Crisis of Care: A Problem of Economisation, of Technologisation or of Politics of Care?

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Abstract

The question of care is globally pertinent and touches not only gendered care and dependencies, but also ethics of care, reflected in the ways in which care is governed and what becomes emphasised in the analyses. The stated societal 'care crises' consist of complex moral, political, economic and social dimensions, which need to be contextualised, with the limits of validity articulated, clarity in the definitions and frames used, and delimitations of the analyses laid out. The 'care crisis' does not have one, but many definitions, with analyses that are embedded and rooted in several disciplinary fields, with epistemic differences and delineations.

This chapter addresses the disconnectedness of the societal, economic and political aspects of care in the academic literature. The chapter asks why the academic discussions on care, rather than addressing the entangled, complex and enmeshed care, operate through separate and disconnected fields and lenses. The chapter concludes that the offered remedies for the crisis of care are mainly technological and techno-material in nature, and based on digitalisation, technological efficiency, surveillance and AI-based algorithmic solutions, while the remedies that relate to the *politics of care* are left untouched in these technological discourses, practices and realities.

Introduction

The question of care, and how to organise it, is globally pertinent and touches not only gendered care and dependencies, but also ethics of care, reflected in the ways in which care is governed and what becomes emphasised in the analyses. Societal discourses on the governance of care revolve around the issues of quality (ethics), costs (economy) and remedies (technology). The three discourses hold separate realms in research but enmesh in everyday life, visible for example in the reactions, actions and repercussions in the current Covid-19 pandemic. Globally, the Covid-19 crisis societal discourses seem to constitute around three differing logics: the costs to economies due to lockdowns and restrictions, the costs to citizens' health and lives due to loosening restrictions, and the restoration of

'normality' by vaccination as remedy. Ethics cut through these discourses by questioning, for example, the values in the political decisions and the politically set national priorities and reactions.

Seeing care as an 'informal' or 'formal', or 'market' or 'non-market' activity aligns with other societal contracts and arrangements that are part of societally accepted patterns, cultures, policies and gendered social contracts (Kovalainen, 2004), but also vehicles for transferring embedded discriminatory and/or unequal practices and processes. With the emergence of market governance mechanisms, the categories of 'public' and 'private', and formal and informal, are blurred and fluid. The bending of boundaries in the organisational and institutional arrangements is reality (eg Kovalainen and Sundin, 2012; Sandberg and Elliott, 2019). The creation of quasi-markets (eg Le Grand and Bartlett, 1993) intensified 'marketisation', that is, the adoption of market as a governance form in the public sphere. This 'market making' is just one example of the processes of economisation. 'Economisation' refers to the economic instrumental rationalities, processes and practices that increasingly rule social life – and even research (eg Çalışkan and Callon, 2009; Fraser, 2014; Vogel, 2018; Wenzlaff, 2019). 'Financialisation' for its part follows economisation and banks on capital formation: in care, it can range from global investment funds acquiring private care homes (Horton, 2017) to the attempts to standardise care as private equity and transform care into a tradable asset.[1] In this process, technologies align with financialisation.

Globally pertinent questions regarding the organising of care address not only contents, ethics and policies, but also costs and deficits. In the Global North, migrant women have supplemented the void of care (Parreñas, 2001; Yeates, 2009; Anderson and Shutes, 2014), for example. But when the cost – and not lack of – care workers is the main rationale in global care migration, the costs, politics and the ethics of care arrangements transcend national boundaries.

The stated societal 'care crises' consist of complex moral, political, economic and social dimensions, which need to be contextualised, with the limits of validity articulated, clarity in the definitions and frames used, and delimitations of the analyses laid out. The 'care crisis' does not have one, but many definitions, with analyses that are embedded and rooted in several disciplinary fields, with epistemic differences and delineations. Thus, the care crisis becomes differently understood and interpreted, and the lenses used in the analyses are multiple.

This chapter addresses the disconnectedness of the societal, economic and political aspects of care in the academic literature. The chapter asks why the academic discussions on care, rather than addressing the entangled, complex and enmeshed care, operate through separate and disconnected fields and lenses.

Several types of academic literature are drawn upon in this chapter, such as feminist scholarship within the field of the ethics of care (Held, 2006; Tronto, 2010; Williams, 2011; Collins, 2015), economics (Çalışkan and Callon, 2009; Wenzlaff, 2019), science and technology studies (Wilson, 2002; Schillmeier and Doménech, 2016), and critical studies on technology (eg Pols and Moser, 2009).

The chapter concludes that the offered remedies for the crisis of care are mainly technological and techno-material in nature, and based on digitalisation, technological efficiency, surveillance and AI-based algorithmic solutions, while the remedies that relate to the *politics of care* are left untouched in these technological discourses, practices and realities. This chapter proposes that the crisis of care

should be analysed contextually as a process. Technologies of care are partially a governance solution of the economisation of the crisis of care and need to be addressed mainly as a *political* problem, and not solely as an economic or technological problem.

Modes of care crisis

This chapter addresses three fields of care research, 'ethics of care', 'technologies of care', and 'economics of care', to find out if crossing over of disconnectedness with elements of boundary work, such as epistemological transactions between fields, takes place.

One key aspect in the stated crisis is structural, which follows the nationally constituted economic and political solutions in the welfare policies (Fraser, 2013, 2016; Levitsky, 2014). The liberalisation of organising principles of the welfare services in European and Nordic countries – creation of quasi-markets, purchaser–provider split, decreasing state provision and increased privatisation of services (Le Grand, 1984; Daly and Lewis, 1998; Kovalainen, 1999) – provided ground for commodification of care work and further invasion of market logics into all activities, the public sector included. Markets do not, however, supply a normative foundation for care organising; as Krippner (2005, 2011) notes, the market is a mechanism for functions, not a principle of justice.

