

Co-creation in complexity

A plea for outreach research¹

‘The classic welfare state is changing slowly into a participatory society. Anyone who is able must be asked to take responsibility for his or her own life’. Dutch state of the union (Kings speech), 2013

Introduction

This was the message to the Dutch people by conservative liberal Prime Minister Rutte which was articulated by the Dutch King in September 2013. It describes the change from an old concept of social welfare, sometimes referred to as ‘the nanny state’, which has proven to undermine important capacities of citizens, into a new concept of individual responsibility in a participatory society. It entails the transformation of people in vulnerable positions into citizens. Used to being service users, and assuming customer and client roles which made them dependent on state officials and social professionals, how can people become responsible for the quality of their own lives and that of those around them? The transition from a welfare state to a participatory society is a complex process: professional institutions will have to learn new ways of working, private enterprise will enter the social domain, neighbourhoods will reinforce social democracy by developing tailor-made solutions that are suited to their life world, representative democracy will have to learn to deal with these expressions of the will of the people. In the intended transition different strengths will intermingle: the social dimension of responsible citizenship, the political dimension of greater decentralized governance and decision making, the technical dimension of the more local organization of work processes and the cultural dimension of sense making and knowledge production with various stakeholders.

As researchers at the WMO workplace at Amsterdam University of Applied Sciences (hereafter referred to as HvA) we are partly financed by the Dutch Ministry of Health, Welfare and Sport. It finances thirteen WMO workplaces all over the country. They study all together more than a hundred practices in which this transition to a participatory society is taking place. The Amsterdam WMO workplace focuses on outreach work practices. Outreach social work tries to improve the lives of citizens in vulnerable situations by starting from their capabilities, perceptions and needs. We study outreach social workers who – according to new policy (the Social Support Act, 2007) and decentralizations in the social domain since 2012 - are trying to deal with the changing

¹ This article is based on the article about the research design of a multi case study of four educational cases I wrote for International Journal Of Qualitative Studies in Education (2013b). This research design also formed the basis for a multi case study of six social work cases (published as ‘Geef de burger moed’ (2012)) and of three social quarter teams (is still ongoing). Both publications were used as a pad for my lecture for NOSMO, HvA en Andragogenkring in 2013. The article presented here elaborates on the findings of the social work and social quarter team case studies.

circumstances and use them as opportunities for innovating their workplaces. We meet service users, customers and clients, together with peer-experts and volunteers, professionals, organizations and governments that are trying to innovate their practices by stimulating people's 'own strength', self-reliance and social and economic participation (Stam et al 2011; Stam 2012). These citizens in vulnerable situations live in the five most deprived city districts of Amsterdam, officially earmarked as belonging to the forty most deprived city districts (the so-called 'Vogelaarwijken') in the Netherlands. Six of our studies are about social work practices with young mothers, former homeless people, people with mental health problems, people suffering from addictions, loitering youths and the lonely elderly (2009 - 2012); three studies are about social community teams in deprived city districts with clients suffering from poverty and social exclusion, domestic violence, rearing problems etc. (2012 – 2015). The last three studies have not yet been completed. Because our research focuses on the capabilities, perceptions and needs of the people involved we refer to it as outreach research. The goal of our studies is to answer the question: How and what do outreach social workers and other participants learn from innovating their own practices?

In one of the five work conferences about the methodology of practice-based research (at HvA, autumn 2013) we presented our outreach research design which captured the complexity of innovations in the social domain and the learning of the participants in these innovative practices (organized by NOSMO, HvA and the circle of adult educational theory). The methodological question which accompanies this goal is: How can outreach researchers capture the complexity of these learning and development processes? This research design and some of the outcomes are presented here.

Context: problem and goal setting

The study '*Werk aan de wijk*' (Work on the district, SCP 2013) by the Social and Cultural Planning Bureau (official Dutch research and advisory institute, SCP) exemplifies the risks of deductive knowledge creation. It tried to prove the effect of policies in which more than a billion euros was invested in five years to improve the quality of life and safety in forty of the most deprived city districts in the Netherlands (the *Vogelaarwijken*). The conclusion of the researchers was that with the available measurement instruments they could not prove that these districts had become more liveable and safer compared to other surrounding weak districts. The researchers merely based this on governmental effect studies and did not go into these forty districts themselves. The report was ambiguous about what could substantially improve the quality of life and safety in such districts and this, added to a crippling press release, caused a storm of outspoken reactions by journalists and politicians. They concluded that the money had disappeared into a bottomless pit and that the study proved that society cannot be manufactured. This should serve as a warning about the desire for certainty in many circles. The pressure of 'knowing for sure' can reduce the value of patient and long-term research about what makes these processes successful.

This example demonstrates that research that departs from the deductive paradigm is limited to understand the transformation processes we encountered in the outreach practices.

What we encountered contradicted the usual categorization of success factors. This was understandable because of the transformation of social work practices that had taken place, in which many uncertainties and surprises occurred. In such circumstances, it does not make sense to give the primacy to the outcomes of theory in the research. We had to give the primacy to the practice. This meant that we followed the course of events and the experiences of the people involved in these practices. Studying complex innovations requires divergent inductive thinking, which cherishes the unique and that which has not yet been categorized. Acknowledging the unique and uncategorized as a source of knowledge creation requires a research design which embraces uncertainty and surprise. It should enable us to capture ongoing processes of inventing, correcting, adjusting and transforming practices.

