

Technology as ‘time saver’ and the ‘saviour’ of older adult care: Analysing doxical representations in Norwegian healthcare policies

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Abstract

In this paper we analyse the political articulation and understanding of ‘technology-supported care’ for older adults in central Norwegian public policy documents. In these documents, technology is increasingly presented both as a time saver and a lifesaver for the welfare state. Drawing on data from document analysis of official green and white papers from the period 1973-2018, the paper describes and seeks answers to how healthcare policies have evolved towards representing a strong ‘techno-optimism’. The primary objective is to analyse how such an optimism has come about and to understand the underlying assumptions and ideologies supporting it.

Epistemologically, the paper leans on the French sociologist Pierre Bourdieu’s theories on policy and practice, and on how current social practices can be analysed historically. Our analysis identifies ‘historical breaks’ regarding how technologies are positioned throughout the last five decades and reveal battles between orthodox and heterodox stances towards technology in care. As such, we discuss the temporal aspects of representations of technology in policies, as well as problematic aspects of what we see at the current or prevalent doxa: *a strong belief in technology in care as time- and cost-saving*.

Keywords: telecare, telehealth, older adult care, policy analysis, reflexive sociology, Bourdieu, doxa

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Introduction

Health policies in western societies stress demographic challenges and a future ‘care crisis’ (Berridge et al., 2014; Lynch, 2015; Mort et al., 2013). In the case of Norway, national population projections for 2020-2100 predict that the number of Norwegians aged 70+ will double by 2060 and that proportion of the population aged 80+ is expected to be increase even more (Statistics Norway, 2020). While the demographic shift is not as pronounced in Norway as in many European countries, the growing number of older adults is still assumed to challenge the current health care system (Jacobsen, 2015; Jacobsen & Mekki, 2012). Demographic aging constitutes a ‘problem’ which (regional, national and supranational) political institutions should solve. These solutions take various forms, and are connected to overarching political ideologies such as ‘active aging’ and ‘innovation in welfare’ and/or more concrete efforts such as prioritizing rehabilitation or technological solutions supporting aging in place (Dahl 2017, p. 116; see also Ågotnes, Moholt & Blix 2021). Reforming care regimes is portrayed as a ‘window of opportunity’ to be taken advantage of today, in order to meet the expected future challenges, by way of altering old fashioned and ineffective care systems (Berridge et al., 2014; Lynch, 2015; Mort et al., 2013; Tøndel & Seibt, 2019). This pronounced ‘need for change’ can, we believe, be explained by the considerable size of public expenditure in health care in Norway, particularly within the care sector, resulting in a ‘discourse on sustainability’ (Blix & Hamran, 2018). The idea of a ‘welfare state in demographic crisis’ is, however, not new (see for instance OECD, 1981), gaining traction in Norway due to the progressive ageing of the population, economic recession and falling oil prices in the late 1980’s (Kildal & Kuhnle, 2004, pp. 61-62). Still, Norway is, like the ‘Nordic family’ of welfare states in general, renowned for having an active state that offers generous public health and care services and social benefits that aims at social security and equality (Halvorsen et al., 2013, p. 30; Pedersen & Kuhnle, 2017, p. 221). In line with this, care for older adults has been a *public* responsibility in recent history in Norway, not only with regard to funding and organization of services, but also in providing them (Christensen & Wærness, 2018; Ågotnes et al., 2019).

Technological aging at home

In order to provide welfare services of quality as well as sustainability, several reforms aimed at decentralization and de-institutionalization of older adult care have been brought about, although this development is perhaps less prominent in Norway than in other European countries (Jacobsen & Mekki, 2012; Otnes, 2015). To alleviate the system and to allegedly support independent living, one of the aims of older adult care policies is that older adults should live at home as long as possible (Report No. 47 to the Storting (2008-2009), 2009; Report to the Storting No. 15 (2017–2018), 2018; Report to the Storting No. 29 (2012-2013), 2013). While care for older adults in Norway primarily still is a municipal responsibility, researchers are stressing that such ‘aging at home strategies’ are on the verge of shifting responsibility from public provision towards voluntary and informal care (Blix & Hamran, 2018; Blix et al., 2021; Jenhaug, 2018; Ågotnes et al., 2021). In addition to the need for more informal care in the municipal care sector, innovative housing solutions, strengthening home based services and more use of telecare and telehealth technologies are the proposed solutions to meet the ‘care crisis’ in central policies (Norwegian Ministry of Health and Care Services, 2015; Official Norwegian Reports NOU 2011:11; Report to the Storting No. 29 (2012-2013), 2013). In this paper we address the latter – the belief that technology in care is the solution to demographic aging – by exploring at which point and based on what kinds of rationalities such a dominant and predominantly positive belief was created.

What is “technology in care”?

The terminology within the field of healthcare technology is ambiguous. In a Scandinavian context ‘welfare technology’ appear as the preferred term, in both policy documents and in research, while in international research literature ‘telecare’/‘telehealthcare’ or ‘telehealth’/‘telemedicine’ are the preferred terms. Telecare and telehealthcare have, however, been used somewhat inconsistently, referring to different objects, while telecare usually refers to information- and communication technologies as well as sensors in home dwellings. Examples of these are (e.g. fire, social) alarms, (e.g. bed, movement) sensors or (e.g. fall, flood) detectors that are connected to a home alert console, routing to a call center (Bowes et al., 2006:17-18). Telehealth and telemedicine appear as a social practice related to the ‘aging at home policy’: technologies used for the purpose of medical follow-up, treatment and monitoring from one’s home (Solli et al., 2012). Finally, the Norwegian health and care authorities, who will we address in this paper, refer to welfare technology somewhat more broadly as “First and foremost technological support contributing to increased safety, security, social participation, mobility and physical and cultural activity, and that strengthens the individual’s ability to cope in everyday life despite sickness and social, psychological or physical decline” (Official Norwegian Reports NOU 2011:11, p. 99).