For rather a long time, the ethics of care research did not incorporate commodification or economisation into the analyses of care, or into the embodied and situated care ethics, but instead addressed the higher grounds, the moral value of care. But care is commodified. Hospitals as buildings and brands, and care business models are already part of the equity markets and tradable capital in asset management. Financial capitalism as a concept means that financial markets have a growing influence and equity formation has an impact on not only the economy, but on society. Financialisation thus not only affects institutions, but also everyday lives and non-economic spheres of society (eg Aglietta and Breton, 2001; Krippner, 2011; Levitsky, 2014). Technology as a remedy to the care crisis is fuelled by financialisation, but care as an embodied work turns into a financial asset only if its commodification leads to capital gains. With the wake of the care crisis, the questions of who does care work, and who pays for it, emerge intertwined with gender, but also with money, public–private divisions and inequalities of new kinds that are built into the current health care and welfare systems.

For the purposes of this chapter, it is important to dissect how care crises are acknowledged as 'crises' in research. More generally, what types of discursive spaces exist and how do the socio-material crises become constructed, and consequently, what possible remedies are recognised? Even if care crisis is a broad and malleable concept with a wide range of meanings, three different types of discussions are addressed here. The interest is to recognise the possible boundary work between the different discussions, and the role of technology as the legitimating vehicle for care-related political solutions.

Care crisis as an articulated moral question

The formation of the 'care space' in the welfare state and social philosophy literature is well researched and analysed by prominent feminist sociologists, political scientists and philosophers addressing the question of care in differing ways in relation to welfare state formation, changes and

political state questions (eg Lewis; Williams; Daly; Lister; Tronto; Fraser. See Hanne Marlene Dahl's chapter in this volume).[2] The addressing of the care crisis relates not only to the care processes, dependencies and vulnerabilities in care relations, but also to the transformations in the role of the state. Yeatman (2018) has pointed to the reorganisation of state power in forms that are less open for feminist challenge, for example. Developments of the welfare state and blurring boundaries of organisations are examples of that.

The question of 'to whom care belongs' is conceptually close to the questions of classical moral theory (Held, 2006), and partly contrasting with the idea of 'feminine' voices and moral principles of care (Gilligan, 1987). Held developed the ethics of care towards a general moral theory relevant not only to the so-called private realms, but also to medical practices. (Held, 2006). The care experienced and care received as bodily engagement transits these principles into intersectionalities and lived practices (eg Hamington, 2015). The ethics of care relates to the moral definitions of the care crisis more generally, as care ethics relates to the arrangements of care and deficiencies in them (eg Sevenhuijsen, 2004). The prescriptive ethics of care focuses on the professional caring relationships, and thus brings forward normative definitions of good care (Menon, 2018). The policy documents act as 'vehicles for normative paradigms' (Sevenhuijsen, 2004, 14-15) that configure knowledge in ways that certain positions become privileged and others not, for example.

How does the moral dimension of the care crisis relate to the aspects in ethics of care? For Tronto (1995), the moral disposition and a set of moral sensibilities, issues and practices arise from taking care as a central aspect of human existence. Tronto (eg 2010) and earlier, Sevenhuijsen et al (2003), view care as a continuous social process characterised by a holistic view of care not restricted to and concerning only privatised relations, but more importantly, social and political institutions as well as societal values. The ethics of care is for them one measuring stick for the normative frameworks of social and political value systems of the state.

The question of the crisis is also dependent on the aspects of normatively defined 'good' and solutions distilled through that definition. According to Pols (2015), care ethicists see it as their task to define or normatively describe the essence of good care, but it may create a problem from the political point of view (see for example, Walker, 2007). What happens to the normatively described essence of good care if the parameters for or practices of care change? This may happen with the introduction of technology, as the description of the essence of good care may be subject to change.

In empirical studies concerning the elements of 'good care', technology within care – as devices or assisting tools, or as replacements for humans – is usually not ranked high as an element of good care by care professionals (eg Nieboer et al, 2014). Similarly, among care professionals, technology is not considered as the best solution for the deficiencies in care. A typical research result among care professionals is that technology is seldom seen as a replacement for humans in any adequate meaning, despite the visions of robots that abound (Pols, 2012, 2015; Coeckelbergh, 2015). Several empirical studies have shown that care professionals appreciate the technology they already use in care if professional values, tailoring of technology and training for the users are present both in the design and in the use of technology (eg Palm, 2013). Usability challenges with technologies continue to have and have had unintended consequences, ranging from patient harm due to poor electronic

patient registries (Ratwani et al, 2019) to biased gender testing of technology (Schiebinger and Schraudner, 2011).

One conclusion from the literature is that the ethics of care literature and technological care literature do not align with the scrutinised care. The ethics and ideals of good care do not necessarily go hand in hand with technology (Walker, 2007; Nieboer et al, 2014; Timmerman et al, 2019). Technologies may offer new care practices and improvements, and in doing so, they transform the understandings of what good care is about. The possibility for tensions and conflicts in values needs articulation, however, as the construction of principles and values are realised in the multitude of practices of care, and in those processes, the technology should align to *serve and support* values *in* care, not set the value standards *for* care.

Care crisis as an articulated economic question

When the crisis of care is articulated and framed in monetary terms in research, it is typically addressed as '*spending*', *'expense'*, '*cost*' or '*projections of expenditure*', such as budgets. The monetary measures of care are deceptive, however, as they conflate many of the unmeasurable elements of care and persuade with the 'clarity' of numbers. For example, the rising cost of health and care are estimated, for example by the OECD (2019a, b). In these estimates, the health and care expenditure costs are calculated as a share of GDP. The GDP as conventionally defined differs from welfare; for example, it does not include the non-market activities that bear on economic wellbeing (eg Dynan and Sheiner, 2018). While mainstream cost projections concentrate on monetary values and how care is financed, there are fewer projections concerning the quality of care, accessibility to care, affordability and availability of care in relation to costs, or in relation to informal unpaid care. The growth of requests for broader measures of welfare which are not bound to GDP is evident (eg Jorgenson, 2010). While many of these discourses are pertinent, they also raise new questions regarding the relationship between economy, values and care practices.

