DEFENSIVE AND EXPANSIVE CYCLES OF LEARNING:

A STUDY OF HOME CARE ENCOUNTERS

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INTRODUCTION

This study examines home care workers' visits to the homes of their elderly clients as sites of learning. The loss of physical mobility is a major factor undermining the quality of life and agency amongst elderly home care clients. A growing body of research (Beswick & al., 2008; Brodie & Inoue, 2005; Burton & al., 2015; Chou, Hwang & Wu, 2012; Eloranta, Arve & Routasalo, 2008; Eloranta, Routasalo & Arve, 2008; Law, 2002; Stuck & al., 2004; Turjamaa & al., 2014) indicates that successful encounters between such clients and their home care workers can support the elderly client's physical mobility, agency and overall quality of life by means of exercises embedded in the daily chores at home.

While some home care clients are very adept at identifying and fulfilling their needs, many others want and need help. Deegan (1992) points out that many people are caught in a cycle of learned helplessness and internalized stigma that allow them to believe that they are not worthy or capable of active and independent living. This often fits all too well with the internalized script of the home care worker, oriented at quick and seemingly efficient "doing for" rather than at more interactive and demanding "doing with" (Jones, 2007). Shrinking an old person's agency during a home care encounter maintains and reinforces the client's dependency. The result is often something like the vicious circle of fear of falling that leads to increasing likelihood of falling.

Among home care clients, a common traditional expectation is to be a passive recipient of services. Thus, active involvement in and initiation of mobility exercises represent a difficult threshold. The challenge is to learn something familiar (namely how to be mobile) in the new context of an aging and fragile body and the potential availability of help in actions that require physical effort. Thus, for the client this is a matter of learning to rediscover the potentials of one's body.

Among home care workers, the standard script of a home care encounter has not included physical exercises. Thus, this new demand threatens to increase the workload and destabilize the timetables, as well as require novel competences. It initially means more work for the home care practitioner and more efforts for the client, so regarding it only as an add-on to existing practice will not work. Its potentials and benefits will only be disclosed and experienced when the dominant script of home care encounters

is qualitatively transformed so as to incorporate mobility exercises as built-in components of necessary daily chores.

To facilitate development in this direction, practitioners and collaboration partners of the Helsinki home care services in Finland designed and are implementing a new practice called the Mobility Agreement (Nummijoki & Engeström, 2010; Engeström, Nummijoki & Sannino, 2012). The Mobility Agreement is a plan prepared jointly by the client and a home care worker with the objective of promoting daily exercises in practice. It is aimed at and tailored for contributing to the home care client's functional capacity and physical mobility through physical actions planned and executed with the support of the home care worker. Although the Mobility Agreement is documented in textual form, it is primarily an embodied agreement that is re-enacted within regular encounters, in joint physical actions and accompanying verbal and gestural exchanges. The embedding and anchoring of exercise actions into the daily routines of home take time and need to be persistently pursued. The Mobility Agreement is implemented with the help of an illustrated booklet that graphically describes the typical exercises and the appropriate ways of conducting them.

Organized home care encounters are structured by a routine script, implemented in each home care visit. Although the home care visits continue at regular intervals, their script is currently challenged by the introduction of the new Mobility Agreement practice. Thus, the encounters analyzed in this article have three important characteristics as sites of learning.

The first characteristic is the cyclic rhythm of regularly repeated home care visits. As Zerubavel (1979) showed in his classic study, work is commonly organized in recurring compact cycles of scripted actions. When held stable, these compact cycles are typically sites of routinization learning. However, when a new challenging set of actions and artifacts is introduced into them, they may turn into sites of small-scale cycles of expansive learning. In other words, the new actions and artifacts may open up possibilities to construct an expanded object for the activity. The theory of expansive learning (Engeström, 2015) is therefore a promising framework for the study of such cycles.

The second characteristic is the struggle between the dominant script and the new practice. Expansion does not occur automatically (Nummijoki & Engeström, 2010). When a demanding new practice is introduced, the existing routines will be both challenged and defended. Defensive actions also contain learning. In such defensive learning, actors learn to protect their routines and to avert and forestall the adoption of novel actions. In other words, we may expect both expansive and defensive learning cycles to take place in these encounters. Defensive learning cycles have been examined in studies of organizational learning (e.g., Argyris & Schön, 1978; Garud & Kumaraswamy, 2005; Henfridsson & Söderholm, 2000; Masuch, 1985; Youtie & Corlie, 2011) but until quite recently they have received scant attention within the learning sciences (for recent exceptions, see Martínez-Álvarez, 2016 and Wäschle & al., 2014). In home care encounters aimed at introducing physical mobility exercises, defensive learning may include for example actions of questioning the need for or feasibility of such exercises, reasoning about and arguing for the preferability of the existing script

of home care encounters, and so on. When such actions are combined and repeated, they may lead to the formation of complex defensive routines (Argyris, 1985).

The third characteristic is the co-existence of two separate but intertwined processes of learning, namely that of the client and that of the practitioner. In work organizations and communities at large, learning processes are often, perhaps predominantly, characterized by the necessary participation of two or more actors learning with different but complementary positions and perspectives. The home care client and home care worker have their own specific backgrounds, competences and interests, so we cannot assume that their learning processes will automatically coincide or proceed harmoniously. Conceivably there will be encounters in which the client is engaged in expansive learning and the home care worker is engaged in defensive learning, or vice versa. Thus, it is likely that we will witness complex dynamics, including tensions and conflicts but also negotiations and joint innovations, in the intertwining of the two learning processes.

Based on these characteristics we pose the following research questions:

1. What kinds of learning cycles may be identified in home care encounters charged with implementing the new Mobility Agreement practice?
2. What kinds of interplay may be detected between the parallel learning cycles of the home care client and the home care worker, respectively?
3. What are the characteristics of defensive learning?

The study reported here is exploratory. Instead of testing or confirming a theory, we aim at opening up a new perspective on learning in cyclically recurring work

encounters facing the challenge of implementing a novel practice. Our aim is to develop working models that can adequately represent defensive and expansive learning cycles as they appear in real-life home care encounters.

We will employ the theory of expansive learning in our analysis (Engeström, 2015; Engeström & Sannino, 2010; Engeström & Sannino, 2012; Sannino, Engeström & Lemos, 2016). In this study, the learners are the intertwined activity systems of the home care client and the home care worker. Their learning is triggered and driven by contradictions in the existing home care related to the physical mobility of the client; these contradictions are examined in some detail in the next section. If and when expansive learning is successfully accomplished, the participants construct a qualitatively new pattern and concept of their activity, oriented at the expanded object of sustainable mobility. In this sense expansive learning is "learning what is not yet there" (Engeström, 2016). Expansive learning proceeds by means of expansive learning actions that together form expansive cycles. The ideal-typical model of an expansive learning cycle consists of seven learning actions depicted in Figure 1.

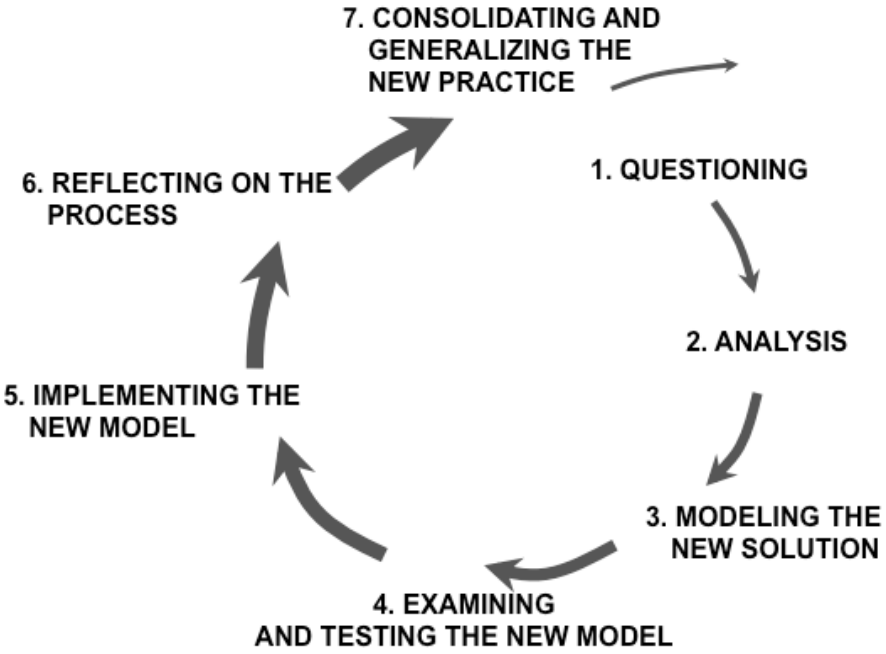

Figure 1. Ideal-typical sequence of learning actions in an expansive learning cycle (Engeström & Sannino, 2010, p. 8).

Large-scale cycles of expansive learning involve smaller cycles of learning actions which can in favorable conditions take an expansive shape. Such a small expansive cycle may take place within a single intensive encounter that requires analysis and redesign of the practice. Careful investigation may reveal a rich texture of learning actions within such temporally short efforts (Engeström, 2008, p. 118-168; Engeström, Rantavuori & Kerosuo, 2013; Rantavuori, Engeström & Lipponen, 2016). However, the occurrence of a full-fledged expansive cycle in temporally compressed encounters is not common, and it typically requires deliberate efforts and interventions.

The data of our study consist of videotaped visits of home care workers to the homes of their elderly clients within the municipal home care services of the city of Helsinki in

Finland. As the new Mobility Agreement practice has been introduced in these encounters, it has become clear that its systematic implementation is a major learning challenge to both the home care workers and their clients. The implementation is also an uncertain endeavor as each client's life situation is different and the new practice must thus be creatively adapted to the specific needs and circumstances. As Pressman and Wildavsky (1984) point out in their classic study, implementation is by its very nature a learning process in which what is implemented is not only put into use but also modified and transformed.

> Implementation ceases being static; it becomes dynamic by virtue of incorporating learning of what to prefer as well as how to achieve it. Implementation is no longer solely about getting what you once wanted but, instead, it is about what you have since learned to prefer […]. (Pressman & Wildavsky, 1984, p. 234)

In the next section, we will examine the contradictions that give rise to the learning efforts analyzed in this paper. We will then describe the Mobility Agreement practice as an attempt to resolve mobility-related contradictions in the home care services of the city of Helsinki. After that, we present our research data and the stepwise methodology of our analysis. Moving to our empirical findings, we will first present an overview of our analysis of 30 home care visits. Next, we will present a detailed analysis of four videotaped home care encounters, each representing a different type of combination of the client's and the home care worker's learning cycles. We will then analyze in more detail the interplay between expansive and defensive learning actions, characterizing it as subtle orientational mismatches. A separate section is devoted to examining what is actually learned in defensive learning cycles. At the end of the article, we will

summarize our findings as answers to the research questions and discuss the implications of the study for further research in the learning sciences.

CONTRADICTIONS IN THE MOBILITY OF THE ELDERLY

Among professionals of elderly care, it is common knowledge that old people are often fearful of falling, which easily leads them to avoid physical movement, which in turn decreases their ability to move, which in turn increases the likelihood of falling. This practical knowledge is confirmed by a growing body of research. One of the major consequences of fear of falling is activity restriction (Deshpande & al., 2008; Zijlstra & al., 2007), which is itself a risk factor for falls because it leads often to muscle atrophy, deconditioning, and ultimately reduced health and physical functioning (Delbaere & al., 2006). Moreover, self-imposed activity restriction can compromise the quality of life by limiting social contacts and leisure activity (Li & al., 2003).

