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From Straight Lines to Twists and Turns: Finding Patterns Between Socio-Economics and Unequal Health Outcomes in the Life Course

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ABSTRACT

Despite welfare state expansion in liberal democracies during the 20th century, health inequalities between socio-economic groups persist. Understanding individuals' lived experiences can inform policy for reducing unequal health outcomes in these lives. We build on Fundamental Cause Theory (FCT), which posits that low socio-economic status is the fundamental cause of health problems in (later) life. We argue that this theory is incomplete in developing policy interventions to tackle unequal health outcomes, because it assumes the relationship between socio-economic status and health to be linear and unidirectional. Based on our findings from biographic interviews of 15 disadvantaged individuals in the Netherlands, we propose a refinement of FCT by taking into account the complex life trajectories of individuals experiencing unequal health outcomes. Specifically, we argue that these individuals' trajectories can be broken down into at least five distinct patterns (ping-pong, snowball, escalator, quicksand and lever) between socio-economic and health issues. These patterns provide a theoretical addition to the existing FCT on the dynamics of life trajectories, the intensity with which problems develop and the importance of external factors. This helps not only to understand the emergence of health problems, but also to imagine more suitable policy responses.

1 | Introduction

Decades of public health research has accumulated in a large body of research that convincingly explains health inequality. The Fundamental Cause Theory (FCT) is among the most influential explanations of health inequality. This seminal contribution posits that low socio-economic status (SES) is the *fundamental cause* of health problems in (later) life. FCT explains health inequality through a meta-mechanism of the complex processes through which social factors may influence health (Link and Phelan 1995). The theory has both been quantitatively substantiated and qualitatively further specified (e.g., Lutfey and Freese 2005; Phelan, Link and Tehranifar 2010; Mackenbach et al. 2017).

As the FCT proposes socio-economic inequality as meta-mechanism behind health inequality, this implies the need for redistribution of money and power to ameliorate health inequalities (Link and Phelan 1995). The welfare state institutions that have developed post World War II protect citizens from social risks and redistribute money and power to do so (Esping-Andersen 1990). Beyond affecting the socio-economic distribution of society, Beckfield et al. (2015) theorized how welfare state institutions also affect the distribution of health in the population.

But counter to FCT derived expectations, welfare state expansion across countries has not in fact reduced health inequalities.[1] This is referred to as the 'paradox of health inequality' (Mackenbach 2012): whereas *overall* public health has improved with the expansion of the welfare state, health inequalities between socio-economic groups have persisted and at times even widened (Baum and Fisher 2014, 213; Mackenbach 2012, 761). Mackenbach's (2012) review study shows that disadvantaged groups do not similarly profit from the improvement in general wellbeing that has accompanied the expansion of the welfare state in the 20th century as advantaged groups. Hence, inequalities persist.

Currently, the debate on policy tools to reduce health inequalities is stuck in a conundrum between behavioural intervention and large-scale economic redistribution. On the one hand, there is the focus on behavioural health promotion strategies that intervene late in the FCT mechanism, trying to curb the behaviours that are results of SES. They have been tried and tested throughout modern welfare states, but often fail in reducing health inequalities (Baum and Fisher 2014). The redistribution of money and power on the other hand, intervenes at the root cause of the FCT mechanism (Link and Phelan 1995). Yet such policies have proven extremely difficult to realize in the current political context (Lynch 2020). Furthermore, the 'paradox of health inequality' teaches that welfare state expansion increases general public health, but does not necessarily decrease health inequalities (Mackenbach 2012).

Hence, it is important to find new policy interventions that could prove effective in helping improve the health of disadvantaged groups. We propose to do so by situating the FCT's fundamental causes of health inequality within individual life courses. FCT assumes linear and unidirectional life trajectories. However, individual lives rarely follow straight lines from one life event to the next. The 'twists and turns' of individual lives complicate the identification of suitable policy entry points to intervene in the creation of health inequalities. To explore which policy entry points in life trajectories are important, we answer the research question: what are important patterns in which health and socio-economic problems develop in the life trajectories of people, observed within their welfare state context?

To answer this research question we conducted fifteen biographic-narrative interviews with people experiencing both health and socio-economic problems in the Netherlands. Like Mackenbach (2012), we understand the group of disadvantaged people in either material or social sense—or both—as a critical case for health inequality. Like other mature welfare states, the Netherlands experiences persisting health inequalities, despite relatively low socio-economic inequality and a well-performing healthcare system (OECD 2019, 67). Nevertheless, the difference in life expectancy between those from the lowest income group versus the highest income group is around 7 years in the Netherlands. The difference in life expectancy in good experienced health between these groups is even higher, around 20 years (CBS 2019). For this reason, the Dutch welfare state offers a suitable context to study the complex interactions between socio-economic and health problems.

We observe that each life trajectory exists of patterns, together forming a chain that leads towards health inequalities over the life course. We distilled five such patterns from the interviews that we labelled ping-pong, snowball, escalator, quicksand and lever. The ping-pong pattern refers to a back-and-forth between socio-economic and health issues. The snowball pattern refers to smaller issues which build up over time. The escalator pattern is a conjunction of issues together in a short period of time setting off a critical situation. The quicksand pattern is defined by a longer period of time in which someone experiences a bad, yet not directly critical, situation. The lever triggers a sudden positive or negative change in the status quo. These patterns portray the different twists and turns in the relationship between the socio-economic and health problems over the life course.

Understanding returning patterns across individual cases helps identify new policy entry points to improve the health of disadvantaged people. Our study shows that, while socio-economic inequality and health inequality are linked, the solution might not be a matter of only redistribution per se. Instead, deeper knowledge of the identified patterns strengthens existing insights from FCT on the dynamics of life trajectories, the intensity with which problems develop and the importance of external factors such as life events or street-level bureaucrats that positively or negatively impact their lives.

2 | Fundamental Cause Theory and Beyond

This research is grounded in the life course approach of (medical) sociology. We take from the life course approach the notion that 'reducing health disparities requires an understanding of the mechanisms that generate disparities' (Jones et al. 2019, S48). Life course approaches are informed by developmental and structural perspectives (Jones et al. 2019). The developmental perspective focuses on mechanisms found in periods in life that are critical in shaping health over the life course. Research on adverse childhood events is an example of this type of scholarship (Umberson et al. 2014). Structural perspectives on the life course focus instead on the mechanisms between the fundamental causes and health outcomes. This type of scholarship studies, for example, how SES, race and gender intersect in determining health outcomes (Brown et al. 2016). The latter perspective is the one taken in this research, specifically focused on SES as a fundamental cause.

