to survive, while keeping their staff on board. However, we know that adopting innovations that essentially alter or are in conflict with organisational members' current ways of thinking and acting are complex; individuals need to engage in a process of negotiation to balance the demands posed by these old and new types of identity causing many planned changes to fail [9,10]. The UK public sector, in particular, is littered with high profile examples of costly digital failures [11]. Repeated attempts to produce transformational changes across this sector all demonstrate the severe difficulties associated with the introduction of new ways of working in this domain [12].

In this paper, we were interested in exploring the apparent paradox between the much heralded advantages of telehealthcare [13] and apparent difficulties in achieving wide-scale adoption of this digital health technology. Despite a growing interest in telehealthcare, we know little about how organizational members have perceived and responded to this innovation, in terms of anticipated material changes in their work (such as interacting more remotely) and their occupational identity. Our case studies represent five large public sector health organizations. All the organisations were simultaneously charged with developing mainstream telehealthcare services. Implementation was accompanied by a list of significant changes in patterns of resource allocation, cultural changes in the professional ethos and work practices in the current form of care delivery to meet the new environmental demands aligned with the telehealthcare vision [1,3].

2. Theoretical Framework

In trying to unpack these innovation adoption attempts literature has elaborated that for change to succeed organisations need to go through a process of identity transformation [14]. Both managers and employees must disengage from the past and embrace the future [15,16]. To achieve this shift the cognitive template or interpretive scheme, shared by managers and staff [17] regarding the organization's visible face, activities, structures, and goals [18,19] needs to be reorientated or replaced. This reorientation typically involves "unlearning" or the "destruction" of central assumptions within the existing schema, enabling members of the organization to assimilate new beliefs and assumptions associated with the new strategy [18,20].

At an organizational level, beliefs about "who we are" as an organization reciprocally influence beliefs about ourselves. The organization creates a context for individual identity and self-beliefs, while individual identity-beliefs are the foundation upon which collective organizational identification is built [21]. Therefore, although these two aspects of identity may subsist as distinct in a conceptual level, in the social world individual and collective identities are not always easily separated; they interact to

the extent that they share attributes, serve similar psychological functions (self-verification processes) and grant each other meaning [22]. It is the level and function of this dialectical relationship and perceived compatibility between them in the light of an innovation that induces identity transition, or threat. It was the expression of these concepts, embedded within managerial narratives that we are interested in.

Innovation may set about a process of disruption that alters the existing identity status quo and triggers the need for sensemaking [23]. Sensemaking is the process that fundamentally sustains and generates individual and organisational identity [14], through the creation of mutually shared understandings around questions, such as who are we, what are we doing, and why does it matter [24]. Once shared meaning or sense is broken, new sensemaking needs to take place [25].

In organisational contexts, negotiation around achieving this task largely falls to managers; their sensemaking efforts and abilities are needed to legitimate and reorientate the cognitive scheme of other employees [26,27], thus, the assumption is where managers lead others will follow. Managers need to reconstruct a meaningful framework for understanding the nature of an innovation (in our case telehealthcare) in order to maintain and generate their organisational identity in light of potential disruption [28]. As the most visible members of an organization, managers [28,29] also need to facilitate new sensemaking and organizational identification in other employees [16,30]. Fiol [14] suggests managers facilitate major identity transitions in other members by reducing the value of the current organizational identity, before going on to provide members with something new to believe in.

In some organizations, the sensemaking of change recipients closely aligns with the vision provided by management [29]. In other cases, the initial strategy formulated by managers is merely a starting point for an employee's sensemaking [18]. An employee's constructed identity and the wider organizational identity in which they are situated are likely to overlap, but not necessarily closely align [31]. In recent debates about how consensus in sensemaking emerges, social interactions with others are highlighted as essential to this process [25,32,33]. Consensus is reached through a process of sensegiving [28]. Sensegiving is the means of influencing sensemaking in others, of shifting them towards a preferred construction of reality. Managers, by the virtue of their role, primarily take on this sensegiving task. Managers give legitimacy, face validity and desirability to the new frame [34] allowing other employees to consolidate the meanings, gain entry to new groups [31] and construct new possible and "desirable" selves [35]. People may affirm positive aspects of the organisation if it corresponds with their own cherished views of themselves, if it bolsters their need for self-consistency, self-esteem and belonging [36].

In an organisational context employees will be proactive in protecting the "target" of their ownership [37]. Experiencing psychological ownership of a shared organisational identity of a group or sub-group, with fierce group loyalty and competition between those in the group and outsiders [21] implies a feeling of possessiveness and strong emotional ties to the organisation [38]. However, if a change in work is perceived as a threat to this "target", people may resist, utilising sensemaking tasks that cognitively (and sometimes behaviourally) disengage and distance themselves and others from the proposed organisational aims. In extreme cases this dis-identification work may lead to a sense of separateness with employees actively discrediting or even breaking their ties with the organization its ideas or members [31]. Hence, by default managerial narratives and strategies to cope with unexpected

or top down induced forms of change in the context of adoption of telehealthcare are the focus of our study.

3. Methods: Case Study Design and Selection

We wanted to remain open to the messy reality that emerged, having said this, we also pursued pre-existing theory as the driver for our research design. Since organizational change is a process that takes place over time, we sought to elaborate a "process explanation" [39] unpacking the dynamics relating to sensemaking, sensegiving and identification over the course adoption processes covering five years.