The need to alert caregivers to this vicious or defensive circle of deterioration led Finland's National Institute for Health and Welfare to construct a conceptual model of it (Figure 2). Although the model is not built in terms of actions but in terms of mental states and social conditions, it is realistic and detailed enough to serve as a first draft in the construction of a basic model of the defensive learning cycle as it actually appears in home care encounters.

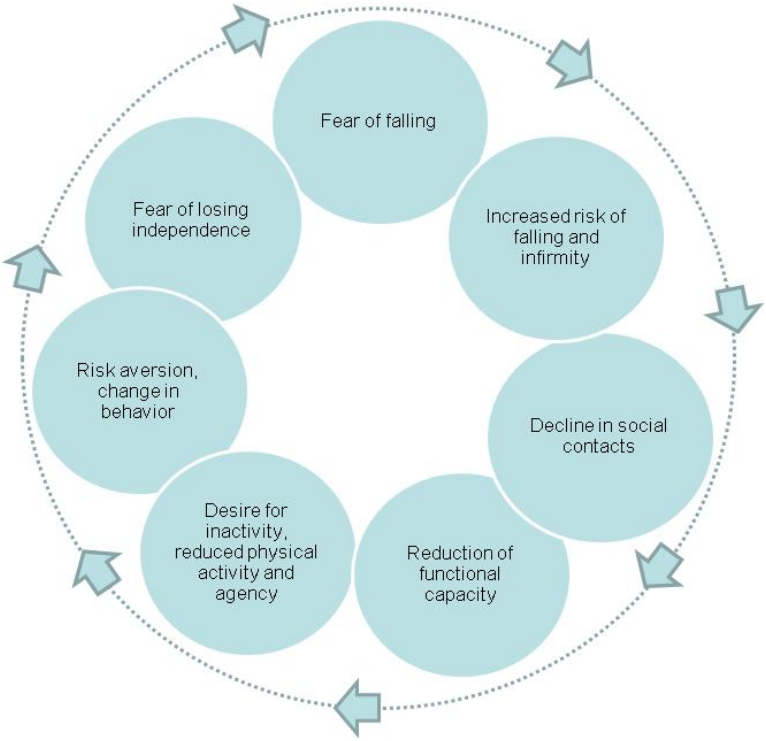

Figure 2. "Fear of falling may lead to a vicious circle that increases risk of falling" (Mänty & al, 2007b, p. 10; see also Mänty & al, 2007a).

One might ask in which sense the model of Figure 2 represents learning. If learning is understood as the acquisition or formation of relatively durable patterns of behavior, the model certainly qualifies. The model explicitly designates "risk aversion" as change in behavior. More generally, the model may be seen as a specific version of the generation of "learned helplessness" (Peterson, Maier & Seligman, 1993). The fact that risk aversion, desire for inactivity and learned helplessness are commonly considered negative outcomes does not mean that they emerge as if automatically, without learning.

The Mobility Agreement was designed and introduced to break and reverse the vicious cycle of defensive learning depicted in Figure 2. This is a compelling reason to analyze the home care encounters in terms of both defensive and expansive learning cycles. To grasp the dynamic forces driving these cycles, we need to examine pertinent contradictions in the intertwined activity systems of the home care client and the home care worker. We do this by employing the triangular diagrammatic models of activity systems and their contradictions commonly used in studies of expansive learning (Figure 3).

The tension between need for safety and craving for autonomy, or more concretely between fear of falling and desire for movement, is a persistent primary contradiction in the life activities of frail, elderly home care clients. Correspondingly, the primary contradiction in the activity of home care workers appears as tension between the desire to stick to the prescribed standard tasks of hygiene, nutrition and medication and the desire to respond the client's needs in a more proactive way, activating the client by working *with* rather than doing the chores *for* him or her. These primary contradictions are depicted within the objects of the respective activity systems in Figure 3. Put together, they can be translated into the persistent institutional contradiction between immediate cost-efficiency and long-term effectiveness of home care.

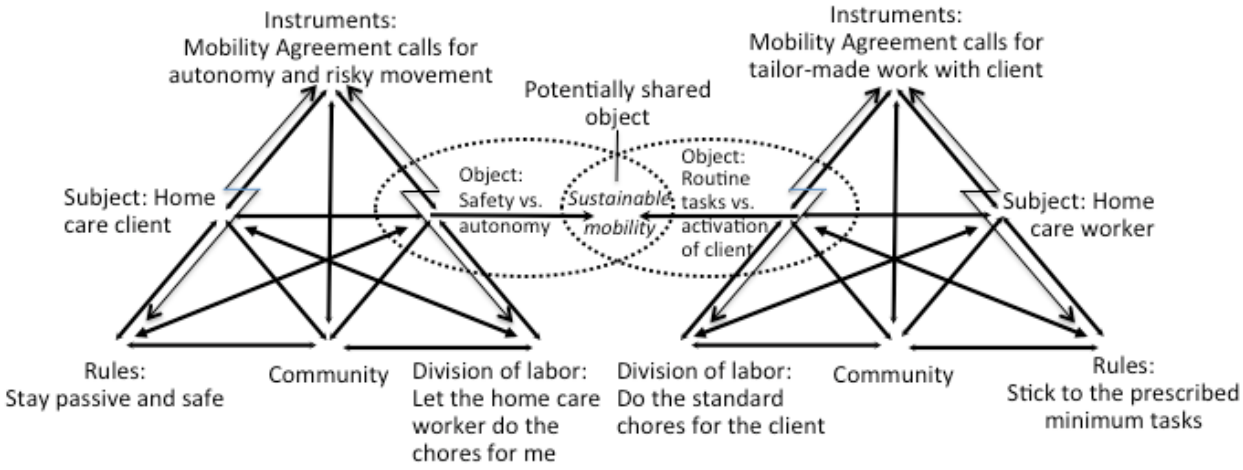

Figure 3. Mobility-related contradictions in home care

In Figure 3, the Mobility Agreement appears as a new instrument that aggravates the latent primary contradictions, generating secondary contradictions between the new instrument and old rules and division of labor in the two interacting activity systems. These secondary contradictions are marked with lightning-shaped double-headed arrows in Figure 3.

If and when these contradictions are expansively worked out and transcended, a new shared object will emerge between the two activities. This emerging object, depicted in the center of Figure 3, may be characterized as *sustainable mobility*. It differs in important ways from the dominant images of physical mobility in our culture. Instead of heroic feats of individual achievement and competition, sustainable mobility is oriented at modest but continuous, jointly agreed-upon exercises embedded in daily home chores, carried out to large extent together with the home care worker but also gradually more independently, and jointly monitored for results and modifications.

Figure 3 summarizes the learning challenge analyzed in this article. The impetus for learning stems from contradictions in the two activity systems under scrutiny, aggravated by the introduction of the Mobility Agreement. Obviously there is no guarantee that learning in the encounters between the home care client and home care worker will lead to the construction of a new shared object. It may as well lead to entrenchment and new defensive routines.

THE MOBILITY AGREEMENT PRACTICE

The municipal home care services of the city of Helsinki have the task to provide integrated services to elderly persons living at home and suffering from illnesses. The services are provided in the form of regularly recurring planned home care visits. The standard visit is focused on the most basic needs of the client; medication, nutrition, blood pressure and pulse measurements, and basic hygiene are the key routines. Until recently the visits have not included systematic efforts to support and facilitate the physical mobility of the client.

A new instrument for the inclusion of physical mobility into regular home care visits was designed in an intervention research project conducted by our team. This instrument is called Mobility Agreement. It is a plan negotiated and prepared by the home care worker and the client, with the objective of promoting daily exercises such as stand-ups from a chair, balancing exercises and taking the stairs. The exercises are as much as possible integrated into normal chores at home. Some of them are conducted together with the home care worker, others are conducted by the client

alone. The objective is to improve muscle strength, balance and functionality. Home care employees provide assistance in selecting and monitoring the exercises. If necessary, complementary services of a physical therapist or an occupational therapist are used.

The Mobility Agreement is supported by a booklet that contains visual illustrations of the key exercises. The Mobility Agreement is recorded in the care plan of the client.

DATA AND METHODOLOGY

The data upon which this study is based consists of 30 videotaped home care visits to the homes of 17 clients conducted over a period of three years (2007-2009), before, during, and after the implementation of the Mobility Agreement. The length of the visits ranged from 20 to 117 minutes.

The videotaped encounters were transcribed, taking into account both the talk and the physical actions that occurred during the visit. We used ATLAS.ti (http://www.atlasti.com/) for preliminary coding of the transcribed data.

For the detailed analysis reported in this article we have chosen four different home care visits. These encounters represent four basic combinations of defensive and expansive cycles between the client and the home care worker. The criteria for selecting the cases are explained in more detail in the next section.

Home care encounters are often negatively impacted by the "twin evils" of mobility: the home care worker's lack of interest, and the client's preference for inactivity. These "evils" manifest themselves as clashes between the newly introduced Mobility Agreement practice and the dominant home appointment script. Such clashes may lead to defensive learning cycles on the part of the home care worker and the client. On the other hand, the parties may also take such clashes as opportunities to embark on expansive learning cycles that result in successful deployment of the Mobility Agreement (Engeström, Kajamaa & Nummijoki, 2015). The matter is complicated by the fact that the two parties may embark on opposite learning cycles, one expansive and the other one defensive.

This study develops working models that represent defensive and expansive learning cycles as they appear in real-life home care encounters. These models should also allow us to examine to what extent the general theoretical model of an expansive learning cycle can be applied to the description and analysis of such micro cycles that may be observed in home care visits. To accomplish these aims, we need a multi-step methodology for the analysis of our data. An overview of the methodology is presented in Figure 4.