Such explorative research – based on uncertainty - should focus on what improves process competencies such as reflecting, coaching, connecting, and transforming (Kruiter & Kruiter, 2013). The design should match the dynamics of a *complex* process. This is quite different from *complicated* processes, which are intricate but the course and termination of which can be predicted. In the practices we wanted to study, new principles are shaped and invented along the way. The way this happens cannot be repeated and be placed in a zero position as if they started at a beginning (which distinguishes them from complicated processes). We agree with Kahane (2004) who says that complex processes are complex in three ways:

They are dynamically complex, which means that cause and effect are far apart in space and time, and so are hard to grasp from firsthand experience. They are generatively complex, which means that they are unfolding in unfamiliar and unpredictable ways. And they are socially complex, which means that the people involved see things very differently, and so the problems become polarized and stuck. (Kahane, 2004, p. 2)

Nevertheless, our aim is to bring out some certainty about the innovative capacity of ‘local’ professionals, participants and organizations. After all, we wanted to learn more about how and what outreach social workers and other participants have learned, when they innovate their own practices. That is why we chose promising outreach practices for our studies, in which the participants (from service users to social workers and their team leaders) were actively involved in their development and started their activities from the life and perception world of the clients/customers/service users. Another criterion for selecting the cases was that the innovation had tangible consequences for citizens in vulnerable situations (which is the aim of outreach social work). A third criterion was that these practices were in a phase of transformation in which values and virtues of the old welfare state, such as the norm that the professional offers help, were challenged. And the last criterion for selecting promising practices was that the innovation had to be, at least partly, initiated from the bottom-up, through the ambitions and efforts of the participants in the innovation. With these criteria, we wanted to select practices in which social

workers themselves had an important voice in the development of the innovations. This enabled us to study their learning and innovative capacities.

We wished to gain insight into the deeper mechanisms which hinder and promote learning in bottom-up innovations. We followed a few practitioners and participants in each case for a period: in some practices for some months to a year, in others for several years. While carrying out the innovation those involved in a practice met all kinds of successes, failures and dilemmas. We reflected with them on the slow and painful nature of this process of change (Mintzberg, p. 210). We refer to this as the ‘warm’ side of our research. Simultaneously we had to gain insight into the macro-forces in this process, such as policies of local and national government. These macro-forces and the ideologies that accompany them cannot be exposed just by collecting experiences of individual practitioners. For the analysis of this data, we used two ‘cold’ models of Cultural-Historical Activity Theory (CHAT) by Yrjö Engeström. This forms the cold side of our research. By moving back and forth between warm and cold, we were aiming to derive certainty from uncertainty. In this, we placed value on the remark by the philosopher Bruno Latour, according to whom, when compared to science, research is uncertainty:

Science is supposed to be cold, straight, and detached; research is warm, involving, and risky. Science puts an end to the vagaries of human disputes; research creates controversies. Science produces objectivity by escaping as much as possible from the shackles of ideology, passions, and emotions; research feeds on all of those to render objects of inquiry familiar. (Latour, 1998, p. 208)

Latour’s approach helped us understand our two roles as outreach researchers: to be part of the process of giving meaning to what happens on the one hand and to look at the situation as an outsider on the other hand. With this two-sided approach we studied the ‘vagaries of human disputes’, such as the values and virtues policy makers count on: people’s own strength, self-reliance and social and economic participation of citizens in vulnerable situations (goals of the Social Support Act 2015).

How did we bring these local disputes to a higher level? This had consequences for both the research design as well as the selection of the object. A simple case study which would only produce context-immanent, local knowledge would be unsuitable. We therefore set up the research design as a multi-case study, in such a way that a wealth of empirical information could be generated about what and how participants of several innovative outreach practices learn. Based on these data we formed a theory which encompasses the conditions for long-term transformation in learning and developing social work practices (see below, paragraph E: results).

In this article, we will report on how mixing warm and cold outreach research enabled us to generate decontextualized knowledge from specific ‘slow and painful’ processes of change. In

other studies, one of us has described his former experiences with this two-sided methodology in another field: the innovation of vocational schools (Miedema & Stam, 2008, Stam et al, 2013b).

We focus on the following questions:

- A. How do we capture the complexity of innovating practices with warm research?
- B. How do we capture the complexity of innovating practices with cold research?
- C. How do we collect data?
- D. How do we analyze data
- E. What were the main results of our studies?
- F. What are our conclusions regarding the question: How can researchers capture the complexity of these learning and development processes?
- G. What are our points of discussion and further research?

A. How do we capture the complexity of innovating practices with warm research?

As researchers at the Amsterdam University of Applied Sciences, we do not study practices merely for the sake of knowledge development. The primacy of our research into practice has two goals. As part of the social work department, we develop knowledge to improve both social work practice and the education of social workers. A lot of old certainties have been undermined in today's social domain. New answers have to be found now that social workers are required to enable their customers / clients / service users to become co-producers of the quality of their own lives by stimulating their own strength, self-reliance and participation. In the warm side of our research the focus therefore lies on describing this transformation, articulating the values of participants and gathering the narrative experiences of service users, peer experts, professionals and others involved.