We were concerned with assessing the impact of managerial identity on the adoption of digital health technology, thus, we needed a range of cases that would provide potential variation. The UK Government had given £80 m to public services providers in England to develop telehealthcare services. From a national sample of 151 possible organisations in England and with government advice we were able to identify a set of cases which were considered national front runners. These five sites were contained within this sample as they had a range of managerial strategies and team compositions (using either external or internal staff to organization) for implementing the change require; the development of new telehealthcare services. Identification of these five sites was done over a six month period through the systematic use of a range of channels (sites publicizing research on a national telecare website, meetings with experts, conferences, site visits, phone calls, government databases, interviews and from project documentation). To enhance generalisability, demographic variability was also taken into account. Two sites were large counties in the south of England. One site was a large county in the north of England. One site was a large metropolitan area on the middle of England. One site was a London borough.

4. Data Collection

We were given full access to the data available across our five sites and an open invitation to visit. To preserve anonymity and confidentiality we have assigned fictitious names to the sites. We used a range of ethnographic methods [40]. In each study site we attended events such as project group meetings and other strategic meetings and observed rollout of telehealthcare services and team decision-making (a total of 170.5 h of observations ranging from an hour to a whole day in duration). These observations played a fundamental role as we developed our understanding of the changes unfolding for the managers and other staff members. As soon as we gained access to the sites we attempted to identify and attend as many key events as possible in order to engage with locally meaningful practices. Each visit was recorded in field notes on the same day to record chronological progress, as well as the observational field notes of the visited sites [41]. All our visits to the sites were non-participatory in nature but we did attempt to create a sense of trust with our informants that would prompt them to freely share information and interpretations.

We relied on a number of other sources in our story building. We examined freely available documents (n = 17) such as annual reports and management meeting minutes concerned with telehealthcare implementation. We conducted many informal discussions with managers and other

stakeholders throughout the period of our study, and in addition conducted formal interviews (over five years from April 2006–June 2011).

We wanted to assure representation across the organization's hierarchy and functions, which led us to the following choices. After the managers and their teams were interviewed, we assigned a roughly equal number of interviews for each of the five sites making sure a representation of other staff were selected and matched in terms of role (n = 90). These included local authority and health services staff. Participants were the Chief Executive and other Project Managers, Directors of Service, Commissioners and Senior Nurse Practitioners. We wanted access to those informants who were actively managing the telehealthcare implementation because of their formal position, as well as those who were identified by others as likely change recipients. This ensured we gained a well-rounded picture of adoption efforts, allowing room for resistant voices, as well as the voices of champions [42].

The interviews typically lasted one to two hours, were tape-recorded and transcribed verbatim. The interview protocol contained a number of questions regarding the sites' current telehealthcare position, likely future position, telehealthcare strategy, and the interviewees' own work roles, motivations, commitment and actions within this context. Interviewees were also encouraged to pursue any topics they regarded as relevant.

5. Data Analysis in Five Rounds

Our analysis followed the principles of grounded theory [43], progressing from a very detailed, empirical reading towards greater abstraction. Our practices for analyzing and presenting the data were also inspired by the qualitative work of Gioia and his colleagues [16,26,28]. The analysis progressed in five rounds. The first round involved detailed contextual analysis of past history; how previous telehealthcare change efforts had progressed. This built a baseline from which strategic progress could be assessed. We then began the process of building a grounded theory. Strauss and Corbin [44] suggest that grounded theorizing begins with a fine-grained reading of the data—A practice which they call microanalysis. We began our analysis by writing a detailed account of the current change effort from the viewpoint of managers. We sought to give a rich account of what had transpired. We catalogued and temporally ordered the data, and used published official sources to construct a recent event history of what had transpired. We coded what appeared to be important events in the implementation process. We proceeded to integrate the views of different stakeholders by using non-public texts and interviews. As the richness of our data allowed for triangulation, we augmented, criticized and structured more public narratives with non-public texts.

During the third analysis round, we coded the data on the basis of the theoretical account we had taken, with pure induction balanced against our initial sensemaking framework. The framework guided our field work and data collection, but we were cautious not to be de-sensitised. The aim was to construct new and emerging narratives. To achieve this we used a narrative strategy of qualitative process research [39], constructing multiple interwoven stories from our data. This narrative story building required that data and theory be constantly compared and contrasted. Evolving theory directed attention to the efficacy of our conclusions made while new data focused attention on the suitability of our conclusions.

Finally, during our four and fifth round of analyses, we integrated the previous rounds into an overall explanation of sensemaking, identification and re-identification and adoption success and failure at the sites, introducing our theoretical vocabulary into this framework [23,28,29]. Over a period of six months five levels of analysis and coding incorporating over 100 pages of text emerged before the final conclusions were revealed and data saturation was achieved. Overall assessments were validated by two researchers and further validated with the informants themselves. These conclusions were further validated by an independent analyst who was asked to code a selection of randomly chosen extracts (about 20%). A high level of agreement was achieved. Our preliminary findings were then further validated by being presented at twenty one conferences attended by representatives from local authorities, health authorities and the industry supply chain implementing or considering implementing remote care. There was broad agreement with our interpretations.

6. Findings

Firstly, we measured the rate of success of telehealthcare implementation. This is illustrated by the number of people in each site using the new service (see Table 1). User numbers is an easily comparable metric, indicative of other associated complicated organizational changes, such as the development of new call centres, new staff roles and training to support these new users. Variation across our five sites was large. User numbers increased and strategic change successfully progressed, in Newhall and Canton, and to a lesser extent in Dinham. Samridge and Sunning failed to further implement telehealthcare services, with telehealthcare user numbers gradually decreasing (see Table 1). In an attempt to understand what may explain these differential levels of adoption across our five sites, the next sections discuss how the strength of managerial organisational identity, experiences of work process control through participation in decision making and a sense of possessiveness towards the organisation frames what constitutes "success" and determines local adoption rates of telehealthcare. Empirical evidence on the impact of organisational ownership is incomplete, but initial work suggests that extremely high levels of psychological ownership may be counter-productive when attempting to promote innovation as members may feel threatened and try to defend their "turf" [38].

