

**Invisible Consequences of Punishment:
Parental Imprisonment and Child Outcomes**

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PhD Dissertation

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Chapter 1

Introduction

This report is part of the PhD dissertation 'Invisible consequences of punishment: Parental imprisonment and child outcomes', conducted at the Department of Political Science and Government, Aarhus University and SFI – The Danish National Centre for Social Research.

The objective of the dissertation is to answer one overall research question: What are the consequences of parental imprisonment?

I investigate the research question in the following four papers:

1. 'Forældres fængsling – en stratificerende livsbegivenhed? [Parental imprisonment – a social stratifier?]', manuscript recommended for revision and resubmission in *Dansk Sociologi*.
2. 'Parental imprisonment: A predictor of Danish children's crime rates as adults?', manuscript recommended for revision and resubmission in *Young*.
3. 'Parental imprisonment and children's educational attainment in Denmark', conditional acceptance in *European Journal of Criminology*.
4. 'Parental imprisonment and out-of-home placement – two interrelated phenomena?', working paper.

The first paper considers parental imprisonment as a social phenomenon and examines whether parental imprisonment contributes to the social stratification of the Danish society. The paper thus presents the macro sociological setting for the dissertation's research question and sets the scene for the subsequent papers. The second and third papers examine the relationship between parental imprisonment and children's own criminality and educational attainment as adults, and indirectly consider the extent to which parental imprisonment should be considered a part of an intergenerational cycle of disadvantage. Finally, based on the previous findings, the fourth paper tests a mechanism – out-of-home placement – through which parental imprisonment might operate, with the aim of obtaining a better understanding of the process of cumulative disadvantage that parental imprisonment might trigger.

This report connects the separate papers by presenting the theoretical framework, the overall research design, and a summary of the main empirical results. Moreover, the report provides a detailed description of conceptu-

al and methodological issues and a discussion of the implications of the findings for further research.

The following chapter, Chapter 2, presents the research questions of the dissertation and puts forward the arguments for the dissertation's theoretical and empirical relevance. Chapter 3 concerns the understanding of the key concepts of crime and punishment and considers these phenomena in the Danish context. Chapter 4 presents the theoretical link between parental imprisonment and child outcomes and places this within a social stratification framework of the wider societal consequences of parental imprisonment. In Chapter 5, I review the existing literature and present the contribution of my dissertation. Chapter 6 presents the research design and data, and discusses the methodological challenges and data limitations of the dissertation. Chapter 7 summarizes the empirical results and main conclusions from the papers, and discusses the implications for future research and policy.

Chapter 2

Research questions

This dissertation examines children in Denmark who experience parental imprisonment and whether this experience has consequences for their life chances. The main purpose of the dissertation is to examine parental imprisonment as a social phenomenon in Danish society by providing systematic quantitative insight on children of prisoners in Denmark and their life courses. This is done by answering the following three questions:

- What characterizes the socioeconomic background of children of imprisoned parents in Denmark?
- Is parental imprisonment a risk factor in terms of the children's own criminality and educational attainment as young adults?
- Is out-of-home placement a mediator of the relationship between parental imprisonment and child outcomes?

To examine parental imprisonment as a social phenomenon in Danish society, we must understand both the social and political contexts for imprisonment as well as its individual consequences.

2.1 Why study parental imprisonment?

In most Western countries, modern-day punishments such as probation, parole and incarceration are regarded as state measures imposed on an individual lawbreaker. Hence, the legal system treats the lawbreakers as social isolates (Comfort, 2007). However, when the legal system sentences lawbreakers to prison, the punishment often extends beyond the legal offender him- or herself because imprisonment also affects families and children. Several studies have demonstrated the ways in which legally innocent people are affected by the imprisonment of a spouse or a parent (Wakefield & Uggen, 2010; Comfort, 2007; Braman, 2004).

Within the last three decades imprisonment rates have increased significantly in most Western countries, including Denmark (Danish Prison and Probation Service, 2011; Christie, 2000; Walmsley, 2002, 2011, 2009; Balvig, 2004). As a consequence, more children will probably experience being separated from a parent for a period of time over the course of their childhoods. Experiencing a parent's arrest, incarceration, and release is often very

distressing for children and adolescents, and imprisonment of a parent may often entail fundamental changes for a family (Smith & Jakobsen, 2010; Christensen, 1999; Comfort, 2007). Close and daily contact with the imprisoned parent is obviously no longer possible, the family income might be reduced, the family might have to move, and in some cases the child will have to be relocated, particularly if the imprisoned parent is a single parent. Additionally, many of these children experience shame and insecurities about the future as a result of their parent's incarceration (Smith & Jakobsen, 2010; Christensen, 1999; Comfort, 2007; Martynowicz, 2011).

These immediate consequences are thoroughly described in both qualitative and quantitative studies. Yet the question remains whether these consequences extend beyond childhood in European welfare states. Very little systematic knowledge exists about this group of children in Europe in terms of the number of children who experience parental imprisonment (Martynowicz, 2011), and even less is known about the consequences of parental imprisonment on the children's life course. Does the experience of parental imprisonment affect children's life chances in terms of their own criminality and educational outcomes? Is the imprisonment of a parent a contributing factor in reproducing the social stratification of society, and does society, by imprisoning a larger proportion of the population, make it even harder for an already vulnerable group to climb the social ladder?

Most of the existing research on the relationship between parental imprisonment and child outcomes comes from the United States. However, the US findings might not be transferable to a Western European welfare state context. First, the United States has the highest imprisonment rate in the Western world: 743 per 100,000 (Walmsley, 2011). Second, the United States also has a very different 'welfare state regime' from most European countries (Esping-Andersen, 1990), which may influence the mechanisms through which parental imprisonment operates. Danish institutional characteristics and public benefits might somewhat compensate for the potential influence of parental imprisonment – for instance, a drop in family income would be mitigated to a greater extent in Denmark. By using Danish data, this study contributes towards a better understanding of how parental imprisonment may affect the life course of children in European-style welfare states.

The theoretical motivation for the analyses is twofold: first, the theoretical motivation underlying the empirical analyses concerns the perception of parental imprisonment as a social phenomenon and the extent to which it might be a contributory factor in the social stratification process in a welfare state such as Denmark. As I will argue later, parental imprisonment might be an overlooked factor in the stratification literature. Second, the analyses pro-

vide new insight to the discussion about whether parental imprisonment in itself affects later child outcomes, or if rather it is pre-existing disadvantages (including parents' criminality) that 'selects' parents into prison and also affects children's outcomes. This is a fundamental question in the research on parental imprisonment. As I shall discuss in detail in the theoretical section, the former argument focuses on parental imprisonment as a life-changing event and as a trigger of additional risk factors, and draws on theories of deviance such as a general theory of strain (Agnew, 1992), social learning theory (Akers, 1973), control theory (Hirschi, 1969) and labelling theory (Becker, 1963). The latter perspective emphasizes how early-life socialization, traits and socio-economic background cause both parental imprisonment and children's outcomes (Rowe & Osgood, 1984; Mednick, Gabrielli, & Hutchings, 1984; Gottfredson & Hirschi, 1990; Farrington, 2003). The two perspectives yield different explanations for a correlation between parental imprisonment and child outcomes; however, this does not mean that they are mutually exclusive. Instead, this dissertation draws on the assumption that both social selection and parental imprisonment, as an environmental factor, explain the variation in children's crime rates and educational attainment. Consequently, the theoretical challenge is to disentangle the influence of parental imprisonment from the social selection variables.

2.2 A suitable amount of pain

Most people would probably agree that it is unfair that children are indirectly punished as a consequence of a parent's imprisonment. At the same time it seems obvious that society cannot abstain from prosecuting and imprisoning individuals just because they are parents. However, as the Norwegian criminologist Nils Christie has documented, the level of imprisonment in a society is not determined by the crime rate and punishment is not just a simple reaction to deviant behaviour. Christie argues that it is important to realize that the size of a prison population is a normative question. He defines punishment as 'pain delivery', designed to inflict pain on the offender (Christie, 1981). Hence, a society needs to decide on a suitable amount of pain, and this question is ultimately based on values. According to Christie, the level and type of punishment reflect the standards that reign in a society, and he proposes that every member of society should ask themselves if that level of pain is acceptable. Nils Christie's contribution to the discussion about punishment and the increasing crime rates is also fundamental to an argument for the importance of studying the consequences of parental imprisonment. The size of a prison population is a result of decisions made by policymakers

– it is a normative question (Christie, 2000). Ergo, the size of the population of children experiencing parental imprisonment is also a result of the same decisions. Both as individuals and collectively as a society considering the ‘suitable amount of pain’, we therefore need to have information about the wider consequences of the inflicted pain in order to be able to assess whether it is acceptable. This dissertation does not put forward any such normative assessment. Instead, the aim is to provide more knowledge about the wide and multi-faceted impact of punitive sanctions and thereby provide a foundation for assessing whether these consequences can be accepted.

In sum, studying the consequences of parental imprisonment in Denmark is important for four reasons. First, investigating parental imprisonment in a Nordic European welfare state setting expands our knowledge of how parental imprisonment might affect children in ‘welfare state regimes’ other than the more ‘liberal’ regime found in the United States. Second, it provides leverage to the discussion in the parental imprisonment literature about whether parental imprisonment in itself affects children’s own criminality and educational attainment, or if parental imprisonment is merely a proxy for pre-existing disadvantage. Third, it raises the question of whether parental imprisonment is a contributory factor in the social stratification of Danish society that the stratification literature has previously neglected to take into consideration. Fourth, the dissertation provides new valuable knowledge of the wider societal consequences of imprisonment in Denmark, which gives policymakers a more informed foundation when assessing whether ‘the level of pain’ in Denmark is suitable.

Chapter 3

Crime and punishment in Denmark

This chapter contains a discussion of different concepts of crime and punishment, as they are essential phenomena in analyses of parental imprisonment. Subsequently, I relate them to the contemporary Danish legal system and the circumstances to which children with imprisoned parents in Denmark are subject. In order to assess the extent to which the findings presented later in this dissertation are dependent on circumstances unique to Denmark, I furthermore consider how the Danish welfare state model might alleviate some of the consequences of parental imprisonment compared to other welfare state types.

3.1 A sociology of punishment

Acts are not, they *become*. So also with crime. Crime does not exist. Crime is created (Christie, 2000: 22).

As the above citation of the Norwegian criminologist Nils Christie stresses, crime does not exist *per se*; it has to be defined or constructed. As early as 'The Rules of Sociological Method' in 1885, Émile Durkheim argued that crime is an essential and *normal* feature of all societies, but what is defined as deviant and criminal behaviour varies between societies and over time (Durkheim, 2000a, 2000b). According to Durkheim, punishment is not just a reaction towards an individual who breaks the rules in a given social context. It also functions as an indicator of the schism between normality and deviance in a given society, and consequences of punishment are thus not only a question of the *pain* inflicted on the individual, but also an index of society's invisible moral bonds.

However, Durkheim neglects the aspect of punishment that functions with an aim to improve and correct by technical means rather than by moral persuasion. In this regard Michel Foucault, with his focus on social control and the perception of punishment and imprisonment as a disciplining institution (Foucault, 2002), has been a main point of reference in the sociology of punishment. Drawing on Foucault's account, it has been argued that imprisonment is a way of governing social insecurity in postmodern society and thus an important political institution (Christie, 2000; Wacquant, 2009; Young, 1999).

Criminologist David Garland encourages sociologists to think of punishment as a social institution, because it enables us to identify other aspects of punishment as well as embrace the fact that penalty is tied to the wider networks of social action and cultural meaning (Garland, 1990: 282). Punishment's role in modern society is not at all obvious or well known. Garland argues that 'like all habitual patterns of social action, the structures of modern punishment have created a sense of their own inevitability and of the necessary rightness of the status quo. [...] Thus we are led to discuss penal policies in ways which assume the current institutional framework, rather than question it,' (Garland, 1990: 3). He stresses that the methods of modern punishment are neither obvious nor self-evident; they are matters of values and culture.

The understanding of crime and punishment as social phenomena are an important part of this dissertation's ontological point of departure. Like Garland, this dissertation will draw on both Durkheim's moral (and functionalist) understanding and Foucault's instrumental understanding of punishment, and how these two aspects combined make up the social institution. This understanding of crime and punishment does not, however, entail assumptions about a pointlessness in constructing and using measures of crime or punishment. The main point is that these are not stable phenomena, and that they are interrelated with the norms and values of a society. Thus it is possible to apply and construct measures of crime and punishment in a given society at any given time.

The present dissertation operates within the sociology of punishment and thus tries to understand punishment and its role for society. These types of studies can illuminate how and to what extent punishment reflects a given society, but at the same time also affects society. Classical sociologists like Durkheim (2000a, 2000b) and Foucault (2002) emphasize this dialectic, and how we as sociologists, through analyses of what a society defines as deviant and how it responds to threats against the social order, can reveal some of the ways that the individual and the social order are interactively constructed (Duff & Garland, 1994; Garland, 1990). Punishment is a social institution which can be understood only within the social context that gives it its practical meaning and determines its social effects (Duff & Garland, 1994). Let us therefore turn to a description of the concrete and contemporary social institution of punishment in Denmark.

3.2 Crime and punishment in Denmark

The penal code in Denmark deals with the traditional types of crime, the main groups being property, violent, sexual, and serious drug offences, with special laws for other types of offences. The difference between the penal code and the special laws tends to reflect the types and severity of typical sanctions. By and large the penalty for most violations of the special laws is a fine, whilst the penal code offences traditionally result in a suspended or an unsuspended prison sentence (Kyvsgaard, 2003).¹ The minimum age of criminal responsibility in Denmark is 15 years, and Denmark has no separate system for juvenile justice. If an individual commits a crime before his or her 15th birthday, the case will be handed over to the social authorities (Kyvsgaard, 2003).

As is the case with most other Western countries, reported crime in Denmark increased after World War II, reached its peak in the 1980s and has been relatively stable since (Balvig, 2004; Statistics Denmark, 2012). The majority (94 per cent) of the reported penal code offences in 2011 were property crimes, whilst violent crimes constitute 4 per cent and sexual crimes less than 1 per cent (Statistics Denmark, 2012). This relative distribution has not changed considerably since the 1980s (Statistics Denmark, 1990; Statistics Denmark, 2000).

Denmark does not imprison nearly as many of its citizens as the United States or England and Wales. Denmark has an imprisonment rate of 74 per 100,000 people, whilst the United States has 743 and England and Wales 153 (Walmsley, 2011). On the basis of such numbers, criminologist John Pratt (2008a; 2008b) has argued that the Scandinavian welfare states exhibit an *exceptional* penal culture in terms of both rates of imprisonment and their humane prison conditions. Pratt argues that the roots of this exceptionalism are to be found in the very egalitarian cultural values and social structures of the Scandinavian countries. The extensive welfare state in the Scandinavian countries is also seen as an important part of the foundation for this exceptionalism. However, he also recognizes that growing imprisonment rates in the Nordic countries might suggest that the region is at a crossroads (Dullum & Ugelvik, 2012).