The crisis of care as an *economic* question corresponds to the lack of funds within the health and care sector, and/or the lack of funds of those in need of care. It is a well-known fact that many high-income countries have cut public health care spending since the global economic downturn and austerity since 2008. The economic crisis, manifested by job and wealth losses and financial fragility, leads to reductions in the use of routine medical care, and the cross-national differences are aligned with differences in the out-of-pocket costs of care across countries (WHO, 2014; Lusardi et al, 2015). The economic crisis of care is highly value-laden, and structural.

Even if the boundaries between 'public and non-profit' and 'private and for-profit' activities may seem clear, when based on the universality of care, payment for care, insurance policies and out-of-pocket-cash payments, there are many more dynamic transactions and blurring of the boundaries in the actual functions, organising, practices of operating and activity logics of arranging care. The adoption of market mechanisms as one integral mechanism in the public sector has brought marketisation into public activities and changed the ways in which care is organised, delivered and monitored within the public sector. It is one manifestation of the New Public Management (Kovalainen and Sundin, 2012, but more importantly, it is not limited to financial or economic transactions. The bidding and procurement systems in public provision and purchasing emphasise and underline the economies of

care. The cost-cutting mechanisms in the form of quasi-market ideology permeate both the public and the private sector, from health and social care, cleaning work to library service work.

The transformation of the Nordic welfare model – even if it has not changed its basic principles of universality and publicly funded and at least partially publicly provided care – means that many of the private sector practices and organising models are in use in the public sector care regime. Managerial practices and processes, the organising of work, responsibilities and even job titles resemble one another. The awareness of the costs increased with the economic crisis of the 1990s in some countries (such as the UK, Finland) and finance became part of the everyday vocabulary (Simonen and Kovalainen, 1998; Kovalainen and Österberg-Högstedt, 2011; Wouters and McKee, 2017). Indeed, this 'monetary care' was adopted as one new task among the old tasks in care jobs, first because of budget cuts, and then through budget responsibilities, in the 1990s, and almost equally in both the public and private sectors. 'Monetary and budget issues' are one key part of the new responsibilities in all care jobs aligned with the economic crisis, the growth of entrepreneurialism and the rise of New Public Management. The transformation and restructuring of welfare services concerned the gendered care work. The active role of the public sector in creating and constructing markets, and shaping the existing markets, meant the immersion of New Public Management ideology into social and health care sector work practices, and for many women, doing the 'worrying' about the finances of care in their everyday care work, ideological displacement from care ethics to monetary ethics.

Research suggests that in order to maintain their legitimacy, care organisations and care corporations engage in two different operational logics (French and Miller, 2012). These logics for their part increasingly engage all care activities, processes and practices with either *technological innovations* or *entrepreneurial activities*, irrespective of whether the production logic of care is public or private. These engagements of technologies and entrepreneurialism are at the core of the new politics of care both in the public sector and in the private sector. It is highly interesting that only the technological innovations, to be implemented within the existing organisations, but not entrepreneurial activities offering new organisational models, are being offered by politics as solutions to economic crises.

Empirical studies on the economies of care at the population level show a global rise in the number of countries that allow people to access their health data electronically, but fewer than half of them have the digital tools available for it (OECD, 2019b). The emphasis on the economies of care has increased the grey economy and labours of love by relatives: if care services, such as transportation for disabled persons, are not available in sparsely populated areas, technologies can be a helpful solution, but only to a certain point. The ministerial and official reports seldom tackle the new social questions in relation to the cost savings that new technology solutions bring. Economies of care should not detach values from that equation.

Care crisis as an articulated techno-political question

In political discourses, the care crisis refers often to a structural mismatch between the needs of care and inputs to care, or to the unsustainable organising of care systems and commodification of care through profit-making institutional solutions. Partly because of this, the crisis of care is articulated through a variety of discourses: the increasing care needs of the growing elderly population, the care deficits borne from the declining number of care jobs and expenditure due to state budget cuts, to

mention a few. These structural aspects govern much of the rising inequalities within the care systems and the rising price tags of the care, and put the political system into the limelight.

Policies and practices also reach care practices and processes diffusely, in contrast to articulated or formal care and health policies. Work practices, new technologies adopted in care processes, and decisions to use AI or apps in care-related work are all examples of the ways in which technologies become amalgamated into care, without deliberate policies, or articulated and written policies or decisions. *Techno-politics*, a mode of politics based on techno-scientific knowledge that informs decision-making activities, functions as an organising principle in care practices (eg Saborowski and Kollak, 2015; Sampedro, 2011. How do techno-politics change care governance and/or practices? Technologies are incorporated into all work, care work included. Solutions such as AI, algorithms, apps and robotics are rendered with care and aligned with care work practices and processes. The technological processes in care often take place either under 'cost-cutting' or 'development' procedures, such as work procedure and control apps, or monitoring devices.

Part of the care work is subsumed with innovations and AI-operating robots and ICT-dependent care devices and supporting, controlling or surveillance mechanisms. Surveillance is regulated through privacy laws, such as GDPR in Europe, with attempts to lessen the opaqueness of surveillance. No such legislation exists in the US at the federal level (Ajunwa, 2017). Monitoring work performance through timetables is part of the new work practices of digitalisation. The new practices become adopted through gradual work practice adoption and through cultures of experimentation: in a nationwide survey in 2019, half of the nurses in Spain used health apps for professional purposes, even without validation of apps by the health or professional institutions, and similar results were found in a UK study (Mayer et al, 2019; Leigh et al, 2020). One of the interesting questions for further analysis is how financialisation, technologies and state interests align in care practices, and to what extent technologies transform the different elements of care.

Technologies offer novelty aspects to care work, and they provide care workers as users with tech prowess and turn them into active agents, developers and co-creators of care technologies. It is through the practices in actual care work where the use, intensification and entanglement of technology in every aspect of care takes place. In this process, the New Public Management governance undoubtedly enables the enactments of technologies in care work and in care practices to become part of the entrepreneurial solution to the problem at hand. Technologies offer solutions to care work and care activities, and during the global Covid-19 crisis, telemedicine and virtual software platforms, chatbots and wearable devices are being adopted as part of the new care routines. Technologies are powerful agents in reshaping care and redefining the view into the care crisis. Techno-politics in care come with a number of ethical, social, political and legal challenges, including changes and redefinitions in care work cultures, ranges of expertise and subjects of care.