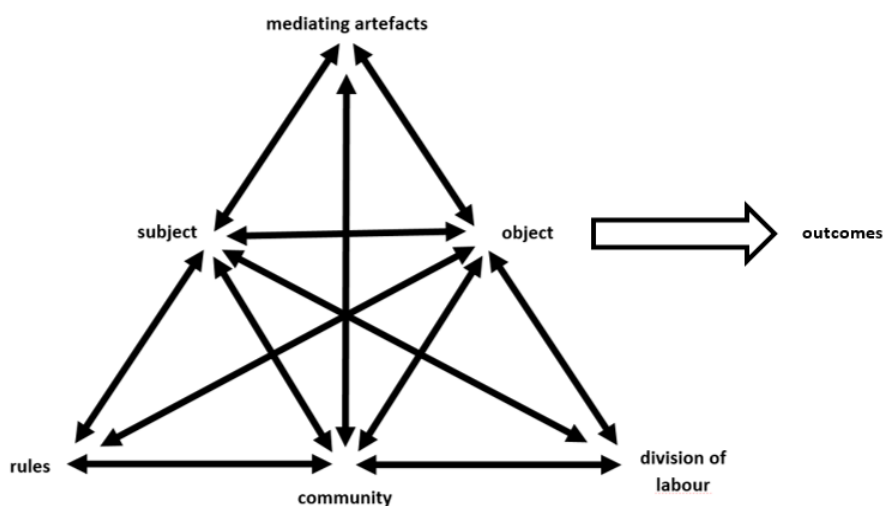
The *learning history* is a useful action research method (Kleiner & Roth, 1996) which enabled us to consider participants in each case we studied as an activity system (AS). An AS entails a group of people aiming for the same goal and motivated by more or less the same virtues and values. This can be a team, a professional organization, a family or an organization of peers. The *learning history* focuses on the ideas and experiences of different participants of an AS. Its goal is giving insight into the learning processes to a larger group of participants, and creating opportunities for ongoing development. With the *learning history* we could make their tacit knowledge explicit, told in the informants' own words, and documented in a text which – after validation by the referents – can be presented as 'a jointly-told tale'. This is thought to be meaningful because people each have their own experiences in the AS, but to learn just from these individual experiences is problematic. A *learning history* can build bridges between individual experiences to create a more generally accepted image.

It is a research method that results in a physical document, which is also called a ‘learning history’. This document forms the basis for a deeper and more meaningful reflection on the practice. It provides the participants inside information from different perspectives. It does not just provide insight into the outcomes of the practice development, but also into the thoughts, assumptions, expectations and decision-making processes which have led to those outcomes. It gives the participants (and us) the opportunity to learn from each other and to create a dialogical learning process. When the *learning history* as a document is presented to the participants of the activity system they are asked to reflect on it, so it is not merely a product, but a catalyst of a process. It encourages them to form their own opinions about the further development of their practice. The learning history helped us to discover possibilities of knowledge creation in the proximity of the research object. This warm side of the research enabled us:

- to be as close as possible to the participants of the practices involved;
- to focus on the distress suffered by these participants;
- to earn their willingness (and trust) to cooperate with us;
- to acquire personal and emotional experiences, opinions and visions at first hand.