In some regards the Nordic countries' penal culture can indeed be viewed as exceptional. Since the 1970s the Danish Prison and Probation Ser-

¹ This dissertation only considers offences that have led to a suspended or an unsuspended sentence. Details on operationalisation can be found in Chapter 6 on the research design.

vice has conducted its work according to the principle of normalization, stating that 'the daily activities of the Prison and Probation Service shall in general, and whenever specific agreements are reached, be related to normal life in the general community,' (Danish Prison and Probation Service, 1998: 10). Moreover, there is a high material standard in most of the prison facilities, and in Denmark there is an extensive use of 'open prisons'. In these facilities there are no physical barriers to keep people from walking in and out of the prison. However, leaving the premises without permission is still an escape that will result in a transfer to a closed facility (i.e. maximum security). Out of the total Danish prison capacity of 4,116 spaces, the open prisons account for 1,421 spaces, 946 are closed facility spaces, whilst the last 1,749 are spaces for remand (Smith, 2012: 39).

Figure 3.1. Number of prison sentences and months sentenced (index 1984 = 100)



Source: Danish Prison and Probation Service (2002; 2011).

Nonetheless, restrictive changes to the penal code in Denmark have resulted in an increase in the number of inmates and the length of, and in 2011 Danish prisons and jails had historically high rates of occupancy even though capacity has been considerably expanded in the last decade (Danish Prison Officers' Association, 2011).² Thus, as shown in Figure 3.1, an increase in the number of sentences and the number of months sentenced can be observed since 1984, and particularly after 2001. The decrease in imprisonments and sentenced months after 2006 was a result of a reform of the police force and

² The occupancy rate was 98.5 per cent for the first four months of 2011.

³ Defined as detentions lasting more than three months.

⁴ In 2008 a law change occurred regarding pre-trial confinement. The law now

the court of justice, which resulted in a delay in their work in 2007 and 2008. With the increase in 2009 and 2010 the number of sentences returned to the level observed before the reforms (Statistics Denmark, 2012).

Taking this development into account, the categorization of *exceptionalism* has been questioned by historian Peter Scharff Smith. He points to the emergence of penal populism in Denmark since the 1990s, a point which has also been put forward by Danish criminologist Flemming Balvig (2004). In both 1994 and 1997, laws about longer and stricter sentencing for violent crimes were passed, and in 2002, 2004, and 2011 the government further strengthened laws in this area. The political arguments put forth to justify the tougher laws were not related to utility and crime prevention – on the contrary, the primary arguments referred to *the feeling of justice* (Smith, 2012: 43; Balvig, 2004: 170). At the same time an increased willingness to disregard expert advice and criminological knowledge has prevailed among many politicians (Engbo & Smith, 2012; Smith, 2012).

Another feature of the Danish and Scandinavian prison practice that calls into question its reputation for being humane is the extensive use of pre-trial solitary confinement. The official reason for using pre-trial solitary confinement is to prevent a suspect from obstructing an investigation. In 2008, 5.3 per cent of all pre-trial detentions in Denmark were carried out in solitary confinement (Smith, 2012: 52). In addition, both the number of long-term pre-trial detentions³ and the total number of months of long-term pre-trial detention was higher in 2010 than in any of the previous ten years (Ministry of Justice. The Research Office, 2011).⁴

Thus although Denmark, along with the other Nordic countries, may seem exceptional in a comparative penal perspective, the evident penal populism has resulted in several concrete policies and reforms. These reforms and the extensive use of pre-trial solitary confinement are features of the Danish system of justice that are important to consider, insofar as they help comprise the legal system and circumstances to which children with imprisoned parents in Denmark are subject.

³ Defined as detentions lasting more than three months.

⁴ In 2008 a law change occurred regarding pre-trial confinement. The law now states that pre-trial confinement may not exceed more than six months if the charge cannot result in imprisonment for more than six months. However, in 2010, 127 pre-trial detentions did not comply with these new time limits (Ministry of Justice. The Research Office, 2011).

3.3 Danish children of imprisoned parents

In the Danish system, the responsibility for prisoners, and thus for the relationship between prisoners and their families, is held by the Danish Prison and Probation Service (*Kriminalforsorgen*). Within the last decade, this agency has implemented several initiatives to improve the visiting facilities and other avenues for maintaining good relationships between imprisoned parents and children in Denmark.

Generally, a person in pre-trial detention has the right to at least a half hour visit per week, and a person serving a prison sentence at least one hour per week. However, an imprisoned parent's visiting rights can be obstructed if either the non-imprisoned parent or another adult with custody of the child prevents the child from visiting. This is also the case if there is no adult to accompany the child or if there is not enough money to pay for the transportation to the prison or jail. Pre-trial detainees are only granted home leave under special circumstances, whilst parents serving sentences can generally be granted home leave every third weekend and some even more often if they have obtained a general permission for home leave (Smith & Jakobsen, 2010).

Visiting an imprisoned parent involves passing through a control procedure with a metal detector and sometimes a body search.⁵ How this control procedure is carried out and thus how it is experienced by the child depends on the prison officer on duty that day. The visiting facilities vary greatly in the Danish prisons and jails. By and large, the visiting facilities are better and less restricted in the 'open' prisons, but they are mostly set up for adult visits. However, within the last ten years the visiting facilities in many prisons have been improved considerably, particularly taking children's needs into account. All visits can be carried out in private visiting rooms, a few facilities have outdoor playgrounds, and some prisons even offer visiting apartments where the inmate can spend time with his or her family for up to two days. However, this consequently means that the children and partner of the inmate are also locked in for a period of time (Smith & Jakobsen, 2010).

Recently, other conditions for imprisoned parents and their children have also been significantly improved, after a pilot scheme concerning the appointment of prison officers responsible for the children in their facilities showed promising results (Hendriksen, Jakobsen, & Smith, 2012). In 2013 all Danish prisons and jails will have prison officers or social workers appointed to be responsible for visiting children.

⁵ Not a thorough body search, but children have been asked to lift up their shirts.

For the child of an imprisoned parent it makes a great difference whether the parent is serving a sentence in an 'open' or a 'closed' prison, or is being held in pre-trial detention. Individuals in pre-trial detention are much more restricted in terms of visits and general contact with the 'outside world'. During the period of pre-trial detention (which in some cases can be quite long), certain circumstances can complicate the contact between child and parent. In particular, if the parent is subject to monitoring of letters, phone calls and visits, their communication will be supervised in order to safeguard the investigation. As Smith and Jakobsen point out, it is a paradox that the conditions of pre-trial detention, i.e. for individuals who are presumed innocent until the legal system has proven them guilty of a crime, are in many regards poorer than those faced by convicted individuals serving their prison sentences (Smith & Jakobsen, 2010: 100).

In sum, although there are features of the Danish prison practice that are troubling from a visiting child's perspective, Danish visiting opportunities and facilities are generally better than their counterparts in Anglo-Saxon jurisdictions (Smith, 2012). Nonetheless, it is important to stress that the recent improvements of visiting facilities, the appointment of prison officers responsible for visiting children and the general increased focus on children of imprisoned parents has only taken place since the first report on children of prisoners in Denmark was published in 1999 (Christensen). Most of the analyses in this dissertation are based on the Danish cohort born in 1980, and these recent improvements do therefore not extend to these children's experiences with parental imprisonment.

3.4 The Scandinavian welfare model

As mentioned, John Pratt argues that the Scandinavian countries are exceptional with regard to their imprisonment rates and humane prison conditions. The foundation of this penal exceptionalism is, according to Pratt, to be found in a culture of equality and the Scandinavian welfare state model. Yet to this argument Smith adds that the fact that the Scandinavian welfare states are so extensive and regulatory might not necessarily lead only to humane policies, but also to very effective social control (Smith, 2012: 41).

Despite the unsettled discussion about the association between the Scandinavian welfare state and exceptional penal systems (Dullum & Ugelvik, 2012), I take the Scandinavian welfare model to be the context that shapes not only the penal system, but also the children who experience the imprisonment of a parent. In this regard, I draw on Esping-Andersen's typology.

Thus, in the present dissertation the welfare regime distinctions are used to illustrate a different point from the discussions described above. As I have argued earlier, punishment is a social institution and should be understood only within the social context that gives it its practical meaning and determines its social effects. Consequently, the form of the Danish welfare state must be taken into consideration when examining consequences of punishment in the Danish context. As Gösta Esping-Andersen clearly states, 'The welfare state is not just a mechanism that intervenes in, and possibly corrects, the structure of inequality; it is, in its own right, a system of stratification. It is an active force in the ordering of social relations,' (Esping-Andersen, 1990: 23).

In *The Three Worlds of Welfare Capitalism* (1990), Esping-Andersen presents the by now well-known and extensively used welfare state typology consisting of the liberal, the corporatist, and the social-democratic welfare state. A main factor distinguishing welfare regimes from one another is the extent of *de-commodification* of social policies. De-commodification occurs when a service is rendered as a matter of right, and when a person can maintain a livelihood without reliance on the market (Esping-Andersen, 1990: 21-22). The 'liberal' welfare state is characterized by taxed-based social benefits catered mainly to a clientele of low-income state dependents. This means that most people must rely on the market and secure themselves and their families by buying private social security and health insurances. In contrast, the basic principle in the 'corporatist' welfare state type is that social rights are something one must 'earn' by paying social security contributions, where half of the contribution is usually paid by the employer. Social rights are thus tied to employment and income. The third welfare type, the 'social-democratic' regime type, also provides tax-based social benefits. However, it provides welfare services for the whole population, not only for the most disadvantaged. It is a welfare state that promotes an equality of the highest standards, not an equality of minimal needs (Esping-Andersen, 1990). The largest degree of redistribution and de-commodification is thus found in the social-democratic welfare type, and the result is a welfare state with extensive services.

Denmark is closest to the 'social-democratic' welfare state categorization, and this is of great relevance for the expectations one can put forward about the nature of the association between parental imprisonment and child outcomes, as well as for interpretations of the findings. Given that Denmark has an extensive welfare system, this might compensate somewhat for the potential influence of parental imprisonment. In general, I therefore expect the mechanisms through which parental imprisonment operates in other types of welfare states, such as the United States, to be weaker in Den-

mark: as Hissel, Biljeveld and Kruttschnitt (2011) argue, the substantial drop in family income for many US families experiencing parental imprisonment is less likely to occur in Western European countries with extensive welfare policies. Moreover, in terms of possibilities for upward social mobility, another important feature of the Danish welfare state is the state-financed educational system, which ensures that cost-related constraints for entering further education are non-existent. This could make it easier for education to function as an institution for social mobility.

However, studies show that social class inequalities (and lack of social mobility) also persist in Denmark. Jæger and Holm demonstrate that economic, cultural, and social capital are the key predictors for educational attainment in Denmark (2007: 739). Therefore, despite the extensive welfare state, social stratification factors such as parental imprisonment may still affect Danish children's education and other important outcomes. By using Danish data, this study therefore contributes towards a better understanding of how parental imprisonment may affect the life course of children in 'social-democratic' welfare states.

Chapter 4

Theory

The main theoretical reason for examining consequences of parental imprisonment is that it yields new insight into the social effects of punishment and the relationship between imprisonment and social stratification. This is the macro-sociological point of departure for this dissertation, and this chapter therefore begins with an outline of the possible role that parental imprisonment plays in the social stratification of society. Central to this discussion is the fundamental question on the micro level about whether parental imprisonment in itself affects child outcomes, or if it is rather pre-existing disadvantages (including parents' criminality) that 'selects' parents into prison and also causes children's outcomes. If parental imprisonment affects later child outcomes, it could therefore also be considered a contributory factor in the social stratification process. This chapter describes and discusses in more detail these two theoretical perspectives, explaining the possible mechanisms at the micro level through which parental imprisonment might operate in affecting children's outcomes. Based on these perspectives, I develop the dissertation's theoretical model. The theoretical model reflects that it is not possible to make a clear distinction between all of the suggested theoretical explanations, categorized as either 'environmental' or 'selection'. This also means that I do not directly test these two perspectives against each other as competing theoretical hypotheses. Instead, with the aim of examining the overall hypothesis that parental imprisonment as an environmental factor net of pre-existing disadvantages affects children's criminal and educational outcomes, I indirectly address the plausibility of the suggested theoretical mechanisms in explaining the link between parental imprisonment and children's criminal and educational outcomes.

4.1 Parental imprisonment – a social stratifier?

Social stratification theories and research are about the stability of social inequality over the course of the lives of a particular birth cohort or between generations (Duncan, 1968). The social stratification perspective is relevant to consider when analysing consequences of punishment extending to the next generation. The unit of analysis for most studies on the consequences of imprisonment is the imprisoned individual, which is a very logical starting point. Nonetheless, when considering the consequences of punishment for

society at large and thus for the social stratification of society, a sole focus on the imprisoned individual may underestimate the potential consequences of imprisonment.

Previous research has shown that job opportunities and opportunities on the marriage market are reduced for ex-convicts, and their general social standing after imprisonment is low. However, at the same time studies also show that the situation of many of these ex-convicts is not profoundly different from their situations pre-prison, since many were already marginalised on the labour market before imprisonment (Wakefield & Uggen, 2010; Trancæs & Geerdsen, 2008; Western, 2002; Massoglia, 2008; Manza & Uggen, 2008). In contrast, directing our attention to the children of prisoners, the potential effects of imprisonment might be more serious from a social stratification perspective. Parental imprisonment happening at an early time in a life course perspective – in childhood or in adolescence – means that relatively more of the important factors for one's life chances are still undecided. For example, education and one's future possibilities in the labour market are not nearly as limited as their parents'. Therefore, parental imprisonment might decrease the possible resources available to these children and create limitation that would not otherwise have existed. Thus, not only when focusing on individual-level effects as proposed by the theoretical model below, but also when considering the wider effects of imprisonment for society, a focus on children is needed (Wakefield & Wildeman, 2011).

Children experience a great number and variety of events throughout childhood which may influence their well-being and life chances. A fundamental question in social sciences concerns parents' situation and resources, and how and to what extent these influence children's life chances. It is well-known that the likelihood of having social problems as an adult, *ceteris paribus*, is higher for children of parents with fewer educational and economic resources than for children of parents with more of these resources. For example, a childhood affected by poverty, divorce, serious illness in the household or multiple changes of addresses have, among other things, appeared to influence children's educational attainment (Jæger, Munk, & Ploug, 2003; Jæger, 2009). Nonetheless, there is no unambiguous theoretical or empirical answer to what determines social stratification, and how structural and individual factors interact in those processes. It is therefore very plausible that parental imprisonment is an important factor that has been overlooked by the social stratification literature. I investigate this hypothesis in 'Forældres fængsling – en stratificerende livsbegivenhed? [Parental imprisonment – a social stratifier?]' by estimating the proportion of children who have experienced parental imprisonment (ages 0-18) for six cohorts born in the begin-

ning of the 1980s to assess whether an increase in the number of children experiencing parental imprisonment in this period has occurred. Subsequently, I relate the observed increase with the children's parental background in terms of education and income, to assess whether children with a relatively disadvantaged social background constitute the majority of the observed increase in the number of children experiencing parental imprisonment.