Technology as a remedy?

Technology as a techno-political or socio-technical 'remedy' to the care crisis relates to the novelty of the technological solutions offered. The use of telehealth technologies in home care (home telehealth) has seen globally a rapid growth since the late 1990s (Demiris, 2016). Most often, the offered technological remedies are based on successful and widely used health monitoring cases, where wideband connections and mobile phone apps are used to monitor patients in their homes,

often without patient interference or participating activity, such as remote monitoring of pacemakers, and blood pressure and glucose monitors which require only minimal activity from the patient. Pacemaker remote monitoring requires a broadband connection, allowing the monitoring to take place hundreds of miles away without the patient participating in the monitoring work. The data surveillance informs of deviations, and a human expert interferes with a physical check-up only if the data alerts the need to interfere. Covid-19 is acting as a rapid catalyst for the growth of digital care services ranging from mental health interventions and delivering teletherapy to more somatic consultations, with the need to meet systems- and policy-level requirements (Taylor et al, 2020).

The technological care practices have produced positive outcomes in terms of health monitoring (Hampton, 2012), assistance in mobility and care work (eg Beedholm et al, 2016) accuracy of the data and also in terms of cost reduction (eg Bedaf et al, 2015), just to mention a few examples. This list could be extended ad infinitum, with global (IBM Watson, Google Health), national and even local or consumer-targeted variations in health and care trials, uses and technological adaptations. The examples above bring forward the technology as part of the care procedure and augmentation, and all these examples mentioned also require well-developed – and universally available – health and technology infrastructures, in order to function properly.

One of the discourses in the health care robotics literature is that the digitalisation of care, that is, the technology-assisted care devices and monitoring of care, reduces the monetary expenses and costs of care. Howeever, the connection between care technologies and cost structures is not straightforward. The historical analyses of the cost growth in health care show that especially in the US, but also elsewhere, the private insurance system has been a major factor in the growth of health care costs and the major promoter in the development of new medical technologies (Peden and Freeland, 1995; Chernew et al, 1998; Bodenheimer, 2005). Technologies may, when adopted, directly lower the costs, as for example the remote-controlled surveillance system diminishes the number of in-person patient visits at their homes and thus also personnel costs. However, the indirect costs of remote care may also be much higher and, overall, more difficult to calculate. Functioning technologies in care presuppose robust societal and legal infrastructures, IT infrastructure included, as well as training of health care personnel and modifications to workflows and information flows in health and social care infrastructure. Most technological health care innovations will generate higher expenditure on health care services at the aggregate level, but also contradictory evidence exists: a body of evidence indicates that the cost of technology varies by disease and that, overall, technology lowers the care costs (Chernew et al, 1998; Westbrook and Braithwaite, 2010; Leite et al, 2020) in cases and in countries where the infrastructure functions well and technologies are supported by in-person care.

In an ideal world, combining data from different sources would allow patient care and overall health and social care to be applied in the delivery of care by the personnel. The costs of this ideal world, that is, online and data-driven care decision-making systems, are difficult to put against alternative cost structures. In fact, trying to distinguish the costs and the nature of care with or without technology is somewhat outdated (Keesara et al, 2020), as the examples of the pacemaker remote monitoring mentioned earlier, and care based on mobile sensors such as smartwatches or oxygen monitors, have been enabled with the development of specific surveillance technologies.

Even without the rapid and global Covid-19 crisis, technology as a remedy for the care crisis is not a straightforward solution, despite the investments. The new technology platforms are addressing citizens as consumers, and they have the potential to decrease some of the costs and increase some of the efficiency of care (eg Taylor et al, 2020). But not all technology platforms are used by citizen-consumers. The use of electronic health records (EHRs) in the US is still quite low, despite the investments (Wang and Huang, 2012). The personalised health records (PHRs) for citizen-consumers have not achieved the prediction of long-term usage in care either. Mobile health applications are designed to improve health care delivery and communication between patients and hospitals, for example, but they are also used for informing patients of their appointments, among other features (Gagnon et al, 2016). While there is limited scientific evidence supporting the effectiveness of general mobile health monitoring, the number of health-related apps has increased globally from approximately 40,000 apps in 2012 to over 300,000 apps in 2019 (Mobile, 2020). Technology is thus also about a promise of delivery, not only about delivery.

Technology in social and health care can be used in a multitude of ways: the use ranges from mobile phone apps to time and separate the work tasks of nurses and home helpers, or sending home helpers to the next location, to monitoring and surveying workers, as in the Swedish home-care helpers' app use (Frennert, 2019). The division of home carers' work into smaller tasks that are measurable units means also that the recipients of care only get the kind of help that is articulated in those measurable terms, which is predetermined and predefined, and planned according to the requests and support item schemes. The care service work becomes 'taskified' (Kovalainen et al, 2020) with standardised and optimal time indications and time-paced service logics. It is indeed the case that the after-effects of Fordism are not dead, but have simply taken a new form in the transfer of time sheets used in industrial factories and assembly lines into mobile surveillance apps carried by workers. Timesheets are uploaded to care service workers' phones, pacing their work and service rhythm and care work in ways that are not visible to outsiders, but only to care recipients – and not even to the worker him/herself. The regulating power of the app is in its ability to compile data and use it in multiple ways.

Another aspect of technology in care are the gendered boundary conditions. By these, I refer here to the 'socioemotional' machines. Lucy Suchman's seminal analysis of the creation of human-like machines, where she analyses what becomes an imagined representation of humans through the eyes of roboticists (Suchman, 1987, 2003), gives an understanding of the use of gender stereotypes in standardising the human–robot interaction, thereby reproducing and reinforcing existing stereotypes (Weber, 2005).