FCT, proposed by Link and Phelan (1995), is the most relevant theory in the life course approach's structural perspective. It explains health inequality through a meta-mechanism of the complex processes through which social factors may influence health. FCT is an umbrella theory explaining why the association between SES and mortality has persisted, despite radical improvements in the curation and risk factors of diseases in the developed world (Phelan, Link and Tehranifar 2010). For example, one causal factor is that people with high income can pay better (private) healthcare in which there is more continuity of care, leading to a better exchange of information between patient and physician (Lutfey and Freese 2005). Another causal

factor is that people with low SES often already perceive more discomfort and pain in their 'noisy bodies' and therefore, notice symptoms and go to the doctor later than high SES individuals (Merrild, Vedsted and Andersen 2017). Over time, these mechanisms also change. Whereas poor sanitation and widespread death from infectious disease used to create health inequality during the 19th century in the developed world, non-communicable diseases such as cardiovascular disease, diabetes and cancers, currently link SES and mortality (Phelan, Link and Tehranifar 2010).

FCT asserts that higher SES individuals possess resources (money, knowledge, prestige, power, or beneficial social connections) which allow them to avoid health risks. This relationship between SES, resources and health holds in different national contexts. According to Link and Phelan, a fundamental cause of health inequality has four essential features: (1) it influences multiple disease outcomes, (2) it affects these disease outcomes through multiple risk factors, (3) it involves access to resources that can be used to avoid risks, and, (4) the association between a fundamental cause and health is reproduced over time via the replacement of intervening mechanisms (Link and Phelan 1995). Since Link and Phelan (1995), studies have shown that SES indeed satisfies all four essential features (Phelan, Link and Tehranifar 2010; Rydland, Solheim and Eikemo 2020).

Over the past three decades, numerous contributions have been made to FCT scholarship. Importantly, the theory has been supported by large quantitative studies (e.g., Mackenbach et al. 2017), which confirm its main propositions. Meanwhile, efforts have also been made to further the theoretical development of FCT (e.g., McCartney et al. 2021). To this end, FCT has been applied to empirical cases, for instance to a case of diabetes technologies (e.g., Weiss et al. 2020). Finally, the FCT has been further specified on the basis of qualitative empirical data (e.g., Hammad Mrig 2021; O'Donnell 2020), enlightening the different ways in which the FCT meta-mechanisms work.

In another seminal contribution to FCT, Lutfey and Freese (2005) explicate the concept of fundamental causality on the basis of an ethnographic study in two diabetes clinics serving patients of contrasting socio-economic position. They show concretely some of the ways in which resources may be translated into health advantages and may thus be implicated in the reproduction of the well-documented quantitative association between SES and health (ibid., 1329). Similar to this paper, they furthermore demonstrate that detailed qualitative data is essential for the explication of the theory. In another publication, Freese and Lutfey (2011) suggest that social networks, 'habitus', and the way in which institutions process people, could pose alternative mechanisms through which SES is related to health. We build on a similar assumption that the relationship between SES and health is not only determined by people being able to use resources to benefit their personal health. The welfare state context in which we are interested is reminiscent of the institution's meta-mechanism proposed by Freese and Lutfey (2011).

Despite the broad acceptance of FCT, it has also been criticised. Øversveen et al. (2017, 106), for instance, argue that the FCT interprets the relationship between SES and health as too linear and unidirectional, with SES offsetting a plethora of mechanisms leading to poor health outcomes. Another critique is related to the key debate on causality in health inequalities research: is health determined by social position, or does poor health cause poverty and social marginalisation (Eikemo and Øversveen 2019)? Furthermore, what distinguishes SES from the concept of 'resources'? If such a distinction cannot be made, FCT is ultimately tautological (Øversveen et al. 2017, 106).

The life course approach taken in the work of political philosophers Wolff and De-Shalit (2007) adds another layer to the interpretation of FCT. To improve the lives of disadvantaged people, they argue that it is imperative to understand that disadvantage as a condition clusters and is corrosive. The 'dynamic clustering' of disadvantage refers both to the case in which a person 'accumulates' disadvantages over time and the case of reproduction of disadvantage over generations (ibid., 120). 'Corrosive' disadvantage is a disadvantage that negatively affects others and thus relates to a causal relationship between disadvantages (ibid., 121). The concepts coined by Wolff and De-Shalit (2007) highlight the dynamic processes underlying the lives of disadvantaged people.

Besides theoretical innovation, scholars have called for a more open-ended and non-deterministic methodological approach (Eikemo and Øversveen 2019, 596), in response to the large-N, cross-case analyses to study health inequality (Smith and Schrecker 2015). The benefit of an open-ended approach is apparent in existing ethnographic and qualitative life course studies of health inequality (e.g., Lutfey and Freese 2005; Merrild, Vedsted and Andersen 2017; Slagboom, Crone and Reis 2022). These studies made contributions in providing depth and thereby uncovering mechanisms underlying general laws. Related to what Maxwell (2004) refers to as 'contextualised causality', we hope to contribute in a similar way: not by interrogating the underlying FCT mechanisms, but by observing socio-economic and health patterns within life trajectories in relation to their welfare state context. The contextualised understanding of life trajectories is important as it opens the box of the linear and unidirectional FCT.

In this article, we aim to join in the scholarly effort to improve the existing theoretical and empirical explanation of health inequality, by taking a dynamic perspective on FCT and how fundamental causes unfold within individual life trajectories. On the one hand, we draw on the critique by Øversveen et al. (2017) on the FCT and forgo the assumptions of linearity and unidirectionality. On the other hand, we build on the work of Wolff and De-Shalit (2007) and explore the dynamic processes in the lives of disadvantaged people. We do this because the paradox of health inequality hinges on the health of disadvantaged people in society (Mackenbach 2012). Hence, we do not identify those causes that create ill health, but rather analyse the patterns that explain *how* ill health is related to socio-economic problems in life. Using the method of biographic interviews, this paper aims to expand the FCT by studying how life trajectories unfold in their welfare state context.