Implementing various types of technologies enabling ‘care at a distance’ through remote monitoring and control of older adults living at home has emerged as one of the major solutions to the ‘problem of aging’ in Norway (Haukelien, 2020; Tøndel & Seibt, 2019) and in other comparable welfare states like the United Kingdom (Lynch, 2015; Milligan et al., 2011) and the Netherlands (Neven, 2015; Oudshoorn, 2011).

In Norway, a national strategy on welfare technology that aimed at integrating telecare in the community health and care services by 2020 and implementing a national Welfare Technology programme was envisioned and endorsed by the Ministry of Health and Care services in 2013 (Thygesen, 2019, pp. 36-37). Through the national programme, Norwegian municipalities have initiated the implementation of a wide range of technologies, with both guidance and financial support from the authorities (Norwegian Directory of Health, 2015, 2017). Today the majority of the municipalities have ongoing telecare-projects, in line with governmental initiatives and goals (Breivik et al., 2019, p. 6). Numerous research reports on telecare argue that these technological devices are enabling the vast majority of older adults to stay secure and feel safe at home (Berge, 2017; Isaksen et al., 2017; Karlsen, 2019; Karlsen et al., 2019). Within this discourse, the home is positioned as an undisputable health promoting setting that contributes to increased participation and activity, producing both socio-economic and health promoting gains (Berge, 2016; Mahler et al., 2014). Visits from health care professionals to the home are viewed as intrusive and as interrupting the life and privacy of older adults, doing more harm than good for their independence (Berge & Øvsthus, 2014). Furthermore, the professional care giver represents a paternalistic care regime, and her hands are no longer ‘warm’ but rather ‘clammy’ (Corneliussen & Dyb, 2021, p. 4; Tøndel, 2018, p. 291), while technological devices are presented as innovative solutions that can alter paternalistic (orthodox) care regimes (see for instance Official Norwegian Reports NOU 2011:11, pp. 41-42).

Challenging assumptions

According to French sociologist Pierre Bourdieu (1994, p. 97) there are battles in the political-bureaucratic field between different positions on regulating and forming specific areas of practice. In the field of ‘care’, such battles or ‘struggles’ are, according to Dahl (2017), increasingly surfacing in political narratives and is “brought into existence in the articulation of ideas and political deliberation by the increasing proliferation of discourses about care” (p. 5). Drawing on Bourdieu’s theories on

policy and practice, we will discuss on what explicit and implicit (doxic) assumptions the belief of technology as a time saver and as a saviour rests on. Furthermore, and again inspired by Bourdieu, our point of departure towards this objective is the identification and analysis of historical shifts leading to a hegemonic idea of technology.

To grasp ‘battles’ in the political field (and society at large) in relation to technology enabled older adult care, the paper poses the following research question: *when did technology develop from a promising aid to a premise for the survival of the welfare state and what assumptions have driven such a change?* Following the exploration of the research question, the premises on which this doxic view rests, is challenged through the question whether technology in care actually warrants such an unchallenged optimism.

Theoretical perspectives on policy and practice

Policy documents contain sets of more or less specific guiding principles and are published in the name of the state, under the responsibility of various ministries and the trusted administration. Bourdieu argues that the state is a nearly unimageable object, because when you are trying to grasp it you “take the risk of taking over (or being taken over by) a thought of the state” (Bourdieu, 1994, p. 1). The main power of the state lays in imposing regulation on how citizens (social agents) view and act in the world, through “categories of thought”, operating at an implicit or pre-conscious level, thus also being beyond direct expression or articulation. These categories form the agents’ mental structures, perceptions, and views of reality, and thereby their perceptions of the state itself (Bourdieu, 1989-1991/2014, pp. 9-10). The state as such exercises symbolic violence by imposing its views or perceptions. It is able to do so, and to do it effectively, as it relies on a convergence between the structures of the objective social order and the mental structures of those subjugated to said order (Bourdieu, 1993/2010, p. 125). The state is therefore at the same time a construct *and* an instrument of construction. It is being constructed by its institutions and their doings, while it also constructs views and ideas of its citizens. It therefore becomes a different form of construct than portrayed within social constructivism, as its acts ‘in the world’ and not only in imaginations (Callewaert, 2013, p. 21).

‘Categories of thought’, as devised by the state, take the form for instance of principles of division into administrative categories like poor, intelligent or old. For the researcher these categories pose challenges as they are part both of the analytical repertoire of the social scientist and are embedded in everyday speech and practices (Bourdieu, 1989-1991/2014, pp. 5-13). Consequently, the researcher, in dealing with such categories, runs the danger of reproducing categorizations by the state:

It is in the realm of symbolic production that the grip of the state is felt most powerfully. State bureaucracies and their representatives are great producers of "social problems" that social science does little more than ratify whenever it takes them over as “sociological problems”.
(Bourdieu, 1994, p. 2)

To address questions of state policy, the researcher must therefore break with pre-notions and the layers upon layers with official representations that spontaneously come to our minds as ‘state beings’ (Bourdieu, 1994, pp. 4-5), not necessarily by a negative critique of ‘the state’ but by picking its components apart, for instance through its historical development, and piecing it together again (Callewaert, 2013, p. 24).

Based on this ontological and epistemological position, a first step is to place bureaucratic and ideological concepts like ‘telecare’, ‘aging at home’, ‘care crisis’, ‘care at a distance’ and ‘innovation of care’ in brackets and explore the social and historical conditions behind the development of these ideas and concepts. One way of approaching this exercise in analytical distancing is to view policy like any other social practice, that, according to Bourdieu, is determined by power and dominance relations in society leading to or at the very least is aimed at achieving a result, contested by the positionings of others (Bourdieu, 1992, p. 97).