Robots have become a well-established component of assisted living scenarios and smart-home scenarios for the near future. In most of these scenarios, the human–machine interface is a technology-based solution, a simplified idea targeted at easing everyday life and giving assistance to people in need of support. It is interesting that extensive research exists, such as about pet robots in day-care centres, nursing homes or residential care home settings (eg Preuss and Legal, 2017), but in these research papers, there is very little, if any, analysis of the aspects of the agency of elderly people, their willingness to adopt the technologies, or indeed, the sociality of machines and technologies. Sociality is interpreted to be an outcome of the interaction between individuals and not a feature of social life, and this then becomes transferred into robots (eg Sharkey, 2014).

Most studies on the use of robots in care lack reflective analysis of the methods used to gather and analyse research data, and instead new categorisations emerge. Weber (2005) has for instance distinguished between two kinds of interaction-relations in the human–robot interface that dominate, namely, the 'caregiver–infant relationship' and the 'owner–pet relationship'. This division obviously excludes health care robotics such as exoskeletons, helping frail or paralysed persons to mobilise themselves, assistance in surgery, and monitoring and surveillance robotics, to mention but a few.

It is obvious that 'technology as remedy to care' discourses emerge not from the discourses of unpaid, informal, invisible, time-consuming and messy caring work, but from the discourses where care can be sliced into clear tasks that can be targeted for bids, and delivered, monitored and priced accordingly (Poutanen and Kovalainen, 2017). In a parallel manner, technologies of care receive attention as high-tech solutions such as assisting robots, and less when mobile phone care apps used by the home-care helpers are discussed.

It is estimated that roughly half the activities people are paid to do globally in current capitalism could be automated. Automation is not, however, straightforward but related to the complexity of transformation of production, reskilling and heterogeneity within occupations, for example (Kovalainen et al, 2020; Poutanen et al, 2020; Vallas and Kovalainen, 2019). It is important to ask, who are the users of technologies, and who are the beneficiaries of investments in technologies: is it the state, investors, citizen-consumers, or those who are being cared for? Some of the care work has already been automated and is among those activities to be in principle replaceable by technologies. Such technology is already in use in robot surgery and, for example, as assistive interpretation vehicles that do not merely help nurses or surgeons, but replace them (Coeckelbergh, 2012). In a similar manner, as medical technologies transform medical practices, also technologies within care, especially when ingrained into care work, monitoring and detailing care activities in work, also change the contemporary and prevailing care practices and processes, and undoubtedly also gradually transform the normative elements of what is understood as 'good care'.

Conclusion

Rather too easily, catch-all phrases such as neoliberalism and New Public Management are being brought in as the only or key explanations for the care crisis, whichever definition it is given, or to depict the uncertainties in care. Setting the historical context in place is a crucial aspect, as it calls for a deeper understanding of not only capitalism and its turns, but also the ways populism in politics turns into current actions manifested, among others, in the care crisis. This chapter has addressed some of the theoretical discussions, connected some discourses and critically reflected the current care policies prevailing across the Nordic countries and beyond where, for example, technology and the care crisis do not seem to easily meet. This chapter has offered insights into the point that care ethics, economics of care, technologies of care and politics are currently inseparable and tightly intertwined. These aspects are kept apart in academic discussions alike in much of the societal discussions.

As the discussions in this volume show, more nuanced gender analyses, for example, have to some extent been lacking, and unpaid care work is one of these fields. Unpaid care work makes a

substantial contribution to most countries' economies, as well as to individual and societal wellbeing. How to address the care crisis discourses in ways that shed light on the complexity of struggles and persistence of inequalities that care work includes is highly needed.

There is also the need for real as opposed to virtual care, and for real as opposed to virtual social interaction. The development of robots for the care and companionship of older people increasingly opens up the possibility of meeting some of their needs by means of technology (Broekens et al, 2009; Borenstein and Pearson, 2010; Martin et al, 2015; Pillinger, 2019). As a 'remedy' to crisis, the various discussions seem to offer very different kinds of medicine as the question of the care crisis is not a one-dimensional question but a layered one that covers several aspects of care in society. Technology as a remedy and a promise of a remedy is justified mainly through the economic rationale that may carry constrained choices and may suppress several of the dimensions in the care crisis.

The tension between human work and technological aid in that particular work has been argued to diminish by building so-called 'moral machines' (Wallach and Allen, 2009). Automatisation is indeed rather naively being offered as a key remedy to care worker deficiency, but the practices prove otherwise, as studies among care workers' experiences with assistive technology show (eg Williams et al, 2014; Saborowski et al, 2015). Technology has enabled the panopticon – omnipresence and measurement of all activities. More importantly, technology and digital care are seen as valuable economic assets that affect the process of care as 'value production'. The 'investments in technology of care' have replaced 'the investments in the care workers', and this has several gendered repercussions (Poutanen and Kovalainen, 2017).

The discourse analysis of globally influential policy documents, such as OECD documents, shows the ushering in of 'technology as remedy' and as a new paradigm and emerging frontier in which the development of health care and social care should be directed (Kovalainen, 2020). The promise of technology lies in its ability to enhance activities, from selection of personalised care to the improvement of service delivery of that care. The potentialities of 'technology as remedy' are boundaryless, and in stark contrast to embodied care work and care provider costs with limited renewal and no scalable skills. Another part of the 'technology as promise and remedy' discourse is the enhancement of consumeristic citizenship through self-monitoring and self-management through their own heath care data. The disparities between socioeconomic groups in the use of technologies and digital illiteracy, or indeed the messiness of embodied care work are not cured by technology, however.

Finally, 'technology as remedy' relates seamlessly to the late-capitalist societies' state-level political decisions of innovation investments and production potentialities of technology that encompass all polities, care included. Most national innovation policies use technology as their springboard, and connect care with technology, but only at the level of innovation or industrial policy. And as much of the economies are built around high-tech industries, care services are only a logical extension to the development of new technologies and to the expansion of tech industries to new fields. For these reasons alone, the questions of the care crisis cut across the ethics of care, economics of care, politics of care and technologies of care, and presuppose alignments rather than detachments between these research fields.