4.2 Social selection or social causation?

The discussion about whether parental imprisonment *causes* adverse child outcomes or whether it is merely a proxy for pre-existing disadvantage reflects the more general discussion within criminology about social selection and social causation as competing explanations for deviance and crime (Wright, Caspi, Moffitt, & Silva, 1999). Within studies of parental imprisonment, the fundamental question is if, and to what extent, parental imprisonment affects children's life course (Murray, Farrington, & Sekol, 2012b).

4.2.1 The social causation perspective: Parental imprisonment as environmental change

A social causation perspective on parental imprisonment perceives this event as a basic environmental change. This perspective draws on sociological theories of deviance such as a general theory of strain (Agnew, 1992), social learning theory (Akers, 1973), control theory (Hirschi, 1969) and labelling theory (Becker, 1963; Braithwaite, 1989), all presenting complimentary and, to some extent, interrelated explanations for the link between parental imprisonment and child outcomes.

General strain theory has its roots in the anomie theory originally proposed by Robert Merton in the 1930s (Merton, 1938). Modern industrial societies create strains by emphasizing status goals like material success, in the form of wealth and education, whilst simultaneously limiting institutional access to certain segments of society. Important status goals remain inaccessible to many groups, including the poor, the lower class(es), and certain racial and ethnic groups who suffer discrimination. Anomie develops as a result of a disparity between culturally valued goals and the legitimate means through which society allows groups to achieve those goals (Clinard & Meier, 2004: 86; Merton, 1938: 681).

In line with the classic anomie and strain theories, Robert Agnew argues that deviance results from an inability to avoid negative or painful situations

in life. Agnew's general strain theory expands on the classic theories by broadening the concept of strain beyond that produced by the discrepancy between ambitions and expectations, to include several sources of strain. Agnew identifies three major types of strain, explaining that strain occurs when others:

- (1) prevent or threaten to prevent you from achieving positively valued goals;
- (2) remove or threaten to remove positively valued stimuli that you possess; or
- (3) present or threaten to present you with noxious or negatively valued stimuli.

Agnew stresses that whilst these types are theoretically distinct from one another, they may sometimes overlap in practice (Agnew, 1992: 59). Forms of deviant behaviour such as delinquency are one likely response to strain under certain conditions and according to Agnew's general strain theory the likelihood of some form of deviance increases with the number of straining events a person is exposed to (Agnew 1992). However, the precise relationship between the different types of strain has not been clarified.

Each type of strain increases the likelihood that individuals will experience one or more of a range of negative emotions, such as disappointment, depression, fear and anger. Anger occurs when individuals blame their situation on others, and anger is a particularly critical emotion because it often creates a desire to take remedial action, with delinquency being one possible response (Agnew, 1992: 59-60).

Parental imprisonment can be categorized as the type of strain where a positive stimulus is removed. Parental imprisonment might also result in the removal of other positive assets such as a reduction of household income, possibly leaving the children with fewer financial resources and opportunities. Moreover, parental imprisonment might present negative stimuli insofar as it results in negative relations with parents, peers and school, or if the family has to move or the child has to be relocated to live with relatives or in out-of-home care.

Another mechanism linking parental imprisonment and children's deviant behaviour is social learning. In the field of criminology, social learning theory refers primarily to the theory of crime and deviance developed by Ronald L. Akers, which builds on Edwin H. Sutherland's theory of *differential association*. Sutherland's theory proposed that criminal behaviour is *learned* and that a person commits criminal acts because he or she has learned "def-

initions” (rationalizations and attitudes) favourable to the violation of the law in “excess” of the definitions unfavourable to the violation of the law. Sutherland’s theory thus explains criminal behaviour by the exposure to others’ definitions encouraging criminal behaviour, balanced against conforming definitions (Akers & Sellers, 2009: 86-87).

In an effort to provide a more accurate specification of the learning processes proposed by Sutherland, Akers in collaboration with Burgess (1966) first developed differential association-reinforcement theory, on which Akers later elaborated to develop social learning theory. Social learning theory as a general perspective on deviance is part of a larger move toward incorporation of modern behaviourism into sociological theory (Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979: 637). The word *learning* should not be taken to mean that the theory is only about how criminal behaviour is acquired. It embraces factors that operate both to motivate and to control criminal and conforming behaviour.

Akers’ development of the theory relies on four major concepts: *differential association*; *definitions*; *differential reinforcement*; and *imitation*. The groups with which one is in differential association provide the main social contexts in which all the mechanisms of social learning operate. They expose one to definitions (attitudes or meanings one ascribes to a given behaviour), present one with models to imitate, and provide the differential reinforcement for criminal and conforming behaviour (the balance of anticipated or actual rewards and punishments that follow from a certain type of behaviour). The most important of these groups are family and friends. The associations that occur early, last longer, occupy more of one’s time, and are most frequent and intense, will have the greatest effect on behaviour (Akers & Sellers, 2009: 90-93).

Parental imprisonment often results in a change in family structure as the family changes from a two-parent to a single-parent family. This may cause undesirable effects on the social learning environment because the balance between family and peers might shift. The parent left to provide for the children will have less time for monitoring them, possibly resulting in children spending more time with (deviant) peers. In cases where parental imprisonment results in out-of-home placement, the social learning environment often changes entirely. Studies have shown that children placed in institutional care (children’s homes) are at particular risk for social learning from deviant peers (Andreassen, 2003; Tjelflaat, 2003; Anderson, 2008). While it may be argued that the social learning environment would improve by removing a criminal parent from the household, criminal parents are not necessarily bad parents. According to control theory, children’s deviating behaviour depends

on the strength of the social bond between parent and child, and not on the characteristics of the parent (Hirschi, 1969).

Parental imprisonment resulting in a change in family structure might also influence the strength of the social control of the child. Social control influences people's actions through sanctions, or specific reactions to behaviour. Control theories, however, have a different starting point from strain and social learning theories. Instead of asking why individuals do not obey the rules of society, the fundamental question for control theories is instead why individuals in fact *do* obey the rules of society. Deviance is taken for granted; conformity must be explained (Hirschi, 1969: 10). The answer from social control theories is that individuals conform because social control prevents them from deviation. The underlying assumption is that there is no individual variation in motivations to commit crime. Actors are rational and weigh the costs and benefits of alternative lines of action, legal or illegal, and choose those they consider most likely to maximize their pleasure (Hirschi, 1986: 108). Social control includes both socialization and the control over a person's behaviour through the external application of sanctions, rewards for conformity, and punishment for deviance (Akers & Sellers, 2009: 125). In *Causes of Delinquency* (1969), Travis Hirschi formulated his *social bonding theory* with the fundamental proposition that crime is a result of an individual's weak or broken bonds to society – a general lack of integration (Hirschi, 1969: 16).

Applying Hirschi's theory in explaining the link between parental imprisonment and child outcomes, I consider it likely that the social bond is weakened by the experience of parental imprisonment, since the attachment to the imprisoned parent weakens considerably. The fact that the parent is a criminal does not matter, according to Hirschi, because it is not the character of the people to whom one is attached that determines the degree of adherence to the conventional rules, but the strength of the attachment (Hirschi, 1969: 152).⁶

However, social control might not always prevent individuals from deviation. According to labelling theories, social control efforts sometimes result in promoting deviance instead of restraining it. A labelling perspective defines 'deviant' as one to whom a label has successfully been applied; deviant behaviour is behaviour that has been labelled as such (Becker, 1963). Devi-

⁶ However, Hirschi's own research showed that delinquency was strongly related to association with delinquent friends, and other research has shown that parental deviance, including criminality, is related to children's deviating behaviour (Farrington & Welsh, 2007: 57-60).

ance is thus not determined by any reference to norms, but instead by the reactions to a given behaviour. Furthermore, stigmatizing labels limit people's opportunities to act according to more conventional roles because they are identified by others as deviant and thus, acting in response to this, they become 'secondary deviants', partly in self-defence. Hence labelling theory claims that sanctioning or labelling efforts designed to control deviance will instead amplify it (Clinard & Meier, 2004: 127; Braithwaite, 1989).

Labelling may therefore also explain a link between parental imprisonment and children's adverse outcomes. Children of imprisoned parents may experience stigmatization in the forms of teasing and bullying, which might lead to social exclusion that limits the child's social capital and future possibilities.

The theories described above all provide reasons to expect that parental imprisonment has consequences for child outcomes. The theories all assume that social relationships (or their absence) cause deviance (or secondary deviance), but they have different focuses. Control theory focuses on the *absence of positive relationships* with conventional others and institutions. In contrast, social learning theory focuses on *positive relationships* with deviant others, and general strain theory and labelling theory complement the other theories of delinquency and deviance with their focus on *negative relationships* – in the case of labelling theory, with a process-oriented emphasis focusing on the deviant's (negative) interactions with conventional society. Combined, the theories give a more comprehensive theoretical foundation for expecting parental imprisonment to affect (deviant) child outcomes.

A social causation perspective implies multifaceted and multileveled social relationships and thus a very comprehensive, complex, and unparsimonious explanation for the link between parental imprisonment and child outcomes. A first step towards evaluating the social causation perspective is determining that the association between parental imprisonment and child outcomes persists after controlling for social background variables (see Chapter 6).

In categorizing the above theories as social causation theories, it should be stressed that linking parental imprisonment to child outcomes through the suggested mechanisms assumes that parental imprisonment entails a significant environmental change – with an emphasis on *change*. The children of imprisoned parents might already be exposed to multiple strains, a negative social learning environment from parents, low social control, and/or labelling before parental imprisonment. Thus, these conditions can also be considered part of a selection perspective.

4.2.2 The social selection perspective: Parental imprisonment – a proxy of pre-existing disadvantage

The social selection perspective includes a broad range of theories that emphasize how early-life socialization, traits, and socio-economic background cause children's deviant outcomes. According to this perspective, a correlation between parental imprisonment and children's criminality is not a result of the imprisonment. Instead, it is a result of predisposing conditions of selection, i.e. that imprisoned parents and their children are already different from non-imprisoned parents and their children prior to the incarceration of the parent. Traits such as low self-control, high impulsivity, low IQ, and genetic factors have been identified as central in this regard (Caspi et al., 1994; Gottfredson & Hirschi, 1990; Farrington, 2003; Mednick et al., 1984; Wilson & Herrnstein, 1985; Rowe & Osgood, 1984).

Twin and adoption studies (Mednick et al., 1984; Christiansen, 1977) lend support to the notion that criminal behaviour might appear to have a genetic component. However, these results have been questioned by Gottfredson and Hirschi, who point to some serious flaws in the research that have since raised doubt as to how much it actually validates the theory of inherited criminal potential. They conclude that the magnitude of the genetic effect is near zero (1990: 47-63).

Still, research has consistently found a weak-to-moderate negative correlation between IQ and delinquent behaviour (Akers & Sellers, 2009: 55; Farrington & Welsh, 2007). Hence, insofar as IQ is not influenced by socialization and education, this supports the notion of a genetic component to deviant behaviour. Most modern 'biological' theories, however, propose that this component interacts with social and environmental circumstances in various ways (Moffitt, Caspi, Rutter, & Silva, 2006; Weaver et al., 2004). Modern 'biological' theories do not regard biological factors as fixed nor as having greater power over behaviour than sociological factors. Rather, their effects are viewed as indirect and mediated by other factors (Akers & Sellers, 2009: 69). A criminological theory much in line with this perspective was proposed by Wilson and Herrnstein in *Crime and Human Nature* (1985). Their theory proposes that people differ in their propensity to commit crimes, but also that the choice of committing a crime is dependent on a rational calculus of costs and benefits in a given situation. They stress that their theory is eclectic and they incorporate both genetic dispositions and social learning components. For example, a child's conscience is built up in a social learning process dependent on the parent's reactions (punishment or reinforcement) to children's disobediences. Conscience is important in this regard because it

inhibits the propensity to offend. Still, the key determinant of offending is a person's impulsivity, because highly impulsive people are less influenced by the likelihood of future consequences, and therefore more likely to commit crimes (Wilson & Herrnstein, 1985). According to Wilson and Herrnstein, highly impulsive parents are more likely to commit criminal acts and thus be 'selected' into prison. This impulsivity will be transferred to their children both genetically and via social learning processes, thereby making the children more prone to criminal behaviour. A correlation between parental imprisonment and children's deviant outcomes is thus a result of the association between a parent's and child's degree of impulsivity, and not the imprisonment of a parent.

Gottfredson and Hirschi's general theory of crime (1990) is to some extent not very different from Wilson and Herrnstein's theory. They claim that low self-control is *the* individual-level cause of crime and emphasize child-rearing in the family as fundamental in the development of self-control: parents must be able to recognize deviant behaviour and punish it when it occurs (ibid). Low self-control is manifested through impulsive behaviour, lack of persistence in tasks, high levels of activity, physical responses to conflict, and risk taking, among other things, and it remains stable over the course of life (Gottfredson & Hirschi, 1990: 89-94). Self-control does not predict absolute levels of crime because crime levels change with age. However, self-control predicts the relative rates of crime over the course of a lifetime, assuming that the relative ordering of antisocial behaviour within any cohort of people remains stable over time.

Finally, it has been established by several studies that socio-economic background is associated with crime (Berk, Lenihan, & Rossi, 1980: 278-280; Laub & Sampson, 2003; Manza & Uggen, 2008). Because crime is a prerequisite for imprisonment, it might be the shared social background of parents and children that influences both parental deviance/crime and children's deviance/crime.

Applying a pure social selection perspective has wide-ranging theoretical, methodological and policy implications. Theoretically, it implies that traditional sociological theories of social causation must be abandoned. According to a pure 'selection perspective', parental imprisonment should be considered as a mere proxy for traits or pre-existing disadvantages, and thus the relationship between parental imprisonment and their children's criminality is spurious.

However, applying the low self-control perspective to explain the correlation between parental imprisonment and child outcomes, cannot unambiguously be categorized as social selection perspective because the im-

prisonment of a parent in early childhood might actually be the social cause that evokes low self-control. As pointed out by Wright et al. (1999), self-control theory is a theory of social causation in early childhood, but one of social selection thereafter. This implies that after childhood ends, social relationships and social events have no causal impact on criminal behaviour. Based on this, one would thus expect to see children experiencing parental imprisonment in early childhood being more affected and thus more deviant as adolescents and young adults.

In my view, this same argument is also true in reverse; that is, it also applies regarding the theories categorized as social causation. As mentioned in the previous section, insofar as parental imprisonment does not involve a considerable *change* to the child's environment, the theories previously categorized as social causation theories are also part of a social selection perspective.

For the selection perspective to hold up, the correlation between parental imprisonment and children's outcomes should thus disappear after controlling for a range of social background variables and parental crime. As previously mentioned, however, much of the recent theorizing emphasizes the interplay of social selection and social causation factors in crime and delinquency (Wright et al., 1999), and this will also be the theoretical approach I rely on in the development of the theoretical model below.