Every social space of society is, according to Bourdieu, divided into fields with relative autonomy and a specific logic of practice connected to it. In every field there are dominating and dominated positions, depending on the strengths of each agent’s resources or accumulated volume of capital (*social, cultural and economic*) and the dominant logic of the field. Bourdieu appropriates a metaphor by comparing fields with games where there are battles over the right to define the rules (Bourdieu, 1992, pp. 98-110). Furthermore, the different positions holds orthodox (dominant) or heterodox (oppositional, unorthodox) conceptions of the topic of struggle, and position themselves accordingly, shaped by the collective social trajectories of agents and organizations behind various positions (Bourdieu, 1992, p. 104-109). Bourdieu further applies the term *doxa* to analyse these rules of the game, that in the political-bureaucratic field often are created by highly positioned members of state commissions:

Not to mobilize consensus, but to mobilize the doxa and transform what is tacitly accepted as self-evident, what everyone grants to this order: to mobilize in such a way that the statements pronounced by this group can operate as watchwords and effect the extraordinary operation that consists in transforming an observation into a norm, moving from the descriptive to the normative. (Bourdieu, 1989-1991/2014, p. 34)

Doxa thus represents tacit or taken for granted knowledge and conceptualizations, not problematized or explicitly contested, that appear to be ‘self-evident’. As will be presented in the following, policies on technology in care contains a peculiar doxical representation, largely uncontested yet developing, and thus traceable, in policy discourses through time.

Method

Inspired by Bourdieu’s theories about policy and practice, we intend to discuss how doxical notions in policy documents that address technology and care for older adults are created, supported and reproduced. The applied method for the document analysis is inspired by the registrant analysis method (see e.g. Kropp, 2009; Mathiesen, 2002; Mathiesen & Delica, 2007). Briefly explained, the method is a systematic reading of documents that draws on Bourdieu’s theoretical framework and key conceptual tools: *field*, *doxa*, *capital* and *symbolic power*. In contrast with a chronological historization, this approach aims to identify changes or historical breaks in the lines of argumentation, in order to highlight how practices that are taken for granted often are the result of preceding struggles between different positions within a specific field (Kropp, 2009; Mathiesen, 2002; Mathiesen & Delica, 2007). Consequently, the registrant analysis also aims towards disclosing underlying assumptions or symbolic representations in documents or statements (Kropp, 2009, pp. 180-182). The latter, the symbolic representations, we will address explicitly in our analysis through the pictures and illustrations included in the white and green papers. An important nuance within

this approach, separating it from Foucault inspired discourse analyses in which a primary objective is to capture the ‘zeitgeist’ of a given political environment, is the objective of identifying the underlying *social conditions* and the *social significance* of the policies (Mathiesen, 2002, p. 11), based on Bourdieu’s notion of the state as constructor and not simply a construct. Our use of the registrant analysis method is, however, somewhat limited, in part due to the scope of the paper. In the paper, we emphasize the discursive or descriptive developments of technology in care, through an historical investigation, while not undertaking a detailed analysis of positions and relations between the respective agents involved in their creation (Kropp, 2009, p. 173; Mathiesen, 2002, pp. 8-11).

Different types of healthcare policies were selected for the document analysis, supplemented with additional official sources in the form of technical reports, documents from other relevant areas of public policy, newspaper articles, consultative statements, as well as research literature. We started the selection process by examining two highly influential and much cited policy documents from the last decade: the Norwegian Official Report *Innovation in the care services* (2011) and the Report to the Storting *Future Care* (2013). We examined which previous policy documents the authorities were referring to in these documents, when arguing for increased use of technologies in older adult care. We continued this process until we ended up in the 1970’s. We did not find any policy documents before the 1970’s that mentioned technologies in care, and therefore set this decade as the starting point of our analysis. Documents concerning the organization of older adult care services in the communities, including discourses on ‘aging at home’, ‘care at a distance’ or ‘technologies in care’ were regarded as highly relevant. However, in line with the registrant analysis method, we also included documents that did not mention technologies, to be able to capture contradictive perspectives on older adult care. The document analysis included thirteen governmental green and white papers about older adult care from the period 1973 until 2018, with at least two documents from each decade to add substance to each period.

Policy documents have different functions, mandates, and influences in the political field and society at large. Norwegian Official reports (NOU’s) or governmental green papers, for instance, consult new policies, proposals or reforms, and aim towards representation of various stakeholders (Christensen & Holst, 2020, pp. 85-86). The green papers can eventually lead to law proposals or, after having been processed by the ministries, be published as a white paper to the Norwegian Parliament, thus giving direction of a particular field of policy. These documents can lead to a resolution or a law proposal after discussions in the parliament (Hanssen et al., 2011, pp. 128-130).

A different document type examined in the analysis were reports from the Norwegian Directorate of Health. The directorates and their representatives are responsible for realisation of policies through knowledge-based consulting and guidance. Directorate reports therefore have a practical and guiding function. They draw on both research, statistics, and various stakeholders’ experiences on a certain topic (Hanssen et al., 2011, p. 137).

To construct a preliminary theory about ongoing battles or doxical representations, and heterodox and orthodox understandings of telecare at a service (micro) level, two additional reports from the Norwegian Directorate of Health were included from the period 2015-2017. These reports draw on experiences with various forms of telecare devices, reported by a number of municipals in Norway.

The following questions were posed in the analysis of the documents:

- What position does the document hold and what is its official mandate?
- How are the documents positioned regarding technology in care?
- What is understood as the problem(s) technology in care will solve?
- How are solutions to the perceived problem(s) legitimised?
- Who and what is not represented or left unarticulated?

Table 1 gives an overview of the selected documents for the document analysis.