Table 1. Telehealthcare implementation across our case studies.

Study Site	Dinham	Canton	Newhall	Sunning	Samridge
Population No. 100,000	493	1329	243	282	1059
Population type	Rural	Mixed	Urban	Mixed	Urban
Level of funding April 2006–2007	£349,004	£743,386	£147,507	£230,136	£554,023
Levels of funding April 2007–2008	£582,612	£1,245,365	£243,208	£379,716	£921,853
Total	£931,616	£1,988,751	£390,715	£609,852	£1,475,876
Additional funding secured 2008	£700,000	£2,000,000	£4,000,000	None	None
No. of users * June 2006	140	310	400	300	300
No. of users June 2008	710	1450	2401	260	233

* Numbers of telehealthcare users include those with home monitoring systems (the frail elderly, with for example falls detectors or motion sensors) and health monitoring systems (for those chronic conditions such as Chronic Obstructive Pulmonary Disease).

The strength of managerial organisational identity was assessed by exploring each participant's length of service, and their organisational commitment and identification with telehealthcare work [45]. This information was extrapolated from the interview data. The aim of this method was to assess participant's strength of organisational identity and explore how they conceptualised this tie. The interviews covered questions such as the desire to remain affiliated (commitment), the use of elements of the organisation identity to oneself (identification) and alignment with organisationally shared goals and values. Finally the participant's sense of ownership regarding their current work, the organisation and the proposed strategic change (telehealthcare implementation) was explored [37].

7. Managing Innovation in the Context of Identity Change

Samridge is the case that is most surprising in terms of its failure to deliver a telehealthcare service. The site had £1.5 m of funding, an experienced committed manager and team of five support workers, yet over a two year period they managed to decrease the number of people receiving this digital health technology. The manager (Mark) was highly identified with the both the telehealthcare work, and the organisation, "to succeed means everything to me". He proudly described himself as actively being involved in an innovation that was distinctive, unique and prestigious and described the great value of this to others. Mark expressed being personally responsible for previous strategic successes and taking sole charge of the telehealthcare, "they need to realise that if they got rid of me the programme would collapse because I'm everything, I'm very closely identified with it." However, the organizational decision to move forward on a larger scale, and invest large sums of funding on an expanded service meant he was no longer in sole charge.

> "I loved doing the telecare work but now I've been told it's going to be over my head—And now I'm not so sure I believe in this anymore—I felt happier about the changes to our working practices when I knew I had a hand in how things were being run."

His esteemed identity, as the person in charge appeared under threat [29], through the prospect of dismantling the current scheme with another, the exact details of which were unknown to him. He expressed that the continuity and future of his role and the work of his immediate team was in jeopardy. Mark was unable to reconcile the new change with his previous role and he is inclined to distance himself from the membership that is being challenged noting an "obvious and non-negotiable mismatch" [30] between himself and the values of the organisation.

> "I now longer have any faith that they know what it is they are doing—All this new health care service—It needs real staff on the ground to run it—And now they seem to not understand that anymore—And I feel they are just not caring about the people they service—And I'm not sure I want to keep going with this anymore and my values and theirs' don't match-up."

Mark's team strongly identified with organisation, yet construction of identity content is, not an individual endeavour, nor a matter of personal choice. We know that identification processes are inextricably linked to individual and organizational relations with others [46]. The making of one's desired self at the workplace is a highly complex process and often a contested endeavour, negotiated through dynamic social interactions between group members, managers, organisational informants and

other stakeholders holding differentiated positions [31,46]. Organisations are made up of a large number of groups and subgroups with different social identities and group prototypes, which provide individual members with many different opportunities for the development of new identities or joining existing organisational groups, where ingroup members share similar ideas and attitudes. However, it is the manager, usually the most visible member of an organisation, who has the power to facilitate, support or block entry to organisational groups, and, through their sensegiving efforts, provide legitimacy, face validity and desirability to belong to a group membership [31,46]. According to Mark the meanings and values associated with the new proposed telehealthcare identity are not only ambiguous but also undermine the current position and vision of the group. In an attempt to ameliorate the threat and its negative consequences Mark created a small but salient sub-group identity.

> "We've increased our numbers of staff. We're going to get a fifth member. We've got other people, but they're, not negative as such, about the service, but I don't think they fully understand the implications, or necessarily share our, my vision."

Although the group identified with the organisation, work members often self-categorise first at the level of their subunit—Their department or immediate work group—Because of task interdependence, interpersonal proximity and similarity [47]. The team closely identified with Mark, and Mark's sensegiving was highly effective. His desire to maintain control and separate himself and the team from others resonated. Once part of a desired group, people's self-definition is enacted with reference to the group, and the member will follow the groups values, norms and beliefs [46] working in concordance with the group identity to enhance and maintain self-esteem levels. A large part of this behaviour will consist of engaging in favourable intergroup comparisons to accentuate the ingroup similarities and remain positively distinct from other groups [48]. The proposed organisational changes were translated by Mark and communicated to his team as a threat to the group's systems of values and beliefs. Mark's status and power legitimised his right to pass on a negative judgement about the proposed organisational changes creating a temporal sense of loss and anxiety within the team which he successfully dealt with by insisting that the team should protect themselves from others to maintain control. A type of battle mentality emerged, a "them and us" divide that had not existed before. A subgroup of aspirational remote care experts ready to 'fight' their battle and lead implementation in their own way emerged.

> "I don't want to work with others on this anymore—I feel we are the only ones who understand the nuances of implementation and other groups just don't really get that—So I fight to keep this here and if I can't then I think we will just give up."