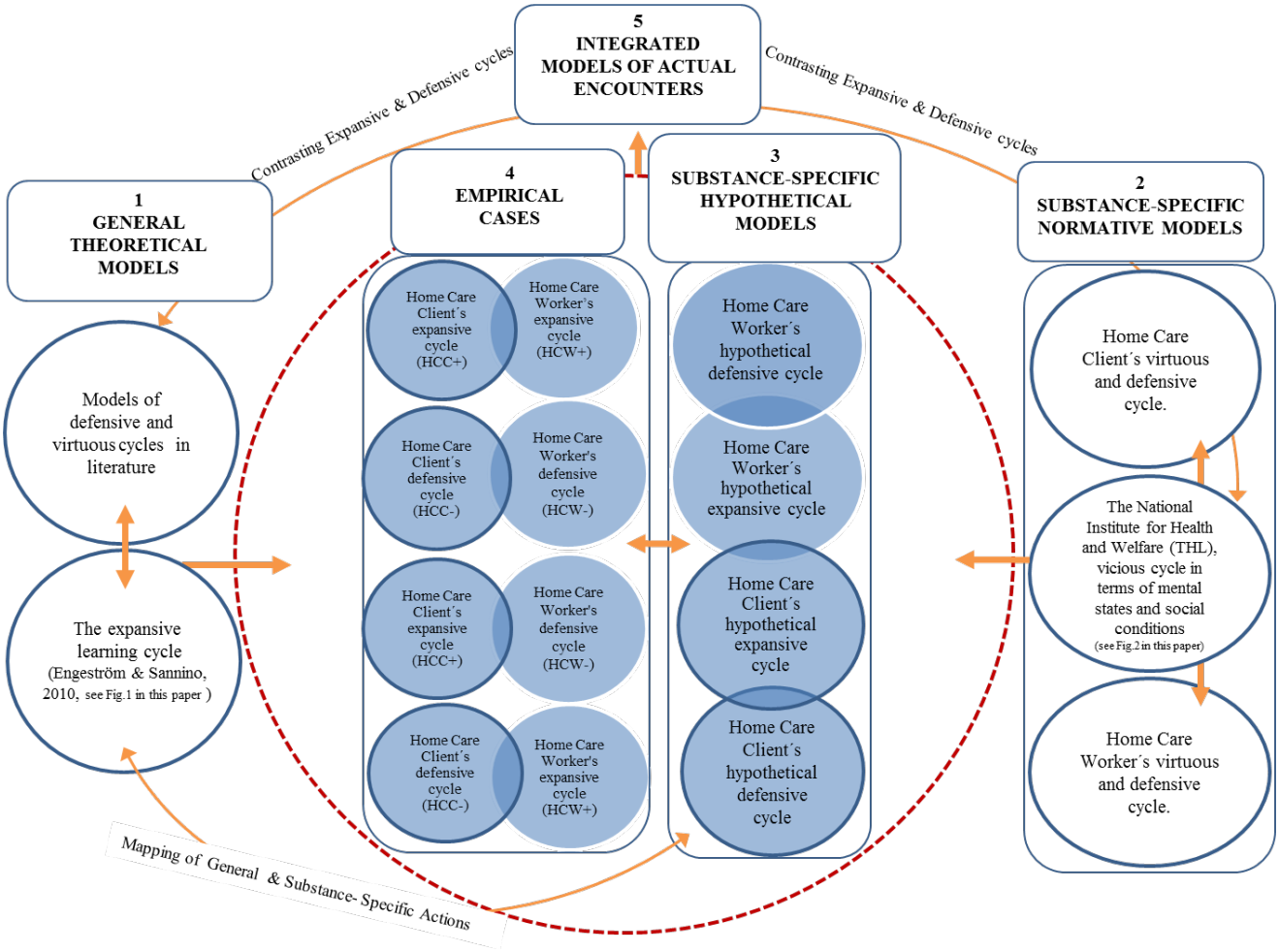

Figure 4. The methodological framework

A home care visit is conducted in interaction between the home care client and his or her caregiver. This interaction impacts the learning of both the home care client and the caregiver. We started our analysis by examining general theoretical models of learning cycles, specifically the cyclic model of expansive learning presented in Figure 1, side by side with available cyclic models of organizational learning.

We then examined substance-specific models of development of physical mobility, focusing on the normative model of the National Institute for Health and Welfare presented in Figure 2. This model depicts a defensive or vicious cycle which we

projected onto both the home care client and the home care worker and converted into corresponding virtuous cycles (step 2 in Figure 4).

The models of step 2 still consisted of relatively decontextualized and normative steps, largely described in terms of mental states and social conditions. Our next methodological step consisted of translating these models into cycles of contextualized actions which could be used as working hypotheses in the examination of our empirical data. The construction of these hypothetical cycles required that the substance-specific actions of the home care client and home care worker were mapped on the actions of the expansive cycle (Figure 1). This was necessary as our aim was to examine to what extent the model of the expansive learning cycle is applicable and has explanatory power in the analysis of the recurring cycles of work tasks that involve the learning challenge of implementing the Mobility Agreement in home care encounters. The mapping is summarized in Table 1.

Table 1. Mapping of substance-specific actions of the home care client and home care worker on the learning actions of the expansive cycle

Actions of expansive cycle	**Home care client´s (HCC) substance-specific actions**		**Home care worker´s (HCW) substance-specific actions**	
	Expansive HCC+	**Defensive HCC-**	**Expansive HCW +**	**Defensive HCW-**
1 Questioning	Client challenges standard practices of home care and requires more support and working	Client challenges the need or feasibility to exercise mobility and asks to be left in peace or to be served.	Worker challenges standard routines of home care and shows interest in the elderly client´s activation	Worker challenges the need to change generally accepted routine-based practice of home care; worker

	together for his/her mobility.		and co-operation during home appointments.	shows lack of interest in client activation during home appointments.
2 Analysis	Client reasons why he/she would like to get support for the improvement of mobility; client compares his/her current condition with the past, discussing improvement or deterioration of his/her mobility; client explains his/her desire for independence in everyday chores, in going out and in conducting outdoor activities (e.g., shopping).	Client reasons why he/she does not need or cannot engage in mobility-related efforts; client compares his/her current condition with the past, discussing improvement or deterioration of his/her mobility; client explains his/her desire to be passive, possibly referring to health reasons and risks associated with physical movement.	Worker reasons how the prevailing practice of home care work does not motivate him/her and explains his/her desire to change the routine and initiate working together with the client; worker reasons that successful Mobility Agreement deployment with client might give variety and motivation to his/her work.	Worker examines the current home care script from the perspective of practical effectiveness, finding routines easier than working with the client; worker explains that he/she is not interested in changing the script of home appointments together with the client as it would disturb his/her schedule and add to the workload.
3 Modeling the new solution	Client elaborates on what exercises he/she would like to do together or separately when the worker is visiting; client proposes exercises embedded in daily chores, observed or actively supported by the worker to improve the client's mobility; client may also engage in joint	Client maintains that he/she wants to remain inactive and will not need mobility exercises supported by the worker; client insists on being served by the worker.	Worker suggests that the client should engage in daily chores and regular exercises; worker presents to the client the new home care emphasis on better physical mobility and the importance of overcoming passivity; worker may also present the	Worker maintains and argues for the traditional home appointment script of doing 'to' and 'for' the client: medication, diapers, food, shower, blood pressure, pulse.

	elaboration of the Mobility Agreement.		Mobility Agreement for joint elaboration.	
4 Examining the new model	Client negotiates and tests in practice his/her mobility exercises, related household chores and their monitoring with the worker, possibly connecting to the Mobility Agreement.	Client asks the worker to do household chores for him/her, testing to what extent the worker is willing to do things for him/her.	Worker negotiates and tests in practice the client´s mobility exercises, related household chores and their monitoring, connecting to and possibly modifying the Mobility Agreement.	Worker observes and comments on the flow of work, excluding mobility exercises and activation of the client. .
5 Implementing the new model	Client participates in his/her household chores and mobility exercises during home care visits; client ensures that he/she gets to exercise in each home care encounter.	Client resists or refuses to engage actively in mobility exercises and related household chores; client insists that the worker should help him/her in actions of daily living (e.g., eating, dressing, bathing, toileting) and do household chores for him/her.	Worker initiates encourages the client to conduct regular exercises and related household chores; worker does exercises and chores together with the client in accordance with the Mobility Agreement.	Worker resists or refuses to engage actively in mobility exercises and related household chores; worker helps the client in his/her actions of daily living (e.g., eating, dressing, bathing, toileting) and does household chores for him/her.
6 Reflecting on the process	Client monitors and assesses the progress of his/her physical mobility with the worker; client may	Client comments approvingly on the existing care or indicates that he/she needs more help and	Worker monitors and assesses the progress of the client's physical mobility by initiating client's self-	Worker monitors the client's medication, nutrition, blood pressure, and pulse measurements as

	initiate updating and expanding the Mobility Agreement.	services; client may express concern that he/she would be more likely to fall and have an accident if mobility-related efforts are included in home care encounters.	evaluation, by interviewing the client, and by means of functional tests; worker assesses the contents of the Mobility Agreement and may initiate updating and expanding it.	standard routines; worker may express concern that the client would be more likely to fall and have an accident if mobility-related efforts are included in home care duties.
7 Consolidating the new practice	Client tells or shows that due to increased mobility his/her condition and resources are improving and he/she has more choice and control over his/her own life and care; client may tell that he/she has attended occasions of social life outside home; Client may indicate that his-her relatives are involved in supporting the client's mobility and that it may be possible to reduce the frequency of home care visits.	Client makes it clear that the established routine of his/her home care is sufficient and no qualitative changes in terms of active fostering of mobility are needed.	Worker expresses the importance of continuity of client activation and indicates that this is achieved in collaboration with colleagues, therapists, the client´s physician, and the client´s family; worker may specifically explain measures taken to involve the client's relatives in mobility-fostering efforts.	Worker makes it clear by words and actions that the established routine of the client's home care is sufficient and no qualitative changes in terms of active fostering of mobility are needed.

Table 1 contains hypothetical substantive models of both expansive and defensive learning cycles for both the home care client and the home care worker (step 3 in Figure 4). Table 1 also serves as coding scheme for the analysis of learning actions in specific home care encounters. For the sake of clarity, the actions of the expansive cycle are marked with a plus sign (+) and the actions of the defensive cycle are marked with a minus sign (-), both in Table 1 and later in the detailed analysis of the four selected cases.

Both the expansive and the defensive cycles were constructed so as to merge the logic of expansive learning and the logic of the specific substance of a home care visit aimed at supporting the client's physical mobility by means of the Mobility Agreement. In other words, these models are historically and contextually more specific than either the general model of the expansive learning cycle or the normative model of National Institute for Health and Welfare.

The next step of our methodological procedure consisted of analyzing our empirical sample of 30 home care visits with the aim of first identifying and coding all learning actions taken during the visits, then categorizing the visits with the help of the four types of hypothesized cycles (step 4 in Figure 4). We divided the transcribed flow of each visit into learning actions taken interactively by the client and the home care worker. The two parties could both be taking the action either expansively or defensively, or there could be a mismatch between them, with one party taking the action expansively and the other one defensively. We also coded each learning action on the basis of who, the client of the worker, initiated that particular action.

There were also phases in the visits which could not be identified as learning actions. These were typically segments in which the talk was shifted entirely away from the topic and tasks of the home care visit. Such phases were marked as interruptions in the flow of learning actions in the figures summarizing our detailed analysis of the four cases (figures 6 to 9). These interruptions included phases initiated either by the client or by the home care worker in which the topic was not related to the care of the client, such as talk about the weather or about events seen through the client's apartment window.

For each home care visit, we classified separately the entire learning cycle of the home care client and the entire learning cycle of the home care worker. This step required particular caution as pure examples of fully expansive or fully defensive cycles were rarely found. In almost every cycle we identified both expansive and defensive learning actions. Furthermore, even if the learning cycle consisted practically completely of either expansive or defensive actions, in no case did these actions appear neatly in the order described in our hypothetical models. On the basis of the frequencies of defensive and expansive learning actions, we were in each case able to determine whether the cycle was predominantly expansive or predominantly defensive. This step in our analysis generated a classification of the 30 cases into four types of combinations of the client's and the worker's learning cycles: ++, +-, -+, and --, where the plus sign stands for a predominantly expansive and the minus sign stands for a predominantly defensive cycle.

Our fifth methodological step consisted of detailed discursive analysis of four selected home care encounters that represent the four types of cycle combinations (++, +-, -+,

and --). On the basis of this detailed analysis, we constructed integrative models that depict the actual learning actions in the selected four encounters (step 5 in Figure 3; see figures 6 to 9). These models integrate the home care client's and the home care worker's actions into a single cyclic representation.

In all steps of the data analysis, the first author did the first round of coding. The second author independently coded a smaller sample of the data. Comparison of the codings led to the identification of problematic or ambiguous items in the data. These were decided by negotiation and recoding.

The collection and analysis of the data were facilitated by the fact that the first author is an experienced home care professional. She holds a middle-level managerial position within the home care services of Helsinki and frequently participates in home care visits in the field.