Table 1: Included documents

Time period	Document title ¹
1970-1979	Report to the Storting No. 104 (1972-1973), (1973). <i>About home-based services</i> . Norwegian Ministry of Social Affairs.
	Official Norwegian Reports NOU 1973:26. (1973). <i>Elderly persons' health, activity and well-being</i> . Norwegian Ministry of Social Affairs.
1980-1989	Official Norwegian Reports NOU 1982:10. (1982). <i>The specialists in the health service, nursing homes, etc.: the specialist, dental health and transport services, the nursing, alcoholic and child welfare institutions, division of tasks and responsibilities. Financing schemes</i> . Norwegian Ministry of Social Affairs.
	Report to the Storting No. 41 (1987-1988), (1988). <i>Health Policy towards the Millennium. National Health Plan</i> . Norwegian Ministry of Social Affairs.
1990-1999	Official Norwegian Reports NOU 1992:1, (1992). <i>Safety, Dignity and Care</i> . Norwegian Ministry of Social Affairs.
	Report to the Storting No. 50 (1996-1997), (1996). <i>Action Plan for Elderly Care. Safety-Respect-Quality</i> . Norwegian Ministry of Health and Social Affairs.
	Report to the Storting No. 28 (1999-2000). (1999). <i>Content and Quality of Care Services - Care 2000</i> . Norwegian Ministry of Health and Social Affairs.
2000-2009	Report to the Storting No. 25 (2005-2006), (2005). <i>Mastery, opportunities and meaning. Future care challenges</i> . Norwegian Ministry of Health and Care Services.
	Report to the Storting No. 47 (2008-2009), (2008). <i>The Coordination Reform. Proper treatment – at the right place and right time</i> . Norwegian Ministry of Health and Care Services.
2010-2018	Official Norwegian Reports NOU 2011:11. (2011). <i>Innovation in the Care Services</i> . Norwegian Ministry of Health and Care Services
	Report to the Storting No. 29 (2012-2013), (2013). <i>Future Care</i> . Norwegian Ministry of Health and Care Services
	<i>Norwegian Ministry of Health and Care Services. (2015). Care 2020. The Norwegian Governments Plan for the Care Sector 2015-2020.</i>
	Norwegian Directory of Health. (2015) <i>First benefits realisation report with recommendations</i> .
	Norwegian Directory of Health. (2017) <i>Second benefits realisation report with recommendations</i> .
	Report to the Storting No. 15 (2017–2018). (2018). <i>A full life - all your life. A Quality Reform for Older Persons</i> . Norwegian Ministry of Health and Care Services

¹ Some of the newest documents have English short versions and document titles, while the titles of documents from 1973-2005 and the directory reports have been translated by the authors. Also quotes, when only available in Norwegian, have been translated by the authors, who take full responsibility for any errors.

How is technology positioned in past and present policies?

In this section we will present the main findings from the document analysis, focusing on identifying historical breaks signifying new or altered perceptions and understandings, as well as battles about technology-enabled care for older adults in healthcare policies.

1970-1979: Introducing technology in care

Institutional older adult care (nursing homes and equivalents) is dominant throughout the 1970's. Christensen and Wærness (2018) argue that the 1970's is part of an expansion period of public healthcare services that began after World War II. This period primarily focused on building nursing homes, while home help and home nursing are portrayed as a promising supplement to institutional care, with long historical traditions. This finding is supported by our analysis of a white paper on home nursing from 1973 that highlights the historical roots of home nursing back to late 19th century diaconal traditions, where it is argued that home nursing have a potential for expansion (Report to the Storting No. 104 (1972-1973), 1973 p. 2). Home care is furthermore positioned as a promising service with regard to meeting future challenges in older adult care, for instance by stressing that by 1980 there will be 650 000 persons over the age of 65 years, which is more than 25 % of the workforce. The health promoting and preventive aspects of home nursing are amply highlighted, particularly for older adults in rural areas. The point that a high quality nursing service may prevent hospital admissions, and thereby decreasing the need for admission to specialised health facilities is emphasized (Report to the Storting No. 104 (1972-1973), 1973, pp. 2-3). Consequently, the quality of the service and the nurse's competences is given considerable attention. Technical aids are positioned as relevant tools for the nursing practice and part of the areas of competences that the nurses need to be trained in (Report to the Storting No. 104 (1972-1973), 1973, p. 23).

Compared to the expansion of nursing homes and home help services, technology at home is given sparse attention. The analysed green paper from this period contains various forms of symbolic representations, for instance photos illustrating what happy ageing at home and in the community might look like (Official Norwegian Reports NOU 1973:26). Human relations between care giver and receiver are also portrayed as a vital theme of this narrative of happy ageing, for instance by a picture of a home helper cleaning the floors in an old man's house while giving him a caring look and smile (p. 56) and highlighting the importance of personal contact during home visits (p. 61). Similarly, there is a number of photos depicting the importance of social contact with grandchildren, neighbours or other relatives (p. 23, 25 and the page after contents), or social gatherings for pensioners (pp. 59, 78, 83, 85, 94, 95, 100, 102). Care at a distance is barely mentioned, apart from two significant cases. Going back to the beginning of the 1970's many people did not have access to a telephone at home. The committee behind the green paper therefore argued that older adults living at home should receive public support to purchase a telephone. Furthermore, a newly developed telephone service organized by various NGO's aimed towards increased safety for older adults living at home is mentioned as a promising service (Official Norwegian Reports NOU 1973:26, p. 88-91). Also, visual signalling in the window in case of an emergency, routine call-ups from neighbours or a public telephone service is suggested measures to enable older adults to stay secure and feel safe at home (pp. 63-64). This may be interpreted as an early glimpse of the 'care at a distance' mindset. Interestingly, the introduction of such technologies, while potentially leading to increased independence, is also problematized as intrusive, controlling and incapacitating (Official Norwegian Reports NOU 1973:26, p. 63).