B. How do we capture the complexity of innovating practices with cold research?

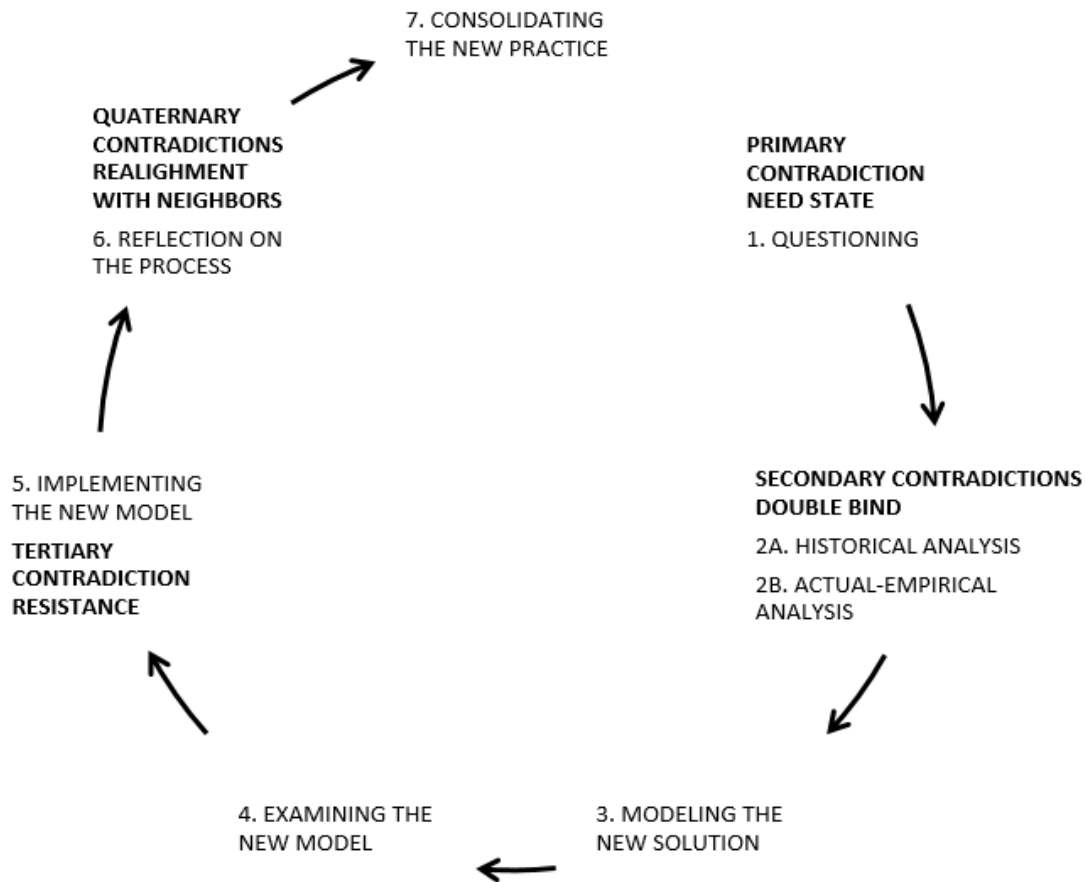
The cold side of our studies is looking for an answer to the question of how these sense making and developing processes – including the feedback on the learning history as a jointly-told tale – develop over time. We made use of the Cultural-Historical Activity Theory (CHAT), as developed by Yrjö Engeström (1987). This helped us to focus our analysis in each case more systematically on the different participants involved in the innovation and on their mutual relations.



Activity system model, Yrjö Engeström (1987)

Each learning history was analyzed with the help of the components of the activity system: *Subject, Object, Tools (mediating artefacts), Rules, Division of Labour, and Community of Practice*. Participants of a practice – for example peer-experts, professionals or clients - can be regarded as the acting Subject, with his or her specific characteristics and qualifications. The *Subjects* strive for the best possible realization of the *Object*, the goal of the AS. What they expect and how they regard this ‘best possible realization’ is referred to as the *Motive* (the direct connection between Subject and Object). Along these lines, service users, clients or customers are achieving certain results: learning new behavior, daring to participate in the practice, trusting his (or her) own strength etc. The activities of the Subjects play a certain role in these achievements. *Tools* refer to the use of artefacts they need while working towards this Object (conceptual artefacts such as plans, theories and diagnostic instruments, as well as material artefacts such as housing facilities, methods of facilitating and stimulating, and conversation and decision models). These are often developed and refined while attaining the goal. *Community of Practice* includes all the participants in an activity system who share the same Object; this forms the community in which the activity takes place. *Division of Labor* refers to the distribution of tasks, powers, and responsibilities between the participants. It clarifies who does what in the activity system. *Rules* refer to the explicit or implicit regulations with which actions have to comply, such as quality standards or restrictions in time and money. In the practices, we studied all these six dimensions were in transition. This caused many tensions and conflicts.

According to CHAT systemic learning takes place when tensions and conflicts in the workplace have outgrown the possibility of being solved within existing frameworks. Only a transformation of the activity system in terms of an Object shift can offer a solution. According to Engeström (1999a, 1999b), when such a transformation is successful, an innovation has been established and the learning that has taken place can be characterized as expansive learning: a new Object of action has been realized. Each AS was studied as an example of a practice on the move: from an old to a new framework or paradigm, exemplified in the shift to a new Object.



Model of expansive cycle, Yrjö Engeström (1987)

CHAT shows that such an Object shift proceeds step-by-step, in the form of cyclical processes made up of phases, which Engeström regards as ‘zones of proximal development (ZPD)’ of the activity system. He adopts and expands the concept of ZPD from Vygotsky (1978), who uses it to describe learning processes on an individual level. Engeström (1987) distinguishes the following phases in a cycle of proximal development:

1. The primary contradictions of the need state concern the basic tensions and basic oppositions in an activity system and its environment. It is about the opposition between the actual (*Sein*) and the desired (*Sollen*). For example, the opposition between service deliverer and service user, or the opposition between measurable and immeasurable effects. They lead in the first instance to questioning the existing activity system.
2. In the secondary contradictions, also called the double bind state, the primary oppositions are accentuated. The discontent with the old causes a search for better practice. The participants accentuate their discontent and channel it towards more sharply defined goals.

3. In the tertiary contradictions of the Object/Motive construction state, the participants construct a new Object to find a solution for the primary and secondary contradictions. In the course of this Object shift, they are confronted with strong conflicts between old and new ways of acting (and thinking) on all six dimensions of the AS.
4. The quaternary contradictions of the application and generalization state appear when the participants bring the modification of the Object in line with the surrounding activity systems.
5. The consolidation and reflection state is when the new activity is consolidated and subjected to critical reflection; it is the beginning of a new cycle.