References

Aglietta, M. and Breton, R. (2001) 'Financial systems, corporate control and capital accumulation', *Economy and Society*, 30(4): 433–66.

Ajunwa, I. (2017) Plenary talk at WORK2017 conference, University of Turku, Finland.

Anderson, B. and Shutes, I. (2014) 'Introduction', in B. Anderson and I. Shutes (eds) *Migration and Care Labour: Theory, Policy and Politics*, London: Palgrave Macmillan, pp 1–7.

Bedaf, S., Gelderblom, G.J. and de Witte, L. (2015) 'Overview and categorization of robots supporting independent living of elderly people: what activities do they support and how far have they developed', *Assistive Technology*, 27(2): 88–100.

Beedholm, K., Frederiksen, K. and Lomborg, K. (2016) 'What was (also) at stake when a robot bathtub was implemented in a Danish elder center: a constructivist secondary qualitative analysis', *Qualitative Health Research*, 26(10): 1424–33.

Bodenheimer, T. (2005) 'High and rising health care costs. Part 2: Technologic innovation', *Annals of Internal Medicine*, 142(11): 932–7.

Borenstein, J. and Pearson, Y. (2010) 'Robot caregivers: harbingers of expanded freedom for all?' *Ethics and Information Technology*, 12(3): 277–88.

Broekens, J., Heerink, M. and Rosendal, H. (2009) 'Assistive social robots in elderly care: a review', *Gerontechnology*, 8: 94–103.

Çalışkan, K. and Callon, M. (2009) 'Economization, part 1: shifting attention from the economy towards processes of economization', *Economy and Society*, 38(3): 369–98.

Chernew, M.E., Hirth, R.A., Sonnad, S.S., Ermann, R. and Mark, F.A. (1998) 'Managed care, medical technology, and health care cost growth: a review of the evidence', *Medical Care Research and Review*, 55(3): 259–88.

Coeckelbergh, M. (2015) 'Artificial agents, good care, and modernity', *Theoretical Medicine and Bioethics*, 36(4): 265–77.

Coeckelbergh, M. (2012) '"How I learned to love the robot": capabilities, information technologies, and elderly care', in I. Oosterlaken and J. van den Hoven (eds) *The Capability Approach, Technology and Design*, Dordrecht: Springer, pp 77–86.

Collins, S. (2015) *The Core of Care Ethics*, London; Basingstoke: Palgrave Macmillan.

Daly, M. and Lewis, J. (1998) 'Introduction' in J. Lewis (ed) *Gender, Social Care and Welfare State Restructuring in Europe*, Aldershot: Ashgate, pp 1-24.

Demiris, G. (2016) 'Consumer health informatics: past, present, and future of a rapidly evolving domain', *Yearbook of Medical Informatics*, Suppl 1(Suppl 1): S42–S47. https://doi.org/10.15265/IYS-2016-s005 [Accessed 5 May 2020].

Dynan, K. and Sheiner, L. (2018) 'GDP as a measure of economic well-being', Hutchins Center on Fiscal and Monetary Policy at Brookings, Working Paper 43, Available from: www.brookings.edu/research/gdp-as-a-measure-of-economic-well-being. [Accessed 15 June 2020].

Fraser, N. (2013) *Fortunes of Feminism: From State-Managed Capitalism to Neoliberal Crisis*, New York: Verso.

Fraser, N. (2014) 'Can society be commodities all the way down? Post-Polanyian reflections on capitalist crisis', *Economy and Society*, 43(4): 541–58.

Fraser, N. (2016) 'Capitalism's crisis of care', *Dissent*, 63(4): 30–7.

French, M. and Miller, F.A. (2012) 'Leveraging the "living laboratory": on the emergence of the entrepreneurial hospital', *Social Science & Medicine*, 75(4): 717–24.

Frennert, S. (2019) 'Lost in digitalization? Municipality employment of welfare technologies', *Disability and Rehabilitation: Assistive Technology*, 14(6), 635–42.

Gagnon, M-P., Ngangue, P., Payne-Gagnon, J. and Desmartis, M. (2016) 'm-Health adoption by healthcare professionals: a systematic review', *Journal of American Medical Information Association*, 23(1): 212–20.

Gilligan, C. (1987) 'Moral orientation and moral development'. Reprinted in: Held, V. (ed) (1995) *Justice and Care: Essential Readings in Feminist Ethics*, Oxford: Westview Press, pp 31–46.

Hamington, M. (2015) 'Care ethics and engaging intersectional difference through the body', *Critical Philosophy of Race*, 3(1): 79–100.

Hampton, T. (2012) 'Recent advances in mobile technology benefit global health, research, and care', *JAMA*, 307(19): 2013–14.

Held, V. (2006) *The Ethics of Care: Personal, Political and Global*, New York: Oxford University Press.

Horton, A. (2017) *Financialisation of Care: Investment and Organising in the UK and US*, PhD thesis, Queen Mary University of London, UK. Available from: http://qmro.qmul.ac.uk/xmlui/handle/123456789/31797, [Accessed 15 July 2020].

Jorgenson, D.W. (2010) 'Designing a new architecture for the U.S. national accounts', *The Annals of the American Academy of Political and Social Science*, 631(1): 63–74.

Keesara, S., Jonas, A. and Schulman, K. (2020) 'Covid-19 and health care's digital revolution', *The New England Journal of Medicine*, 382: e82.

Kovalainen, A. (1999) ‘The welfare state, gender system and public sector employment in Finland’, in J. Christiansen, P. Koistinen and A. Kovalainen (eds) *Working Europe: Reshaping European Employment Systems*, Aldershot: Ashgate, pp 137–54.

Kovalainen, A. (2004) ‘Rethinking the revival of social capital and trust in social theory’, in B.L. Marshall and A. Witz (eds) *Engendering the Social: Feminist Encounters with Sociological Theory*, London: Open University Press, pp 151–71.