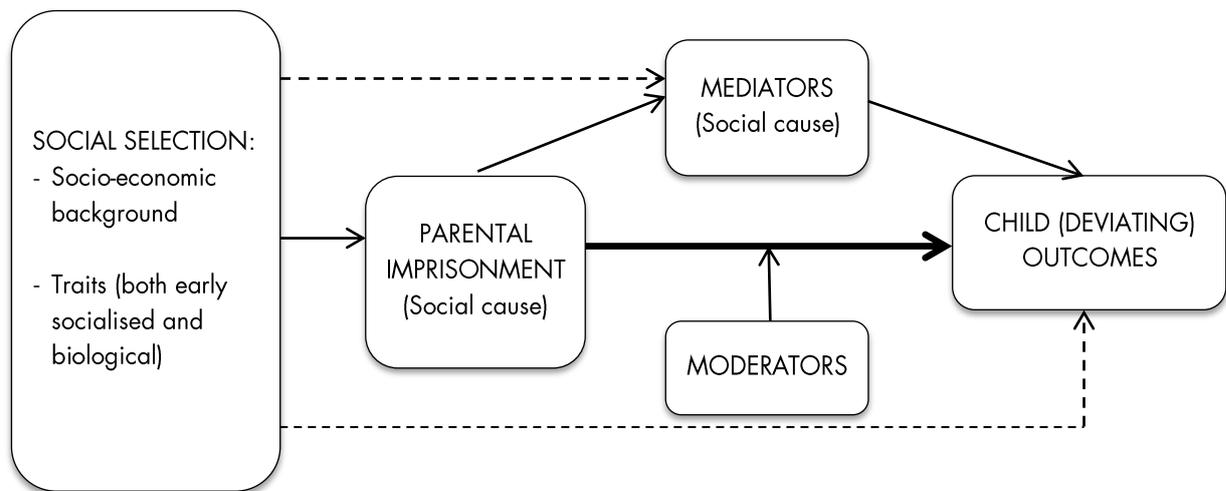
4.2.3 The theoretical model: Social causation, social selection, or both?

The social causation and social selection perspectives yield different explanations for a correlation between parental imprisonment and child outcomes. However, this does not mean that they are mutually exclusive, and as already described they also overlap because strain, a negative social learning environment, a low degree of social control and labelling processes before parental imprisonment can influence a child's behaviour; and at the same time, self-control theory could also be seen as a social cause theory in early childhood because the imprisonment of a parent might affect the rearing of the child and result in lower self-control.

Drawing on this discussion and stressing the importance of perceiving parental imprisonment as a factor of environmental change, this dissertation's theoretical model (Figure 4.1) proposes that pre-existing disadvantages and traits 'select' parents into prison. Subsequently, parental imprisonment as an environmental factor (*causing* additional social, economic, and emotional strain; *changing* the social learning environment; weakening

social bonds; and *causing* labelling) influences child outcomes. The consequences of parental imprisonment might be moderated by certain individual factors of the child such as gender, cognitive abilities, and ethnicity. Moreover, parental imprisonment might trigger additional disadvantages, such as out-of-home placement, which might mediate the effect of parental imprisonment. However, the initial social selection variables also directly influence child outcomes, as well as working indirectly through parental imprisonment and its possible mediators.

Figure 4.1. Theoretical model



To investigate the consequences of parental imprisonment on child outcomes and the mechanisms through which it operates, one thus needs to disentangle the different effects from one another. Whilst it is not possible to make a detailed distinction between all of these (to some extent) interrelated mechanisms with the data available, I examine the overall hypothesis that parental imprisonment as an environment factor, net of pre-existing disadvantages and accounting for moderating variables, affects children's (deviating) outcomes. The outcomes analysed in this dissertation are criminality (both adolescent criminality and later criminality at ages 19-29) and educational attainment at age 30. Criminal behaviour is one category of deviant behaviour, and probably the category that has received the greatest sociological research attention. Criminal behaviour is a relevant outcome to study in this context because a prerequisite for assessing whether a given punishment is acceptable is to understand its consequences. Is one of the consequences of imprisonment a reproduction of the behaviour that the punishment was originally intended to prevent? If parental imprisonment contributes to children's own criminal behaviour, this implies at the individual level

that (innocent) children's life chances are affected, and for society that punishment serves to maintain and perhaps reinforce social divisions. I examine the association between parental imprisonment and children's own criminality in the paper 'Parental imprisonment – a predictor of Danish children's criminal convictions as young adults?'

However, criminality is a relatively rare phenomenon, and therefore a sole focus on this outcome does not provide us with information about the effect of parental imprisonment on children who appear to do well on this outcome. When examining the extent to which parental imprisonment might influence the life course of children, thereby playing a part in the social stratification process, we also need to study more prevalent outcomes such as educational attainment. Social stratification studies and theories consider education to be one of the most important factors in the social stratification process (e.g. Bourdieu, 1984; Jæger & Holm, 2007). I examine the relationship between parental imprisonment and children's educational outcomes in the paper 'Parental imprisonment and children's educational attainment in Denmark'.

Previous studies suggest that parental imprisonment might be the reason or one of the reasons that a child is placed in out-of-home care (Mumola, 2000; Johnson & Waldfogel, 2002; Hanlon, Carswell, & Rose, 2007; Egelund, Andersen, Hestbæk, Lausten, Knudsen, Olsen & Gerstoft, 2008; Christensen, 1999; Osborn, Delfabbro & Barber, 2008; Hayward & DePanfilis, 2007). Importantly, research mostly shows negative or at best no effects of out-of-home placement on child outcomes (Egelund, Christensen, Jakobsen, Jensen, & Olsen, 2009; Doyle, Jr., 2007; Olsen, Egelund, & Lausten, 2011). Out-of-home placement may therefore very well be a part of the explanation for why children of prisoners are affected by parental imprisonment. I examine whether parental imprisonment might trigger this concrete mediator, and to what extent this accounts for some of the observed effects of parental imprisonment, in the paper 'Parental imprisonment and out-of-home placements – two interrelated phenomena?'

Chapter 5

Previous research and contributions

Most of the existing research on the relationship between parental imprisonment and child outcomes comes from the United States. This is no coincidence: since the 1970s, the United States' inmate population has grown more than six fold (Manza & Uggen, 2008: 95). Consequently, the phenomenon of mass incarceration has received growing scholarly attention since the late 1990s (Gottschalk, 2011; Garland, 2001), as has research concerning collateral consequences of imprisonment, including research on the consequences for families and children.

The need for studies of the consequences of mass imprisonment for children and for future inequality has thus been present, urgent, and much more obvious in the United States than in Western Europe. Nonetheless, with a similar development in incarceration rates in many Western European countries (albeit on a smaller scale), the number of studies occupied with this subject in a European context has also increased since the beginning of the new century.

In this chapter I briefly review a selection of studies that I estimate to be most relevant for this dissertation's research questions. The criteria applied for selection are methodological quality and context relevance. Among the many American studies I include those of highest methodological quality because they are standard-setting for the quantitative research on parental imprisonment at the moment. Among the non-Danish European studies I include all quantitative studies with covariate adjusted estimates. Finally, I include all existing Danish studies on parental imprisonment. The purpose of this brief review is to summarize what is already known about the consequences of parental imprisonment and subsequently to present how this dissertation contributes to the existing literature.

5.1 Previous research from the United States

There are a large number of existing studies on parental imprisonment in the United States. However, many of them are plagued with small and biased samples and/or methodological problems in terms of a solid quantitative strategy for disentangling effects of parental imprisonment from social background factors. Important methodological requirements that need to be met in order to be reasonably confident that a given analytic strategy is able to

disentangle the effect of parental imprisonment from social selection variables are:

- A suitable temporal order of events to avoid endogeneity, i.e. parental imprisonment must clearly precede the child outcome of interest, so the causality can only operate one way;
- Control for important covariates that might confound the relationship between parental imprisonment and child outcomes. In this regard the temporal order is again of utmost importance. The covariates must be measured *before* parental imprisonment to avoid controlling away some of the imprisonment effects;
- If data allows for it, studies should investigate within-individual difference, i.e. a change in child outcome from before parental imprisonment vis-à-vis after (Murray, Farrington, Sekol & Olsen, 2009: 70).

The four studies based on US data presented below meet most of these requirements, and I thus consider them to be the studies with the most reliable findings in a US context so far.

In recent years Sara Wakefield and Christopher Wildeman have contributed considerably to a methodological step forward in the literature on parental imprisonment. Using data from the Project on Human Development in Chicago Neighbourhoods, Wakefield examined changes in children's externalising and internalising behaviours⁷ before and after parental imprisonment with several modelling strategies: propensity score matching, lagged dependent variable, and difference-in-difference (or fixed effects) models. Her sample consisted of 69 6-15 year-old children who had a father imprisoned, and she found that on average paternal incarceration results in about a 5-6 per cent increase in mental health issues and problem behaviours (Wakefield, 2007: 96).

Using data from the longitudinal birth cohort study Fragile Families and Child Wellbeing Study, Wildeman showed that paternal imprisonment is associated with increased physical aggression for boys ages 3-5 and that the effects were concentrated among boys whose fathers were neither incarcerated for a violent offense nor abusive to the boy's mother (Wildeman, 2010). Wildeman had repeated measures of children's behaviours and paternal imprisonment and he relied on four modelling strategies: OLS regres-

⁷ Externalising behaviour refers to aggressive, hyperactive, noncompliant, and under-controlled behaviours, whilst internalizing behaviour refers to anxious, depressive, and over-controlled behaviours.

sion including control for important covariates, propensity score matching, placebo regression, and fixed effects models, where this last method allows for investigation of the association between a change in paternal imprisonment and a change in boys' behaviour, controlling for unobserved heterogeneity. He concluded that the results imply that mass imprisonment may contribute to a system of stratification in which crime and incarceration is passed down from fathers to sons.

Combining the two samples, Wakefield and Wildeman (2011) present estimates of effects of parental imprisonment (at least a 4 per cent increase in mental health issues and behavioural problems using data from the Project on Human Development in Chicago Neighbourhoods, and at least a 19 per cent increase in physically aggressive behaviour using the Fragile Families and Child Wellbeing Study). Moreover, they combined those estimates with demographic estimates of the risk of imprisonment, which Wildeman (2009) had estimated by calculating life tables in a previous study. This combination allowed them to describe the effects of mass imprisonment on racial inequalities in childhood behavioural and mental health problems. The study concludes that the overall effect of paternal imprisonment is, on average, harmful for children's externalizing and internalizing behaviour. Moreover, these effects were disproportionately borne by children who were already disadvantaged, and the negative effects of paternal incarceration were observed only for children of fathers with no domestic abuse history. In terms of racial disparities, their estimates show that the influence of mass imprisonment has increased Black-White disparities in externalising behaviour by up to 26 per cent and internalizing behaviour by up to 45 per cent. However, some covariates in these three studies were measured after parental imprisonment, which may have controlled some of the effect of parental imprisonment away, as pointed out by Murray et al. (2012b).

Based on data from the Pittsburgh Youth Study, Murray, Loeber, and Pardini (2012a) conducted generalized estimating equations, propensity score matching, and fixed effects models to estimate change in behaviours from before and after parental imprisonment. They found that parental imprisonment was associated with increases in youth theft, but did not predict marijuana use, depression, or poor academic performance after controlling for other childhood risk factors and youth behaviour *before* imprisonment.

On balance, all the studies analysing within-individual change suggest that parental imprisonment affects children's antisocial-delinquent outcomes; however, the findings regarding internalizing outcomes and depression are mixed.

5.3 Previous European research

There exist only a few European quantitative studies examining the effects of parental imprisonment, and none of them analyses outcome changes from before to after parental imprisonment. However, the studies reviewed here all ensure that parental imprisonment precedes the outcomes of interest and that social selection variables are measured prior to parental imprisonment. All the studies except for one use data from the Cambridge Study in Delinquent Development, either alone or in combination with samples from Sweden or the Netherlands to obtain comparative analyses of the effects of parental imprisonment. The study conducted by Rakt, Murray, and Nieuwbeerta (2012), however, uses data from the Criminal Carers and Life Course Study

Joseph Murray and David P. Farrington (2005, 2008) showed that parental imprisonment in England, controlled for social selection variables (including parental conviction), predicted several antisocial-delinquent outcomes, measured at different times between ages 14-40, and boys' internalizing problems from ages 14-48. In both studies they compared children of prisoners with four different control groups: boys who did not experience any separation from parents, boys separated by hospital or death, boys separated for other reasons, and boys whose parents were imprisoned before birth. Both studies used regression strategies (logistic and OLS) to disentangle the effects of parental imprisonment from social selection variables.

In contrast, the comparative studies also using data from either Sweden or the Netherlands found no effect of parental imprisonment on the crime rates of the Swedish and Dutch offspring after controlling for parental criminality and other essential risk factors (Besemer, van der Geest, Murray, Biljeveld & Farrington, 2011; Murray, Janson & Farrington, 2007). These comparative studies also used regression strategies to disentangle the effects of parental imprisonment from social selection variables.

Using Dutch data to conduct latent class growth curve analyses van der Rakt and colleagues (2012) demonstrated an association between paternal imprisonment and child convictions. However, after control for father's criminal history the influence of paternal imprisonment becomes much weaker. Nonetheless, it remains significant.

In sum, the evidence on the effects of parental imprisonment in European countries is mixed. Evidence from England suggests that parental imprisonment is associated with offspring antisocial-delinquent and internalizing outcomes after controlling for other important risk factors – most importantly parental crime – whilst results from Sweden and the Netherlands find no such effects, or very weak effects.

With the exception of van der Rakt et al. (2012) these studies cover a time period from 1946-1982 during which parental imprisonment was measured, and for individuals in these studies parental imprisonment was mainly experienced in the 1960s and 1970s. In this period penal policies in Sweden and in the Netherlands focused much more on re-socialisation. The penal and political environment in that period and views on crime and punishment were different from those of today (Murray et al., 2007; Besemer et al., 2011; Rakt et al, 2012). The time period in which parental imprisonment is experienced may therefore be an important factor when assessing findings. Contemporary data from Sweden might tell a different story today because they would capture the changes in the penal discourse and the increase in the imprisonment rates that Sweden along with many other European countries have also experienced (Cavadino & Dignan, 2006). The diverging results from the two Dutch studies using data from different time periods support such a hypothesis.

5.4 Previous Danish research

The only Danish quantitative study investigating the association between parental imprisonment and child outcomes was conducted by Kandel et al. (1988). Kandel and colleagues examined individuals born from 1936 to 1938 and their criminal involvement up to 1972. The aim of the study was to examine the role of IQ in protecting high-risk men from criminal involvement. At the same time they examined the association between parental imprisonment and sons' criminality, because high-risk men were defined as those with a father who had served at least one prison sentence. The study found that the incidence of serious criminality for high-risk men was 5.6 times greater than for low-risk men, which suggests that there was a relationship between having an imprisoned father and men's own criminality as adults. However, the study did not control for a range of other factors relevant to this relationship. Most importantly, the study disregarded the group of individuals whose criminal fathers were not imprisoned.⁸ In other words, they did not differentiate between imprisonment and criminality. This means that we do not know whether it was the father's criminality along with other risk factors that drove the association, or if parental imprisonment had an independent effect on the criminality of their sons as adults. Nonetheless, the results suggest that there is – or at least was – a relationship between parental imprisonment and offspring offending in Denmark.

⁸ Fathers with suspended sentences were thus not included in the study.

Since Kandel and colleagues' study there has been no Danish quantitative study investigating the association between parental imprisonment and children's outcomes. But at least two studies have considered the issue of parental imprisonment as a secondary subject in studies on prisoners' conditions in Denmark, and two studies have explicitly engaged in research about parental imprisonment and parents' and children's experiences in this regard.