3 | Research Design

This article is based on a cross-sectional, biographic-narrative interview study conducted among Dutch citizens experiencing a combination of socio-economic and health issues during the period October 2020 to January 2021. A total of fifteen biographic-narrative interviews were conducted. On the basis of the qualitative interview data, we constructed individual biographies. Following Verd and Lopez (2011), we distilled patterns between socio-economic issues and health issues from these biographies. Consistent with their approach, we did not only analyse the interviews to gain an insight in the respondents' subjective experiences, but rather used the chronologies of interviewees' life stories to identify patterns within the life trajectories (Verd and Lopez 2011). These patterns can be seen as analytical constructs that help unpack the meta-mechanism of FCT and help identify concrete entry points for targeted policy interventions.

3.1 | Interview Method

In this project, we combined the Biographic-Narrative-Interpretative Method (BNIM) with qualitative interviewing (Wengraf 2001). A complete biographical narrative interview with one participant took place in three consecutive steps. In the first step, the interviewee was asked to present their life story on the theme of issues experienced in their life and help received from the government. The researcher did not intervene, until the participant fully presented their story. Only one interview question was asked during this stage, namely (translated from the original Dutch):

> Could you tell me something about the issues you've had in your life and the help you've received from government institutions from the moment that you can remember and how it has developed until now. Take all the time you need. I will first just listen and make notes and will only start asking questions when you are done.

During our interviews, the answer to this initial question took from 10 min up to 2 h.[2] In the second step, the researcher only followed-up on the topics the respondent presented in their story (Wengraf 2001). It is important that only narrative questions were asked. Rather than asking why the respondent did something a certain way, the interviewer would ask *how* something happened exactly (Rosenthal 2004). In the third step, the interviewer was allowed to ask follow-up questions on any topic relevant to the research that has not been mentioned by the interviewee.

Telling a story is one of the only ways to come close to a reproduction of what happened in a person's life (Rosenthal 2004). The biographic-narrative method caters to this, by letting the narrator speak uninterruptedly, enabling them to let their memories become stronger and more detailed (Rosenthal 2004). Indeed, in this research specifically, the experience of the narrator is very important. The ways in which people experience the connections between their socio-economic and health issues, is shaped by individual agency *and* by social structure. The narrator's interpretation of the influence of their social environment on their own agency provides unique insights that help develop an explanation of these complex relationships.

3.2 | Analysis

In the BNIM, the 'told life' and 'lived-life' are analysed separately. When reconstructing a past (the life history or lived-life) presented in the present of a life narrative (the life story or told life), BNIM prescribes a consideration of how the present of narrating shapes the presentation of past events (Rosenthal 2004, 50). For this reason, the lived-life (the chronological order of events) is analysed separately from the told life (the interviewee's subjective experiences). In the final stage of the analysis the told life and lived-life are then connected. In this stage, the biography is constructed by describing the evolving relationship between the lived-life as analysed and the told life as analysed (Wengraf 2001, 284).

Following the biographic-narrative analysis as prescribed, two documents were produced per interview: the first a summary of the interviewee's life stories in chronological order, the second a transcription verbatim of the full interview. The first document presented the chronology as lived-life, while the second document detailed the told life, the way in which the biographical account was experienced and understood from the interviewee's perspective (Wengraf 2001, 236, 239). In our study, the lived life document was central to the analysis of the patterns between socio-economic and health issues. We compared different life stories to understand the relationship between socio-economic and health. We did so by inductively identifying patterns between the different problems respondents faced in their life. The transcriptions were coded using open coding in Atlas.TI, focussing only on the parts where interviewees talked about experiences of their problems and experiences with public professionals and government agencies, so not the parts where they spoke merely of the chronology of events.

3.3 | Sampling and Recruitment

The selection of respondents for the biographic-narrative interview study was based on purposive sampling of disadvantage in either material or social sense. Following Wolff and De-Shalit (2007, 10), the most important aspect of disadvantage is that 'for some reason several disadvantages cluster together'. Since health is the topic of research, respondents were selected on the basis of the following inclusion criteria: (1) socio-economic problems (2) health problems, (3) contact with governmental institutions about these issues.[3] The goal was to have a diverse selection of participants on characteristics such as age, sex, ethnicity[4] and living area, gaining a more inclusive understanding of the mechanisms at play in the diverse lives of the respondents, see Table 1. The variation of the respondents' demographic characteristics is similar to the demographic variation in the population living in poverty in the Netherlands

TABLE 1 | Respondent characteristics.

Respondent	Sex	Age	Ethnicity	Living area
1	F	29	Ethnic majority	Rural
2	M	70	Ethnic minority	Urban
3	M	20	Ethnic minority	Urban
4	F	48	Ethnic minority	Urban
5	F	35	Ethnic majority	Rural
6	M	45	Ethnic majority	Urban
7	F	37	Ethnic minority	Urban
8	F	54	Ethnic majority	Rural
9	M	54	Ethnic majority	Urban
10	M	26	Ethnic majority	Rural
11	M	23	Ethnic minority	Urban
12	M	31	Ethnic minority	Urban
13	F	27	Ethnic majority	Rural
14	F	60	Ethnic minority	Urban
15	M	57	Ethnic majority	Rural

regarding the strong overlap between the ethnic minority and urban backgrounds. The percentage of the Dutch population living in poverty is highest in the urban areas (Rotterdam, Amsterdam, The Hague). In these cities, the percentage of people with a non-Western immigration background is also highest, which is an important risk factor of poverty in the Netherlands. Around 16%–18% of non-Western immigrants in these cities live in poverty (SCP 2019).

For the purpose of this study, socio-economic and health issues are broadly defined. The socio-economic issues in the fifteen life-stories range from homelessness to trouble finding stable employment. The majority of life-stories revolve, at least for some part of the biography, around the accumulation of debts. Review studies have shown that debt is often associated with diverse health issues (Richardson, Elliott and Roberts 2013). Health issues in this research consist of three broader categories of physical health, mental health and addiction. The health issues in the fifteen life-stories range from the experience of stress to multiple cardiac arrests (physical health) and from depression (mental health) to heroin addiction (addiction).

The problems in respondents' lives are not exclusively composed of socio-economic and health problems, but also concerns related to the relational sphere, child abuse, problems at school or crime. Describing all of these related issues in detail is not possible within the scope of this paper, yet they were taken into account in the analysis, meaning they were included as life events in the chronological analysis.

This research project was a collaboration between Leiden University and the Council for Public Health and Society (hereafter referred to as the Council).[5,6] Participants were recruited using our research partner's network of public organizations, like ministries and municipalities, social work organizations and GP practices. These public organizations approached potential participants by sending out a call for this research project. In the call, potential participants were asked to fill out a first set of questions (demographics and the inclusion criteria) on the basis of which the researchers determined whether the potential participants were suitable for the project. The selection was based on whether people had a combination of social and health issues.[7] Participants were not recruited with the promise of a reward, but they received a gift from the Council after participation.