Our nine cases were all in the phase of implementing a new Object, which means that they were facing tertiary contradictions. The Subjects – in our cases mostly social workers, peer experts and service users / clients – were confronted with strong conflicts between the old and new ways of acting and thinking. When they were innovating their work they were learning, by developing new relations and work processes, and by solving problems that occurred in the new practice and its implementation. By doing so, they experienced critical incidents, moments when they did not know what to do. Sometimes these experiences caused strong emotions of despair, failure or doubt. This kind of experiences occurs when the participants of an innovative practice cognitively and emotionally experience a gap between present beliefs, routines, and competences customary for the ‘old’ activity, and beliefs, routines, and competences that are necessary in order to be able to function in the ‘new’ activity. We refer to them (in accordance with Meijers & Wardekker, 2002) as ‘boundary experiences’.

The concept of boundary experiences as the individual expression of a tertiary contradiction enabled us to investigate how participants of an innovative practice reach the limit of their capabilities. The concept of ‘boundary experiences’ has clarifying value in understanding the necessity of starting a learning process. However, it does not explain why some persons react to new situations by starting a process of learning, and others do not. Some try to avoid, escape or neglect these negative emotions, or choose eventually for ‘inner migration’, drop out or leave their jobs/the practice. In order to grasp these differences, the concept of boundary experience was enriched (Miedema & Stam, 2008) with Vygotsky’s concept of discontinuity. Vygotsky ascribes important developmental potential to individuals experiencing a crisis: developmental crises arise when a person is involved in conflicting activities or emotions. *‘On a personal and on an organizational level, discontinuity and crisis essentially belong to the concept of development.’* (Van Oers, 2001, p. 15). Discontinuity is thus an essential feature of boundary experiences. It occurs when feelings of fear, sadness, and anger dominate.

Engeström defines this zone of tertiary contradictions in a broader sense as the *“distance between the everyday actions of individuals and the historically new form of the societal activity that can be collectively generated”* (Engeström, Brown, Christopher, & Gregory, 1997, p. 174).

How can we connect this hyper individual expression of hyper individual, negative emotions with the collective learning processes in an innovative practice (the individual, team and systemic level of an activity system)? We learned from previous research (Miedema & Stam, 2008) that the transformation of boundary experiences into learning is promoted by collective reflection on tensions, failures and successes that occur along the way. That is why we – as researchers - ‘warmly’ supported and facilitated the participants in their expression of these emotions and in exchanging their ways of seeing, thinking and doing in relation to these experiences.

CHAT helped us discover possibilities of knowledge creation beyond the separate cases. This cold side of the research enabled us:

- to compare different cases and to cross-analyze the learning in the nine practices by using the models of activity system (with its six dimensions) and of expansive learning;
- to focus on tertiary contradictions appearing in different forms (tensions, conflicts, dilemmas, boundary experiences) in different practices;
- to look for conditions for collective learning from these tertiary contradictions;
- to look for conditions for bringing the Object shift in a new form of societal activity, in line with the surrounding activity systems (learning from quaternary contradictions).

C. Data collection

‘A learning history approach captures stories people tell about learning and change efforts and reflects them back to the organization and others’ (Kleiner & Roth, 1996).

In the case studies, we followed the social workers who were involved in the innovation of their own practices for several months or years. The actions and statements of these social workers down what the members of the inner circle themselves understood by the innovation. This took place in a semi-structured interview. The aim of the interviews was to allow participants to describe their own role in the development of the innovation, and the meaning they assigned to this role. Social workers spoke about important incidents, persons, and moments. The first interview provides a picture of the various individual perspectives on, and personal experiences of, the innovation.

The second interview with the inner circle provides an opportunity to describe these perspectives in fuller detail, and to situate them in the interpretative framework of an activity system. For this purpose, we used a semi-structured interview to focus more closely on the experiences, tensions, and results that had come up in the first interview. In this way, we could get on the track of historical, current, and expected developments. The second interview enters more deeply into the kind of tensions and contradictions that had led to this innovation (what were the problems the innovation was meant to solve?), into the contradictions that had been solved by the innovation, and into new tensions and conflicts that had manifested themselves, meanwhile. This gives the social workers and other participants of a practice the opportunity to express themselves about their inspiration and motives, and about what they themselves mean for clients, colleagues, the organization, and society. They also examine their own development: is this development

continuous, or does it show a break? They express themselves about how they stand with respect to the discussion of innovation in the team, and how they deal with emotions attendant on these sweeping changes. They also tell about the personal qualities they have developed in the course of the innovation, and about the personal obstacles, they have encountered while working on and in the innovation.

To gain deeper insight into the innovation and learning processes in the practices, we compared the stories within a case with each other and distinguished different positions, ambitions, and interests between the social workers, managers, staff, and clients. We supplemented this with the results of the analyses of documents. In order to answer the question of how these sense making processes – including the feedback on the learning biography as a jointly-told tale – developed over time, we made use of the Cultural–Historical Activity Theory.