OVERVIEW OF COMBINATIONS OF LEARNING CYCLES IN THE HOME CARE ENCOUNTERS

The outcomes of the analysis of the 30 cases are summarized in Figure 5. In the figure, the combination of client's expansive cycle and worker's expansive cycle (++) was the most common type of combination, comprising 40 % of the cases. This indicates that there was a fairly strong drive among the participants toward integrating active support of the elderly client's physical mobility into the script of home care visits. This drive was almost equally strong among the clients and the workers, with 60 % of the

former and 57 % of the latter being engaged in predominantly expansive learning cycles. This finding is in line with the results of a previous analysis in which we found widespread expansive utilization of the Mobility Agreement in home care encounters (Engeström, Kajamaa & Nummijoki 2015).

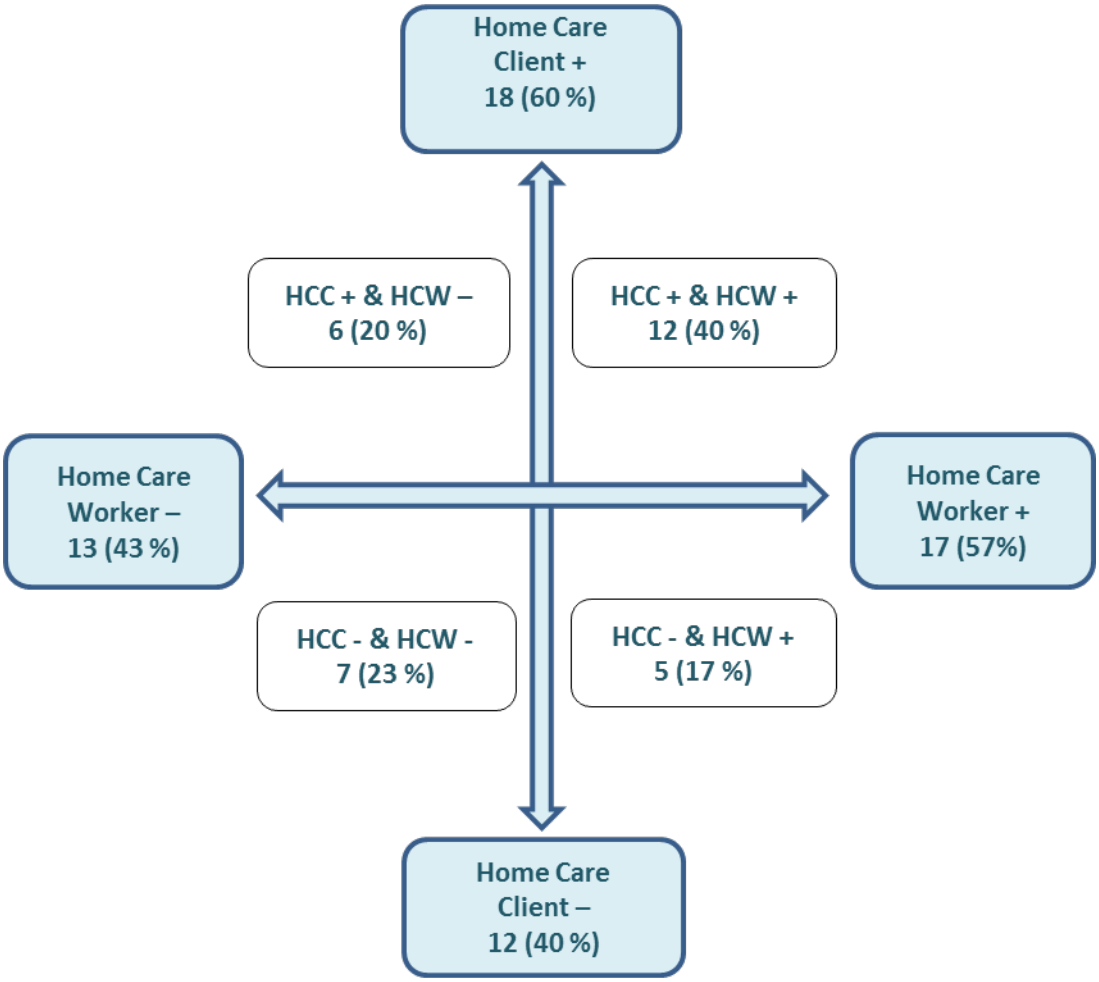

Figure 5. Distribution of predominantly defensive and predominantly expansive learning cycles of home care clients and home care workers

Importantly, the three other types of combinations of learning cycles were quite evenly represented in our sample, their shares ranging between 17 % and 23 % of the cases. The combination of client's defensive cycle and worker's defensive cycle (--) comprised 23 % of the cases.

We may interpret the overall message of Figure 5 in the following way. There is a relatively strong tendency in the data sample toward appropriating and implementing the new Mobility Agreement practice by means of joint expansive learning efforts of the client and the worker. At the same time, there are significant numbers of cases in which the efforts of the two parties do not match or are in conflict with one another, and also a significant number of cases in which both parties predominantly reject or resist the new practice. In other words, although the new practice has momentum, it is also avoided or opposed to. In fact, in 60 % of the cases at least one of the parties was engaged in a predominantly defensive cycle.

Figure 5 may be read as a powerful diagnostic representation of the state of an organizational learning effort. Here organizational learning is not regarded as a general capacity of an organization but as a specific target-oriented effort and process that may be followed up and diagnosed by scrutinizing samples of repeated critical instances of organizational behavior requiring learning, such as the critical encounters between home care client and home care worker.

The findings summarized in Figure 5 invoke the question: What are the detailed dynamics of the interplay of the two cycles in the different types of combinations? We

will examine this with the help of four home care visits, each one representing one of the combination types represented in Figure 5.

THE LEARNING CYCLES OF FOUR HOME CARE ENCOUNTERS

Case A (HCC- & HCW-)

Case A is an encounter in which the client was a man born in 1926. The history of this case goes back to 10 months earlier when a Mobility Agreement was made by the client and a home care worker with the objective of promoting everyday mobility and exercises. Before the encounter analyzed here, the home care worker explained to the researcher how passive this client had been and that he did not exercise independently at all. The client's (HCC) written home care plan included exercises based on Mobility Agreement, to be undertaken before assisted showering. This visit lasted 40 minutes and the discussion contained 235 turns before the participants moved to showering.

At the beginning of the encounter, the client reasoned why he could not engage in mobility-related efforts. The client compared his current condition with the past, discussing deterioration of his mobility by referring to health reasons and risks associated with physical movement. The home care worker (HCW) went along with the client's interpretation. We coded this action as analysis. The home care worker then took the initiative to examine and model the client´s upper limb actions, which seemed to be a surprise for the client.

Neither of the two parties mentioned the Mobility Agreement during the encounter. Instead, both the client and the worker took up substitute topics. It appeared that the home care worker did not feel that her duties would include actively promoting the client´s mobility and the implementation of the Mobility Agreement. She had formed a strong emphasis on empathy and used that to construct her way of working.

Figure 6 gives an overview of the learning actions taken during the encounter. In this and in the following similar figures, the party which initiated the learning action is marked in bold within the circle representing a learning action. Continuous flow of learning actions is indicated by means of overlapping circles, whereas interruptions in the flow of learning actions are marked with spaces between the circles. This case contained four interruptions.

In case A, the client took 10 defensive and 6 expansive learning actions, whereas all 16 learning actions taken by the home care worker were defensive. The client´s and worker´s defensive actions largely supported and reinforced one another. However, in six occasions the client took expansive actions aimed at identifying or initiating possible mobility exercises that might be done when the home care worker was visiting him. These led to mismatches as the worker did not endorse or expand on these hints, taking up substitute topics and eventually focusing on tasks within the standard script: medication, nutrition, and showering. Figure 6 reveals that the learning cycle in case A consisted of the four first learning actions of the expansive/defensive cycle (see Table 1). Actions of implementing, reflecting and consolidating were not taken in this case. It seems that as both parties took a

predominantly defensive learning stance, the learning cycle could not move into actual implementation.

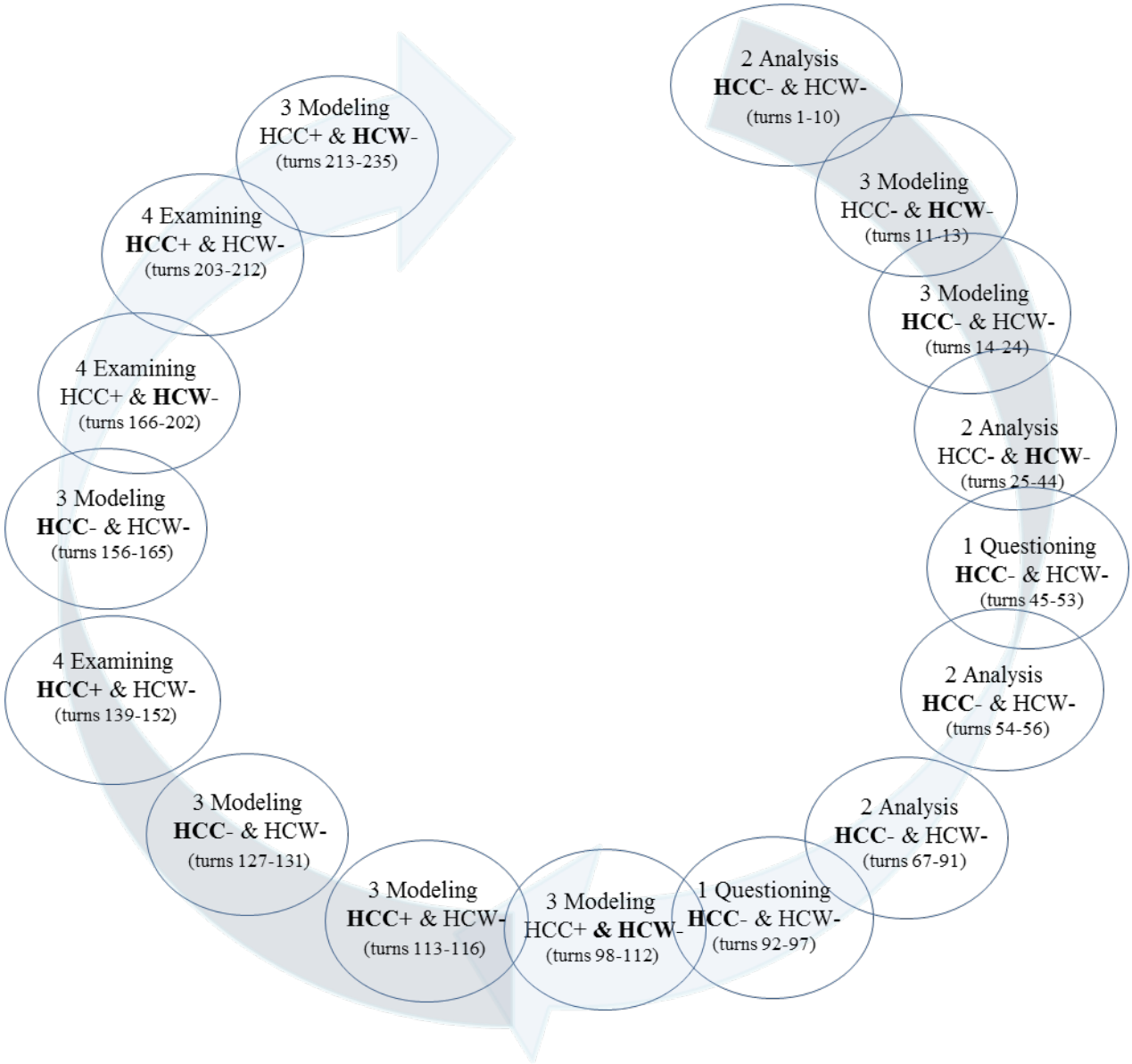

Figure 6. The learning cycle of case A (HCC- & HCW -)

Excerpt 1, taken from the end of the encounter, is an example of the mismatches between the actions of the client and the worker.