Danish sociologist Linda Kjær Minke examined prisoner's relationships and contact with partners and children in a section of her dissertation *Fængslets indre liv* (Life Inside) (Minke, 2012).⁹ The dissertation used both qualitative and quantitative methods. Among other things, Minke describes how many prisoners feel that they are missing out on important experiences with their children, and how the imprisonment often results in divorce or break-up with their partner. Moreover, many of the prisoners describe not seeing their children for long periods of time. This is generally either because the imprisoned parent does not want the child to experience the control techniques that a prison visit entails, because they are concerned about exposure to visiting facilities that are not always child friendly, or because the adult with child custody is not willing to escort the child. Other prisoners also choose not to have contact with their children, simply because they do not feel prepared to handle it emotionally.

Charlotte Mathiassen's qualitative report *Perspektiver på kvinders dagligdag i danske fængsler – erfaringer med kvinders og mænds fælles afsoning* (Perspectives on women's everyday life in Danish prisons – experiences with women and men's common incarceration) also describes how incarcerated mothers spend a lot of energy thinking and worrying about their children. Mathiassen assess that maternal imprisonment has long-term negative consequences for both women and children (Mathiassen, 2011).

In line with many international small sample or qualitative studies (Boswell, 2002; Poehlmann, Schlafer, Maes, & Hanneman, 2008; Braman, 2004), Else Christensen's qualitative study of children of prisoners and their parents (1999) and Peter Scharff Smith and Janne Jakobsen's book (2010) based on questionnaire data collected from relevant actors such as the police, social authorities, and the Danish Prison and Probation Service as well as more informal information from a range of other relevant actors, have documented how a parent's arrest, trial, incarceration and release often entail fundamental changes for the family and children of the lawbreaker. Experiencing a

⁹ The dissertation's main focus is on prisoners' socialisation, or so-called 'prisonisation'.

parent's arrest is for many children a shocking and traumatizing experience. The previously described complications that children may experience in terms of keeping contact and visiting their parent and the prison's visitor control procedures to which they are subject are also well-documented in the Danish context by these two studies. Examples of stigmatization in the forms of bullying and teasing, and in some cases the burden of keeping the imprisonment a family secret, are also described. A 12 year-old boy describes:

Our dad had been arrested in the afternoon (...) my mom had fallen ill, fainted and was transported to the hospital (...). She came home and spent the night with us. Then the police arrived. They came in several police cars with the blue lights on. They arrested our mom, and we [the children] had to go in another car, transporting us to a children's home. They told us that our parents were arrested because of drugs. We accepted this. We were not that old at the time (...). The first week we did not know where our parents were. We did not see our mom for 1 ½ months and our dad for 2 ½ months. (My own translation of Christensen, 1999: 37).

A 7 year-old girl also explains her father's absence, which she was told was due to a vacation:

I did not know where he was, but I knew that he was not on vacation because he had never left before without saying goodbye to me. (My own translation of Christensen, 1999: 39).

Both Christensen and Smith and Jakobsen's studies describe how children experience emotional stress, anxiety, and uncertainty about the future and suggest that parental imprisonment has comprehensive effects on children's everyday lives, wellbeing, educational performance and mental health. However, whether these experiences also have long-term harmful effects on the children, as suggested by all the Danish studies, is still an open question.

5.5 Contribution

This dissertation expands on the literature on parental imprisonment in several ways: First, this dissertation analyses the effect of parental imprisonment on two important outcome dimensions by examining several measures of crime, but also by examining children's educational attainment. This dissertation is thus the first European study that examines the association between parental imprisonment and child educational attainment using advanced statistical control techniques.

Second, this dissertation uses prospective administrative register data that offer detailed information about children's and parents' criminal records (including exact dates for pre-trial detention and imprisonment, and types and number of convictions) as well as on socio-economic background variables. The analyses are primarily based on the cohort of children born in 1980, and the register data offer a unique opportunity to follow them from birth to their 30th birthdays. The register data provide more reliable data compared to studies using retrospective survey data that might entail sources of bias because people cannot always remember the exact timing of events.¹⁰ Furthermore, using a whole Danish cohort and thus a sample consisting of more than 50,000 individuals reduces the likelihood of errors (both Type I [false positive] and Type II [false negative]), and the findings presented can therefore be considered more reliable than studies using small samples. Comparatively, the sample is also more representative than those of previous studies because it allows for the study of a whole cohort instead of only a sample from it. Moreover, the register data makes it possible to determine the actual percentage of children from these cohorts who have experienced parental imprisonment, and to track the increasing incidence of this phenomenon. Such an accurate description has not previously been provided by any study

Third, this study is the first to consider out-of-home placement as a mediator of parental imprisonment and thus also in this regard offers new insight on the complex relationship between parental imprisonment and children's outcomes.

Fourth, the dissertation also offers new insights on the general phenomenon of parental imprisonment by investigating it in a European 'Social democratic' welfare state, with an institutional setting very different from that of most previous studies, which stem from the United States. This provides indications about the extent to which welfare state characteristics influence the way that parental imprisonment might operate.

Finally, the dissertation provides a range of novel research questions to be explored in future analyses.

¹⁰ Obviously, there are also sources of bias and possible errors in the register. I discuss those possible data problems in the next chapter about the research design.

Chapter 6

Research design

As outlined in Chapter 2, the objective of this dissertation is to understand parental imprisonment as a social phenomenon in Danish society. In Chapter 4, I argued that parental imprisonment may be a contributory factor to social stratification, and that theoretically there are good reasons to expect parental imprisonment to independently influence child outcomes. This chapter describes the data and overall analytical strategy employed to answer this dissertation's research questions. Potential limitations regarding the strategy are discussed in Chapter 7.

6.1 Data

This dissertation utilizes data from the administrative registers in Denmark. The registers were established to serve a range of administrative and statistical purposes and are administered by Statistics Denmark. Since 1968 all persons living in Denmark have been assigned an individual identification number (CPR), which is used in many registers and makes it possible to link information on individuals across registers.¹¹ Births, deaths, gender, marriages, divorces, family type, and migrations are recorded in the Population Register; arrests, convictions, and confinement are recorded by the police, courts, and the Danish Prison and Probation Service in the Crime Register; and educational activities are recorded in the Educational Register. Many other socio-economic, demographic, and health data are available from different registers. The register data used in this dissertation consist of information on the six cohorts born in 1980-1985 and their parents. Senior researcher Mogens Nygaard Christoffersen at SFI (The Danish National Centre for Social Research) has kindly made these data available to me. Christoffersen and collaborators have used the data for several studies on children, families and society for the cohorts of 1966, 1973, 1980, 1981, 1982, 1983, 1984, and 1985, which together constitute their dataset (Christoffersen, 1994; Christoffersen, Sothill, & Francis, 2005, 2007; Sothill, Christoffersen, Hussain, & Francis, 2010). However, crime data of good quality are not available before 1979, and therefore the cohorts born after 1979 are better suited for analyses of the research questions in this dissertation. A unique feature of the register da-

¹¹ The data is made anonymous before being made available for research.

ta used in this dissertation is that they include information of records in the Psychiatric Register, enabling me to control for parents' mental health history.

Using register data has several major advantages when studying inter-generational transmission patterns such as consequences of parental imprisonment. The register data are by nature longitudinal because the registers are continually updated, which allows me to follow the 1980-1985 cohorts from their birth to their late twenties. Events are recorded either annually, monthly, or on the exact date of a given event (e.g. imprisonment date). Longitudinal data facilitate the formation of probable causal claims because the causal direction can be better controlled. Moreover, the information from the registers is generally highly reliable and in very few cases are there missing data. This means that we can avoid the concerns about the representativeness of the analytical sample that often arise with survey data (Lyngstad & Skardhamar, 2011). Using the whole resident population of a cohort also results in a very large sample size, reducing the likelihood of errors and making the estimates more reliable.

A fundamental characteristic of the register data is that the researcher does not collect the data – the data are initially not collected for scientific purposes. This is a limitation for this study in some respects because I have not been able to influence the variables included in this study nor the measurements of these variables. Examples of relevant information that would have been of great advantage to this study are parenting styles, parental conflicts, measurements of self-control, measurements of cognitive skills and similar variables that would give information about the family conditions that a child is subjected to as well as individual characteristics of parents and children. In this regard the main limitation of the data is that there is no useful information on child outcomes *before* parental imprisonment, such as school performance or antisocial behaviour. This limits the analytical strategies that may be applied. I will return to this subject below in the section about the analytical strategy.

6.1.1 Issues relating to the use of data from the crime register

Crime and punishment are central phenomena in the analyses of this dissertation, and I will therefore briefly present the origin of the data used for constructing measurements of these phenomena and issues related to these data.

The Central Register on Crime has existed since 1979 (Statistics Denmark, 2012),¹² and the data from the Central Register on Crime used in this dissertation stems from the sentencing records and the confinement records.¹³ I use information on:

- Date of sentence
- Type of crime (primary)
- Type of sentence (suspended or unsuspended prison sentence)
- Date of confinement
- Type of confinement (detention, imprisonment)

There have been changes and extensions to the register since 1979, resulting in some inconsistencies in the information available in the time period under analysis. In this regard the main limitation is that the 1980-1990 release dates are not available in the crime registers provided by Statistics Denmark (Statistics Denmark, 2013). The exact duration of the imprisonment of individuals ending their sentences within this period is therefore not possible to include in the analysis. Moreover, as described by Kyvsgaard (2003) in the 'The Criminal Career' there are some weaknesses and flaws in the crime statistics data regarding the existence of charge, sentence, and confinement records. This dissertation only uses the last two records, and the problem arises when there is a sentence record but the imprisonment record is missing, or the other way around. To address this problem, I combine the information from all records in constructing the confinement measure, using information on the date of pre-trial detention, the date of the sentence, and the date of imprisonment. This is described in more detail below in the description of the operationalisation of the variables used for analyses.

6.1.2 The study population

The analyses in this dissertation are primarily based on data on the cohort of 1980 and their parents. I have chosen to focus on this cohort because it enables me to follow the individuals of interest for the longest time period and thus to capture outcomes of interest – crime and educational attainment – at a point in time where it is reasonable to assess individual long term rates of

¹² Statistics on crime have existed in Denmark since 1832 and on the public administration of justice since 1863.

¹³ There are also records of charges and subcharges, but I have not used any of the information from these records.

crime as well as educational attainment. Nonetheless, in the first article 'Forældres fængsling – en stratificerende livsbegivenhed? [Parental imprisonment – a social stratifier?]' describing the development in the proportion of Danish children experiencing parental imprisonment, I also use the data on the cohorts 1981-1985. Without working with any restrictions on the data on these cohorts, i.e. including all individuals from these cohorts who have ever lived in Denmark thus including those who have immigrated, emigrated and died, the raw study populations currently are:

- N 1980 = 66,967
- N 1981 = 61,549
- N 1982 = 60,343
- N 1983 = 57,798
- N 1984 = 58,614
- N 1985 = 60,320

However, as I am interested in how both social selection and social causation factors (including parental imprisonment) influence children's life courses and thus the intergenerational transmission of advantages and disadvantages, the sample must be restricted to individuals who have lived most of their lives in Denmark. This is necessary to obtain socioeconomic and demographic background variables in the analyses, but also to assure that there is information on the outcomes of interest. Consequently, I first exclude from the cohort of 1980 all individuals who died before age 18 ($n = 740$), were older than six when they immigrated to Denmark ($n = 9246$), or had spent fewer than 10 years in Denmark ($n = 1980$). Moreover, I exclude adopted children, examining only the parental imprisonment of biological parents ($n = 845$). The initial number of individuals from the Danish 1980 cohort was 66,967. After the exclusions, the cohort is reduced to 56,916. The exclusion criteria inevitably mean that children of non-Danish origin are underrepresented in the sample.

6.2 Operationalisation of parental imprisonment and criminality

A discussion of the measurement of the main predictor in the analyses, parental imprisonment, is included here because the issue of separating out the effect of parental imprisonment from parental criminality has received a lot of attention in the literature. Separating out the effect of parental imprison-

ment from parental criminality is not easy, because a prison sentence presupposes that the person has committed a crime. Yet differences between imprisonment and crime do exist. Being physically confined and deprived of a range of personal freedoms because of a conviction for a crime is in its essence something different from the criminal act in itself. Furthermore, imprisonment is just one of a number of sentencing options. Breaking the law does not usually result in imprisonment. Less serious lawbreakers receive a fine or a suspended sentence. These different conviction types enable me to make a distinction between imprisonment and criminality in the operationalisation.

In this dissertation parental imprisonment refers to any kind of custodial confinement of a parent, except being held overnight in police cells. That is, imprisonment refers to confinement in jails (in Danish 'arresthuse'), 'open' or 'closed' prisons, and pre-trial detention insofar as the parent is eventually sentenced to imprisonment.

As described earlier, there are missing records in both the confinement and sentencing records. For this reason missing dates for imprisonments are replaced by the sentencing date. This results in a construction of the date of parental imprisonment variable using, in prioritised order: the date of pre-trial detention, the date of imprisonment, and the date of the sentence. I construct the measure of parental imprisonment using the date(s) of parental imprisonment and the child's birthday. Combining these pieces of information allows for a very precise measurement of whether a parent has been imprisoned from a child's birth until his or her 15th or 19th birthday. This dichotomous measure reflects parents who served a few days in prison as well as those who served long sentences. However, in the studies I have also used measures differentiating between different ages at parental imprisonment, the number of times of parental imprisonment,¹⁴ and whether the child has experienced paternal imprisonment (n = 3,944), maternal imprisonment (n = 436), or both (n = 144).¹⁵ Thus in the majority of the analyses *parental imprisonment* refers primarily to paternal imprisonment.

To be able to measure a possible additional effect of parental imprisonment, it is essential to control for parental criminality and to be able to construct a valid measure of exactly that. Otherwise the criminality of the parent, not parental imprisonment, could influence the children. I use different approaches to this challenge in the different papers. One approach is to use

¹⁴ Having a parent imprisoned once, as opposed to several times, is likely to be less disruptive for a child.

¹⁵ These numbers are from the sample of the 1980 cohort after the application of the described exclusion criteria.

two continuous measures of *father's criminality* and *mother's criminality*, counting their suspended and unsuspended sentences. The advantage of this approach is that it exploits all the information available – I am able to use information about *how* criminal the parents are. However, the disadvantage of this approach is the highly skewed distributions of these measures. Imprisoned parents have on average more convictions than parents who were convicted but not imprisoned, indicating that they are, in fact, more criminal than the parents with only suspended sentences. In the majority of the analyses I consequently approach the control for the parents' criminality in a slightly different way. I construct a categorical variable with three categories: 1) parents have not been convicted or imprisoned while the child was ages 0-18; 2) at least one of the parents has been convicted but not imprisoned while the child was ages 0-18; and 3) at least one of the parents has been imprisoned while the child was ages 0-18. Murray et al. (2007) and Besemer et al. (2011) used similar measures for parental imprisonment and parental criminality.