Fourteen interviews were conducted by the first author and one interview was conducted by a Council collaborator on the project, following the interview guide.[8] The interviews took place in consultation with the respondents, in their homes or in a public space.[9] Six out of the 15 interviews were conducted online via videocall in the context of the Covid-19 pandemic. Most interviews lasted for approximately one and a half hours, with the shortest interview taking 45 min and the longest interview two and a half hours. After the interviews were conducted, we drew up summaries of the respondents' life stories. These summaries were emailed to the respondents for validation.

4 | Results: A Dynamic Perspective on the FCT Pathway

The problems as experienced by the respondents overlap in diverse ways in their lives, with indebtedness as the most prevalent socio-economic issue. Three respondents (R3, R7, R14) experienced indebtedness and only light health issues which do not hinder them in their daily life, except for periods of stress. Three different respondents (R6, R8, R11) suffered the more extreme combination of debt, addiction and physical health problems. Some of the respondents (R2, R9, R15) had a combination of debt and physical health problems. Other respondents (R1, R4, R13) experienced mental health problems in addition to debt and physical health problems. Finally, there were respondents who did not have any debts, but who had other socio-economic and physical or mental health problems. R5 was unemployed and living on benefits, R10 had a turbulent history in youth care and unstable housing and R12 was precarious both in work and housing.

Importantly, not all life stories follow the linearity and unidirectionality of socio-economic status to health outcomes as assumed by the FCT (Øversveen et al. 2017). A typical FCT pathway could be described as having a lack of (financial) resources due to lower socio-economic status, leading to stress and an unhealthy lifestyle. The repercussions of this stress accumulate over the years and result in poor health outcomes, often seen in non-communicable diseases such as cardiovascular disease or diabetes. The typical FCT pathway (or variations on it) can be found in 9 out of the 15 respondents, or two-thirds of our cases. Nevertheless, we find two additional outcomes that cannot be accounted for by FCT. First, six respondents experienced *different* pathways of socio-economic and health problems, suggesting that FCT does not always proceed in a linear and unidirectional manner. Second, we observed that *all* 15 life trajectories are composed of different patterns together forming chains of events that cannot be captured with the correlational approach found in many quantitative studies of health inequality.

Where the respondents' life stories do *not* display the linear and unidirectional trajectory from low SES to health problems, we observe a non-linear and sometimes reverse chain of events. Take R2, for instance, whose problems did not start with socio-economic difficulties, but with health complications leading to job loss. In other words, R2 shows a *reverse directionality* than is presumed by FCT. R5's health issues—a genetic health deficiency—*ran parallel* to experiences with child abuse. While unrelated to the child abuse she experienced in a low socio-economic household, the combination of both severely complicated her life. Respondents R6 and R8 have dealt with addiction and homelessness for a large part of their lives. These are extreme cases, in which low SES does not lead to poor health, but to a variety of other intertwined problems. Finally, respondents R10 and R13, both young, did not have severe physical health problems, but had to deal with serious mental health problems. In these final two life stories, the mental health problems derive from a different direction than low socio-economic status and the resources related to it, namely from an unstable family and home situation at a young age. Important to note, these findings do *not* counter FCT as SES clearly plays an important role in all life trajectories. Rather than debunking, this research extends FCT by analysing life trajectories beyond a linear and unidirectional relationship between SES and health.

But most importantly, we find that none of the life stories form a straight line from one life event to the next, but are built up of chains of different patterns. In our study, we observed five distinct patterns that imply a dynamic picture of the relationship between SES and health. When analysing the life stories in close detail, we find that not only the six life stories showing a non-linear pathway, but even the nine life stories following the FCT pathway from low socio-economic status to poor health consist of different patterns. Not one story is the same as another. Instead, we observed that different patterns return across all 15 life stories in unique chains. To describe the five patterns we use illustrative labels: *snowball, ping-pong, escalator, quicksand* and *lever*. In Table 2 we present which of the five patterns were found in which life trajectory of all 15 respondents.

The five patterns are defined in Table 2 and illustrated below by two life trajectories of two individual respondents. The trajectory of Rosa (R14) is illustrative of a typical FCT life trajectory starting from socio-economic problems and accumulating health problems throughout life as a result. However, the life story also shows that even this FCT trajectory is dynamic and is best described as a chain of the patterns we distilled from the interviews. Second, the trajectory of Edson (R2) is illustrative for a life course that does not follow the typical FCT trajectory. This life story shows reverse directionality of health and socio-economic issues and is made up of a chain of different patterns we distilled from the interviews. We will elaborate on the patterns in relation to policy entry points in the discussion of the results.

4.1 | Rosa's Life Trajectory

At first sight, Rosa's life trajectory fits the FCT meta-mechanism linking low SES to poor health outcomes. Rosa's life is defined by short-term contract jobs. Apart from one 11-year period of stable employment, she has had unstable income throughout her adult life. Every time she loses her income, she gains debts. Every time she gets another job, she repays those debts again. Although she has no immediate health issues, at age 60 she is worn down and has both physical and mental health issues for which she does not see a doctor, because she is scared of the healthcare costs. In the following quote Rosa reflects on the continuous struggle she experiences: '*It's always been a struggle to get things done, but especially when you don't have a stable job*'.

When analysed more closely, the life trajectory of Rosa shows dynamic elements that the FCT does in principle not account for. We see this in her life story, for example, in the episode in which her mother has just passed away. The life event of losing her mother triggers Rosa to change her life. She leaves a stable job and housing, planning to move back from the Netherlands to the country where she was born. However, things do not turn out well and she ends up staying in the Netherlands instead, but this time without a job or a home. For the next period, she lives in her father's house and her daughter's student room instead.

We labelled this type of external factor that changes a life trajectory a 'lever'. The *lever* triggers a sudden change in the status quo situation. The lever puts force on a moment in a person's life and this force makes the trajectory of issues the person is experiencing redirect completely. In this example the lever is negative, but it could also be positive. Levers play an important role in the majority of life-stories. Our analysis shows that life is not always pre-wired, but also consists of contingencies.