1980-1989: Economic crisis, promising technological development, and eagerness to change

Geopolitical developments in the 1980's influenced the very premises for older adult care, both regarding how older adult care is perceived and how 'technology' is conceptualized within these services. The economic crisis in the late 1980's led to a neoliberal system of governance in many western countries (Davis, 2019b), introducing an economic market logic (New Public Management) to new areas of practice and institutional contexts such as public healthcare (Dahl, 2017, p. 119). The document analysis highlights these parallel historical shifts that marks a starting point towards a still ongoing eagerness to change, reorganise, decentralise, innovate and de-institutionalise older adult care (Jacobsen, 2015; Jacobsen & Mekki, 2012; Ågotnes et al., 2021).

The included white paper from this decade focuses on global economic challenges, and problematises healthcare delivery to an ageing population in a period of austerity. Drawing on WHO's goals of increased equality in health, the idea of health promotion and disease prevention in older years was introduced (Report to the Storting No. 41 (1987-1988), 1988, p. 22, 56, 140, 150). The municipal health and care sector is portrayed as the most suited service level for these health promoting and self-managing initiatives, for instance through the lowest-efficient-care-level principle (known as the LEON-Principle in Norwegian) (Official Norwegian Reports NOU 1982:10, p. 300). As such, the shifting policies are indicative of changes in older adult care regimes during this period and in the decades to come. Decentralisation of responsibility for service provision occurred, leading, ultimately, to relative municipal autonomy regarding care provision as well as technologies within it. More responsibility for older adult care was placed at a municipal level, formalised through legal requirements of municipal healthcare services and home nursing in 1982 (Christensen & Wærness, 2018, p. 20). Although social alarms/alarm pendants were introduced in municipal home care services in the 1970's in the UK (Fisk, 2003, p. 6) and at the beginning of the 1980's in Norway (Bølstad, 1985, pp. 78-79), technology still receives sparse attention in the analysed documents. Technology is generally positioned as promising tools, while the time and labour-saving effects of technology is questioned. One concern is that new technologies create new user groups, and thereby increase the number of patients in healthcare (Report to the Storting No. 41 (1987-1988), 1988, p. 53, 62, 82, 113).

Viewing the document analysis in a wider context, some of our findings resonate with the geopolitical landscape in the period, while others are more confounding. The decade, and particularly the first part of it, is characterized by a strong economic and technological optimism, commonly known as the 'yuppie era'. Advances in information and communication technologies changed how people worked, communicated and lived their lives (Davis, 2019a). A 'techno-case' that highlights the technological optimism of the 1980's is the futuristic and 'intelligent' smart home, first launched in the private housing market (Berg, 1991), and later introduced in various contexts of healthcare (Thygesen, 2009, p. 76). While the smart home never became a great and lasting success, present notions around 'intelligent' telecare systems at home can be related to policy visions and imaginaries occurring in the 1980's. As previously mentioned, OECD began stressing that a majority of European welfare states were in crisis in this period (OECD, 1981), leading to influential 'ageing in place strategies' launched by the OECD in 1994 (Aceros et al., 2015, p. 103).

1990-1999: Differing views, controversies and technological hindrances

As in a continuation of emphases from the previous decade, a central and much cited quality reform on care for older adults from 1996 stresses the need to build more nursing homes and other forms of public care facilities like supported housing arrangements (Report to the Storting No. 50 (1996-1997), 1997, p. 24). A picture on the front page of this reform shows an empty bench in an autumn-coloured alley, while another picture (also on the frontpage) is of an older woman together with a caring nurse. The pictures can be interpreted as depicting a contrast between the values of human relations in care and the lonely and isolated bench (life) without people.

Quite contrarily, a green paper from the same decade presents a more benign depiction of ‘the issues of ageing’, highlighting self-management, ageing at home and preventive measures to facility in old age (Official Norwegian Reports NOU 1992:1, p. 11, 261). In this document, a whole chapter is dedicated to the promising technological developments for older adults and people living with disabilities (p. 261-262). Technical devices like the social alarm (p. 131), computer-based systems for persons with lapse of memory (p. 261) and systems where home care can receive messages from home-dwellings (p. 261) are presented as key elements in the ageing at home strategies, while potential challenges connected to the new devices – being technical or ethical – are barely mentioned.

In a white paper from the end of this period, a battle between hetero- and orthodox positions resurfaces yet again: technologies in care are highlighted as promising, but are still regarded as controversial and ethically challenging. Here, an explicit stance is taken against “comprehensive surveillance” such as video-recording or the use of electronic door locks, especially in the care of older adults with dementia (Report to the Storting No. 28 (1999-2000), 2000, pp. 85-86). Law proposals from the same period similarly highlight ongoing battles in the political field between orthodox and heterodox positions towards technology enabled care. For instance, a law proposal are at one hand stressing dilemmas of privacy and freedom, while on the other hand arguing that such devices, might contribute to the increase of personal autonomy (Thygesen, 2009, p. 111). In summary, the included policy documents approach the need for and effect of different types of telecare, or care at a distance technologies in vastly different ways. One represents an orthodoxy in which continued institutional care is emphasized, the other a less paternalistic approach in which autonomy and care at home is prioritized (see also Gautun & Sørvoll, 2021). The difference between them is, we believe, indicative of how struggles between opposing positionings are made more explicit, signalling, perhaps, a fork in the road and a potential change in direction towards increased acceptance of technology in care.

2000-2009: The reintroduction of technologies as a solution to the care crisis

Despite a steadily growing optimism towards technology in care in continuation of the period before, the actual implementation of technologies in care delivery progressed slowly in this period.