6.3 Analytic strategy

In the following I discuss the research design for studying the three research questions of the dissertation: what characterizes the socioeconomic background of children of imprisoned parents in Denmark, is parental imprisonment a risk factor in terms of children's own criminality and educational attainment as young adults, and is out-of-home placement a mediator of the relationship between parental imprisonment and child outcomes? The designs for answering the three questions are described in turn.

6.3.1 Children of imprisoned parents and their socioeconomic background

Studying children of imprisoned parents and their socioeconomic background, and assessing whether parental imprisonment is a contributory factor to the social stratification of society, first and foremost necessitates an estimation of the proportion of children that experience parental imprisonment during their childhood. Social phenomena that influence children's lives do not necessarily contribute to the social stratification of society – even in cases of serious and traumatic events. If the increase in Danish imprisonment rates since the 1980s only affects relatively few children, this will quite possibly affect their life chances, but not the overall constitution of the strata or groupings that make up the social hierarchy of society. Knowing how the preva-

lence of this phenomenon develops over time is thus a necessary precondition for an assessment of parental imprisonment as a social stratifier. Second, if an increase in the relative number of children experiencing parental imprisonment exists, then this increase must be disproportionately made up of children with different socioeconomic backgrounds. Third, for parental imprisonment to be a contributory factor in the social stratification of society, it must influence children negatively.

Under the assumption that parental imprisonment on average has a negative influence on children's life course, the development of the number of children experiencing parental imprisonment and their socioeconomic backgrounds are examined using a simple descriptive strategy of chi²-tests to compare the proportion of children experiencing parental imprisonments between cohorts as well as between groupings by socioeconomic background within the cohorts. This description of the population of children of imprisoned parents, presented in 'Forældres fængsling – en stratificerende livsbegivenhed?' [Parental imprisonment – a social stratifier?], is a prerequisite for the subsequent studies because it outlines the macro sociological setting and provides the empirical evidence demonstrating the importance and motivating the pursuit of further investigation into this subject.

6.3.2 Parental imprisonment – a risk factor?

Having illuminated the first research question, the next research question concerns whether parental imprisonment is a risk factor in terms of children's own criminality and educational attainment.¹⁶ In a social stratification perspective these two outcomes are important to investigate because they are fundamental in terms of future life chances.

In 'Parental imprisonment: A predictor of Danish children's crime rates as adults?', I move one step further by examining whether parental imprisonment is associated with children's own criminality by age 29. This is done using logistic and negative binomial models including a range of control variables (social selection variables) as well as moderators of gender, ethnicity and social class. I use different outcome measures of the children's own criminality (and consequently different regression models) as well as

¹⁶ *Risk factors* are correlates that are shown to predict an outcome and thus precede the outcome of interest. *Causal risk factors* are risk factors that when changed, cause a change in risk of the outcome. The 'gold standard' method to demonstrate a risk factor is causal is a 'randomised clinical trial' (Kraemer, Lowe, & Kupfer, 2005).

measures of parental imprisonment and parental crime to ensure that the results are insensitive to different operationalisations.

In 'Parental imprisonment and children's educational attainment in Denmark' I further pursue the hypothesis of parental imprisonment influencing children's outcomes by investigating whether parental imprisonment is associated with children's educational attainment at age 30.¹⁷ In a social stratification perspective, the possible influence on educational attainment is important to include. Because criminality is a relatively rare phenomenon, 'Parental imprisonment: A predictor of Danish children's crime rates as adults?' does not provide us with information about children who do well on this outcome (that is, do not commit crimes). Therefore, it is necessary to also study more prevalent outcomes such as educational attainment.

In 'Parental imprisonment and children's educational attainment in Denmark' I extend the previous analytical control strategies by also employing propensity score matching. In the first stage of the analyses I thus use OLS regression to assess the effect of parental imprisonment relative to other social factors, and as a point of reference for the subsequent analyses. However, using OLS regression might result in a comparison of children whose parents had a high chance of imprisonment with children whose parents had no chance of imprisonment. To ensure an appropriate comparison and be able to identify whether parental imprisonment operates over and above the selection factors, I also apply propensity score matching. Studies have demonstrated that propensity score matching can be a good alternative for estimating effects in non-experimental settings, producing results close to those of experiments (Dehejia and Wahba, 2002). However, given that I am not able to measure educational outcomes (nor criminal outcomes for that matter) *before* parental imprisonment I am not able to fully exploit the longitudinal nature of the data. This makes it difficult to ensure that children of prisoners and a matched comparison group of children of convicted but not imprisoned parents do not differ in some unobserved way (cf. the selection perspective) that may affect the likelihood of their parents being imprisoned *and* their own outcomes. Yet in this regard propensity score matching is also useful because it provides an indication of the sensitivity of the results by estimating how large the effect(s) of the potentially confounding variable(s) would have to be to make the effect on educational attainment insignificant.

¹⁷ The Educational Register is updated sooner than the Criminal Register, which explains why the crime outcomes are measured at age 29 and the educational outcomes at age 30.

A significant influence of parental imprisonment on children's criminality and educational attainment after control for social selection variables would substantiate that parental imprisonment as a social cause exacerbates existing strains, changes the social control and social learning environment, and possibly results in labelling processes. An insignificant influence would by contrast support a 'selection perspective' claiming that parental imprisonment is merely a proxy for initial social selection.

6.3.3 Parental imprisonment and out-of-home placement

In the fourth and final paper of the dissertation 'Paternal imprisonment and out-of-home placement – two interrelated phenomena?', I examine one of the possible concrete mechanisms through which parental imprisonment might operate: out-of-home placements. To investigate whether out-of-home placement might mediate the relationship between paternal imprisonment¹⁸ and adolescent crime, I use nested logit models and the KHB-method provided by Kristian B. Karlson, Anders Holm and Richard Breen (2012). The logit models illustrate the influence of the different factors included in the models, as well as how the overall relationship between paternal imprisonment and adolescent offending changes when control variables and the mediator, out-of-home placement, are included in the model. However, controlled logit coefficients do not have the same straightforward interpretation as in linear regression and comparing coefficients across nested logit models is not directly feasible (Karlson et al., 2012). In these models, uncontrolled and controlled coefficients can differ not only because of confounding but also because of a rescaling of the model that arises whenever the mediator variable has an independent effect on the dependent variable. In addition to the logit estimations, I therefore also use the KHB-method, which gives unbiased decomposed effects. The KHB-method ensures that the coefficients presented are measured on the same scale and are not affected by the scale identification (Kohler, Karlson, & Holm, 2011).

6.4 Overview of the studies

After having described the main elements in the overall research design of the project, I provide an overview of the objectives and designs of the four papers that constitute this dissertation in Table 6.1 below.

¹⁸ In this paper I restrict the analyses to paternal imprisonment to limit heterogeneity in the 'treatment variable'.

Table 6.1. Objectives and Research Designs of Dissertation Papers

	Study 1	Study 2	Study 3	Study 4
Title	Forældres fængsling – en stratificerende livsbegivenhed? [Parental imprisonment – a social stratifier?]	Parental imprisonment: A predictor of Danish children's crime rates as adults?	Parental imprisonment and children's educational attainment in Denmark	Parental imprisonment and out-of-home placements –two interrelated phenomena?
Main objective	Describe the development in the number of children experiencing parental imprisonment and the distribution of this experience according to social background.	Examine the association between parental imprisonment and children's own crime.	Examine the association between parental imprisonment and children's educational attainment.	Examine whether out-of-home placement mediates the effects of parental imprisonment.
Measures of parental imprisonment	Parental imprisonment at ages 0-19	Parental imprisonment (paternal or maternal) at ages 0-19	Parental imprisonment at ages 0-19 Paternal imprisonment Maternal imprisonment Paternal and maternal imprisonment Number of times imprisoned	Paternal imprisonment at age 15 Number of times imprisonment Age at imprisonment
Dependent variable(s)	-	Conviction of criminal offense Number of convictions of criminal offense Convictions of serious crime types: violent crime, crime against property, and drug crime	Educational attainment (number of years of education at age 30).	Adolescent crime (ages 15-20)
Data source	Register data of the cohorts 1980-1985 and their parents.	Register data of the cohort 1980 and their parents.	Register data of the cohort 1980 and their parents.	Register data of the cohort 1980 and their parents.
Time period	1980-2003	1979-2009	1979-2010	1979-2001
Method	Chi ² -comparisons	Logistic and Negative Binomial regression models	OLS regression and Propensity Score Matching	Nested Logit models and the KHB-method.

Chapter 7

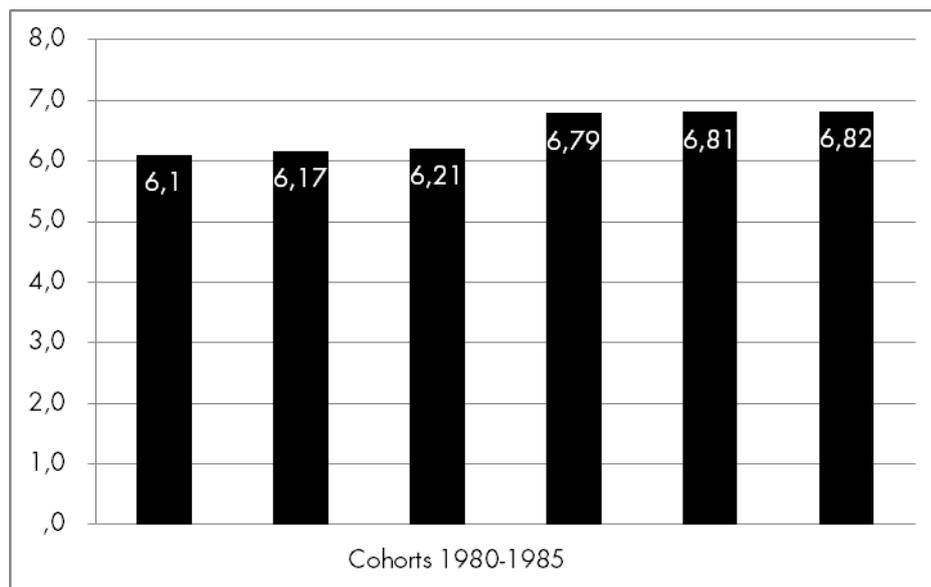
Findings, conclusions, and perspectives

The four studies constituting this project have produced a number of empirical findings giving insight into the prevalence of parental imprisonment in Denmark, the socioeconomic background of children of imprisoned parents, whether parental imprisonment is a risk factor for children's own criminality and educational attainment as young adults, and whether out-of-home placement mediates the relationship between parental imprisonment and child outcomes. Together these findings provide the answer to the overall research question about the consequences of parental imprisonment. In this chapter I present and discuss the main findings of the four studies, conclude this report by summarising the main conclusions, and discuss different perspectives of these conclusions.

7.1 Children of imprisoned parents and their socioeconomic background

The findings in the article 'Forældres fængsling – en stratificerende livsbegivenhed? [Parental imprisonment – a social stratifier?]' suggest that parental imprisonment is a social stratifier in Denmark, not only maintaining but also magnifying existing inequalities between children from different socioeconomic backgrounds. Analyses of the six cohorts born in 1980-1985 show that the relative number of children experiencing parental imprisonment during childhood (ages 0-18) increased from 1998 to 2003. The absolute numbers of children from these cohorts experiencing parental imprisonment vary between 3,746-4,115 children per cohort, which equals 6.10-6.82 per cent of the analysed cohorts. The largest proportion of children experiencing parental imprisonment from ages 0-18 is found in the cohort of 1985, which both in relative and absolute numbers is the cohort where most children experience parental imprisonment. Figure 7.1 illustrates the relative numbers of children in the cohorts 1980-1985 that have experienced parental imprisonment.

Figure 7.1. Percentage of children experiencing parental imprisonment at ages 0-18.
Cohorts 1980-1985



The increase from 1998 to 2003 in the percentage of 18-year-olds (born in 1980-1985) that experienced parental imprisonment during childhood is significant. Moreover, in terms of the prevalence of this phenomenon, it is of a similar size as other social phenomena regarded as important for social stratification in Denmark, such as out-home-placement (Olsen et al., 2011) and child poverty (Gerstoft & Deding, 2009).

The prevalence and the increase in the number of children experiencing parental imprisonment suggest that parental imprisonment contributes to maintaining existing divisions in society. However, it does not necessarily mean that parental imprisonment magnifies these divisions. I thus proceed by showing that there also exists an uneven 'recruitment' to this disagreeable event. Examining the development of children of imprisoned parents and how they are distributed according to socioeconomic background (parents' income and education) shows a clear pattern that the majority of children of imprisoned parents have fathers from the lowest income group and/or with very little education. The pattern is not as clear when taking the mother's income and educational levels into account. However, overall the findings support the contention that parental imprisonment not only contributes to maintaining already-existing social divisions, but magnifies them. Still, this conclusion only holds under the assumption that parental imprisonment on average has a negative influence on children's outcomes.

The next step in an examination of parental imprisonment as a social phenomenon and the consequences it has for children's life chances is thus

to investigate whether parental imprisonment negatively influences outcomes that are regarded as significant for children's life chances.

7.2 Parental imprisonment – a risk factor?

The two articles 'Parental imprisonment: A predictor of Danish children's crime rates as adults?' and 'Parental imprisonment and children's educational attainment in Denmark' display two different pictures of how parental imprisonment might influence children's life course.

In 'Parental imprisonment: A predictor of Danish children's crime rates as adults?' I examine whether parental imprisonment influences the conviction of a criminal offence of young adults and the number of times they are convicted. I apply different regression models controlling for confounders including parental criminality, and also different operationalisations of parental imprisonment to examine the robustness of the results. The regression models suggest that children of prisoners are about three times more likely to be convicted of a crime or to receive an additional conviction at the ages of 19-29 compared to peers with parents who have not been imprisoned or convicted. Compared to peers with convicted parents, however, children of imprisoned parents are only 1.2 times more likely to be convicted and 1.4 times more likely to receive an additional sentence. The parameter estimates for these two groups are not significantly different at a 0.05 level, suggesting that parental imprisonment has no effect over and above parental criminality.

The prevalence and incidence of criminal behaviour provide a general understanding of the extent to which people are involved in crime, but it is also useful to consider the types of crimes in which people are involved. Is it petty crimes or more serious types of offences that are committed? Investigating more serious types of offences such as violent crime, crimes against property, and drug crimes, I find that not only are children of imprisoned parents more likely to commit and be convicted of property crime compared to their peers with non-convicted parents, they are also 1.5 times more likely to commit and be convicted of property crime compared to children of convicted parents. Examining the most prevalent type of serious non-violent crime such as theft/burglary/vandalism, the findings show that parental imprisonment influences children's criminality in this regard, supporting the hypothesis that parental imprisonment predicts children's property crime over and above parental criminality and other social selection variables. This suggests that there *are* long-term consequences of parental imprisonment in Denmark; however, the effect size (odds ratio) of 1.5 must be considered

moderate. Still, considered in a broader perspective, this finding supports the hypotheses that parental imprisonment is a contributory factor to social stratification because it contributes significantly to the likelihood of an adverse outcome for this group of children.