EXCERPT 1: Learning action of modeling

213HCC: And it is that kind of chair, where I have to struggle a bit, to get out of there.

214HCW: Yeah, it's a bit lower.

[...]

216HCC: That's very good, yes, yes! And I have never avoided it really. I thought at the beginning, when such a chair was brought in, that I could not ever sit on it.

217HCW: Oh yeah, it's a beautiful armchair.

[...]

219HCC: It's so ...

220HCW: A colorful, you seem to like colors.

221HCC: Well, yeah, why not. – All right, I will start now..

222HCW: Yeah, let´s take a shirt off and ...

223HCC: Yeah.

224HCW: Brakes are now on in this wheelchair.

225HCC: Good! Thank you.

226HCW: Here is a pretty flower!

227HCC: Yes, it is. It is pretty as long as it functions and grows

228HCW: It is sustainable.

Here the client expressed an initiative to show exercises he had been doing. We coded this as an action of modeling. The home care worker diverted the focus first onto the color of the armchair, then onto a pretty flower in the client's apartment. The client's hint at using the deep armchair as an exercise device was thus extinguished.

This is an example of the home care workers' need to learn to pay attention to clients' spontaneous or opportunistic initiatives to make use of their everyday artifacts and routines in the service of physical mobility (for additional examples, see Engeström,

Kajamaa & Nummijoki, 2015). This is a learning challenge for the municipal home care services as a whole, exemplifying the intertwining of learning at the levels of client-worker dyads and the entire organization.

Case B (HCC- & HCW+)

In case B, the client was a woman born in 1916. The history of this case goes back to 5 months earlier when a Mobility Agreement was made by the client and the same home care worker who also conducted the visit analyzed below. The client had practiced mobility-related tasks and taken some outdoor walks, but now she had started to withdraw from such exercises. The client´s written home care plan included medicine dispensation and drafting a grocery list. This home appointment lasted 45 minutes and the discussion included 180 turns of talk. The encounter contained four interruptions.

At the beginning of the encounter, the client talked about why she did not need to engage in mobility-related efforts. The client compared her current condition with the past, discussing the deterioration of her mobility. She explained her desire to be passive, referring to risks associated with physical movement. The home care worker made repeated efforts to embed mobility promotion in the client's daily routines.

As shown in Figure 7, in this case the home care client's learning cycle included 10 defensive actions and seven expansive actions, whereas the home care worker's cycle included two defensive actions and 15 expansive actions. In other words, the clients cycle was predominantly defensive and the worker's cycle was predominantly expansive. The overall tone of the encounter was that of a mismatch between the

actions of the two parties, one resisting or ignoring and the other one promoting regular exercises based on the Mobility Agreement. Figure 7 reveals that the learning cycle in case B contained all the seven learning actions of the expansive cycle. In this case, also actions of implementing, reflecting and consolidating were taken.

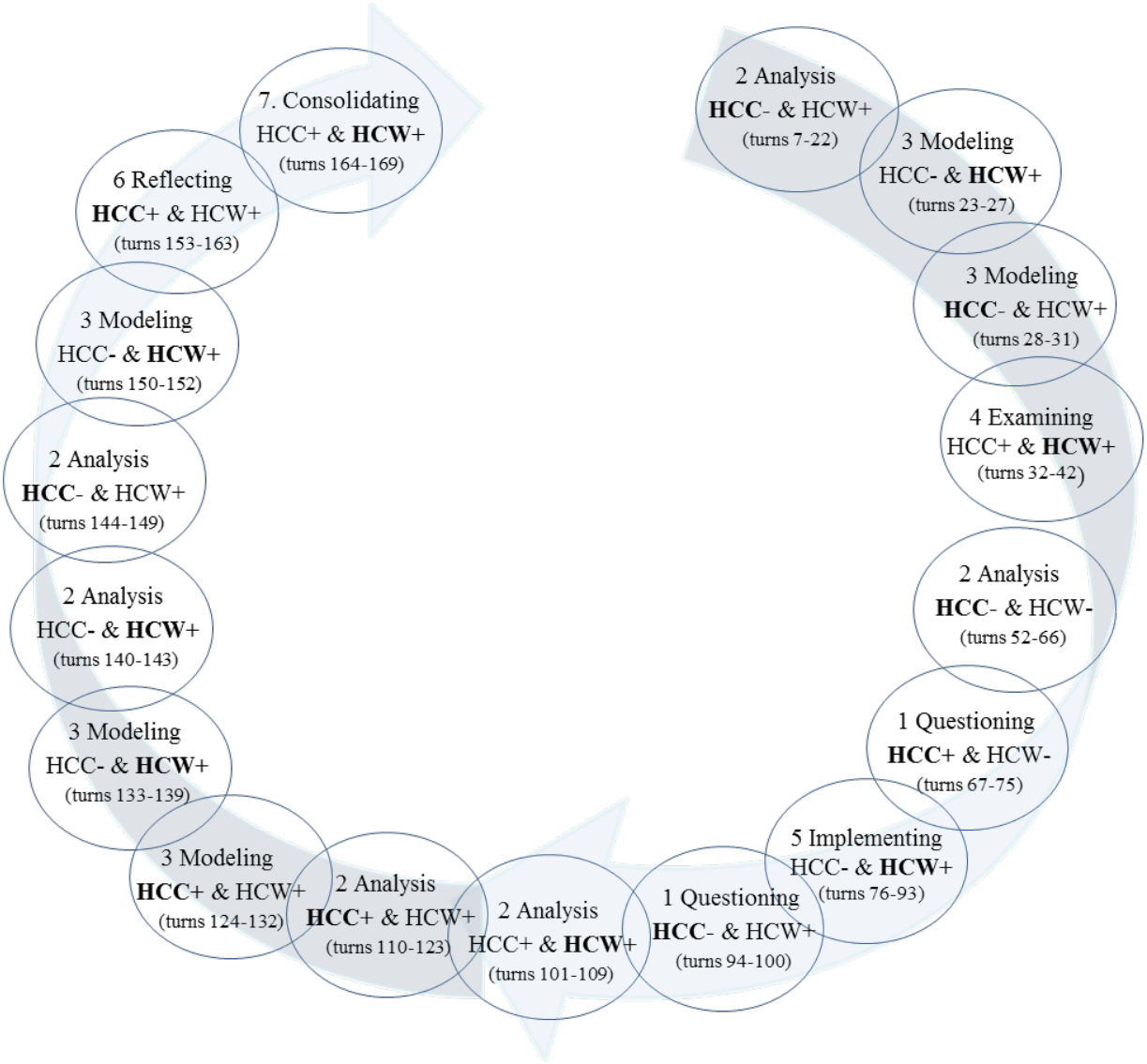

Figure 7. The learning cycle of case B (HCC- & HCW+)

The home care worker tried to direct the client's focus onto mobility exercises.

The client obeyed the worker´s suggestions to carry out sit-to-stand exercises, but she seemed to view those exercises as self-evident daily events without much meaning and personal sense attached to them (Excerpt 2).

EXCERPT 2: Learning action of implementing

76HCW: Do you feel that you could exercise sit-to-stand few times at the same time here?

77HCC: What?

78HCW: Do you feel that you could get up from the chair few times while I do this medicine dispensation?

79HCC: Where up?

80HCW: Get up from the chair and sit down couple of times.

81HCC: Well, yes, I always I get up here, when then ... when I leave and…

82HCW: Oh yeah.

83HCC: … when I'm here.

84HCW: So do you feel that now you could get up from the chair something like five times?

85HCC: [laughs and gets up once] I do not ... [laughs] The head is ... [gets up for the second time]

86HCW: Do you feel that legs are weak?

87HCC: Do you mean feet? [gets up again] No legs feel fine but my head.

88HCW: Oh, head. Well help with your hands more!

89HCC: So. What?

90HCW: Support yourself on the table!

91HCC: Oh yeah.

In six occasions, the home care worker was able to induce her client to shift from defensive to expansive actions (Excerpt 3).

EXCERPT 3: Learning action of reflecting

159HCC: .... But I just have to try...

160HCW: Yes

161HCC: And then.. Yes, I have noticed that when you do you get more.

162HCW: Yes, then you will be stronger to manage.

[…]

164HCC: When I am having my daily rest here, it is so good to be there that I would not like ever to get up again. But then I push myself up and I say move, move! Then I start to walk around these rooms here. Luckily this apartment is like this, that I can move here.

165HCW: Yes.

In these occasions the client either followed the worker´s suggestion to exercise or reflected on her own efforts to overcome her inertia. This is quite typical to the cases of this type (HCC-, HCW+). Even if the client's cycle was predominantly defensive, the cases of this type usually did not represent a client's total refusal to engage in expansive learning actions.

Case C (HCC+ & HCW-)

In case C the client was a woman born in 1930. The history of this case goes back to 9 months earlier when a Mobility Agreement was made by the client and one of the workers of the home care team. Several home care workers had visited this particular home before the encounter analyzed below. The home care worker in this particular encounter had not ensured that the agreed-upon mobility exercises had been carried out and monitored during earlier home visits. This client´s home care plan included support in daily chores before showering assistance. The visit lasted about 45 minutes. It contained 405 turns of talk and one interruption.

In this encounter the client took the lead, suggesting that the home care worker should guide and assess her exercises by following the graphic instructions displayed in an

exercise booklet used as support material for the Mobility Agreement. The home care worker went along and exercised with the client. However, the main concern for the worker seemed to be to measure the client´s blood pressure. In the home visit folder, the worker wrote the following text about the content of the visit.

Client suggested that she would be interested to exercise once a week always before the shower assistance, now that medicine dispensation is not anymore in the home care script. Today client did not want to go to shower. Her blood pressure was 142/188, pulse 88.

As shown in Figure 8, the client took 17 expansive learning actions and five defensive actions, whereas the home care worker took seven expansive and 15 defensive actions in the cycle. Thus, also this encounter was characterized by a mismatch between the actions of the two parties, only this time the home care worker was the defensive party. Figure 8 reveals that the learning cycle in case C contained six of the seven learning actions of the expansive cycle. Only the action of consolidating and generalizing was missing in this case.