Another episode of Rosa's life is characterised by a long period in which she has housing and sometimes income, but her life is neither progressing nor deteriorating. In one particular phase her employment contract is not extended after 3 years, followed by 3 years of unemployment benefits and volunteer work. This is followed by social assistance, after which she again finds employment, but her contract is not extended. During this period of time, Rosa is able to pay her rent. However, she does accumulate debts, which she tries to repay. She reflected on her feelings in this period, illustrated in the quote below.

> It's as if you're drowning, but you're not drowning just yet. I've had that feeling, actually I still do.

We label this pattern *quicksand,* which is defined by a longer period of time in which someone finds themselves in a bad, yet not directly critical, situation. This pattern shows the intensity of the developing problems, in this case at a slow pace.

4.2 | Edson's Life Trajectory

Edson describes his younger working life as very successful, travelling around the world, having different jobs and being well-paid. At the age of 50, Edson breaks his knee, setting off a chain reaction of health and socio-economic problems. As such, Edson's life trajectory does not follow the typical FCT pathway

TABLE 2 | Patterns between socio-economic and health issues in life trajectories.

Pattern	Definition	Present in life stories	Illustrative quote
Ping-pong	The ping-pong pattern refers to a back-and-forth between socio-economic and health issues. An event in the socio-economic sphere directly triggers an event in a person's health, or vice versa	R1, R2, R3, R4, R6, R8, R9, R11, R12, R13	'*As the years go by, and you stay in it longer, it gets worse. Insomnia starts to increase, because you're fretting every day of what do we eat tomorrow, what do we do tomorrow, or will someone [debt collector] come at the door? You never rest, you start to lose weight like 10 kilos, you start to become more nervous. And then, of course, when you're stressed, yeah, you get an ulcer*' (R9)
Snowball	The snowball pattern refers to smaller issues which build up over time and trigger bigger issues. The snowball pattern can be an extension of the ping-pong pattern, but is not exclusive to the ping-pong between socio-economic and health issues, as this mechanism can take place within one domain	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15	'*I also didn't know that they had made up those rules at the tax office (...). So at the end of 2011 I already received, well, during 2011 I already had to pay back a very large part right away. And that was really such a snowball effect. Every time, every year I had to pay back a huge amount and I had to provide proof and at a certain point it got crazier and crazier (...). So I became more and more insecure about myself*' (R1)
Escalator	The escalator pattern is a conjunction of issues together in a short period of time setting off a critical situation	R2, R4, R5, R6, R8, R11	'*I came home and my house was full of junkies (...), they were there using heroin, using cocaine. Yes, then something snapped in me and then I said yes, if I'm going to fuck up then I'll choose to do it myself. So then overnight I started using heroin*' (R8)
Quicksand	The quicksand pattern is defined by a longer period of time in which someone experiences a bad, yet not directly critical, situation	R7, R10, R12, R13, R14, R15	'*We tried to save money, but every time there was something to pay. (...) I tried all types of payment settlements. Because at some point I was sick of it and I did not want to see anything, hear anything, I did not want to respond. You find yourself in an apathic mood*' (R14)
Lever	The lever—often an external factor—triggers a sudden change in the status quo. This change can both be positive or negative, but has big impact and triggers the socio-economic and health issues to move in a different direction	Positive; R3, R5, R6, R8	'*I am happy with my municipal worker. Because of him I see the world differently. He helped me with the move. Because I still lived with my dad. (...) In the end I'm happy that three years ago I moved here. Before that I did not have anything*' (R5)
		Negative: R1, R4, R9, R13, R14, R15	'*And then a taxi company called saying well, you can, we want to see you and then had an interview and then I could start work the following Monday. Well, that was panic, arranging everything. It turned out that the taxi company (...) they were just scammers. From then on, things actually went pretty weird. (...) At one point I also received a wage garnishment, which I deducted from my salary for six months, it turned out that he had put it in his own pocket*' (R15)

but shows a different directionality of health problems leading to socio-economic problems. We use the label *ping-pong* to explain health issues triggering issues in the socio-economic domain and vice versa. Because of his decreased mobility, Edson could no longer continue his job. Fortunately, he could switch employment, yet the new job was less well paid. The story continues with ping-pong patterns as, in his new job, Edson has a heart attack followed by another one. His employer believes the situation is too risky and helps him to find different employment for which he can work from home, as illustrated in the quote below.

> I was working a night shift when I became ill again. Then the highest boss came to talk to me. He said: you are a good and kind worker, a good guy, but I don't want to be responsible for this. So you will go on sickness benefits.

Again this new job results in income loss. After a year, Edson's contract is discontinued and he lives from unemployment benefits from that point onwards, as illustrated in the quote below.

> I got a one year contract. And after one year, it did not get renewed, so you automatically go into unemployment benefits. (...) And from unemployment benefits, when you turn sixty-five, you go into state pension.

We use the common-parlance expression of something *snowballing* to describe a situation in which the issues grow worse over time. This part of Edson's life story is illustrative as health issues trigger loss of employment and subsequently income loss three times over. The income loss leads to debts and eventually also loss of his home. We found the snowball pattern in all respondents' life stories and as such it is a general shared experience. Yet in combination with the other patterns, each life trajectory is distinctive. The ping-pong and snowball patterns overlap in the case of Edson. They would not overlap in the case of someone whose socio-economic and health problems do not cross-influence each other but grow worse independently.

After years of ping-pong and snowballing, the pattern of Edson's life changes as the situation escalates. Edson loses his home and ends up living on the streets for a period of time, in which he also develops severe health problems. He even experiences a stroke while he is without a home. This episode of Edson's life is what we labelled an '*escalator*', a moment in which health and socio-economic problems in a short period of time collide in a poisonous cocktail, creating an escalation of life events.

After this detrimental episode a social worker helps Edson find a house. Edson's living situation stabilises. Yet, the health problems never go away. During the interview he shows his vast collection of medication he has to take daily. Edson is still paying off his debts. He has tried to make an agreement with the social worker on the debt programme to shorten the programme from 3 to 2 years, because, he says, he does not know how much time he has left.