Technological immaturity, in the form of slow development and/or difficulties in the implementation of technologies within public systems, is partly the reason for this. Also controversies and restrictions due to privacy legislation are proposed explanations of the slow progress, expressed in retrospective reflections on the numerous attempts to incorporate various forms telecare technologies in services for older adults (Norwegian Directorate of Health, 2012, p.35; Official Norwegian Reports NOU 2011:11, pp. 110-111). However, the second half of this period marks another shift in the heterodox stance. Here, technology is reintroduced and reemphasised as the very *premise* for the continuation and sustainability of the welfare state (Report to the Storting No. 25 (2005-2006), 2006,

p. 5, 11-12, 43, 58, 66, 69, 80, 91-92). Another example is a report from The Norwegian Board of Technology² in which older adults of the future are portrayed as resourceful (with regard to both economy and education), active and more healthy than previous generations (Teknologirådet, 2009, p. 7). Here, technology in care is explicitly associated with or connected to this 'new generation' of older adults, for instance in that it replies to demands for new information systems and mobile services (Teknologirådet, 2009, pp. 130-131). Furthermore, both administrative technologies (p. 42) and telecare technologies like smart home solutions, body sensors, GPS-sensors as well as robot technology (p. 12), are argued to potentially increase efficiency and save time that may consequently be dedicated to more direct care to the service recipients (pp. 32-42). Also in this period, a coordination reform further allocates responsibility of healthcare provision to a municipal level (Report No. 47 to the Storting (2008-2009), 2009), while the public sector is portrayed as the sector with greatest potential for innovation, technological or otherwise, in their services (Report to the Storting No. 7 (2008-2009), 2009).

2010-2018: Technological optimism and targeted governmental initiatives

The most recent decade represents, we argue, the most influential break with past policies, while it is also influenced by them. This break is quite conspicuous in the much cited green paper *Innovation in the Care Services* (Official Norwegian Reports NOU 2011:11). This paper is in part a continuation of the argumentation in the mentioned game-changing NBT-report on future ageing, and it comprises some of the same contributors. In this green paper municipal healthcare is presented as old fashioned, ineffective low-tech care regimes with great potential for change. Particularly telecare and telehealth are positioned both as a major problem solvers and time savers that in the future can:

give the users greater security and a better ability to take care of themselves in daily life, help in treatment, supervision and care, and [provide] technical support for communication, administration and management. This frees time for care workers so that they can spend more time on direct user contact. (Official Norwegian Reports NOU 2011:11, p.15)

A strong symbolic representation of the potential for change is presented on the front page of the document, depicting a ski jumper soaring high above the ski jumping arena. This can be interpreted as a visual metaphor that points to the need to courageously take a big leap to accommodate to the care-needs of the future. The use of the term 'care' in other policies and official documents is criticised for representing too high expectations and an unrealistic picture of the future care services. Furthermore, it is argued that 'care' connotes a passive receiver (patient-role) that does not comply with an understanding of active ageing (Official Norwegian Reports NOU 2011:11, pp. 38-42), alluding to the report's portrayal of the 'older adult of tomorrow'.

In the period after *Innovation in the Care Services*, specific governmental initiatives aimed at increased use of technologies in care were established (Report to the Storting No. 29 (2012-2013), 2013, p. 109-116), which shows that this break is not simply of policy and ideology, but also practices. A governmental white paper named *Future Care* proposed a national telecare program that could stimulate the development through state funding schemes and guidance (Report to the Storting No. 29 (2012-2013), 2013, p. 109), while largely disregarding ethical dilemmas and practical obstacles discussed in previous policy documents. The white paper suggests that changes in legislation might enable the use of technology in care for groups previously excluded, such as

² An independent board that advises the Norwegian parliament and government on new technology.

persons with dementia (p. 113). In a plan published by the Norwegian government in 2015 that details the care sectors’ needs in the next five years, the word ‘telecare’ is mentioned 48 times, and a whole chapter is dedicated to the topic (Norwegian Ministry of Health and Care Services, 2015, pp. 44-48). Furthermore, medical technology and e-health are presented as a new and growing industry with great potential for a country in transition (away from the oil dependency) (Report to the Storting no. 18 (2018-2019), 2019). A quality reform about care for older adults from 2018 highlights ageing at home, active ageing and the WHO strategy ‘age friendly societies’ and portrays telecare devices as important tools that render people autonomy and quality of life (Report to the Storting No. 15 (2017–2018), 2018, p. 21, 126). The frontpage picture shows a smiling old lady and symbolically illustrates that happiness is possible even without the company of others.

The included Norwegian Health directorate reports regarding benefit realisations of telecare, provide insight into how these policy imperatives are conceived to be carried out in real-life services. Overall, the documents seem to mirror the new dominant policy doxa that considers technology in care as a premise for ageing at home, by arguing for it as beneficial in that it increases the quality of services, as well as saves both time and municipal budgets (Norwegian Directory of Health, 2015). The very core of the benefits realisation management is related to time savings, as the following quote from the report shows:

Time-savings precisely describes the benefit of introducing changes that reduce the time spent on delivering a service. The benefits of time-savings are only realised when a service can be reduced/removed completely or when the time is used to provide services to more people. Time-savings are revealed with time measurements of a work task or work process before and after the intervention. (Norwegian Directory of Health, 2015, p. 9)

A symbolic representation of this optimistic view of telecare technologies is present at the front page of the document, that shows coins rolling out of a wallet and a green and shiny apple, which may be seen as a symbol of a fresh and fruitful start of a new era. In the second directorate report, published in 2017, an even stronger case is made for the benefits of technology, documented through several municipal telecare pilot project. On this basis, the Norwegian Directorate of Health confidently recommends a variety of telecare and telehealth technologies, such as care at a distance and remote monitoring devices, GPS-tracking, electronical door locks and electronical pill dispensers (Norwegian directory of Health, 2017). The front page depicts an old lady who lifts her arms towards a cloudless sky - a symbol of freedom and a promising last phase of life.