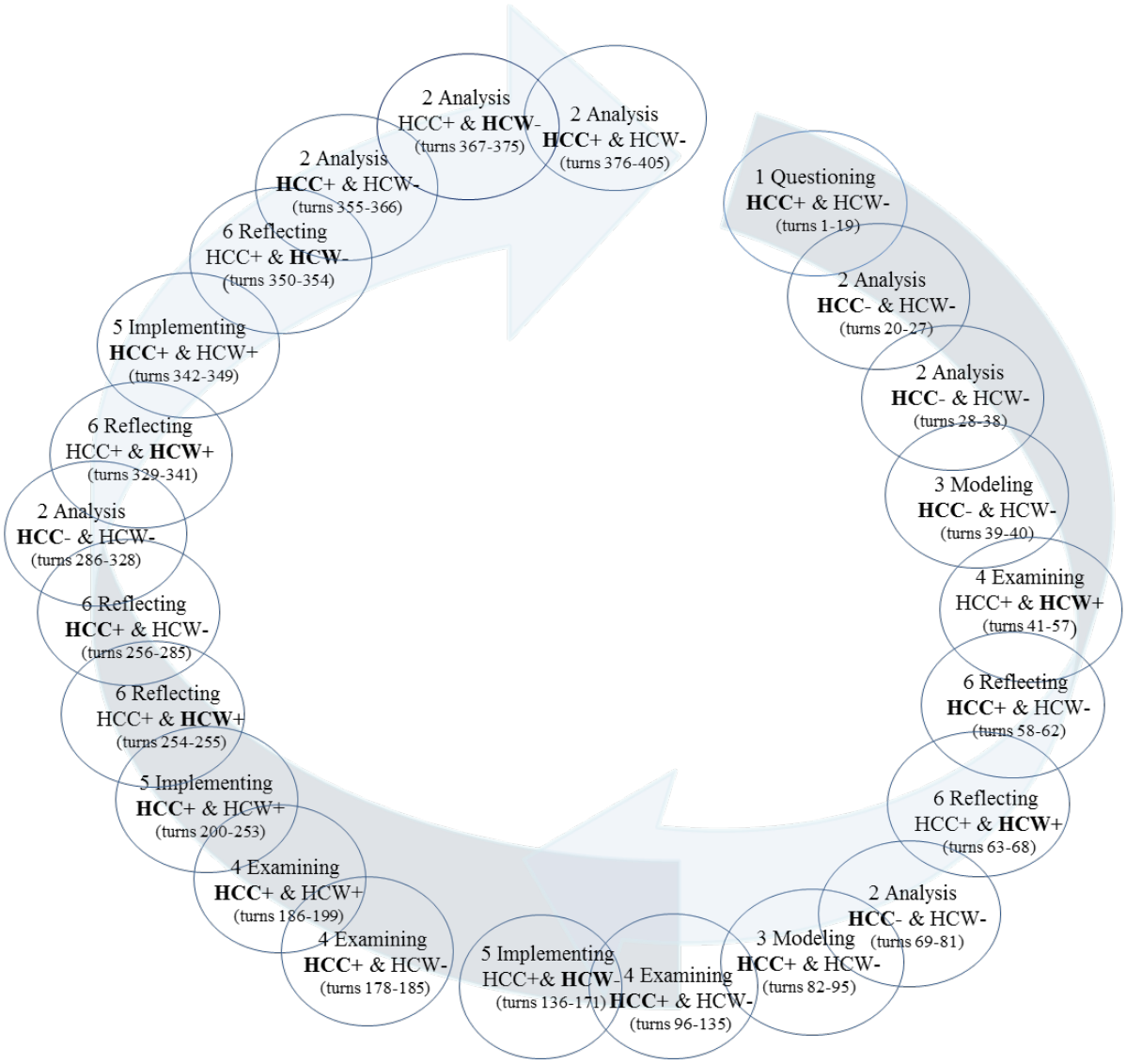

Figure 8. The learning cycle of Case C (HCC+ & HCW-)

The home care worker's defensive stance was primarily manifested in her passivity and indifference, not so much in the form of diversion toward substitute topics or active rejection of the client's ideas. Figure 8 shows that the client initiated 15 out of the 22 learning actions. It seemed that the home care worker simply did not know how

she could incorporate physical mobility exercises into her script and schedule. This soft defensive stance is exemplified in excerpts 4 and 5.

EXCERPT 4: Learning action of examining

178HCC: Should I show these now? [looking at the exercise booklet]

179HCW: Do you not feel too tired to do a couple of exercises from there?

180HCC: Yeah... I think these all are very easy

181HCW: It is good, if it feels easy, you could repeat them.

EXCERPT 5: Learning action of reflecting

257HCC: [reading the exercise booklet] This I can do quite well!

258HCW: Mm, the standing up from the chair?

259HCC: Standing up from the chair. "Stand in good posture, take support on your left, take a step with your right foot moving your weight forward and bring the foot back to the side of the other one. The same way a step sideways and back to the side of the other foot, and a step backward and back to the side of the other foot. Repeat the series of movements rapidly five times." –Shall I do this?

260HCW: Well, it seems a bit difficult.

261HCC: Oh, does it?

262HCW: Yes.

In three occasions the client's initiatives did prompt the home care worker to shift from defensive to expansive action. One of these shifts occurred when the client initiated the action of examining the Mobility Agreement as a new model and the worker got interested.

EXCERPT 6: Learning action of examining

187HCW: Yes, that! Should we do it together?

After that, they moved to the action of implementing, exercising together with the help of the exercise booklet. Toward the end of the visit, the home care worker, with input from the client, analyzed her own defensive stance (Excerpt 7).

EXCERPT 7: Learning action of analysis

367HCW: … It is like, I´ve been working about six months in this area, so it has kind of been like a given rule: measure the blood pressure, and then you don´t easily start something like…

368HCC: Do they even tell you what you are not allowed to do?

369HCW: Well, not quite like, "Don´t do this!"

370HCC: "Don´t go for shopping... "

371HCW: Yes, so it is like that we are not allowed to take money or manage money at all...

372HCC: Manage, yes.

373HCW: But I mean it is not so ... yes it could be that you just start to do it, so probably it might become more natural to do this kind of exercises, too.

In Excerpt 7, the client practically guides the worker to reflect critically on her way of working. The home care worker's reflection indicates that the client's expansive initiatives were indeed having an impact, even if the worker's overall cycle in this encounter remained predominantly defensive.

Case D (HCC+ & HCW+)

In case D the client was a man born in 1925. The history of agreed-upon mobility support in this case goes back to one and a half year before this particular encounter. The responsible home care worker had ensured regular implementation of the Mobility Agreement. The agreed-upon mobility exercises had been carried out and monitored during all home visits. The home care team had continuously assessed the client's

resources and changed the Mobility Agreement depending on the client's progress and also on the seasons (e.g., more indoor exercises during the winter). The client´s home care plan for the morning visits included support in morning chores: dressing up before the assisted breakfast and outing in summer time. This home appointment lasted about 50 minutes and the discussion included 766 turns of talk. This unusually talkative encounter contained 12 interruptions.

Figure 9 shows that both the client and the home care worker took an expansive stance in all the 19 learning actions of the encounter. Importantly, the cycle consists mainly of the learning actions of implementing (6 actions), reflecting (7actions) and consolidating (4 actions). The actions of questioning, modeling and examining the model are missing in this case. This is most likely a consequence of the preceding history of implementation. The initial actions of expansive learning had likely been performed in earlier encounters; now the focus was on putting into practice and reflectively maintaining the new model. Figure 9 also shows that the client initiated only five of the 19 actions. This implementation-oriented and worker-led approach is exemplified in excerpt 8.

EXCERPT 8: Learning action of implementing

124HCW: (…) you have been more independent before (…) would you pour milk for yourself as much as you like, please! Here you are, pour! – Excellent! Very good grip you have in your hands, the milk carton stays well in your hand.

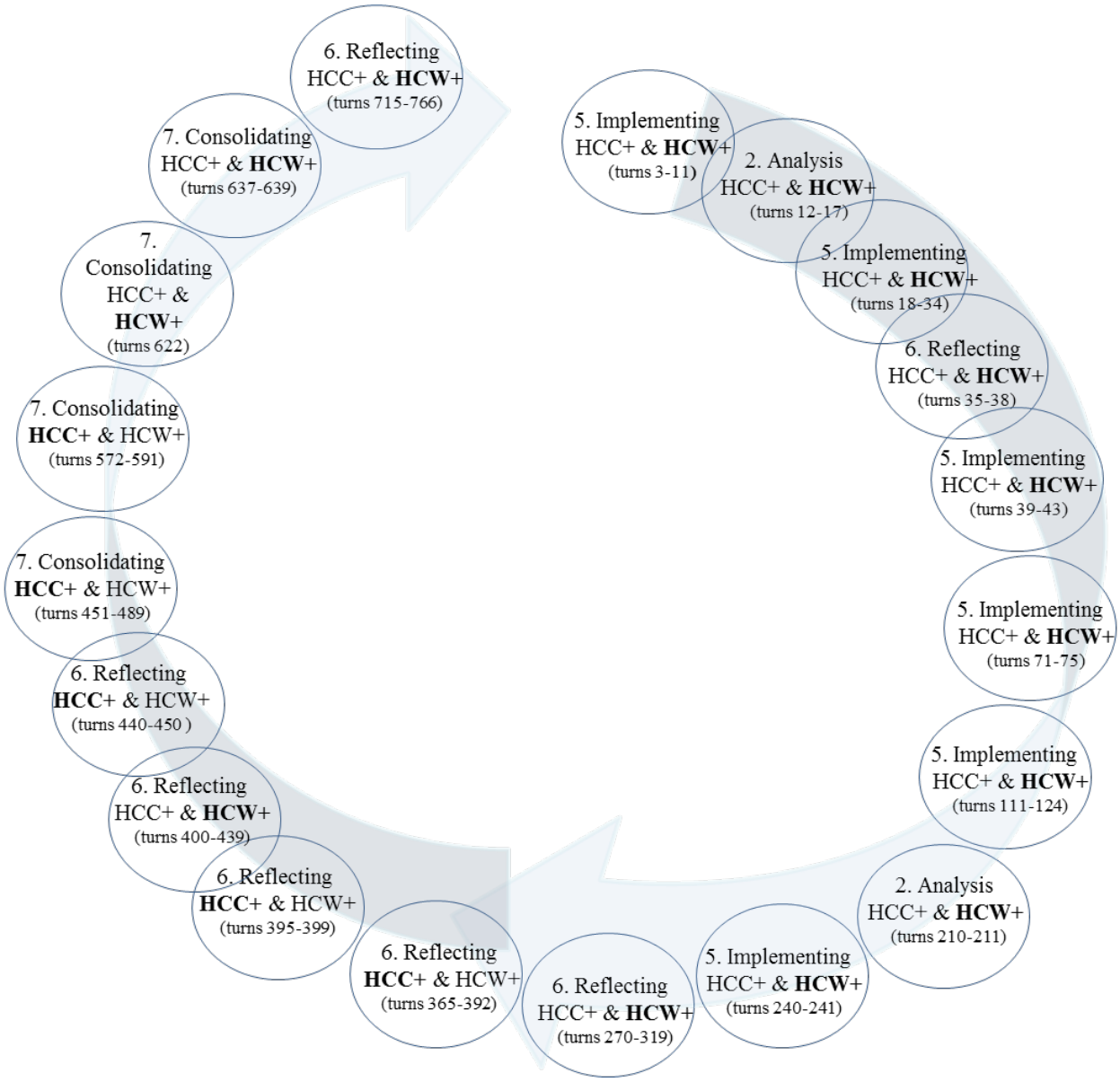

Figure 9. The learning cycle of case D (HCC+ & HCW+)

Although the initiative was largely in the hands of the home care worker, issues and actions were negotiated and the client's view was heard, as can be seen in excerpts 9 and 10.

EXCERPT 9: Learning action of reflecting

365HCW: What about, now that you have been going more for outings, have you noticed any changes in the quality of your sleeping over the nights?

366HCC: Yeah, sure, I sleep like a log. [Both laugh]

EXCERPT 10: Learning action of consolidating

572HCC: I have gotten so much better with this, not falling down anymore. I have not fallen down this year at all!

573HCW: No you have not!

574HCC: There was a time when I used to fall down at least once a month, that way.

Case D contained no defensive learning actions. This was not common in our sample. Out of the 12 cases in which both the client's and worker's cycles were deemed predominantly expansive, three (25%) contained no defensive actions.