D. Data analysis

Each learning biography was analyzed with the help of the components of the activity system: Subject, Object, Tools, Rules, Division of Labor, and Community of Practice. For each component, the quotes were analyzed for primary, secondary, tertiary, and quaternary contradictions. This collection of quotes was also examined for conditions facilitating the learning of participants. These conditions were specified in a learning biography, the report of the case study. Each of these reports begins with an introduction in which the primary and secondary contradictions providing the impetus for the innovation are situated in a broader (often national) framework. In this operation, we have consistently observed the requirements of the *learning biography* as to the nature of the reported stories: the stories are founded in data, are told ‘dramatically’, and are recognizable by respondents.

The use of Cultural-Historical Activity Theory gave insight into systems contradictions which ultimately led to change. Activity Theory enabled us to connect the system level with the team level, by analyzing how, and to what extent, social workers and other participants collaborated and innovated their practice. The analytical model and concepts of the Activity Theory also helped us to focus our analysis more systematically on the different stakeholders involved in the innovation and on their mutual relations: social workers, team leaders, staff, directors, and clients. CHAT helped us to bring their negative emotions in the collective reflection as possible manifestations of systemic tensions, conflicts and dilemmas, due to tertiary contradictions. We stimulated the collective reflection on and sense making of critical incidents and boundary experiences and by doing so we utilized uncertainty in the ‘warm’ side of our research as a source of knowledge creation.

Because Activity Theory provided focus on collective processes, we were able to establish that a hesitant innovation occurred not only on a team level, but also on a systemic organization level (tensions between directors and team leaders and between staff and teams). We gave differences a place in the written learning biography. After almost two years, the learning biography was

resubmitted to respondents of the inner circle and their managers. This meeting was used to connect different layers of a practice in their conversation about the ongoing innovation.

E. Results

Because the aim of this article is to describe an outreach research design, we will pay little attention to the results of our studies in terms of answers to our research question: How and what do outreach social workers and other participants learn while they innovate their own practices? (For answers, see Stam 2012, 2013a, 2013c).

In short: By using the learning history, we as researchers attained rich information, and the participants learned to use new ways of reflection and communication. By connecting the concept of boundary experience with Activity Theory, we were able to demonstrate the importance of support from the team for this learning and practice development. Although individual attitudes towards the innovation differed widely, the way in which individual participants developed proved to correspond closely with the development of the Community of Practice.

By studying nine case studies of social work with people in vulnerable positions, we developed a new vision of the goals and means of social work and the social domain. We discovered that Object shifts in which outreach social workers support their customers / clients / service users in becoming co-producers, are about democratization and enabling citizenship. This is what stimulating people's own strength, self-reliance and participation is about. Enabling citizenship implies new responsibilities, roles and behavior for all the participants in these practices. The principle element we discovered was that all the participants, including the people in vulnerable positions themselves (the 'clients', 'service users' or 'customers'), should be prepared for co-creation in all its complexity. This entails a transformation from being taken care of, to caring together. In the nine practices this caring together starts with a focus on people's abilities instead of their inabilities. It also starts with an inclusive mind set and is based on the trust of own social strengths and less on medical, psychiatric, juridical or economic powers. It focuses more on the quality of life, which is holistic, than on the quality of care, which is specialist. These transformations are sometimes referred to as paradigm shifts: new values replace old ones.

Considered from different perspectives, the cases were complex, the research question itself, with which we sought to make connections between learning at the individual and system levels, was complex, and the processes leading to co-creation in complexity were complex. Patrick Dawson and David Buchanan (2006) refer to change as a multi-authored process. Indeed, what we found is that successful transformations in the social domain require collaboration between different kinds of strengths and expertise. We distinguish five strengths in the social domain which have to learn to co-create: citizen strength, professional strength, governance strength, knowledge strength (researchers, teachers and trainers in schools, universities and knowledge centers) and business strength. In the practices, we studied this co-creation between those strengths, which is a multi-layered type of networking in collaboration,

is invented, developed and learned along the way because of joint efforts, relations and interactions. However, all these five strengths encounter difficulties while developing co-creation because they are used to operate separately from each other, through specialization, competition or hierarchical order.

We will focus here on how researchers (part of ‘knowledge strength’) did become participants of co-creation. The classical tension between proximity and distance, a recurrent dilemma of social workers, also applies for outreach researchers. As researchers, how did we, learn to intermingle proximity and distance? How did we capture these learning and development processes between product and process, life world and system world? We started by exploring proximity with the participants of a practice. We had to learn by ‘*revealing the needs and possibilities for development in an activity, not in relation to a given standard or objective, but by jointly constructing the zone of proximal development (ZPD) of this activity*’ (definition of expansive learning by Yrjö Engeström, 1987).

Social workers and peer experts taught us how to utilize difficulties which they consider sources of tension and conflict but also of energy and change. They love the sheer poetry of when things turn out to work well but they do not understand how this is possible. For example, that something, under a certain amount of stress and disorder, just starts to flourish. Because they do not know beforehand what is the right amount, so they have to take risks and act from a conviction that things will turn out well. When this does not happen immediately, they know that they have to be nearby and fast enough to try something else. In this way, they prevent a case from going from bad to worse.