How is technology in care legitimised in policies and what is left unarticulated?

Through the document analysis we have identified two central breaks with regard to how technology has been positioned in healthcare policies over the last five decades: the first is a smaller one, and the second is more pronounced and of more consequence. It also seems clear that the first is a precondition for the second. The analysis thereby offers a preliminary answer to our primary research question: *When did technology develop from a promising aid to a premise for the survival of the welfare state and what assumption has driven such a change?*

We find the first break in the period 1990-2000, when parallel battles between orthodox views of institutional older adult care and heterodox understandings of independent ageing at home can be identified in the policy documents. Interestingly, such an ambivalence towards technology in care is briefly mentioned in policy documents in the 1970’s, while not, apparently, it does not manifest itself

as a comprehensive ‘political debate’ about the merits of technologies, perhaps because of technological immaturity in the more recent documents. In the 1990’s technology is still controversial in the political field. In this, the political debate mirrors a dominant scepticism in society at this time as well as the discussion of technology in popular media (Thygesen, 2009, p. 98). Despite of this, pilot projects on smart house technologies were initiated during the 1990’s and in the first decade of the new millennium (Laberg et al., 2004; Official Norwegian Reports NOU 2011:11). Also, social alarms/alarm pendants became an established service in the majority of Norwegian municipalities during the 1990’s (Berntzen, 1993).

We identify the second and more pronounced break in the period from 2009 to 2018, when telecare and telehealth are positioned as a premise to secure future older adult care and the very continuation of the welfare state. The most significant difference in this period compared to earlier periods is that technology supported care now becomes a national priority, governed in a new and more targeted manner. This occurs through the establishment of a national program for telecare in 2013 (Thygesen, 2019, p. 35) and an additional directorate for e-health in 2016 (Directorate of e-health, 2022), as well as changes in legislation that enabled e.g. GPS-tracking of persons with dementia not able to give an informed consent, in 2013 (Holthe et al., 2016:18). The majority of Norwegian municipalities had initiated telecare projects in 2019 (Breivik et al., 2019), and the use of social alarms had increased from 38 000 in 1992 to more than 90 000 recipients in 2017 (Berntzen, 1993, p. 5; Mørk et al., 2018, p. 15). Population growth and demographic changes play a part, but cannot be the only explanation of the considerable increase in the usage of technologies in care, and we believe that the significant increase is related to a more deliberate policy towards use of technological solutions in older adult care in the most recent decade.

Following the second break, the dominant view of telecare and telehealth technologies in policies remains exclusively optimistic. When the dominant views were questioned, for instance in consultative statements by patient organizations (Pensjonistforbundet, 2011) or work unions (Den norske legeforening, 2011; Fagforbundet, 2011; Fellesorganisasjonen, 2011; Norsk Sykepleierforbund, 2011), the critique seems to have been silenced or even discredited as old-fashioned (orthodox) techno-scepticism, by drawing on stereotypical dichotomies between warm care and cold technology:

For many people care is associated with warmth, closeness, nurture, while technology often appears as something cold and insensitive. For many this represents two disparate worlds, both professionally, culturally and value-related. (Official Norwegian Reports NOU 2011:11, p. 109)

Old-fashioned care relations are furthermore criticized as being intrusive and paternalistic care regimes that do not comply with modern understandings of independency (Official Norwegian Reports NOU 2011:11). Statements in policies like: “telecare isn’t about technology, it’s all about humans” and “when implementing new technologies, the technology only constitutes 20 percent of the changes that are made. It is mostly about new forms of working and organizing”, reduce complex technical challenges to technocratic issues, legitimized by the many good intentions that drive policy changes, Corneliussen and Dyb (2017, pp. 170-171) argue. The prevalent doxic representation of technology in care as both efficient and necessary also becomes a form of moral project that stresses the importance of adaptations towards ‘the new older adult’, a concept resting on notions of individualization, choice and autonomy (Ågotnes et al., 2021). Within this “new paradigm of care needs” autonomy and choice are presented as new opportunities for ‘the new elderly’, but the “new paradigm” also entails a form of pressure, in that remaining healthy and active “becomes a moral obligation rather than a choice” (Dahl, 2017, p. 38).

In summary, our material suggests that a form of ‘technology-optimism’ was introduced in the political discourse in the 1990’s, first as a heterodoxy that in part opposed the orthodoxy (and paternalism) of continued institutional care. This way of imposing a new view was not successful, in part because of practical difficulties. As such, the 1990’s, and to a smaller extent the 1970’s, represent an era in which opposing views are made explicit, with the heterodox views as a foreshadowing of changes to come. The second break represents a change in the dominant view on technology in care, and a change of orthodoxy. Here, heterodox views are not made explicit. Rather, technology is the solution, and opposing views are disregarded as old-fashioned: “The care crisis is not created by the wave of the elderly. It is created by the assumption that care cannot be approached differently than today. If the possibilities are seen and used, a whole different future is possible” (Kåre Hagen cited in Report to the Storting No. 29 (2012-2013), 2013 p. 11). The transition thus represents a change in the discourse about technology in care, from problematizing its benefits, to the legitimization of its merits.

Questioning the prevailing doxa

In this paper, we have pointed to ways in which technology enters and is encoded in policy documents, and we have identified significant breaks in how technology is spoken of, presented and understood in documents spanning 45 years (1973-2018). The analysis shows how efficiency and cost-benefit calculations like time-saving measurements are key dimensions when the advantages of technology are legitimised in Norwegian healthcare policies. These findings support Mort and colleagues’ argument about how technology enabled ‘ageing at home’ through ‘care at a distance’ is presented as an efficient and time saving care regime in a time of austerity (Mort et al., 2013).