5 | Discussion: From Life Trajectory Patterns to Policy Entry Points

The patterns we observe describe how socio-economic and health problems influence each other in an individual person's life, ultimately leading to health inequality at the macro-level. That is why the patterns give us insight into possible entry points for policy interventions on health inequality. The ping-pong and snowball pattern together are most similar to the typical FCT trajectory, in which socio-economic problems accumulate and lead to other (health) problems. This process is also described by Wolff and De-Shalit (2007) as a cumulative disadvantage. Researchers have rightly argued that redistribution is the designated policy to stop this downward spiral (Lynch 2020). In this case, social policies and benefits can have a preventative effect on health (Goijaerts, Van der Zwan and Bussemaker 2023). In addition, the ping-pong mechanism emphasises a possible different *directionality* between SES and health problems across the life course, related to existing analyses regarding the bidirectionality of the SES and health relationship (Hoffmann, Kröger and Pakpahan 2018). Any behavioural health intervention would not have prevented Edson from accidently breaking his knee and losing his job and accumulating debt as a consequence of that. Besides behavioural health interventions and redistribution, the welfare state should thus also invest in supporting and activating people with health problems to prevent socio-economic issues.

The escalator and quicksand patterns emphasise the difference in the *intensity* of issues across the life course. Some problems stay stable for a while (quicksand), or grow worse in a short time period (escalator). This variation in the degrees of intensity requires more than behavioural health interventions or redistribution, it requires a welfare state that offers services and provisions in the short-term. Hence, it is important for the welfare state to offer support that can be upscaled and downscaled and secure the accessibility of the services it offers. The importance of flexible services aligns with the scholarship that describes the change from old to new social risks in which services are increasingly becoming more important to support people than redistribution (Bonoli 2005; Klenk and Reiter 2023).

The lever is different from the other patterns in that it moves another pattern rather than being a pattern itself. It helps us contextualise life trajectories and take into account important *external factors* in two different ways. First, as contingencies that can cause people to become disadvantaged based on bad luck or events. Here, lever complements life course theory describing the important role of life events in future development (Elder 1998). Relatedly, lever shows the importance of social relationships. For example, both R9 and R15's life trajectories took a turn for the worse after a divorce. Second, there is an important role for the welfare state as a positive lever in some of the respondents' life stories. For several respondents, a worker at a government institution—often referred to as street-level bureaucrat (Lipsky 1980)—was the key figure turning their life trajectory in a positive direction. For instance, an understanding municipal social worker took it upon himself to offer R5 weekly personal guidance, not only helping her practically but also increasing her confidence that someone cared for her.

This changed her outlook on life completely. Also, R8 explains how several 'key figures'—a policy officer, head of the rehab facility—helped to turn her life trajectory for the better. Hence, instead of a linear trajectory to poor health in FCT, the lever mechanism helps us to imagine how policies could play a role triggering a way out of a downward trajectory.

Sometimes help was not organised in a beneficial way for the respondents' life trajectories. This is a finding we could not report in detail in the results, but in some life trajectories we have observed the welfare state context not just as a lever, but also in its absence of help. For instance, when respondents were not eligible for help, or services were not available or accessible as a result of complex organization. This finding is related to the institutional meta-mechanism proposed by Freese and Lutfey (2011) and deserves more investigation in future research.

This study does not capture the entire range of hypothesised explanations of the paradox of health inequality. We have chosen to focus our contribution on the welfare state context. Yet Mackenbach et al. (2017) have hypothesised that the fundamental causes of the social gradient in health outcomes may have transitioned away from material to non-material factors. Although we did not analyse immaterial factors per se, we found reason to assume that factors such as low health literacy, cultural norms and lack of social support are indeed important and should be studied further. Also our reported results suggest looking beyond material factors for future research, namely the role of state institutions and street-level bureaucrats as 'key figures' in life courses.

6 | Conclusion

The substantive effect of more than four decades of research on health inequality has been too small in terms of its translation to policy interventions which work to reduce health inequality (Bambra et al. 2011; Lynch 2020; Mackenbach 2011). In recent years, health inequality research has therefore shifted from large-N, cross-case analyses towards more theoretical development and the use of open-ended research methods (e.g., Beckfield et al. 2015; Gkiouleka et al. 2018; Smith and Schrecker 2015). This paper has taken the critique of Øversveen et al. (2017) on existing theories of health inequality, in particular the FCT, as a starting point for an empirical study of the patterns between socio-economic and health issues in the lives of disadvantaged people.

The 15 biographies presented in this paper have shown that people experience a chain of different patterns connecting socio-economic status to poor health outcomes throughout their lives, instead of a linear and unidirectional trajectory. In the chains of the five observed—but not necessarily exhaustive—patterns that make up the lives of the respondents in this study, directionality twists and turns rather than sticking to a uniform path, intensity changes and external factors can play a role in changing the trajectory of people's lives and the issues they have been facing.

We subscribe to the FCT and its main argument that socio-economic status plays a fundamental role in health inequality. After all, we find that the typical FCT trajectory is applicable to most of the respondents we interviewed. In addition, this paper seeks to refine FCT by providing insight into the complex dynamics of health inequality. The FCT theory provides an important policy entry point, which is the general redistribution of money and power. This study complements FCT by showing entry points to improve health not only in the direction of SES to health, but also the other way around (ping-pong). Furthermore, it underlines the importance of 'cumulative disadvantage' as shown by Wolff and De-Shalit (2007) as captured in the snowball pattern. This study also provides insights to policy entry points in high intensity periods of disadvantage (escalator) or low intensity periods (quicksand), both leading to health problems in different ways. Finally, the lever helps to reimagine the life trajectories of disadvantage in the larger context of contingencies, social relationships and possibilities for positive change.

Recently, health inequality scholars have developed new theories to better understand the relationship between macro-level welfare state institutions on the one hand and micro-level health outcomes on the other hand (Beckfield et al. 2015; Goijaerts, Van der Zwan and Bussemaker 2023). Beckfield et al. (2015) describe multiple institutional processes through which the welfare state distributes health in the population: redistribution of resources, compression in terms of lower and upper bounds of living standards, mediation on the operation of the social determinants of health and institutional imbrication which represents the cross-cutting effect of policies. At this critical point, we require empirical research to inform this theory development. This study provides additional insights through observing bottom-up experiences of the intervention of welfare state institutions on people's lives. On the basis of our research we presume that there are indeed different ways in which welfare state institutions could affect the patterns between socio-economic and health problems. Moreover, we argue that taking into account disadvantaged people's life experiences in the design of policies could improve the effectiveness of welfare state institutions in ameliorating health inequalities.

Author Contributions

Janna Goijaerts: conceptualization (lead), data curation (lead), investigation (lead), methodology (lead), project administration (equal), visualization (lead), writing–original draft (lead), writing–review and editing (equal). **Natascha van der Zwan:** conceptualization (equal), methodology (equal), supervision (equal), writing–original draft (equal), writing–review and editing (equal). **Jet Bussemaker:** conceptualization (equal), project administration (equal), supervision (equal), writing–review and editing (equal).