In the article ‘Parental imprisonment and children’s educational attainment in Denmark’ I pursue this contention further, examining whether parental imprisonment influences children’s educational attainment. Using OLS regression and propensity score matching, the findings from the analyses demonstrate that only children who are in the extreme situation of experiencing both parents’ imprisonment have significantly less education compared with children who have a convicted parent(s) or children experiencing only paternal or maternal imprisonment. Tables 7.1 and 7.2 illustrate these main findings.

Table 7.1. Propensity score matching results for educational attainment at 30 years old. Children with both parents imprisoned matched with children of convicted parents

Matching type	Treated on/off support	Treated	Controls	Difference	T-statistic
Unmatched	112/0	11.02	11.76	-0.74	-3.34
Nearest neighbour without replacement	109/3	11.02	11.70	-0.68	-2.25
Nearest neighbour	109/3	11.02	11.62	-0.60	-1.92
Kernel	109/3	11.02	11.56	-0.54	-2.42
Radius	109/3	11.02	11.55	-0.53	-2.30

All matching analyses are restricted to regions of common support.

Note: In this analysis, the ‘Difference’ is an expression of the Average Treatment effect on the Treated, where ‘treatment’ refers to both parents’ imprisonment and the effect regards educational attainment measured as years of education (on the scale 6-20 years). See ‘Parental imprisonment and children’s educational attainment in Denmark’ for specific details.

The group of children of imprisoned parents is balanced on a long list of covariates in order to make them comparable to the two different control groups of children displayed in Tables 7.1 and 7.2, respectively, and to isolate the impact of parental imprisonment.

As is evident from Tables 7.1 and 7.2, children experiencing both parents’ imprisonment(s) have on average 6-8 months less education than children with a convicted parent, and 6-9 months less education than children experiencing either paternal or maternal imprisonment.

Table 7.2. Propensity score matching results for educational attainment at 30 years old. Children of imprisoned mothers and fathers matched with children of imprisoned fathers or imprisoned mothers

Matching type	Treated on/off support	Treated	Controls	Difference	T-statistic
Unmatched	112/0	11.02	11.89	-0.87	-4.00
Nearest neighbour without replacement	110/2	11.00	11.59	-0.59	-1.98
Nearest neighbour	110/2	11.00	11.64	-0.64	-2.10
Kernel	110/2	11.00	11.76	-0.76	-3.58
Radius	110/2	11.00	11.56	-0.56	-2.57

All matching analyses are restricted to regions of common support.

Note: In this analysis, the 'Difference' is an expression of the Average Treatment effect on the Treated, where 'treatment' refers to both parents' imprisonment and the effect regards educational attainment measured as years of education (on the scale 6-20 years). See 'Parental imprisonment and children's educational attainment in Denmark' for specific details.

The analyses also show that children experiencing parental imprisonment between birth and their 7th birthday have between 2-6 additional months of education compared to children experiencing parental imprisonment either at ages 7-13 or 13-19, or children who have a parent that has been convicted between birth and age 19. This shows that parental imprisonment on average is more harmful after the 7th birthday, but *not* more harmful than having a convicted parent. Overall, children of imprisoned parents are not more likely to have less education than children of convicted parents, and differentiating between paternal and maternal imprisonment does not change this conclusion. It is the criminality of the parents rather than the imprisonment that drives the observed relationship between Parental imprisonment and children's educational attainment. However, this is also an important 'side result' of this paper because it demonstrates that children of criminal (and imprisoned) parents have significantly fewer years of education at age 30 than their peers. Their average is around 11.5 years, whilst their peers on average have 13.2 years at the same age. Less than 12 years of education in a Danish context indicates that one has not completed high school, and has also most likely not completed a vocational education.¹⁹

These results demonstrate that having criminal parents most definitely increases a child's likelihood of criminal behaviour and low educational at-

¹⁹ A vocational education varies in length between 1.5-5.5 years, but most often takes four years to complete.

tainment. Parental imprisonment, in addition to parental crime, increases the likelihood of conviction(s) of property crime and also low education in cases where both parents have been imprisoned. These findings support a theoretical explanation where parental imprisonment as a *changing factor* influences the care environment and social network in which these children grow up, but also an explanation where initial social selection variables such as parental criminality play a major part.

Despite the theoretical and empirical importance of these findings, they only give us some indication of the pathways through which parental imprisonment operates – overall these pathways are still very much a ‘black box’. Therefore, the ambition with this dissertation was also to illuminate a part of this black box, because this is a necessary step in obtaining a more comprehensive understanding of parental imprisonment.

7.3 Parental imprisonment and out-of-home placement – two interrelated phenomena?

In the fourth and final paper, ‘Paternal imprisonment and out-of-home placement – two interrelated phenomena?’ I examine a concrete intervention that might affect the relationship between parental imprisonment and adolescent criminality, out-of-home placement. I only present the results of the analyses of paternal imprisonment because equivalent analyses of maternal imprisonment produced insignificant results. The choice of examining out-of-home placement is not only theoretically motivated (out-of-home placement being an event that captures all of the suggested social causing mechanisms), but also very much empirically motivated. Many children of imprisoned parents are placed in out-of-home care during their childhood, and therefore it is likely that out-of-home placement is an important element when trying to piece together the complex life stories that many children of imprisoned parents have.

Parental imprisonment and out-of-home placements are interrelated at least for two reasons. First, children experiencing parental imprisonment are, on average, from families with fewer resources and therefore have a higher likelihood of being placed in out-of-home care regardless of parents’ imprisonment(s). Few resources and other characteristics of these families might ‘select’ parents into prison, children into out-of-home placements, and also influence adolescents’ criminal outcomes. Second, parental imprisonment might work as a trigger of additional risk – in the present dissertation out-of-home placement being the additional risk of interest. This means that paren-

tal imprisonment evokes a radical environmental *change* for the child – operating as a risk factor for delinquency fully or partly through out-of-home placement. This mediational hypothesis implies a causal relationship among the parental imprisonment and out-of-home placement.

The findings from ‘Paternal imprisonment and out-of-home placement – two interrelated phenomena?’ confirms that there is a considerable overlap between the children experiencing parental imprisonment and those in out-of-home placement, with 16.13 per cent (n = 440) of the children experiencing paternal imprisonment at ages 0-15 (n = 2,728) having also been placed in out-of-home care in the same period of time. This suggests that these two phenomena *are* interrelated. Estimations using a logit model furthermore show that having an imprisoned father more than doubles the odds of being placed in out-of-home care compared to children without an imprisoned father. These results thus demonstrate the link between parental imprisonment and out-of-home placement in Denmark.

Examining whether out-of-home placement is mediating the influence of paternal imprisonment on adolescent crime, both the nested logit models and the KHB-method show that this is in fact the case. The impact of paternal imprisonment is reduced after including out-of-home placement in the model, and the KHB-estimates show that 12 per cent of the total effect of paternal imprisonment is due to the out-of-home placement of children experiencing paternal imprisonment once, whilst almost 18 per cent of the total effect of paternal imprisonment is due to out-of-home placement for children experiencing paternal imprisonment two times or more. Another important finding from these analyses is that paternal imprisonment impacts adolescent crime over and above parental criminality.

Examining the mediational hypothesis for children experiencing paternal imprisonment at different ages with out-of-home placement occurring maximum three years after paternal imprisonment, shows that particularly for children experiencing paternal imprisonment at ages 9-12, subsequent out-of-home placement from the ages of 12-15 mediates the impact of paternal imprisonment on adolescent crime. This applies both for children experiencing paternal imprisonment once and for children experiencing paternal imprisonment several times. At least two explanations are plausible in terms of these results. First, previous research has shown that the older the child is the more likely it is that he/she will be placed in some kind of institutional care rather than in foster care (Egelund et al., 2008),²⁰ where the social learning

²⁰ Foster care is the most prevalent type of out-of-home placement in Denmark, but as children grow older, more and more of them are placed in institutional care.

environment might be dominated by (antisocial) peers rather than adults, the social bonds to adults may be weakened, and where labelling mechanisms are much stronger than for children in foster care (Egelund & Jakobsen, 2011). Another explanation could be that a change in a child's care environment at an early developmental stage might be a lesser strain for the child and therefore does not mediate the impact of parental imprisonment. The results from 'Parental imprisonment: A predictor of Danish children's crime rates as adults?', also suggested that children experiencing parental imprisonment in early childhood (ages 0-7), also was less affected by this experience in terms of their educational outcome compared to children experiencing parental imprisonment later in their childhood.

In sum, out-of-home placement is interrelated with paternal imprisonment, and is a risk factor that is present in many of these children's lives. However, the results also suggest that there is still much to be learned about the mechanisms through which paternal imprisonment operates, because out-of-home placement only explains a part of the total effect of paternal imprisonment, and is most influential for children ages 9-12. Hence for the other age groups it appears that other mechanisms not examined here play a larger role in influencing their life course.

7.4 Conclusion

The objective of this dissertation was to answer one overall research question: What are the consequences of parental imprisonment?

I have addressed this question by examining parental imprisonment as a social phenomenon in Danish society, providing systematic quantitative insight on children of prisoners in Denmark and their life courses. The overall research question has been illuminated by empirical studies on the socioeconomic background of children of imprisoned parents in Denmark, whether parental imprisonment is a risk factor for children's own criminality and educational attainment as young adults, and whether out-of-home placement mediates the relationship between parental imprisonment and child outcomes.

The percentages of children at age 18 who have experienced parental imprisonment during their childhood (ages 0-18) have increased between 1998 and 2003. This increase is mainly composed of children from low-income and low-parental-education backgrounds. Thus the increasing imprisonment rates and the increasing number of children experiencing parental imprisonment are not evenly distributed in the population, suggesting that

parental imprisonment is a social stratifier insofar as this experience also affects children negatively.

The findings in the articles 'Parental imprisonment: A predictor of Danish children's crime rates as adults?' and 'Parental imprisonment and children's educational attainment in Denmark' show that parental imprisonment in Denmark *is* a risk factor regarding the long-term outcomes of children's own criminality at ages 19-29 and educational attainment by age 30. However, the articles do not provide an unambiguous answer in terms of the contention that parental imprisonment predicts adverse child outcomes over and above parental criminality (social selection) and thus could be considered a causal risk factor. A significant influence of parental imprisonment on children's criminality and educational attainment after control for social selection variables would substantiate that parental imprisonment operates as a social cause exacerbating existing strains, changing the social control and social learning environment, and possibly resulting in labelling processes. On the other hand, an insignificant influence would support a 'selection perspective', claiming that parental imprisonment is merely a proxy for initial social selection. Regarding children's criminality, the findings render it plausible that parental imprisonment is a causal risk factor for children's property crime at ages 19-29. Hence, this lends support to the 'environmental' explanations as to why parental imprisonment independently impacts certain crime outcomes. Particularly, in a strain perspective a plausible response to limited resources (perceived as unfair) could explain property crimes such as theft and burglary.

At the same time, the findings regarding educational attainment suggest that parental imprisonment only has an affect additional to parental criminality for those children who have had both parents imprisoned, which is a very 'selected' category of imprisoned children. Otherwise, children of imprisoned parents are no different from children of convicted parents in terms of their educational attainment. Thus, the results on education generally lend most support to a pure 'selection' perspective.

This leads to the conclusion that whether parental imprisonment should be considered a social cause (causal risk factor) depends on the outcome of interest. This dissertation suggests that parental imprisonment should be considered a 'social cause' influencing children's likelihood of property crimes and influencing educational attainment insofar as both parents have been imprisoned. Analyses of the impact of paternal imprisonment on adolescent crime in 'Paternal imprisonment and out-of-home placement – two interrelated phenomena?' also support the contention that paternal imprisonment impacts children's criminality at least in the short/medium term. However, for

the majority of children of imprisoned parents there appears to be no impact on educational attainment, which is in line with other studies on educational outcomes (Murray et al., 2012b). Moreover, congruent with other European studies on parental imprisonment from Sweden and the Netherlands (Murray et al., 2007; Besemer et al., 2011) the effect sizes found in this dissertation are moderate. This supports the suggestion that an extensive welfare state with a generous social security system might alleviate some of the consequences of parental imprisonment compared to other welfare state types.

Still, considered in a broader perspective the findings support the contention that parental imprisonment is a contributory factor (of moderate size) to social stratification, because it contributes significantly to increasing the likelihood of certain criminal outcomes for this group of children. Moreover, the findings suggest that the impact of parental imprisonment operates through out-of-home placement, and that these two phenomena are interrelated factors in the stratification process.

In interpreting the findings presented in this dissertation, it is however important to emphasize that parental imprisonment is one of multiple factors (both social causation and selection factors) that influence the likelihood of the examined outcomes. Even though parental imprisonment should not be considered a 'major stratifier', it is still an important piece of our understanding of the different and interrelated elements that are part of social stratification processes. A secondary but important conclusion that can also be drawn from the analyses of this dissertation is that having a criminal parent (imprisoned or not) increases the likelihood of criminal behaviour as well as low education.

7.5 Concerns

There are two general concerns that need to be addressed in relation to the validity of the overall conclusions presented above.

First, in the descriptive analysis of the development from 1998-2003 in the percentage of 18-year-olds that experienced parental imprisonment during childhood (0-18), the fact that the analyses are only based on six cohorts limits the inference that can be drawn from these numbers. It seems reasonable to assume that this increasing development continues, given the documented development in the imprisonment rates. However, I cannot rule out the possibility that the percentage of children experiencing parental imprisonment during childhood suddenly decreases after 2003.

Second, using non-experimental observational data has implications in terms of the conclusions that can be drawn from the analyses because there

might be unobserved factors that the analyses disregard. In relation to this issue of unobserved heterogeneity, a drawback of the analyses presented in this dissertation is that information on the children's individual characteristics was scarce. Children's cognitive and behavioural measures are not included in the registers, and thus are not included in the analyses. This also means that I am not able to investigate changes in child outcomes from before to after parental imprisonment. Thus I cannot entirely rule out that unobserved variables might influence the estimated effects of parental imprisonment in the analyses.

Still, all the analyses of the impact of parental imprisonment on child outcomes in this dissertation ensure that parental imprisonment clearly precedes the child outcomes, and they thus overcome the problem of endogeneity. Furthermore, the inclusion of fundamental covariates and moderators should capture the most important factors explaining outcomes such as criminality and educational attainment.

7.6 What is new?

This dissertation is, to my knowledge, the first study that analyses a complete cohort of children with imprisoned parents and follows them from birth until they are 29-30 years old. Not only is the sample representative, the large sample size also renders estimates more reliable. Using register data allows me to construct reliable measures of recorded crime and imprisonments and as a result also allows for suitable constructions of comparison groups.

Furthermore, this dissertation is one among only a few other European studies that examine the consequences of parental imprisonment, and the first study using European data and more advanced control techniques in the examination of the relationship between parental imprisonment and children's educational attainment. Moreover, the use of contemporary data in this study, capturing the time period in which increasing imprisonment rates have taken place, is also unique in a European context. In this respect this dissertation adds considerably to the existing knowledge about the consequences of parental imprisonment in a European context.

The existing literature on parental imprisonment does not offer any direct tests of the 'environmental' or 'selection' theories, which is a great weakness of the literature because hardly anything is known about the exact mechanisms in play. The investigation of out-of-home placement as a related social phenomenon to parental imprisonment and the extent to which it might be triggered by parental imprisonment illuminates some of the 'black box'

mechanisms through which paternal imprisonment might operate. This is thus a novelty in the general literature on parental imprisonment.