There were significant differences in the degree of completeness of the learning cycle between the four cases presented above. Encounters in which both the client's and the practitioner's learning cycles were predominantly defensive, exemplified by Case A, commonly did not contain the last actions of the cycle, namely implementing, reflecting and consolidating. Encounters with a mismatch between the client's learning cycle and the worker's learning cycle, exemplified by cases B and C, typically contained all or almost all the learning actions of the ideal-typical cycle. Encounters in which both cycles were predominantly expansive, exemplified by Case D, often did not contain some of the early actions of the cycle, such as questioning and modeling.

These findings may be interpreted as implications of the power of mismatches in the learning of a demanding new practice. When both parties are predominantly defending the old practice, the learning does not need to proceed to implementing and consolidating; implementation and consolidation of the old practice are already *fait accompli*, and learning actions are primarily needed to generate ways to fend off the new. When one of the parties is predominantly defending and the other one predominantly trying to expand, the dynamic tension seems to push the learning effort further. Finally, when both parties are expansively oriented, they may actually already have accomplished the questioning of the old and the modeling of the new practice, and thus are inclined to go directly into implementation and consolidation. This indicates that using only short encounters as data has important limitations, and the findings probably need to be interpreted against the background of longer cycles, i.e., against the background of what has happened before and what might happen afterwards.

Most of the encounters in our data contained shifts in which either the client or the home care worker initially assumed a defensive stance but then switched over to an expansive stance, or vice versa. In the four cases analyzed in detail above, the clients shifted 10 times from a defensive action to an expansive action and eight times from an expansive action to a defensive action. The home care workers shifted five times from a defensive to an expansive and five times from an expansive to a defensive action. In other words, there was no significant difference in the frequency of the directions of the shift. But the clients shifted stances nearly twice as often as the workers, and a similar pattern was found in our larger data corpus.

Mere hints from one party to the other one did not seem to be sufficient to trigger the shifts, as shown for example in Excerpt 1, lines 213-214. Initiatives taken by one party in the form of or tightly connected to physical actions seemed to be more effective in this respect, as shown in Excerpt 2 and Excerpt 6. The fact that shifts were so common in the encounters implies that the stances of the two parties may in many cases have been internally dilemmatic and thus unstable, involving internal oscillation between defensive and expansive orientations. We will briefly return to this in the next section.

SUBTLE ORIENTATIONAL MISMATCHES

Why might it be so that a richer or more complete repertoire of learning actions tended to appear when there was a mismatch between the learning cycles of the home care client and the home care worker? To examine this further, we looked into the details of interaction in our cases B and C. These are the cases in which there was a mismatch between the dominant quality of the learning cycles of the two parties, one being predominantly expansive and the other predominantly defensive.

The productive potential of conflicts and controversies in learning has been analyzed and theorized by Johnson and Johnson (2007) and Tjosvold (2008). These authors maintain that "constructive controversy exists when one person's ideas, information, conclusions, theories, and opinions are incompatible with those of another, and the two try to reach an agreement" (Johnson, Johnson & Tjosvold, 2006, p. 69). Constructive controversy is defined as a verbally articulated clash and negotiation of ideas, theories or opinions.

The first feature that emerged in our detailed examination of the two cases is the absence of open conflicts and disagreements. The understanding of constructive controversy as verbally articulated clash of ideas is alien to the mismatches in our data. The mismatches in the home care encounters were subtle movements toward different directions. These subtle mismatches seem to manifest differences in largely tacit orientations rather than explicit differences in opinions or ideas and have interesting expansive potentials fort he development of home care visits and the mobility of clients. Here are examples from cases B and C.

EXCERPT 11 (Case B)

23HCW: Have you done sit-to-stand exercises recently?

24HCC: What?

25HCW: Have you done those sit-to-stand exercises recently?

26HCC: Oh, do you mean now?

27HCW: Yes.

28HCC: No, I have not quite done any exercises; I have just been walking from room to room with this walker here. Because they did not take those plastics [points at windows] from the windows until yesterday. I wonder whether they will place them back again.

In Excerpt 11, the home care worker initiated an exchange aimed at modeling sit-to-stand exercises. The client responded first with two counter-questions ("What?" and "Oh, do you mean now?"), before cautiously responding with a negative answer ("I have not quite done any exercises"). The negative answer was complemented with the description of alternative movement ("I have just been walking from room to room with this walker") she did instead of the sit-to-stand exercises. Then, as to provide an explanatory account (Antaki, 1994) for not having undertaken the sit-to-stand

exercises, she took up the plastic covers on her windows, which seem to represent an unpleasant aspect of doing the exercises in this specific location in her home. The client also expressed concern that the covers might have been only momentarily taken away.

The organization of this excerpt with the delayed and elaborate structure of the negative answer reminds us of the classic conversational markers of dispreference (Schegloff, Jefferson & Sacks, 1977). This kind of a subtle digressive moves were very common in our data. In this case, the home care worker's persistence enabled the parties to refocus on the exercises *per se* and to briefly overcome their orientational mismatch in the next learning action.

EXCERPT 12 (Case B)

32HCW: How do you manage with that sit-to-stand exercise?

33HCC: Yes, the rising works [stands up].

34HCW: Are you able to manage without the help of hand support?

35HCC: What?

36HCW: Are you able to get up without the help of hand strength?

37HCC: Well, it depends on how much strength on has [client and worker laugh].

38HCW: But can you get up from the chair without using hands?

39HCC: [stands up]

40HCW: Well, that much it rises.

41HCC: Yeah, that much.

42HCW: Yeah.

43HCC: No, I was actually going to explain how it was quite uncomfortable or sticky here when I couldn´t air these rooms at all. And now that they took those plastics away yesterday evening, I felt immediately that I can breathe better after that.

In Excerpt 12, the home care worker gently challenged the client by asking how she managed with performing the sit-to-stand exercise. The client responded with a practical demonstration that raising up from the chair with the support of the hands worked, and by smiling while saying this ("Yes, the raising works"). Determined to challenge the client a bit more, the home care worker asked if she was able to stand up without using the hands ("Are you able to manage without the help of hand support?"). To answer this question, the client established a new delay, as in Excerpt 11, which this time made the home care worker repeat the original question two more times (turn 36: "Are you able to get up without the help of hand strength?" and turn 38: "But can you get up from the chair without using hands?").

Here the client's initiation of the delay included a counter-question ("What?") and a humorous statement of uncertanty, prefaced with the typical marker of dispreference "well" (Heritage, 2015) ("Well, it depends on how much strength one has"). The home care worker joined the client's joke and broad smile by laughing, before repeating the original question for the third time. At this point, the home care worker's persistence paid off with the client eventually standing up without hand support, the way depicted in the Mobility Agreement booklet. In the following speaking turns, after both parties assessed the performed movement (turns 40 to 42), the client returned to the topic of the plastic covers on the window ("No, I was actually going to explain how it was quite uncomfortable or sticky here when I couldn´t air these rooms at all. And now that they took those plastics away yesterday evening, I felt immediately that I can breathe better after that").

The client started this speaking turn with the word “no,” an unusual expression in our data, which was hardly an explication of articulated disagreement. Primarily this “no” was an indication of a wish to resume explaining an issue of concern for the client – a wish that she actually fulfilled with the following statements in the speaking turn. The client reported that the presence of the covers obstructed the air flow in the apartment. This explanation was of potential relevance for turning what may appear only as a digressive move on the part of the client into productive and expansive new openings to create the best conditions in the house for her to do the excercises.

Subtle digressive moves may manifest themselves as dispreferences in interactions between the client and the home care worker. Engaging with these dispreferences, as the home care worker did in excerpts 11 and 12, may lead to overcoming the orientational mismatches between the two parties. Also, engaging with these dispreferences may reveal concerns and constrains that have productive and expansive potential to further support the client’s mobility.

In case C, as the client took the lead, the mismatch was largely manifested in the worker’s passive responses to the client’s initiatives.

EXCERPT 13 (Case C)

134HCC: Well, I will go and sit on the chair, and turn this walker in ready position to go...

[...]

136HCW: Well, I guess you can show how you manage at home, since...

137HCC: How I manage at home.

138HCW: Yes. We only visit once a week, so...

139HCC: [starts to move with the walker] These are my regular places, where I move.

140HCW: Yes.

The client's repeated enactive initiatives eventually led to moments in which also the worker became physically involved.

EXCERPT 14 (Case C)

263HCC: [takes the exercise instruction booklet and reads]

264HCW: [sits down at the table]

265HCC: [reads aloud] "Stand -- stand up on your toes and descend back down 10 to 15 times." This I could try. But where ... where will I stand and what do I hold on to? Here? [stands up]

266HCW: Well, there for example.

267HCC: This is the place where I always eat.

268HCW: [stands also up]

269HCC: [reads aloud] "Stand up on your toes and descend back down 10 to 15 times." [starts the exercise together with the worker] Now I have my regular shoes.

270HCW: Get a bit up on the balls of your feet.

271HCC: Should I take off the shoes and wear socks?

272HCW: Does it feel easier without shoes?

273HCC: I don't know.

274HCW: The floor might be more slippery that way.

275HCC: Maybe, yes.

276HCW: Do you feel it in your calves?

277HCC: Not much, not much.

278HCW: To some degree?

279HCC: To some degree. It wouldn't work otherwise...

280HCW: Yes.

281HCC: All right! [sits down in the chair] I guess we could begin to practice more of these!

282HCW: Well.

283HCC: Or what does the boss say? [the parties laugh]

284Researcher: So who is the boss?

285HCC: You are.

The home care worker's subtle reluctance to commit herself to more joint mobility exercises (turn 282) prompted the client to take the exceptional step of involving the researcher in the exchange (turns 283 to 285). The home care worker continued to oscillate between passivity and moments of supportive involvement till the end of the encounter. Importantly, however, as shown earlier in Excerpt 7, at the end of the encounter the home care worker reflected on her own stance in a future-oriented way: "But I mean it is not so ... yes it could be that you just start to do it, so probably it might become more natural to do this kind of exercises, too." (line 373) This is an illustration of how mismatched examples might play out over time, in this case potentially leading the worker to make a shift from a predominantly defensive to a predominatly expansive learning orientation.

In our data, these subtle orientational mismatches did not usually lead to agreements or explicit resolutions. The predominant outcome of these mismatches was that the situation was left open and unfinished. It seems that this very quality of incompleteness and open-endedness generated further learning actions. Such further learning actions seldom indicated deliberate attempts to reach an agreement. More commonly they involved small adjustments and coordination efforts.

These findings invoke the question of deliberate articulation of different orientations. Would it be beneficial to guide home care workers and clients to make explicit their orientations to the systematic facilitation of physical mobility? This would require new

instruments, for example sets of questions that trigger joint reflection on the orientations of the parties toward mobility. The development and testing of such instruments is a learning challenge for the organization and management of the municipal home care services in Helsinki. This is another example of the intertwining of learning processes at the level of individual clients and their home care workers on the one hand and learning processes at the level of the entire organization.

WHAT IS LEARNED IN DEFENSIVE LEARNING CYCLES

What is actually learned within defensive learning cycles is seldom problematized in research literature. For example, Wäschle & al., (2014) examined vicious circles in self-regulated learning in terms of procrastination, understood as delay of academic tasks until the last minute. Students who recorded high levels of procrastination assessed their goal achievement as being low, which in turn reinforced procrastination. Procrastination was taken as both the starting point and the end result of a vicious circle – a mode of analysis that itself resembles circular reasoning.