Over time this "giving up" and overall lack of identification with the new telehealthcare led to implementation failing to progress (see Table 1). Mark and his team made no attempt to widen participation to others, there was a lack of cooperative spirit, with rigidity and the embattled attitude eventually leading to a reversal in telehealthcare uptake.

In contrast, staff at Sunning appeared from the outset to have low organisational identification with the organisation and with their immediate work group and little commitment to telehealthcare. This appeared largely due to organizational restructuring, which happened just before and during and the study period. Nearly all staff had had to reapply for their jobs, with heavy job losses reported and staff reporting "it is the worst time ever known here".

> "It hasn't been easy because everyone is in a state of flux at the moment. We are going through a big structural reorganization. So everyone working for health is very nervous at the moment because they know that jobs are going to be cut and nobody knows yet who."

Staff were disillusioned, and by the end of the study identification and trust within the organization and telehealthcare work was at "an all-time low", with staff expressing that the reorganization meant the end of working life as they knew it, and many staff leaving of their own volition. In the chaos the manager in charge of implementation was replaced twice.

> "The idea of working together and all that working practice stuff, is really key in getting to where we are, but he's now been replaced by someone else. It's that's understanding, all lost, it was kind of like we had to start again, and we just can't do it."

Staff turnover meant that sensemaking and sensegiving did not have continuity, and staff became largely indifferent to the telehealthcare, apart from how it affected them personally. There was also a growing lack of any belief in telehealthcare or trust in the organization's agenda surrounding the technology. Without individuals' to champion the benefits or the technology people appeared reluctant to believe in it or engage, resulting in very little being achieved.

> "We have got kind of rogue voices, who were quite against doing anything at all. They would turn up to meetings but didn't want to get involved and wouldn't sign up to anything."

In Dinham the "battle" to provide people in the district with basic provisions was spoken about with evangelical zeal. Staff who worked at Dinham were "on a mission" and were proud to be "making a difference". The high level political support at the time pushed telehealthcare services further up to the local agenda and added not only to staff commitment and pride but also to the "determination" to succeed.

The manager (Peter) in charge of telehealthcare implementation and the Chief executive officer expressed enthusiasm for the task ahead, but there was a lack of knowledge about how the task could be achieved. Peter was given operational responsibility for achieving the strategic change but early on experienced a loss of credibility within his team. With the stakes high due to the concerted political interest Peter also expressed internal doubts about his abilities. External credibility with colleagues was further dented by a failed bid to gain additional funds from the UK Department of Health. A lot of effort had been put into the bid and failure was taken badly. As stated by one senior practitioner and member of the team the overall impression was that Peter was a "*good bloke*" but lacked the experience needed for the task of implementing telehealthcare organization-wide.

This lack of belief made Peter vulnerable and the task of implementing telehealthcare and sensegiving the benefits of this change to other employees hard. Other staff did not take Peter seriously and some organizational members were openly hostile. This lack of trust in Peter's abilities and uncertainty about the innovation itself largely contradicted the actual progress made over the course of the study (see Table 1). Despite the setbacks and with political support on board there was significant progress, but overall rate of success was hampered by Peter's own lack of belief in his ability to lead, and offer sensegiving that provided members with a sensemaking foundation from which to move forward. As Weick, Sutcliffe and Obstfeld [24] explain, sensemaking is driven by plausibility rather than accuracy. The drafting of an emerging story requires robustness, in order to be resilient in the face

of criticism. The sensegiving did not appear enough to counteract growing scepticism in the value of telehealthcare care and concerns about how it would impact on people's work. A process of excitement, and action was, thus, followed by feelings of exhaustion, uncertainty, inaction and gradual loss of confidence in dealing with the complicatedness of the task in hand [49]. Realisation that building a single and coherent organisational vision may not be either plausible or desirable in the current context emerged as infighting and worry about the "new roles" set in.

> "There's the S curve where you have a rise in expectations and excitement and then you have a huge trough where things start going wrong and you know, people are getting tense and nervous."

In Newhall the chief executive office decided to parachute in an external consultant and his team to drive the change through (see Table 1). Newhall had a highly identified and loyal workforce. Newhall is one of the most deprived areas of the UK, with high crime and a prevalence of older, sick people (those too poor to move away). Staff in Newhall were, again, highly committed to improving things. The chief executive in Newhall was highly respected and his choice of management strategy was universally accepted by other staff and paved the way for a radical programme of change.

> "We are trying to drive this programme so it becomes business as usual from the start, and the last thing I want to do is set up separate organizations because then it becomes self-perpetuating, and the whole idea and the whole reason why we use consultants is so that a future point we can take them away and share it to everybody else—And drive it into the mainstream."

The consultant and his team did not identify with the parent organization, seeing themselves as outsiders. The lack of a strong organisational identification allowed the external team in Newhall freedom to quickly set about dismantling the existing interpretive scheme, getting rid of areas of doubt about technology myths and "hidden management agendas" winning over sceptics. By interpretive scheme we mean organisationally shared central assumptions and beliefs about the organisation that define and legitimise its goals and activities [19].

> "I feel it's up to me to decide how to make this programme work—And so I am going to led on this and make it work for us—I will decide how we will deal with sceptics and I will sort out the men from the boys when it comes to delivering the new model of care—And it will be a new model—My new model."

Despite this freedom, there was concern over employee resistance. The team expressed how they worked tirelessly to provide new roles and identities and reduce any anxiety related to changes in work practices [50]. The consultants addressed feelings of uncertainty regarding individual's professional roles by emphasising the importance of individual jobs, and the organisation's need for employee input to decision making, in terms of building an increasingly vital and forward thinking organisation that would serve the future needs of the community beyond the project deadlines. The consultant (Matt) clearly stated that he felt his job was to align employees with the ethos of the organisation and its goals, as opposed to his own goals.