They showed us repeatedly their capacity to deal with insecurity. This capacity cannot be learned by instructions. Learning it requires that learners release themselves from models of certainty, such as methods and formulas, and be open to the idea that neither contents nor form are fixed. Learning from uncertainty slowly moves from tensions regarding the unexpected to solid ground and back. What keeps these practitioners on track is the conviction that eventually, by trial-and-error, piece by piece, the case will move in the right direction. And even in this there appeared to be no certainty. More than half of the practices we studied ended prematurely.

On a meta-level – by comparing the nine cases in the cold part of our research - we discovered that successful co-creation in complexity requires four simultaneous transformations. To be successful these four transformations have to be inclusive, congruent and parallel on all levels of participation (the strengths involved: clients, people in their social environment, professionals, researchers, officials, team leaders, directors):

- a. *Inside out*. Social professionals work more from the needs of their ‘clients’ than from protocols of the system world. From the inside out means: taking the life and perception world of citizens in vulnerable positions as a starting point. And: ‘(S)he who isn’t part of the problem can’t be part of the solution’. This is in contrast to the dominant form of

governance (New Public Management, NPM) which promotes working *from the outside in*, in which the system world with its rules, protocols and output figures is predominant. By doing so NPM reduces the rich complexity of the life world of people in vulnerable positions and frustrates any possible agency.

- b. *Bottom-up*. Working from the inside out demands enough discretionary space to do what is needed to help succeed this transformation towards citizenship. The work is organized from the bottom-up which means that it is arranged in such a way that capabilities can be detected and crises and conflicts can be used instead of being neglected or avoided. This results in better use of the five strengths within the social domain. This is in contrast to NPM which promotes working *from the top down* based on the principle of competition, fragmentation and specialization, and by so doing reduces the rich complexity of the life world of people in vulnerable positions and frustrates any possible agency.
- c. *Inductively*. Social work develops more inductively than deductively. Inductively means accepting and using ambiguity and uncertainty (expert positions based on ‘knowing for sure’ are often counterproductive in complex situations). This also means accepting development as an emergent process without a fixed goal in terms of output figures or evidence-based protocols. This is in contrast to NPM which promotes *deductive* knowledge and narrowly defined agency (knowing for sure in general). By doing so it reduces the rich complexity of the life world of people in vulnerable positions and frustrates any possible agency.
- d. *Together in co-creation*. The activities of social workers are organized as cooperative work. This is the first step away from the *coordination principle* (leading to divide-and-govern). The *cooperation principle* implies that several types of social professionals acknowledge and connect their expertise. Their cooperation however doesn’t guarantee the invention of fundamental change. This requires also cooperation with informal strengths on an equal base. This we call the *principle of co-creation*. By opening a creative space for experimenting and learning new and effective possibilities are invented in practice. Co-creation also means that participants feel more heard, supported, secure and respected. This stimulates them to show more of their capacities and creativity and use their creative, problem solving and innovative powers better. This is in contrast to NPM which promotes working in silos and emphasizes an *evidence-based* repertoire aimed at isolated individuals. By doing so it reduces the rich complexity of the life world of people in vulnerable positions and frustrates any possible agency.

F. Conclusions: How can researchers capture the complexity of these learning and development processes?

In this article we have shown how mixing warm and cold research methods enables outreach researchers to generate decontextualized knowledge about specific ‘slow and painful’ processes of change. We demonstrated what proximity can add to knowledge creation. We experienced that the process of creating a *learning history* comes with some implications.

Firstly, the people in the activity system (AS) need to be open and self-conscious, to be ready to hear about their merits but also about problems, misconceptions, and tensions. We tried to avoid defensive/non-cooperative behavior of the social workers by approaching them as owners and co-producers of the innovative practice, so as proud and critical professionals/participants.

Secondly, the people in the activity system need to support the goal of the learning process: to strengthen the knowledge base and strive for the common goal of the practice innovation. For this we addressed them as ‘knowledge workers’: their experience and expertise were decisive to reach this goal.

Thirdly, people should be willing to look at their actions and to analyze their own underlying principles and structural thoughts. This means they have to be willing to pay attention collectively to worries they have about their aims, virtues and values. They wish to gain greater insight into them and accentuate their significance. This is referred to as ‘double-loop learning’. Anonymizing their contributions and strict confidentiality were important means to create such an open and rigorous honest mind set.

And lastly, when these first three conditions are met, the reflective interview form gave us the opportunity to build a relationship with the participants based on mutual trust, gratitude, and ‘attractiveness’. In this way, we tried to avoid situations in which relevant information could not be shared with us. It takes a lot of steerage and sensitivity from the researchers to meet these conditions. We were lucky to have researchers in our team who were initially educated as social workers. They helped us to realize and deepen these conditions of the principle of ‘proximity’.