Kovalainen, A. (2020) ‘Influential discourses: technology shaping the national agenda’, Unpublished manuscript.

Kovalainen, A. and Österberg-Högstedt, J. (2011) ‘Finland’s changing public sector: business, trust and gender in municipalities’, *Nordiske Organisasjonsstudier*, 13(2): 57–73.

Kovalainen, A. and Sundin, E. (2012) ‘Entrepreneurship in public organizations’, in D. Hjorth (ed) *Handbook on Organizational Entrepreneurship*, London: Edward Elgar Ltd, pp 257–79.

Kovalainen, A., Vallas, S.P. and Poutanen, S. (2020) ‘Theorizing work in the contemporary platform economy’, in S. Poutanen, A. Kovalainen and P. Rouvinen (eds) *Digital Work and the Platform Economy: Understanding Tasks, Skills and Capabilities of the New Era*, New York: Routledge, pp 31–55.

Krippner, G.R. (2005) ‘The financialization of the American economy’, *Socio-Economic Review*, 3(2): 173–208.

Krippner, G.R. (2011) *Capitalizing on Crisis: The Political Origins of the Rise of Finance*, Cambridge, MA: Harvard University Press.

Le Grand, J. (1984) ‘An introduction’, in J. LeGrand and R. Robertson (eds) *Privatisation and the Welfare State*, London: Allen & Unwin, pp 1-12.

Le Grand, J. and Bartlett, W. (1993) ‘Quasi-markets and social policy: the way forward?’ in J. Le Grand and W. Bartlett (eds) *Quasi Markets and Social Policy*, Basingstoke; London: Macmillan, pp 202–20.

Leite, H., Hodgkinson, I.R. and Gruber, T. (2020) ‘New development: ‘healing at a distance’—telemedicine and COVID-19’, *Public Money & Management*, 40(6): 483–85. doi:10.1080/09540962.2020.1748855

Levitsky, S.R. (2014) *Caring for Our Own: Why There Is No Political Demand for New American Social Welfare Rights*, Oxford: Oxford University Press.

Lusardi, A., Schneider, D. and Tufano, P. (2015) ‘The economic crisis and medical care use: comparative evidence from five high-income countries’, *Social Science Quarterly*, 96(1): 202–13.

Martin, A., Myers, N. and Viseu, A. (2015) ‘The politics of care in technoscience’, *Social Studies of Science*, 45(5): 625–41.

Mayer, M.A., Rodríguez Blanco, O. and Torrejon, A. (2019) 'Use of health apps by nurses for professional purposes: web-based survey study', *JMIR mHealth*, 7(11): e15195. doi:10.2196/15195

Menon, K. (2018) 'The state of care: work, ethics and gender', *Contemporary Social Scientist*, 10(2): 23–30.

Mobile (2020) *Mobile Health Global Market Report 2013–2019: The Commercialization of the mHealth Applications*, Available from: www.globenewswire.com

Nieboer, M.E., van Hoof, J., van Hout, A.M., Aarts, S. and Wouters, E.J.M. (2014) 'Professional values, technology and future health care: the view of health care professionals in the Netherlands', *Technology in Society*, 39: 10–17.

Organisation for Economic Co-operation and Development (OECD) (2019a) Health Care Quality Indicators. OECD Statistics, Available from: www.oecd.org.

Organisation for Economic Co-operation and Development (OECD) (2019b) *Health in the 21st Century: Putting Data to Work for Stronger Health Systems*, OECD Health Policy Studies, Paris: OECD Publishing.

Palm, E. (2013) 'Who cares? Moral obligations in formal and informal care provision in the light of ICT-based home care', *Health Care Analysis*, 21(2): 171–88.

Parreñas, R. (2001) *Servants of Globalization: Women, Migration and Domestic Work*, Stanford, CA: Stanford University Press.

Peden, E.A. and Freeland, M.S. (1995) 'A historical analysis of medical spending growth, 1960–1963', *Health Affairs*, 14(2): 235–47.

Pillinger, A. (2019) 'Gender and feminist aspects in robotics', Working paper. http://www.geecco-project.eu/fileadmin/t/geecco/FemRob_Final_plus_Deckblatt.pdf. [Accessed 15 July 2020].

Pols, J. (2012) *Care at Distance: On the Closeness of Technology*, Amsterdam: Amsterdam University Press.

Pols, J. (2015) 'Towards an empirical ethics in care: relations with technologies in health care', *Medicine, Health Care, and Philosophy*, 18(1): 81–90.

Pols, J. and Moser, I. (2009) 'Cold technologies versus warm care? On affective and social relations with and through care technologies', *ALTER, European Journal of Disability Research*, 3(2): 159–78.

Poutanen, S. and Kovalainen, A. (2017) *Gender and Innovation in the New Economy: Women, Identity and Creative Work*, New York: Palgrave Macmillan.

Poutanen, S., Kovalainen, A. and Rouvinen, P. (2020) 'Digital work in the platform economy', in S. Poutanen, A. Kovalainen and P. Rouvinen (eds) *Digital Work and the Platform Economy*: *Understanding Tasks, Skills and Capabilities of the New Era*, New York: Routledge, pp 3–9.

Preuss, D. and Legal, F. (2017) 'Living with the animals: animal or robotic companions for the elderly in smart homes?', *Journal of Medical Ethics*, 43: 407–10.

Ratwani, R.M., Reider, J. and Singh, H. (2019) 'A decade of health information technology usability challenges and the path forward', *JAMA*, 321(8): 743–4.

Saborowski, M. and Kollak, I. (2015) '"How do you care for technology?" – Care professionals' experiences with assistive technology in care of the elderly', *Technological Forecasting and Social Change*, 93: 133–40.

Sampedro, V. (2011) Introduction: new trends and challenges in political communication, *International Journal of Press and Politics*, 16(4): 431–9.