> "I feel we need to get people on-board with the strategic vision around all this—It's not about my way but about the way forward for this organisation and we need everyone to start leading on this and getting exciting about it."

Managerial sensemaking activities were mobilised on a huge scale, with different managerial strategies employed at different phases of implementation. In the early phases of implementation rhetorical and symbolic strategies were widely used. New names were given to the initiative, and media and marketing campaigns were started. Sensegiving focused on persuading other stakeholders to embrace the new change, with telehealthcare positioned as a new and exciting development that would enable people to live better lives at home. We observed negative rhetorical strategies [14] (p. 664), with no attempts made to devalue previous working and care delivery processes.

At a later stage rhetorical strategies were further supported by shared social actions, such as the creation of new work roles, and involvement of different stakeholders in tasks such as workshops and training. In the final stage of change, for identification to become secured and newly learned understandings to gain purchase both types of strategies were consistently evoked, allowing for no backward slippage [28]. These sensegiving tasks (such as workshops, training days, conferences and media communications) provided stability and a framework for schema replacement and the development of a new organisational identity. Staff started to think of themselves as part of the scheme and identification and inclusion in the telehealthcare initiative quickly became a desired goal.

> "I think it gives the work status and gives us an edge if you like. We are seen as being forward thinking and as being at the front. This is good for everyone here so I said count me in."

These strategies were most effective when combined with a fast pace of the change [28], and the sheer level of combined activity was perceived as critical, leaving members no opportunity to reflect or fall back on previous ways of working. Alongside the changing political and local narratives, the innovation itself and its desired outcomes evolved. Telehealthcare was initially concerned with delivering pilots, but to be scaled up it also needed to be a clinically safe alternative and a potential money saver. Matt expressed that this was hard message to sell.

> "There's a big divide. We've breached it in many places, but it's hard work and it's very quick to open up again if you don't keep looking after it."

In Canton, like Newhall new managers were brought in to lead the change, but unlike Newhall staff were new internal members of the organisation. The CEO felt that new people could be "different enough to have the freedom to innovate and actually show that different things will, and can work. And they do tend to learn from each other".

The organisation was perceived as highly innovative and as having a charismatic and entrepreneurial leader. This leadership had brought positive and radical changes to the organisation. The sheer force of the CEO's personality and trust in him allowed the new appointments to be initially accepted without resistance. The new managers took full advantage, solidifying their new role with action. They requested funds (>£2 m), and they set about buying large amounts of telehealthcare equipment. Despite the CEO's support this action was poorly received, especially when the process of implementation slowed. Trust between the managers and other members of the organisation was under scrutiny, as the

technology failed to live up to expectations and deliver expected benefits in the time frame originally espoused. New "them and us" divides started to emerge. The new roles had tenuous legitimacy, and the managers received little support from the internal staff who perceived them as being "for themselves" rather than working for the good of the organisation.

> "Those people do focus on the equipment and buying things because it looks so good. You see something and say, that's great. But what are you going to do with it? They don't actually know! It was a bit toys for boys, and I'm sceptical you have to do a lot of work to integrate that technology into the actual service delivery to achieve the value."

The CEO response was to create four new posts to support the change. These posts were filled by esteemed internal members, with their work role and duties reassigned. The creation of the support posts had strong symbolic meaning, giving needed legitimacy to the new work. The action enabled the work to be seen as more integral to the organisation. New levels of personnel also enabled the managers to increase their sensegiving activities, with a large media campaign extolling the virtues of the new service model for clients.

> "We're on the journey of trying to change our approach-to how we view the public, how we're dealing with our resources, how we try and create and provide opportunities for people to be more independent. And it's about the role of what we can offer them in support of that."

This new sensegiving moved away from previous dialogues concerning the "extravagant spending" with the change successfully reframed as "a change for good". With these new activities further implementation progressed well.

8. Discussion

By studying the messy process of organisational identity and its impact on telehealthcare adoption, not just as the change is being instigated but throughout the change period and across five large public sector organisations, we develop new insights. Our findings support the argument that the dynamics between individual and organisational identities both support and undermine digital technology adoption efforts. Levels of ingroup identification played a key role in determining how the proposed organisational change (telehealthcare) was perceived, the levels of threat experienced and the choice of responses for improving the integrity of the organisational identity and the local management of implementation.

In our case study Samridge, the manager who most strongly identified with the innovation felt threatened by the intended change [14,29]. Via sensegiving this threat was then transferred to an equally strongly identified workforce. The high level of agreement that telehealthcare was threatening resulted in the manager and his workforce coalescing to form a united front that prevented further adoption. Many studies have described sensemaking efforts in the context of externally induced unfreezing [14,16,29]. In this case, sensemaking was not focused on actively unfreezing the prior interpretative scheme but appeared collectively used as a method of undermining and creating more scepticism, whilst legitimating specific self-conceptions [51]. All attempts to alter managerial control with organization-wide standards and procedures were negatively communicated and seemed largely

ignored. The impact on telehealthcare implementation was devastating, despite £1.5 m of additional funding, there was a reduction in telehealthcare users from 300 to 233.