We also demonstrated what distance in relation to proximity can add to knowledge creation. CHAT gave us tools for a cross-analysis of cases. That brought us insight in the success factors (Inside out, Bottom-up, Inductive, Together-conditions (IBIT)) of outreach practices. By following and comparing nine practices of social innovation, we were also able to give shape to three methodological principles for outreach research:

1. *Do justice to the exchange of strengths in the social domain*

In the ongoing transition of the welfare state, citizen strength, professional strength, governance strength, knowledge strength and business strength have to learn to relate to each other and, together, give meaning to what happens and what should be done in practice. This implies learning to employ mutual expertise and strength. This also implies the capacity to jointly learn what is not yet there. This should become a ‘competency’ of social workers and attain a central place in their curricula. This also requires new research designs in which the ‘proximity’ principle is deepened, together with the corresponding slow and dialogical ways to make contact and earn mutual trust. Learning History enabled us to give ‘voice’ to these different strengths. This happened in two ways: First, tacit knowledge of participants became manifest and was written

down in a description of learning history. Second the different perspectives of participants became manifest and were discussed, and ultimately concluded in a jointly told tale. This entails a shared consciousness of values, problems and perspectives. Although the proximity principle implies dealing with the murkiness of distrust, misunderstandings, conflicts, crises and tensions, the reward is a wealth of information, sense making and knowledge about learning and developing successful innovations in the social domain. We also – as outreach researchers in our role as co-facilitators and co-supporters of such practices - receive a lot in return, for example insight into the bias of knowledge creation from a contra-IBIT point of view. Acting from the triangle of social work development, educational development and scientific development helped us to do justice to the different strengths involved. By giving primacy to the social work practices meant that we kept our feet on the ground by exploring what made learning and developing new practices successful. The same applies to our strong involvement in developing new educational practices (which are beyond the scope of this article).

2. *Do justice to the holistic Object of study*

This requires the art of knowledge development from uncertainty and complexity. The focus should be on tensions, solutions, and conflicts (dilemmas) that participants have experienced, when innovating their own practices. According to Hargreaves and Shirley (2009, p. 33), these dilemmas ‘fly under the technocrat’s radar’. However, outreach researchers have to gain insight into the deeper mechanisms which hinder and promote learning from bottom-up innovations. In order not to reproduce these mechanisms in the research, they therefore have to seek dialogic and co-productive relations with representatives of the macro-forces in this process, which means governance strengths and professional strengths from surrounding organizations (Stam et al, 2013a).

3. *Do justice to the complexity of learning*

Outreach researchers do not follow the person who knows for sure what has to be done to find solutions. They approach the participants in a practice, together with participants in neighbouring activity systems, as inventors of new solutions that did not exist before, but they do not take these inventions for granted. They organize the exchange, as part of a Community of Practice (CoP), of local, practical, and tacit knowledge (= experience-based knowledge), and stimulate the reflection on dilemmas and tensions that occur during these ongoing processes. They consider successes as reassurances: we are on track. The researchers support this reflection by helping to bring dilemmas and tensions expressed by individual participants to a collective level, and by helping to capture these collective sense-making processes in concepts and theories. In this way,

researchers can facilitate the learning and development processes within an activity system and between activity systems.

G. Topics for discussion and further research

By giving primacy to practice development, we are using qualitative methods. In terms of quality standards for knowledge, this has a lower status than quantitative research in NPM-dominated knowledge creation. Outreach researchers distance themselves from unilateral knowledge development focused on the system world, in a deductive way, from the outside in and in a fragmented manner. Studying the transformations of the social domain in the interest of citizens in vulnerable positions requires uncertain, holistic, emergent knowledge production. Question is how outreach researchers can bring this practice based knowledge to the centre of power. Their narrative approach conflicts with the more quantitative knowledge base of politicians and administrators. Recognition of the importance of qualitative knowledge still has a long way to go because the incumbent interests in the five strengths point to consuming, banking, fixing knowledge, instead of exploring uncertainty and complexity.

This underlines the importance of coalitions in the social domain between schools of social work and innovative practices. They should form regional knowledge infrastructures as a counter balance to contra-IBIT orientations (outside in, top-down, deductive, divided in specialisms). These communities of practice and learning should elaborate upon the mixing of warm and cold research methodologies. This means that students, together with teachers and social workers, will become involved in theory development by practice development. By doing so, they will learn the methodological aspects of developing knowledge in co-production in an inclusive, congruent and parallel way. This means that the learning and development processes in and between the five strengths in de the social domain should contribute to empower service users, customers and clients in vulnerable positions and other citizen strengths like peer experts and volunteers. The main goal of outreach research is to involve people in vulnerable positions in enabling citizenship. This means developing perspectives of agency: new ways of how they can solve their own problems and improve the quality of life of themselves and that of their relatives and neighbours. This requires involvement of all available strengths in all phases of research: from demand articulation and design development to decision making about further development and knowledge dissemination in articles and conferences (see for examples of co-productive publishing: Huber, M. & T. Bouwes, 2011; Huber, M, T. Bouwes, M. Dompig, N. el Marzkoui, M. Lochtenberg, 2010).

In this article, we have presented the two-sided research design that we developed for answering the question about how and what professionals and other participants of outreach social work practices learn from innovating their own practices. We distinguished five strengths the representatives of which all have to learn to play new roles in order to improve democratization

and enabling the citizenship of citizens in vulnerable situations. Without outreach research, it would not have been possible to expose the connection between the learning of representatives of these strengths and other transformation processes on an individual, team, and systemic level. This underlines the importance of outreach research for successful innovations in the social field. In our opinion, our two-sided research design is a precondition for the co-creation of these relative autonomous strengths and the connectedness of each of these three levels.

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