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Ethics Statement

Our study was conducted with approval of the Medical Ethics Committee of Leiden University Medical Centre (approval no. N20.161) and the Ethics Committee of the Faculty of Governance and Global Affairs, Leiden University (approval no. 2020-015-BSK-Goijaerts). All participants provided written informed consent prior to enrolment in the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Research data are not shared, as interview respondents did not consent to data sharing.

Endnotes

[1] During the last three or four decades, a widening of inequalities in mortality has been reported for many Western European countries—on a relative and sometimes also on an absolute scale (Mackenbach 2012, 762).

[2] This difference in length of answer to the first question might be explained by many factors, most importantly some people feeling more comfortable to speak than others. In the second and third step of the interview the interviewer made sure that a similar level of detail was reached for all interviews.

[3] Before selecting the respondents, they were asked either via email or telephone to shortly describe their livelihood precarity, mental or physical health problems and help received through government institutions. We opted for a broad interpretation of these criteria because we aim to contribute to FCT in breadth instead of in depth as explained in the introduction and discussion in relation to contextualized causality (Maxwell 2004).

[4] Some of the respondents with an ethnic minority background (R2, R3, R4, R12, R14) were not born in the Netherlands and have thus not always been included in the Dutch welfare state. However, this is also a part of the universal population of people living in precarity in the Netherlands and we have only taken into account their interactions with the Dutch, and no foreign, welfare state.

[5] The Council used the interviews for a journalistic report intended to advise and improve Dutch policies. The latter is not an output of Leiden University. The participants provided written informed consent for the interviews being used for both the Council publication and for the academic research purposes.

[6] This research was conducted with approval of the Medical Ethics Committee of Leiden University Medical Centre and the Ethics Committee of the Faculty of Governance and Global Affairs, Leiden University.

[7] Selection included professional 'experts by experience' on socio-economic and health issues, namely respondents R5, R8, R10, R13, R15. These respondents have received training in telling their life story to help others.

[8] During one interview, a contact person from the organization offering housing to the respondent was present.

[9] Given the Covid-19 crisis situation interviews were conducted at a safe distance (at least 1.5 m according to Dutch regulations).

References

Bambra, C., K. E. Smith, K. Garthwaite, K. E. Joyce, and D. J. Hunter. 2011. "A Labour of Sisyphus? Public Policy and Health Inequalities Research From the Black and Acheson Reports to the Marmot Review." *Journal of Epidemiology & Community Health* 65, no. 5: 399–406. https://doi.org/10.1136/jech.2010.111195.

Baum, F., and M. Fisher. 2014. "Why Behavioural Health Promotion Endures Despite Its Failure to Reduce Health Inequities." *Sociology of Health & Illness* 36, no. 2: 213–225. https://doi.org/10.1111/1467-9566.12112.

Beckfield, J., C. Bambra, T. A. Eikemo, T. Huijts, C. McNamara, and C. Wendt. 2015. "An Institutional Theory of Welfare State Effects on the Distribution of Population Health." *Sociological Theory & Health* 13, no. 3–4: 1–18. https://doi.org/10.1057/sth.2015.19.

Bonoli, G. 2005. "The Politics of the New Social Policies: Providing Coverage Against New Social Risks in Mature Welfare States." *Policy & Politics* 33, no. 3: 431–449. https://doi.org/10.1332/0305573054325765.

Brown, T. H., L. J. Richardson, T. W. Hargrove, and C. S. Thomas. 2016. "Using Multiple-Hierarchy Stratification and Life Course Approaches to Understand Health Inequalities: The Intersecting Consequences of Race, Gender, SES, and Age." *Journal of Health and Social Behavior* 57, no. 2: 200–222. https://doi.org/10.1177/0022146516645165.

CBS. 2019. Gezonde levensverwachting; inkomensklasse. https://opendata.cbs.nl/#/CBS/nl/dataset/80298ned/table?ts=1647868474194.

Eikemo, T. A., and E. Øversveen. 2019. "Social Inequalities in Health: Challenges, Knowledge Gaps, Key Debates and the Need for New Data." *Scandinavian Journal of Public Health* 47, no. 6: 593–597. https://doi.org/10.1177/1403494819866416.

Elder, G. H. 1998. "The Life Course as Developmental Theory." *Child Development* 69, no. 1: 1–12. https://doi.org/10.2307/1132065.

Esping-Andersen, G. 1990. *The Three Worlds of Welfare Capitalism*. Princeton, New Jersey: Princeton University Press.

Freese, J., and K. Lutfey. 2011. "Fundamental Causality: Challenges of an Animating Concept for Medical Sociology." In *The Handbook of the Sociology of Health, Illness, and Healing*, edited by B. A. Pescosolido, J. K. Martin, J. McLeod, and A. Rogers, 67–81. New York, NY: Springer.

Gkiouleka, A., T. Huijts, J. Beckfield, and C. Bambra. 2018. "Understanding the Micro and Macro Politics of Health: Inequalities, Intersectionality & Institutions – A Research Agenda." *Social Science & Medicine* 200: 92–98. https://doi.org/10.1016/j.socscimed.2018.01.025.

Goijaerts, J., N. Van der Zwan, and J. Bussemaker. 2023. "Health and the Social Investment State." *Journal of European Public Policy* 30, no. 5: 828–848. https://doi.org/10.1080/13501763.2022.2038239.

Hammad Mrig, E. 2021. "Integrating Fundamental Cause Theory and Bourdieu to Explain Pathways Between Socioeconomic Status and Health: The Case of Health Insurance Denials for Genetic Testing." *Sociology of Health & Illness* 43, no. 1: 133–148. https://doi.org/10.1111/1467-9566.13195.

Hoffmann, R., H. Kröger, and E. Pakpahan. 2018. "Pathways Between Socioeconomic Status and Health: Does Health Selection or Social Causation Dominate in Europe?" *Advances in Life Course Research* 36: 23–36. https://doi.org/10.1016/j.alcr.2018.02.002.

Jones, N. L., S. E. Gilman, T. L. Cheng, S. S. Drury, C. V. Hill, and A. T. Geronimus. 2019. "Life Course Approaches to the Causes of Health Disparities." *American Journal of Public Health* 109, no. S1: S48–S55. https://doi.org/10.2105/ajph.2018.304738.