We found organisational attempts to redefine work roles and loosen identification were inhibited by past experience and already solidified identities. The strategic decision to legitimise early work by giving individual managers increased status and control was problematic and painful later on. Initially, the actions led to an increased passion of the telehealthcare initiatives, with managerial identities and the telehealthcare increasingly intertwined. This deep connection and ensuing state of psychological ownership initially enabled the organizations to drive forward—People were enthused and committed. Later the move from pilot projects, run by individual managers and self-managing teams, to organization-wide initiatives required an individual's shift in identification and ownership; either explicitly via relinquishing control of the decision-making to another authority or through more tacit forms of control over problem definition, implementation strategy and execution. At this point strong identification and possessiveness became problematic. Being seen as a pivotal part of the telehealthcare implementation became a preferred self-conception [35,46], a valued source of identity meaning and self-esteem. Moving to organization-wide development was threatening; it meant the potential loss of this desired self. In addition to individual identity threat, the organization's identity was often damaged by the technology itself not matching many of the apparently over hyped expectations. We observed many people excitingly engaging, then later emotionally disengaging, as the "*gut wrenching reality*" of poor adoption outcomes became "*too much to bear*". Managing expectations and supporting a collective (organisation wide) rather than an individual level of psychological ownership from the start might have lead to better implementation outcomes.

In Dinham, organizational identification was strong, both individual members and the manager in charge of leading the change were committed to telehealthcare, supportive of the innovation and proud of the organizations achievements. Yet, identification processes negatively impacted on strategic change, initially at a localised level. This localised effect then spread across the organization. The problem was situated in a lack of trust in the manager (Peter) assigned with the task of implementation. Identification is based around trust [52].Trust is a psychological state of positive expectation about another's motives and future actions [53]. Staff did not believe in Peter, and subsequently they did not believe in the telehealthcare technology, despite the fact there had been some progress. This led to Peter questioning himself and created a negative interactive spiral, with implementation strategies too risk adverse and conservative to create the environment to support wide level of implementation required by the organization.

Similarly, in Canton, trust and the perceived legitimacy of the managers became an issue when implementation slowed. Newly appointed managers had the freedom and vision to move beyond traditional organisational boundaries, without feeling personally threatened by the change. However, this strategy carried risk. Staff who do not highly identify with organisation can be perceived by other members as "outsiders" and as lacking legitimacy. This inherent danger was acknowledged and addressed in Newhall right from the outset. Managers in charge of telehealthcare were external consultants, who capitalised on their positions, in not being strongly identified or strongly identifying with the extant scheme. They set about successfully dismantling the old scheme and setting up the new, with rapid and radical action. Throughout this action, the managers were very mindful of the need

to build trust, and internalise ownership of the change [37], with a large range of sensemaking tools and co-opted actions utilised to strengthen the legitimacy of the new interpretative scheme.

To replace the old scheme "*people needed something new and bold to believe in*"—telehealthcare care needs to deliver promised benefits and quell concerns about future working practices. To create this whole new bold world, a new language was utilised and further reinforced with behaviour and symbolic artefacts. For example, the organizations gave the telehealthcare initiatives new names, gave members involved important sounding new titles (*i.e.*, Telecare Programme Director) engaged in widespread marketing to constituent users and other stakeholders, and gave staff new roles. The tactic was one of inclusion [26], the action to work hard and to work quickly, leaving no room for reversal. This risk was conceptualised by managers in both Newhall and Canton. Until the new identification was concrete, the residual effect of the previous cognitive scheme remained strong, so unattended members could quickly fall back on previously learned or relatively automatic behaviours and ways of thinking, even after the change process was enacted.

9. Conclusions

Crucial to the process of achieving acceptance of digital health technologies is the process of negotiation, of sensemaking and sensegiving between managers and members. As the case of Sunning demonstrated, some level of identification with the technology is required for sensemaking and sensegiving activities to take place—Additionally, with the technology itself also delivering the expected benefits. The final outcome depends on managers and members negotiating and renegotiating what the technology means to themselves and others [42,50]. Alignment and consensus needs to be reached for strategic action to take place, but it is the ongoing sensemaking and sensegiving negotiation aspect process that is pivotal to make it a success.

10. External Generalisability

Our focus has been on the relationship between identification and telehealthcare in public sector innovations. The unique nature of our setting and our inductive qualitative inquiry does not mean that "naturalistic generalization" is not plausible and some knowledge cannot be transferred from our study sample to a wider population which may have subtle differences in other organizations and settings. This said our sample was large, theoretically informed, and appropriate to our research question. We ensured rigour by sampled from different organizational levels: senior management, middle management, senior and operational practitioners with our data not limited to one organization or profession. But our data collection was not exhaustive, and we adopted qualitative methods and used purposive rather than random sampling. To overcome these limitations, we maintained a systematic approach to our research rigour at every stage of the study, in our design, sampling, analysis and interpretation.

Acknowledgments

This article is based on research projects funded by the EPSRC funded Health and Care Infrastructure Research and Innovation Centre (HaCIRIC) and the Department of Health, UK. The

views expressed are those of the authors and are not necessarily those of the funders. We are also extremely grateful to the participating case study organisations for their help, and to all the interviewees for their time and interest in the study. We are also grateful to members of the remote care community for their continuing support in our research.

We also thank the independent referees for their helpful comments on an earlier version of this paper.