It is worthwhile, we believe, to challenge the assumptions this dominant view rest on, for instance regarding privacy considerations, legislation, and technical errors, and how these are under-communicated or simply not addressed in policy documents. Technology as a means to save time and costs is presented as a taken for granted certainty and not problematized, although research has demonstrated that this can be far from the truth. Measuring both short- and long-term financial gains of technology in care has proven difficult, partly because neither advances in technology nor the implementation of technology occur in a smooth, linear process, in part because different technologies compete against each other in an ‘open market’ where some succeed, while others fail. At times, introduction of new technologies can lead to increased cost, as technologies often are accompanied by “treatment expansion” (Willemé & Dumont, 2015).

Time spent on reorganising home care services, adjusting the devices and alarm-interruptions, for instance, take the form of invisible work that is not included in the accounts when technology related time-savings and efficiencies are argued for (Haukelien, 2020; Lynch et al., 2019; Tøndel, 2018). Similarly, the work that goes into evaluations of telecare-user’s needs, installations, adjustment of devices and alarm responding, are taken as simple, streamlined tasks that follow a standardized protocol, and therefore not adapted to individual needs and capacities (Mort et al., 2013). In practice, however, research has shown that call centres established to take care of telecare related tasks, demand dedicated teleoperators 24/7 who coordinate a network of various stakeholders to care for and about the recipient (Roberts et al., 2012). Furthermore, not only the care workers and the technical staff are involved in this, but also care recipients and their next of kin (Milligan et al., 2011; Mort et al., 2013). These findings are echoed in recent research from Norway, both regarding how technology works on ‘the shop floor’ and how it is implemented on a larger scale. Two different observation studies of home care workers in Norway, for instance, have demonstrated how

answering an alarm call from one user can interrupt the care relation and take time from other patients (Haukelien, 2020; Tøndel, 2018). Moser and Thygesen (2014) problematize how, despite the increased project activity in municipalities as a result of the governmental measures mentioned above, only a few telecare projects survive the ‘pilot-period’ and become an integral part of care services. Stokke (2016) argues that even a well-established technology like the social alarm, which has been an integral part of the home care services in Norway since the mid 1980’s, still can be unpredictable and work differently in different contexts and work cultures.

Despite a widespread presentation and understanding of technology as efficient, the effects connected to cost or quality have proven difficult to document in both national and international research, a fact that is contrary to the presentations in later policy documents. Interestingly, the documentation of the benefits of health technology is ambiguous also in evaluation reports performed or commissioned by policy agencies. For example, Norwegian telehealth projects, while reporting increased safety and disease management, nevertheless state that reduction in the number of health consultants and time saving cannot be documented (Intro International et al., 2018). Similarly, a large state funded RCT study from the UK had trouble finding evidence for cost savings, reductions in use of health and care services or a major increase in quality of life for the telecare users (Henderson et al., 2014; Hirani et al., 2014; Steventon et al., 2013).

Concluding remarks: The social shaping of a ‘techno-doxa’ in policy and practice

Drawing on Bourdieu’s relational perspectives on policy and practice, the function of state policies can be read as a way in which an official view is imposed in a given field and eventually becomes the official view of the state and its citizens, and thus conceived as legitimate or correct (Bourdieu, 1989-1991/2014, p. 31). The bureaucratic field carries with it traces of past battles (Callewaert, 2013, p. 7), as we have demonstrated in our analysis. When we discerned these battles, we were also able to understand current dominant views. We have tried to show how today’s dominant view or doxa is legitimised in policies by drawing on ‘facts and numbers’ from selected reports and research papers, arguing for the simultaneous effect of increased quality and efficiency. The analysis has also shown how ‘ageing in place’ initiatives from transnational organizations like WHO, UN and particularly OECD have contributed to enforce the ‘care crisis’ narrative in which demographic ageing is seen more or less exclusively as detrimental. Similarly, critical perspectives in research highlight the strong link between ‘technocare-policies’ and the ideal of independent and active (self-managing) at home (Aceros et al., 2015; Lynch, 2015; Mort et al., 2013; Neven, 2015; Tøndel & Seibt, 2019).

Bourdieu’s (2014) theories on the state’s ability to regulate how citizens think and view the world, and thereby their perceptions of the state itself, have proved to be fruitful when aiming at an exploration of how ‘common-sense notions’ in techno-policies are created, supported, and reproduced as truths. Bourdieu’s (1992) theories have moreover proven a useful tool in our analysis of how (often non-explicit) positionings are articulated and manifested in policy documents. We have examined how technology in care is legitimised in the analysed healthcare policies and, again following Bourdieu, can attempt to explain the present dominating views on technology in policy and practice. The document analysis provides examples of how social struggles or battles within the field of health care is represented in the political discourse, revealing orthodox and heterodox stances towards technology enabled older adult care. Based on our findings we argue that the narrative on technology has changed in recent decades from making it out as a promising aid for older adults and

people with disabilities, to considering it a premise for the very continuation of public older adult care in Norway, relevant also for other welfare states. The dominant understanding (doxa) of technology in policies presents the development as an exclusively positive, effective (timesaving) practice, to the benefit of both individuals and society at large.

Finally, we argue that policies can be an influential game changer, shaping the ways a certain problem is understood and approached. The most significant example of this in our material is the break with common sense notions we found in the discussions on technological surveillance (tracking) or ‘care at distance’ for persons with dementia, illustrated by a narrative change from the (humanistic) ‘warm hands’ to the (paternalistic) ‘clammy hands’. The ‘surveillance case’ demonstrates how policy can contribute to shaping and changing common sense notions, in this case from a highly controversial to an accepted and implemented practice in municipal home care services. However, as shown in the analysis, such changes do not take place from one day to the other, but through years of battles between orthodox and heterodox stances towards technology in care.

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