Sandberg, B. and Elliott, E. (2019) 'Toward a care-centred approach for nonprofit management in a neoliberal era', *Administrative Theory & Praxis*, 41(3): 286–306.

Schiebinger, L. and Schraudner, M. (2011) 'Interdisciplinary approaches to achieving gendered innovations in science, medicine and engineering', *Interdisciplinary Science Reviews*, 36(2): 154–67.

Schillmeier, M. and Doménech, M. (2016) 'New technologies and emerging spaces of care: an introduction', in M. Schillmeier and M. Doménech (eds) *New Technologies and Emerging Spaces of Care*, London; New York: Routledge, pp 1–18.

Sevenhuijsen, S. (2004) 'Trace: a method for normative policy analysis from the ethic of care', in S. Sevenhuijsen and A. Schwab (eds) *The Heart of the Matter: The Contribution of the Ethics of Care to Social Policy in Some New EU Member States*, Peace Institute, Institute for Contemporary Social and Political Studies, pp 13–46. Ljubljana, Slovenia.

Sevenhuijsen, S., Bozalek, V., Gouws, A. and Minnaar-Mcdonald, M. (2003) 'South African social welfare policy: an analysis using ethics of care', *Critical Social Policy*, 23(3): 299–321.

Sharkey, A. (2014) 'Robots and human dignity: a consideration of the effects of robot care on the dignity of older people', *Ethics and Information Technology*, 16: 63–75.

Simonen, L. and Kovalainen, A. (1998) 'Paradoxes of social care restructuring: the Finnish case', in J. Lewis (ed) *Gender, Social Care and Welfare State Restructuring in Europe*, Aldershot: Ashgate, pp 229–55.

Suchman, L. (1987) *Plans and Situated Action: The Problem of Human–Machine Communication*, Cambridge: Cambridge University Press.

Suchman, L. (2003) *Human/Machine Reconsidered*, Lancaster: CSS, Lancaster University, Available from: www.comp.lancs.ac.uk/sociology/papers/Suchman-Human-Machine-Reconsidered.pdf. [Accessed 1. July 2020].

Taylor, C.B., Fitzsimmons-Craft, E.E. and Graham, A.K. (2020) 'Digital technology can revolutionize mental health services delivery: the COVID-19 crisis as a catalyst for change', *The International Journal of Eating Disorders*, 53(7): 1155–57. https://doi.org/10.1002/eat.23300

Timmerman, G., Baart, A. and Vosman, F. (2019) 'In search of good care: the methodology of phenomenological, theory-oriented "N=N case studies" in empirically grounded ethics of care', *Medicine, Health Care and Philosophy*, 22: 573–82.

Tronto, J. (2010) 'Creating caring institutions: politics, plurality and purpose', *Ethics and Social Welfare*, 4(2): 158–71.

Tronto, J. (1995) 'Care as a Basis for Radical Political Judgments', *Hypatia,* 10(2): 141-149.

Vallas, S.P. and Kovalainen, A. (2019) 'Introduction: taking stock of the digital revolution', in S.P. Vallas and A. Kovalainen (eds) *Work and Labor in the Digital Age*, New York: Emerald Publishers Ltd, pp 1–12.

Vogel, S.K. (2018) *Marketcraft: How Governments Make Markets Work*, Oxford: Oxford University Press.

Walker, M.U. (2007) *Moral Understandings: A Feminist Study in Ethics* (2nd edn), Oxford: Oxford University Press.

Wallach, W. and Allen, C. (2009) *Moral Machines: Teaching Robots Right from Wrong*, Oxford: Oxford University Press.

Wang, C.J. and Huang, A.T. (2012) 'Integrating technology into health care: what will it take?' *JAMA*, 307(6): 569–70.

Weber, J. (2005) 'Helpless machines and true loving care givers: a feminist critique of recent trends in human-robot interaction', *Journal of Information, Communication and Ethics in Society*, 3(4): 209–18.

Wenzlaff, F. (2019) 'Economization of society: functional differentiation and economic stagnation', *Journal of Economic Issues*, 53(1): 57–80.

Westbrook, J. and Braithwaite, J. (2010) 'Will information and communication technology disrupt the health system and deliver on its promise?', *Medical Journal of Australia*, 193(7): 399–400.

World Health Organization (WHO) (2014) *Economic Crisis, Health Systems and Health in Europe: Impact and Implications for Policy*, Available from: www.euro.who.int/__data/assets/pdf_file/0008/257579/Economic-crisis-health-systems-Europe-impact-implications-policy.pdf. [Accessed 10 August 2020].

Williams, A., Goodwin, M. and Cloke, P. (2014) 'Neoliberalism, Big Society, and progressive localism', *Environment and Planning A*, 46(12): 2798–815.

Williams, F. (2011) 'Towards a transnational analysis of the political economy of care', in R. Mahon and F. Robinson (eds) *Feminist Ethics and Social Policy: Towards a New Global Political Economy of Care*, Vancouver; Toronto: University of British Columbia, pp 127–44.

Wilson, M. (2002) 'Making nursing visible? Gender, technology and the care plan as script', *Information Technology & People*, 15(2): 139–58.

Wouters, O.J. and McKee, M. (2017) 'Private financing of health care in times of economic crisis: a review of the evidence', *Global Policy*, 8(2): 23–9.

Yeates, N. (2009) *Globalizing Care Economies and Migrant Workers: Explorations in Global Care Chains*, Basingstoke: Palgrave.

Yeatman, A. (2018) 'Gender, social policy and the idea of the welfare state', in S. Shaver (ed) *Handbook on Gender and Social Policy*, London: Edward Elgar Ltd, pp 21–36.

[1] Private equity assumes cash flow and/or profitability. The valuation of private equity takes place solely through economic valuation, and assumes standardised and predictable activities, which are not often possible in care labour practices.

[2] The chapter by Hanne Marlene Dahl, 'The care crisis: its scientific framing and silences', traces some of the key origins in feminist care literature by analysing self-reflexively the ways that the 'care crisis' has been attributed in articles by Phillips, Hochschild, Frazer and Williams.