Author Contributions

Jane Hendy and James Barlow conceived and designed the study. Jane Hendy and Theopisti Chrysanthaki have collected the data, performed the analysis and drafted the manuscript together. All authors have contributed to interpretation of findings, commented on drafts produced, read and approved the final manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

References

1. Hendy, J.; Chrysanthaki, T.; Barlow, J.; Knapp, M.; Rogers, A.; Sanders, C.; Bower, P.; Bowen, R.; Fitzpatrick, R.; Bardsley, M.; *et al.* An organizational analysis of the implementation of telecare and telehealth: The Whole Systems Demonstrator. *BMC Health Serv. Res.* **2012**, *12*, 403, doi:10.1186/1472-6963-12-403.
2. Hendy, J.; Barlow, J. Adoption in practice: The relationship between managerial interpretations of evidence and adoption of an innovation. *Health Policy Technol.* **2013**, *2*, 216–221.
3. Chysanthaki, T.; Hendy, J.; Barlow, J. Stimulating whole system redesign: Lessons from an organisational analysis of the Whole System Demonstrator Programme. *J. Health Serv. Policy* **2013**, *18*, 47–55.
4. Bower, P.; Cartwright, M.; Hirani, S.P.; Barlow, J.; Hendy, J.; Knapp, M.; Henderson, C.; Rogers, A.; Sanders, C.; Bardsley, M.; *et al.* A comprehensive evaluation of the impact of telemonitoring in patients with long-term conditions and social care needs: Protocol for the Whole Systems Demonstrator cluster randomised trial. *BMC Health Serv. Res.* **2011**, *11*, 184, doi:10.1186/1472-6963-11-184.
5. Sanders, C.; Rogers, A.; Rogers, A.; Bowen, R.; Bower, P.; Hirani, S.; Cartwright, M.; Fitzpatrick, R.; Knapp, M.; Barlow, J.; *et al.* Exploring reasons for non-participation and withdrawal from a randomised controlled trial of telehealth and telecare in England: A qualitative study. *BMC Health Serv. Res.* **2012**, *12*, 220, doi:10.1186/1472-6963-12-220.
6. Steventon, A.; Bardsley, M.; Billings, J.; Dixon, J.; Doll, H.; Hirani, S.; Cartwright, M.; Rixon, L.; Knapp, M.; Henderson, C.; *et al.* Effect of telehealth on use of routine secondary care and mortality: Findings from the Whole System Demonstrator cluster randomised trial. *Br. Med. J.* **2012**, *344*, e3874.

7. Henderson, C.; Knapp, M.; Fernandez, J.-L.; Beecham, J.; Hirani, S.P.; Cartwright, M.; Rixon, L.; Beynon, M.; Rogers, A.; Bower, P.; *et al.* Cost effectiveness of telehealth for patients with long term conditions (whole systems demonstrator telehealth questionnaire study): Nested economic evaluation in a pragmatic, cluster randomised controlled trial. *BMJ* **2013**, *346*, 1035, doi:10.1136/bmj.f1035.
8. Hirani, S.; Beyon, M.; Cartwright, M.; Rixon, L.; Doll, H.; Henderson, C.; Bardsley, M.; Steventon, A.; Knapp, M.; Bower, P.; *et al.* The effect of telecare on the quality of life and psychological well-being of elderly recipients of social care over a 12 month period—The Whole Systems Demonstrator (WSD) cluster randomised trial. *Age Aging* **2014**, *43*, 334–341.
9. Stryker, S. Identity competition: Key to differential social movement involvement. In *Self and Identity: Psychosocial Perspectives*; White, R., Ed.; John Wiley & Sons: New York, NY, USA, 2000; pp. 89–103.
10. Hood, C.; Peters, G. The Middle Aging of New Public Management: Into the Age of Paradox? *J. Public Adm. Res. Theory* **2004**, *14*, 267–282.
11. Cross, M. Public Sector IT Failures. *Prospect* **2005**, *115*, 48–52.
12. McNulty, T.; Ferlie, E. Process transformation: Limitations to radical organizational change within public sector organizations. *Organ. Stud.* **2004**, *25*, 1389–1412.
13. Department of Health. Whole System Demonstrator Programme Headline Findings, 2011. Available online: https://www.gov.uk/government/publications/whole-system-demonstrator-programme-headline-findings-december-2011 (accessed on 11 February 2014).
14. Fiol, M. Capitalizing on paradox: The role of language in transforming organizational identities. *Organ. Sci.* **2002**, *13*, 653–666.
15. Dukerich, J.M.; Golden, B.R.; Shortell, S.M. Beauty is in the eye of the beholder: The impact of organizational identification, identity, and image on the cooperative behaviors of physicians. *Adm. Sci. Q.* **2002**, *47*, 507–533.
16. Corley, K.G.; Gioia, D.A. Identity ambiguity and change in the wake of a corporate spin-off. *Adm. Sci. Q.* **2004**, *49*, 173–208.
17. Balogun, J.; Johnson, G. Organizational restructuring and middle manager sensemaking. *Acad. Manag. J.* **2004**, *47*, 523–549.
18. Bartunek, J.M. Changing interpretive schemes and organizational restructuring: The example of a religious order. *Adm. Sci. Q.* **1984**, *29*, 355–372.
19. Greenwood, R.; Hinings, C.R. Radical organizational change. In *Handbook of Organization Studies*; Clegg, S., Hardy, C., Nord, W.W., Lawrence, T., Eds.; Sage Publications: London, UK, 2006; pp. 814–842.
20. Pratt, M.G.; Barnett, C.K. Emotions and unlearning in Amway recruiting techniques: Promoting change through safe ambivalence. *Manag. Learn*. **1997**, *28*, 65–88.
21. Hogg, M.A.; Terry, D.J. Social identity and self-categorization in organizational contexts. *Acad. Manag. Rev.* **2000**, *25*, 121–140.
22. Deaux, K. Meaning and making. Some comments on content and process. In *Representations of the Social*; Deaux, K., Philogene, G., Eds.; Blackwell Publishers: Oxford, UK, 2001; pp. 312–317.
23. Weick, K.E. *The Social Psychology of Organizing*; Addison-Wesley: Reading, MA, USA, 1979.