7.6 Perspectives: Implications for future research and policy

This dissertation has extended our understanding and empirical knowledge of the relationship between parental imprisonment and child outcomes – particularly in a European context. The findings have implications for both scholars and policymakers.

7.6.1 Implications for future research

In this dissertation it has been argued that parental imprisonment is an overlooked factor in the social stratification literature. However, to validate this argument further it is necessary that future studies examine the entire development of parental imprisonment from 1980 up until today. An overview of the population of children of imprisoned parents across this entire time period, during which a more punitive discourse has governed, would be a considerable step forward because certainties about actual developments would enable a research focus based on facts rather than assumptions about where to direct the research attention.

This dissertation has indicated that the circumstances under which children experience parental imprisonment vary, for example in terms of how many times, for how long, and at what age they experience parental imprisonment. However, this study does not provide much information about whether the child is living with the parent before the incarceration, the parent-child relationship, the care arrangements during the imprisonment, and the possibilities for contact with the incarcerated parent. The contact opportunities with the imprisoned parent might vary according to prison type. Open prisons are theoretically the most visitor-friendly, whilst pre-trial detention and ‘closed’ prisons may complicate visits to a greater extent. Future studies need to shed more light on these variations between children experiencing parental imprisonment.

Another implication arising from the results presented in this dissertation is that the relationship between parental imprisonment and out-of-home placement should be examined even further. For example, examinations of the type of placement (foster care or institutional care) and the number of separate placements should be made. What are the care arrangements for these children whilst their parents are imprisoned? If they are placed in out-

of-home care, do they stay there even after the parent has finished serving his or her sentence, and what are their chances of reunification compared to other children in foster care? If they stay in out-of-home placement even after the parent has ended his or her sentence, say hypothetically an institutional setting with a questionable social learning environment, this could very likely be a complimentary cause of some of these children's adversities.

This dissertation was not able to conduct analyses of within-individual change, i.e. changes in child outcomes from before and after parental imprisonment, which makes causal claims about the effects of parental imprisonment in this dissertation less certain. Methodologically, having 'before' and 'after' measures of child outcomes is of great importance in expanding our knowledge about the causal processes involved when parents are imprisoned. Furthermore, future studies should apply more direct measures of *changes* in strains, social bonds, social learning environments and labelling after parental imprisonment as well as measures of low self-control, impulsiveness and the like before parental imprisonment, with the aim of actually testing the explanatory power of these theories, whenever possible. This is necessary not only from a scientific point of view to extend our theoretical and empirical knowledge, but also from a policy standpoint because the mechanism needs to be identified more accurately in order to aim social intervention in the right direction(s).

In regard to other concrete mechanisms through which parental imprisonment might work, it would also be relevant to examine the suggested economic strain that parental imprisonment might entail. How does it affect the household economy in money terms? How great is the economic strain experienced by these families and to what extent is any decrease in income compensated for by the Danish welfare system? The actual financial latitude for these families could affect children considerably.

7.6.2 Implications for policy

This dissertation shows that the number of children experiencing parental imprisonment during childhood (0-18) increased from 1998-2003 and that there are consequences of imprisonment that extend beyond the legal offender. In a policy perspective it is important to emphasize that the effect sizes are moderate, but the question about whether these side effects of our penal system are acceptable still remains. To what extent is it acceptable to reproduce criminality over generations, partially through the way that society chooses to punish? Even though parental imprisonment might be only one of many factors in this reproduction, its relevance in a stratification perspective

might be reinforced if the development of children experiencing parental imprisonment after 2003 has continued to follow the upward trend in imprisonment rates. If the increasing imprisonment rates have meant that more and more children born after 1985 have experienced parental imprisonment, this should be added to the 'amount of pain' calculus. Whether this amount is suitable, and how strong the influence of parental imprisonment has to be before it is assessed as unacceptable, is a normative question that this dissertation leaves to politicians.

A more concrete policy implication of the results of this dissertation, together with the evidence on out-of-home placement, could be to aim at fewer children being separated from their parents as long as they are capable caregivers. In cases and where the seriousness of the criminality of the parent allows for it, it would likely be more beneficial for all involved if the convicted parent were to serve their sentence with their families, as is already possible for a few families today at the open institution Engelsborg. Families at Engelsborg also receive family therapy as a part of the stay. Non-scientific evaluations of this sort of imprisonment suggest positive outcomes. If this can be further validated, the establishment of similar institutions should be considered, with the aim of offering this type of imprisonment to more families in cases where it could be considered an appropriate alternative to traditional imprisonment.

Since 1999 there has been an increasing focus on children of imprisoned parents and considerable improvements have been made concerning several of the conditions that these children are subjected to in Denmark. This dissertation has documented the importance of maintaining this focus, in order to ensure that the unintended effects of imprisonment are minimized in such a way that our penal institutions do not contribute to a reproduction of the exact outcome (criminality) that prisons are intended to prevent, or at least from which they are intended to protect the rest of society.

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English summary

Within the last three decades imprisonment rates have increased significantly in most Western countries. As a consequence, more children will experience being separated from a parent for some period of time. Still, very little systematic knowledge exists about this group of children in Europe, and moreover, even less is known about the consequences of parental imprisonment on children's life course.

Most of the existing research on the relationship between parental imprisonment and child outcomes comes from the United States. However, having the highest imprisonment rate in the Western world, the United States is not representative. By using data from Denmark – a small European country with a relatively low imprisonment rate and an extensive welfare state – this dissertation contributes towards a more comprehensive understanding of how parental imprisonment may affect the life course of children in European welfare states.

The main purpose of this dissertation is thus to provide systematic quantitative insight on children of prisoners in Denmark and their life courses. Using Danish register data, a series of empirical analyses investigate the prevalence of parental imprisonment, the social background of children of prisoners, the extent to which parental imprisonment affects children's criminal and educational outcomes, and finally the mechanisms by which parental imprisonment might affect children.

The theoretical motivation for the analyses are twofold: first, the empirical analyses concerns the perception of parental imprisonment as a social phenomenon, and the extent to which it might be a contributory factor in the social stratification process in a welfare state such as Denmark. Parental imprisonment might be an overlooked factor in the stratification literature. Second, the analyses add new insight to the discussion about whether parental imprisonment in itself affects later child outcomes, or if it is rather pre-existing disadvantages (including parents' criminality) that 'selects' parents into prison and also affects children's outcomes. This is a fundamental question in the research on parental imprisonment. The former argument focuses on parental imprisonment as a life-changing event and as a trigger of additional risk factors. The latter perspective emphasizes how socio-economic background, traits, and thus early-life socialization are causing both parental imprisonment and children's outcomes. The two perspectives yield different explanations for a correlation between parental imprisonment and child outcomes; however, this does not mean that they are mutually exclusive. Instead, this

dissertation draws on the assumption that both social selection and parental imprisonment, as an environmental factor, explain the variation in children's crime rates and educational attainment. Consequently, the challenge is to disentangle the influence of parental imprisonment from the social selection variables.

The analyses show that there has been an increase in the percentage of children experiencing parental imprisonment during their childhood (ages 0-18), both in absolute and relative terms, from 1998-2003. Children from families with fewer resources predominantly constitute the increase in the proportion experiencing parental imprisonment, showing that parental imprisonment not only contributes to maintaining existing inequalities, but also reinforces them. The analyses clearly demonstrate that children experiencing parental imprisonment have a higher likelihood of being registered for a criminal offence and having poor educational outcomes compared to their peers with noncriminal parents. Children of imprisoned parents also have a higher risk of being convicted of property crime at ages 19-29 and juvenile delinquency (ages 15-20), both compared to their peers with noncriminal parents, but more importantly also compared to peers with convicted but not imprisoned parents. Parental imprisonment thus affects the risk of property crime and juvenile delinquency over and above parental criminality and social background.

In contrast, parental imprisonment does not affect children's educational outcomes over and above parental criminality. Only the small group of children who experience the imprisonment of both parents are more likely to have less education than both the group of children who experience *either* paternal or maternal imprisonment and the group of children with convicted but not imprisoned parents. Finally, the analyses also show that the effect of parental imprisonment on juvenile delinquency is mediated by out-of-home placement. These findings thus reveal one of the mechanisms through which parental imprisonment operates.

I conclude that the variation in children's criminal and educational outcomes to a large extent is attributable to initial selection in terms of socioeconomic background and parental criminality, but that parental imprisonment does make a difference for certain outcomes and subgroups. This supports the theoretical model that includes social selection variables, parental imprisonment, and possible additional risk variables such as out-of-home placement.

The dissertation consists of four papers. Three papers were prepared for international peer-reviewed journals, whilst one paper has been prepared for a Danish peer-reviewed journal. Three of the papers have been submit-

ted and been invited for resubmission, whereas the fourth paper is a working paper.

Dansk resume

Siden 1980'erne er antallet af fængslede steget betragteligt i størstedelen af de vestlige lande. Som følge heraf oplever et stigende antal børn at måtte undvære en forælder i en kortere eller længere periode af deres barndom, fordi forælderen afsoner en fængselsdom. Imidlertid er der fortsat meget lidt systematisk viden om denne gruppe af børn, og hvordan og i hvilket omfang forældres fængsling påvirker børns senere livschancer – særligt i en europæisk kontekst.

Den foreliggende forskning om børn af fængslede er primært baseret på amerikanske data. USA er imidlertid ikke repræsentativ i forhold til en mere generel forståelse af, hvordan forældres fængsling påvirker børns livsforløb, idet USA adskiller sig ved at være det vestlige land i verden, der fængsler den største andel af sine borgere – ofte i mange år og i mange henseender under meget restriktive afsoningsforhold. Ved at undersøge forældres fængsling i Danmark, et lille europæisk land med en relativ lav fængslingsrate og en omfattende velfærdstat, bidrager denne afhandling med ny viden om, hvordan forældres fængsling påvirker børns livsforløb i europæiske velfærdstater og dermed også til en mere generel forståelse af forældres fængsling som et socialt fænomen.

Det overordnede formål med denne afhandling er således at levere systematisk kvantitativ viden om børn af fængslede i Danmark og deres livsforløb. Dette gøres i en række empiriske analyser baseret på danske registerdata, der undersøger, hvor udbredt et fænomen forældres fængsling er i Danmark, hvilken social baggrund børn af fængslede har, i hvilket omfang forældres fængsling påvirker børnenes egen kriminalitet og uddannelsesgrad, og endeligt om anbringelse af barnet uden for hjemmet er en af de mekanismer, som forældres fængsling muligvis virker igennem.

Den teoretiske baggrund for at undersøge forældres fængsling har for det første sit udgangspunkt i en forståelse af forældres fængsling som et socialt fænomen, og dermed i hvilket omfang forældres fængsling bidrager til den sociale stratifikation i Danmark. Spørgsmålet er, om forældres fængsling er en overset faktor i stratifikationslitteraturen. For det andet tages der endvidere udgangspunkt i et meget debatteret spørgsmål i litteraturen om børn af fængslede: Er det forældrens fængsling, der påvirker børnenes outcomes, eller er det i stedet allerede eksisterende ugunstige sociale omstændigheder, herunder forældrens kriminalitet, som 'selekterer' forælderen til fængsling og samtidig også påvirker børnenes outcomes? Der er således to perspektiver på spil i forhold til forståelsen af en sammenhæng mellem foræl-

dres fængsling og børnenes outcomes. Det første perspektiv anser forældres fængsling som en begivenhed, der potentielt forandrer børnenes liv og opvækstbetingelser fundamentalt, da fængslingen ikke kun medfører en adskillelse fra forælderen, men også kan have økonomiske, praktiske, følelsesmæssige og stigmatiserende konsekvenser for familie og børn. Det andet perspektiv anser derimod forældres fængsling som en proxy for de eksisterende sociale omstændigheder og forældrens karakteristika og således ikke som en begivenhed, der i sig selv påvirker børnene væsentligt. I denne afhandling opfattes de to perspektiver som udgangspunkt ikke som gensidigt udelukkende – tværtimod. Den grundlæggende antagelse er her, at både initiale selektionsfaktorer og forældres fængsling, som en livsforandrende faktor, tilsammen forklarer variationen i børns kriminalitet og uddannelsesgrad. Som følge heraf er den empiriske udfordring at få isoleret den potentielle effekt af forældres fængsling fra sociale baggrundsvariable.

Resultaterne af de empiriske analyser viser, at der i årene 1998-2003 har været en stigning i andelen af børn, der oplever forældres fængsling i løbet af deres barndom (0-18 år), og at denne stigning hovedsageligt udgøres af børn fra familier med få økonomiske og uddannelsesmæssige ressourcer. Dette peger på, at forældres fængsling i Danmark bidrager til at opretholde, men også forstærke i forvejen eksisterende uligheder. Analyserne viser endvidere, at børn af fængslede gennemsnitligt har en højere sandsynlighed for at blive dømt for kriminalitet senere i livet og for at få færre års uddannelse sammenlignet med børn, der hverken har kriminelle (dømte) eller fængslede forældre. Sammenlignet med børn, der har kriminelle, men ikke fængslede forældre, har børn af fængslede desuden også højere sandsynlighed for at blive dømt for ungdomskriminalitet (15-20 år) og blive dømt for berigelses-kriminalitet (19-29 år). Forældres fængsling indvirker således på børnenes sandsynlighed for ungdomskriminalitet og berigelseskriminalitet i tillæg til forældres sociale baggrund og kriminalitet. Til gengæld påvirker forældres fængsling ikke børnenes uddannelsesgrad mere end hvis forældrene er dømt for kriminalitet, men ikke har afsonet en fængselsdom. Kun den mindre gruppe af børn, der oplever, at begge forældre har været fængslet i løbet af deres barndom har en højere sandsynlighed for færre års uddannelse sammenlignet med børn, der enten har oplevet fars *eller* mors fængsling eller børn med forældre, som er dømt for kriminalitet, men ikke har været fængslet. Endeligt viser analyseresultaterne, at effekten af forældres fængsling på børns ungdomskriminalitet er medieret af, om barnet efterfølgende er blevet anbragt uden for hjemmet.

På den baggrund konkluderes det i afhandlingen, at variationen i børns kriminalitets- og uddannelses-outcomes i høj grad kan tilskrives den initiale

social selektion i form af socioøkonomisk baggrund og forældres kriminalitet, men at forældres fængsling har en effekt i disse henseender for bestemte outcomes og undergrupper af børn. Endvidere konkluderes det, at forældres fængsling til dels virker igennem børns anbringelse uden for hjemmet. Dette giver således empirisk støtte til en teoretisk model, som både inkluderer sociale selektionsvariable, forældres fængsling, og potentielle medierende variable som anbringelse uden for hjemmet.

Afhandlingen består af denne sammenfattende rapport samt fire artikler, der er skrevet til peer-reviewed tidsskrifter. Tre af artiklerne er indsendt, mens den sidste artikel foreligger som et arbejdspapir. To af de indsendte artikler er blevet inviteret til genindsendelse, og den tredje er blevet accepteret for publicering under betingelse af mindre rettelser.