Klenk, T., and R. Reiter. 2023. "Social Services as Critical Infrastructure – Conceptualising and Studying the Operational Core of the Social Investment State." *European Journal of Social Security* 25, no. 2: 115–138. https://doi.org/10.1177/13882627231175566.

Link, B., and J. Phelan. 1995. "Social Conditions as Fundamental Causes of Disease." *Journal of Health and Social Behavior, Extra Issue: Forty Years of Medical Sociology: The State of the Art and Directions for the Future* 35: 80–94. https://doi.org/10.2307/2626958.

Lipsky, M. 1980. *Street Level Bureaucracy: Dilemmas of the Individual in Public Services*. New York: Russell Sage Foundation.

Lutfey, K., and J. Freese. 2005. "Toward Some Fundamentals of Fundamental Causality: Socioeconomic Status and Health in the

Routine Clinic Visit for Diabetes." *American Journal of Sociology* 1105, no. 5: 1326–1372. https://doi.org/10.1086/428914.

Lynch, J. 2020. *Regimes of Inequality: The Political Economy of Health and Wealth*. Cambridge, Massachusetts: Cambridge University Press.

Mackenbach, J. P. 2011. "Can We Reduce Health Inequalities? An Analysis of the English Strategy (1997–2010)." *Journal of Epidemiology & Community Health* 65, no. 7: 568–575. https://doi.org/10.1136/jech.2010.128280.

Mackenbach, J. P. 2012. "The Persistence of Health Inequalities in Modern Welfare States: The Explanation of a Paradox." *Social Science & Medicine* 75, no. 4: 761–769. https://doi.org/10.1016/j.socscimed.2012.02.031.

Mackenbach, J. P., C. W. N. Looman, B. Artnik, et al. 2017. "Fundamental Causes' of Inequalities in Mortality: An Empirical Test of the Theory in 20 European Populations." *Sociology of Health & Illness* 39, no. 7: 1117–1133. https://doi.org/10.1111/1467-9566.12562.

Maxwell, J. A. 2004. "Using Qualitative Methods for Causal Explanation." *Field Methods* 16, no. 3: 243–264. https://doi.org/10.1177/1525822x04266831.

McCartney, G., E. Dickie, O. Escobar, and C. Collins. 2021. "Health Inequalities, Fundamental Causes and Power: Towards the Practice of Good Theory." *Sociology of Health & Illness* 43, no. 1: 20–39. https://doi.org/10.1111/1467-9566.13181.

Merrild, C. H., P. Vedsted, and R. S. Andersen. 2017. "Noisy Lives, Noisy Bodies." *Exploring the Sensorial Embodiment of Class, Anthropology in Action* 24, no. 1: 13–19. https://doi.org/10.3167/aia.2017.240103.

O'Donnell, S. 2020. "'Your Wealth Is Your Health': The Fundamental Causes of Inequalities in Diabetes Management Outcomes: A Qualitative Analysis." *Sociology of Health & Illness* 42: 1626–1641.

OECD. 2019. *Health for Everyone?: Social Inequalities in Health and Health Systems*. OECD Health Policy Studies. Paris, France: OECD Publishing.

Øversveen, E., H. T. Rydland, C. Bambra, and T. Eikemo. 2017. "Rethinking the Relationship Between Socio-Economic Status and Health: Making the Case for Sociological Theory in Health Inequality Research." *Scandinavian Journal of Public Health* 45, no. 2: 103–112. https://doi.org/10.1177/1403494816686711.

Phelan, J., B. Link, and P. Tehranifar. 2010. "Social Conditions as Fundamental Causes of Health Inequalities: Theory, Evidence, and Policy Implications." Supplement, *Journal of Health and Social Behavior* 51, no. S1: S28–S40. https://doi.org/10.1177/0022146510383498.

Richardson, T., P. Elliott, and R. Roberts. 2013. "The Relationship Between Personal Unsecured Debt and Mental and Physical Health: A Systematic Review and Meta-Analysis." *Clinical Psychology Review* 33, no. 8: 1148–1162. https://doi.org/10.1016/j.cpr.2013.08.009.

Rosenthal, G. 2004. "Biographical Research." In *Qualitative Research Practice*, edited by C. Seale, G. Gobo, J.F. Gubrium, and D. Silverman, 49–65. London, UK: SAGE Publications Ltd.

Rydland, H., E. Solheim, and T. Eikemo. 2020. "Educational Inequalities in High- vs. Low-Preventable Health Conditions: Exploring the Fundamental Cause Theory." *Social Science & Medicine* 267: 113145. https://doi.org/10.1016/j.socscimed.2020.113145.

SCP. 2019. Armoede in Kaart 2019. Den Haag: Sociaal en cultureel planbureau.

Slagboom, N., M. Crone, and R. Reis. 2022. "Exploring Syndemic Vulnerability Across Generations: A Case Study of a Former Fishing Village in the Netherlands." *Social Science & Medicine* 295: 113122. https://doi.org/10.1016/j.socscimed.2020.113122.

Smith, K. E., and T. Schrecker. 2015. "Theorising Health Inequalities: Introduction to a Double Issue." *Social Theory & Health* 13, no. 3–4: 219–226. https://doi.org/10.1057/sth.2015.25.

Umberson, D., K. Williams, P. A. Thomas, H. Liu, and M. B. Thomeer. 2014. "Race, Gender, and Chains of Disadvantage: Childhood Adversity, Social Relationships, and Health." *Journal of Health and Social Behavior* 55, no. 1: 20–38. https://doi.org/10.1177/0022146514521426.

Verd, J. M., and M. López. 2011. "The Rewards of a Qualitative Approach to Life-Course Research. The Example of the Effects of Social Protection Policies on Career Paths." *Forum for Qualitative Social Research* 12, no. 3: 15.

Weiss, D., E. R. Sund, J. Freese, and S. Krokstad. 2020. "The Diffusion of Innovative Diabetes Technologies as a Fundamental Cause of Social Inequalities in Health. The Nord-Trøndelag Health Study, Norway." *Sociology of Health & Illness* 42, no. 7: 1548–1565. https://doi.org/10.1111/1467-9566.13147.

Wengraf, T. 2001. *Qualitative Research Interviewing: Biographic Narrative and Semi-Structured Methods*. London, UK: SAGE Publications Ltd.

Wolff, J., and A. De-Shalit. 2007. *Disadvantage*. New York, NY: Oxford University Press Inc.