24. Weick, K.E.; Sutcliffe, K.M.; Obstfeld, D. Organizing and the process of sensemaking. *Organ. Sci.* **2005**, *16*, 409–421.
25. Cunliffe, A.; Coupland, C. From hero to villain to hero: Making experience sensible through embodied narrative sensemaking. *Hum. Relat.* **2012**, *65*, 63–88.
26. Gioia, D.A.; Thomas, J.B.; Clark, S.M.; Chittipeddi, K. Symbolism and strategic change in academia: The dynamics of sensemaking and influence. *Organ. Sci.* **1994**, *5*, 363–383.
27. Isabella, L.A. Evolving interpretations as a change unfolds: How managers construe key organizational events. *Acad. Manag. J.* **1990**, *33*, 7–41.
28. Gioia, D.A.; Chittipeddi, K. Sensemaking and sensegiving in strategic change initiation. *Strateg. Manag. J.* **1991**, *12*, 433–448.
29. Ravasi, D.; Schultz, M. Responding to organizational identity threats: Exploring the role of organizational culture. *Acad. Manag. J.* **2006**, *49*, 433–458.
30. Pratt, M.G. The good, the bad and the ambivalent: Managing identification among Amway distributors. *Adm. Sci. Q.* **2000**, *45*, 456–493.
31. Scott, S.G.; Lane, V.R. A stakeholder approach to organizational identity. *Acad. Manag. Rev.* **2000**, *25*, 43–62.
32. Humphreys, M.; Ucbasaran, D.; Lockett, A. Sensemaking and sensegiving stories of jazz leadership. *Hum. Relat.* **2012**, *65*, 41–62.
33. Whittle, A.; Mueller, F. Bankers in the dock: Moral storytelling in action. *Hum. Relat.* **2012**, *65*, 111–139.
34. Birken, S.A.; Lee, S.D.; Weiner, B.J. Uncovering middle managers' role in healthcare innovation implementation. *Implement. Sci.* **2012**, *7*, 28, doi:10.1186/1748-5908-7-28.
35. Ibarra, H. Provisional selves: Experimenting with image and identity in professional adaptation. *Adm. Sci. Q.* **1999**, *44*, 764–791.
36. Elsbach, K.D.; Kramer, R.M. Members' responses to organizational identity threats: Encountering and countering the Business Week rankings. *Adm. Sci. Q.* **1996**, *41*, 442–476.
37. Pierce, J.L.; Kostova, T.; Dirks, K.T. Towards a theory of psychological ownership in organizations. *Acad. Manag. Rev.* **2001**, *26*, 298–310.
38. Pierce, J.L.; Rodgers, L. The psychology of ownership and worker-owner productivity. *Group Organ. Manag.* **2004**, *29*, 588–613.
39. Langley, A. Strategies for theorizing from process data. *Acad. Manag. Rev.* **1999**, *24*, 691–710.
40. Emerson, R.; Fretz, R.; Shaw, L. *Writing Ethnographic Fieldnotes*; University of Chicago Press: Chicago, IL, USA, 1995.
41. Bernard, R.H. *Research Methods in Anthropology: Qualitative and Quantitative Methods*; AltaMira Press: Walnut Creek, CA, USA, 2002.
42. Hendy, J.; Barlow, J. The role of the organizational champion in achieving health system change. *Soc. Sci. Med.* **2012**, *74*, 348–355.
43. Glaser, B.G.; Strauss, A. *Discovery of Grounded Theory. Strategies for Qualitative Research*; Sociology Press: Mill Valley, CA, USA, 1967.
44. Strauss, A.L.; Corbin, J. *Basics of Qualitative Research*; Sage: Thousand Oaks, CA, USA, 1990.

45. Pratt, M.G. To be or not to be? Central questions in organizational identification. In *Identity in Organizations: Developing Theory through Conversations*; Whetten, D., Godfrey, P., Eds.; Sage: Thousand Oaks, CA, USA, 1998; pp. 170–207.
46. Thornborrow, T.; Brown, A.D. "Being regimented": Aspiration, discipline and identity work in the British Parachute Regiment. *Organ. Stud.* **2009**, *30*, 355–375.
47. Ashforth, B.E.; Mael, F.A. Social identity theory and the organization. *Acad. Manag. Rev.* **1989**, *14*, 20–39.
48. Hogg, M.A.; Abrams, D. *Social Identifications: A Social Psychology of Intergroup Relations and Group Processes*; Routledge: London, UK, 1998.
49. Greenhalgh, T.; Procter, R.; Wherton, J.; Sugarhood, P.; Shaw, S. The organising vision for telehealth and telecare: discourse analysis. *BMJ Open* **2012**, *2*, e001574.
50. Segar, J.; Rogers, A.; Salisbury, C.; Thomas, C. Roles and identities in transition: Boundaries of work and inter-professional relationships at the interface between telehealth and primary care. *Health Soc. Care Community* **2013**, *21*, 606–613.
51. Reicher, S.; Hopkins, N.; Condor, S. Stereotype construction as a strategy of influence. In *The Social Psychology of Stereotyping and Group Life*; Spears, R., Oakes, P.J., Ellemers, N., Haslam, S.A., Eds.; Blackwell: Oxford, UK, 1997; pp. 94–118.
52. Kramer, R.M.; Wei, J. Social uncertainty and the problem of trust in social groups: The social self in doubt. In *The Psychology of the Social Self*; Tyler, T.R., Kramer, R.M., Peter, O.P., Eds.; Lawrence Erlbaum Associates: London, UK, 1999; pp. 145–168.
53. Sitkin, S.B.; Roth, N.L. Explaining the limited effectiveness of legalistic "remedies" for trust/distrust. *Organ. Sci.* **1993**, *4*, 367–392.

© 2014 by the authors; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/3.0/).