In our data, defensive learning cycles were oriented at fending off the new practice of systematic promotion of physical mobility exercises in home care visits. This may look like denial of any learning. In line with studies of learned helplessness and procrastination, one might argue that if there is learning involved in such defensive cycles, it is certainly simple unconscious conditioning and reinforcement rather than some sort of deliberate acquisition of new skills.

In our data, we found indications that question such an assumption and call attention to relatively complex forms of defensive learning. Our observations are necessarily tentative and further research is needed in this issue.

We identified four types of contents in the actions and cycles of defensive learning. These are (1) learning to avoid, (2) learning to constrain, (3) learning to divert, and (4) learning to refuse. Here we give a brief example of each of the four types.

(1) Learning to avoid

EXCERPT 15 (Case A)

213HCC: And it is that kind of chair, where I have to struggle a bit, to get out of there.

214HCW: Yeah, it's a bit lower.

[...]

216HCC: That's very good, yes, yes! And I have never avoided it really. I thought at the beginning, when such a chair was brought in, that I could not ever sit on it.

217HCW: Oh yeah, it's a beautiful armchair.

[...]

219HCC: It's so ...

220HCW: A colorful, you seem to like colors.

In turn 214 of this excerpt, the client explicitly pointed out that he had *not avoided* a chair that was demanding from the point of view of physical mobility. The home care worker, however, took the action of avoiding the topic of the mobility-enhancing potential of the chair. In turns 217 and 220, the home care worker diverted the focus to the esthetic qualities of the chair (thus, this excerpt could also serve as an example of learning to divert). The repeated diversion efforts indicate that this was a line of action adopted and pursued at least to some extent deliberately.

(2) Learning to constrain

EXCERPT 15 (Case C)

259HCC: Standing up from the chair. [Reading in a booklet] "Stand in good posture, take support on your left, take a step with your right foot moving your weight forward and bring the foot back to the side of the other one. The same way take a step sideways and back to the side of the other foot, and a step backward and back to the side of the other foot. Repeat the series of movements rapidly five times." – Shall I do this?

260HCW: Well, it seems a bit difficult.

261HCC: Oh, does it?

262HCW: Yes.

At the end of turn 259, the client expressed her readiness to engage in an exercise described in the booklet. The home care worker constrained the client's initiative by emphasizing the difficulty of the exercise. We saw numerous similar sequences in our data. Often these sequences included questions from the client (such as turn 261 above) which challenged the home care worker's constraining interpretation – and still the home care worker typically insisted on constraining. This seems to indicate that constraining was at least to some extent adopted and implemented deliberately, with some reflection.

(3) Learning to divert

EXCERPT 16 (Case C)

384 HCC: I still hope that I could get some outing … I would like to get out. I am afraid to go out all alone because of that door downstairs, it will slam on me. When I walk with this rollator [walker], and stand there trying to push that door, I cannot get out without it slamming on me – that door!

385 HCW: I see. Or if we could get someone like those people who would take you out, like escort you. Did you get a letter from the social office with information of the voluntary workers, or those people who escort?

386 HCC: No.

387 HCW: Hmm. I wonder why you have not gotten that letter.

Here the client made it clear that she would like to get out and needed help with the downstairs door. Instead of escorting the client out and helping with the door, the home care worker diverted the focus onto the issue of getting volunteers to help the client, and further, to the issue of a missing letter containing information about the volunteer services. This type of moves were common in our data. Again, the diversion was produced interactively, through multiple turns of talk, and it can hardly be regarded as merely an automatic gut reaction on the part of the home care worker.

(4) Learning to refuse

EXCERPT 17 (Case B)

303 HCW: Try five times. [Suggests that the client should get up from the chair five times]

304 HCC: I feel so bad because I am so sweaty.

305 HCW: Once...

306 HCC: Two is a bit too much, too.

307 HCW: Let´s see. Two?

308 HCC: No, I cannot.

Here the client refused to do the exercise suggested by the home care worker. Straightforward refusals such as this were rare in our data. Both the home care workers and the clients used the other three types of defensive moves quite frequently, but flatly refusing an expansive action was not a significant component of the defensive

repertoire. Notice, however, that even this simple refusal emerged through some negotiation and argumentation, and the client used an explicit warrant ("because I am so sweaty") to justify her refusal.

Overall, these preliminary findings indicate that defensive learning actions and cycles may be much more complex and deliberate than might be expected on the basis of literature depicting them largely as outcomes of unconscious conditioning and reinforcement. Perhaps one reason for the simplistic view of defensive learning is that it has mostly been studied in individual subjects isolated from social interaction. In work encounters such as the home care visits, both defensive and expansive moves are typically matters of negotiation and coordination of perspectives, requiring some degree of reflection.

CONCLUSIONS

Our first research question was: What kinds of learning cycles may be identified in home care encounters charged with implementing the new Mobility Agreement practice? As summarized in Figure 5, we found a full spectrum of four types of combinations of learning cycles in the 30 encounters analyzed for this study. The combination of client's expansive cycle and worker's expansive cycle (++) was the most common type, with 60 % of the home care clients and 57 % of the home care workers being engaged in predominantly expansive learning cycles. The three other types of combinations of learning cycles (-+, +- and --) were quite evenly represented in our

sample. In 60 % of the cases at least one of the parties was engaged in a predominantly defensive cycle.

The learning cycles we analyzed were mostly mixed. In other words, predominantly defensive cycles contained also some expansive actions and predominantly expansive cycles contained also some defensive actions. There were few exceptions to this. Among the seven cases in which both the client's and the worker's cycles were predominantly defensive, there was one "pure" case in which all the learning actions were coded as defensive. And among the 12 cases in which both the client's and the worker's cycles were predominantly expansive, there were three "pure" cases in which all the learning actions were coded as expansive. The prevalence of "mixed" cases (87 % of all cases) indicates that learning in these encounters is interplay and movement between expansive and defensive learning actions. In studies of expansive learning, such dynamic and tension-laden interplay should be taken as an important focus of analysis in its own right.

Our second research question was: What kinds of interplay may be detected between the parallel learning cycles of the home care client and the home care worker, respectively? We were particularly interested in understanding why encounters in which there was a mismatch between the client's and the worker's learning cycles (types -+ and +-) seemed to contain richer repertoires of learning actions than encounters where the two cycles are aligned (types -- and ++). Would this perhaps be a consequence of constructive controversy between the parties? A detailed analysis of cases B and C revealed that the mismatches in the home care encounters were subtle movements toward different directions, manifesting differences in largely tacit

orientations rather than explicit differences in opinions or ideas. The predominant outcome of these subtle orientational mismatches was that the situation was left open and unfinished. It seems that this very quality of incompleteness and open-endedness generated further learning actions. On the other hand, the analysis and use of mismatches requires great care, as mismatches can obviously also become harmful and exploitative.

The third research question prompted us to examine what is actually learned in defensive learning cycles. Based on our data, we argue that practitioners and clients engaged in defensive learning cycles learned to ward off the expansion of the script of home care visits to include systematic cultivation of the client's physical mobility. This defensive learning seems to take at least four forms, namely learning to avoid, learning to constrain, learning to divert, and learning to refuse. Such forms of defensive learning are probably widespread, yet little acknowledged and seldom carefully analyzed. They seem to be at least potentially deliberate and more complex than the simple conditioning mechanisms traditionally attributed to defensive learning. On the other hand, defensive learning in itself did not generate richer sets of learning actions. As our Case A demonstrates, when both parties take a predominantly defensive learning stance, the learning cycle can hardly move toward actions of implementation.

The participants may have good reasons to engage in defensive learning actions and cycles. It seems advisable to avoid simplistic negative categorization or condemnation of defensive learning. A more productive approach would be to initiate dialogues in which the defensive orientation has a chance to be argued and elaborated on, safely and without pressure. This might open up "third spaces" (Gutiérrez, Rymes & Larson,

1995) of negotiated learning that go beyond the opposition between straightforward acceptance of and stubborn resistance to a new practice. Such dialogues will require new mediating instruments.

DISCUSSION

We identified defensive learning actions and cycles that represent the flip side of their expansive counterparts. However, one might question whether the dualism of expansive *vs.* defensive is valid for other types of learning processes. Our data consists of encounters in which a new demanding practice is directly challenging the old practice and script. This may be characterized as a challenge of implementing a relatively radical innovation against the backdrop of a stubborn restrictive routine. Such a challenge seems to lead to a rather straightforward dualism of *for* and *against.* Challenges of this kind are not uncommon, but it is likely that in less dualistic situations one will find more ambiguous and "middle-ground" learning actions which may be more difficult to interpret with the help of the original model of the expansive learning cycle.

The fact that both the home care worker and the client may engage either in a predominantly defensive or a predominantly expansive learning cycle should alert us to the fact that in many learning processes it is not at all simple to determine who is teaching, leading or guiding whom. Even though home care encounters have an in-built asymmetry between the potentially powerful practitioner and potentially powerless elderly client, when the learning challenge requires reorientation from both parties,

the power relations seem to become much more open-ended and mutable. For example, we see instances (such as those in our Case C) of the client pushing or pulling the practitioner into expansive learning actions in spite of the overall defensive orientation of the latter. This study indicates that more research is needed to deepen our understanding of the dynamics of interacting cycles of learning in multi-learner settings.

One could argue that for example in classroom instruction learning is assigned to the students while the teacher's task is to teach. This view may, however, turn out to be increasingly restrictive as teachers face novel knowledge objects, phenomena and technologies that they also must learn to make sense of and cope with while at the same time teaching them to the students. The growing importance of learner-generated content will accentuate this shift. In work organizations and communities at large, learning processes are often, perhaps predominantly, characterized by the necessary participation of two or more learners with different but complimentary positions and perspectives. Thus, the methodological solution developed in this article may be taken as an invitation for further studies and novel solutions.

Home care encounters are admittedly a specific site and format for learning. The intertwined cycles of learning seem to be less about learning how to do something new and more about learning how to do something already familiar in the home context. However, the familiarity is deceptive. The learning challenge of implementing the Mobility Agreement is actually the challenge of overcoming or transcending foundational contradictions in the activities of the client and the home care worker. For the client, the primary contradiction is that between autonomy and safety. For the

worker it is between saving labor by sticking to the standard procedure on the one hand, and responding to the client's vital needs proactively and collaboratively on the other hand. A struggle between short-term cost-efficiency and longer-term impact is at the core of the learning challenge. Our analysis shows that deep-seated restrictive patterns in home care can be overcome and transformed. In other words, while it would be idealistic to claim that the learning processes we analyzed have resolved the foundational contradictions, it is not an exaggeration to argue that expansive learning in the implementation of the Mobility Agreement puts those contradictions into movement.

In expansive learning, the learners take actions to change their activity. In other words, generation of transformative agency among the learners is a key quality of expansive learning (Sannino, Engeström & Lemos, 2016). The present study points toward important extensions of the notion of transformative agency. First, transformative agency may be best understood in terms of actions that emerge through negotiation, contestation and collaboration between two (or more) learners engaged in a challenging shared task and object. Secondly, transformative agency has a flip side that might be called defensive agency. Actions of resistance (Sannino, 2010), that is, of fending off a novel challenge and protecting the *status quo,* are agentive in their own right and need to be analyzed as such.

We interpret our findings as indicating that efforts at developing and implementing such agency-promoting practices as the Mobility Agreement should embrace negotiations and debates between different orientations in care encounters. Making the differences explicit and reflecting on them may be a starting point of further

expansion. Paraphrasing Marton (2014), we argue that deliberate and reflective use of variation is the mother of expansive learning.

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