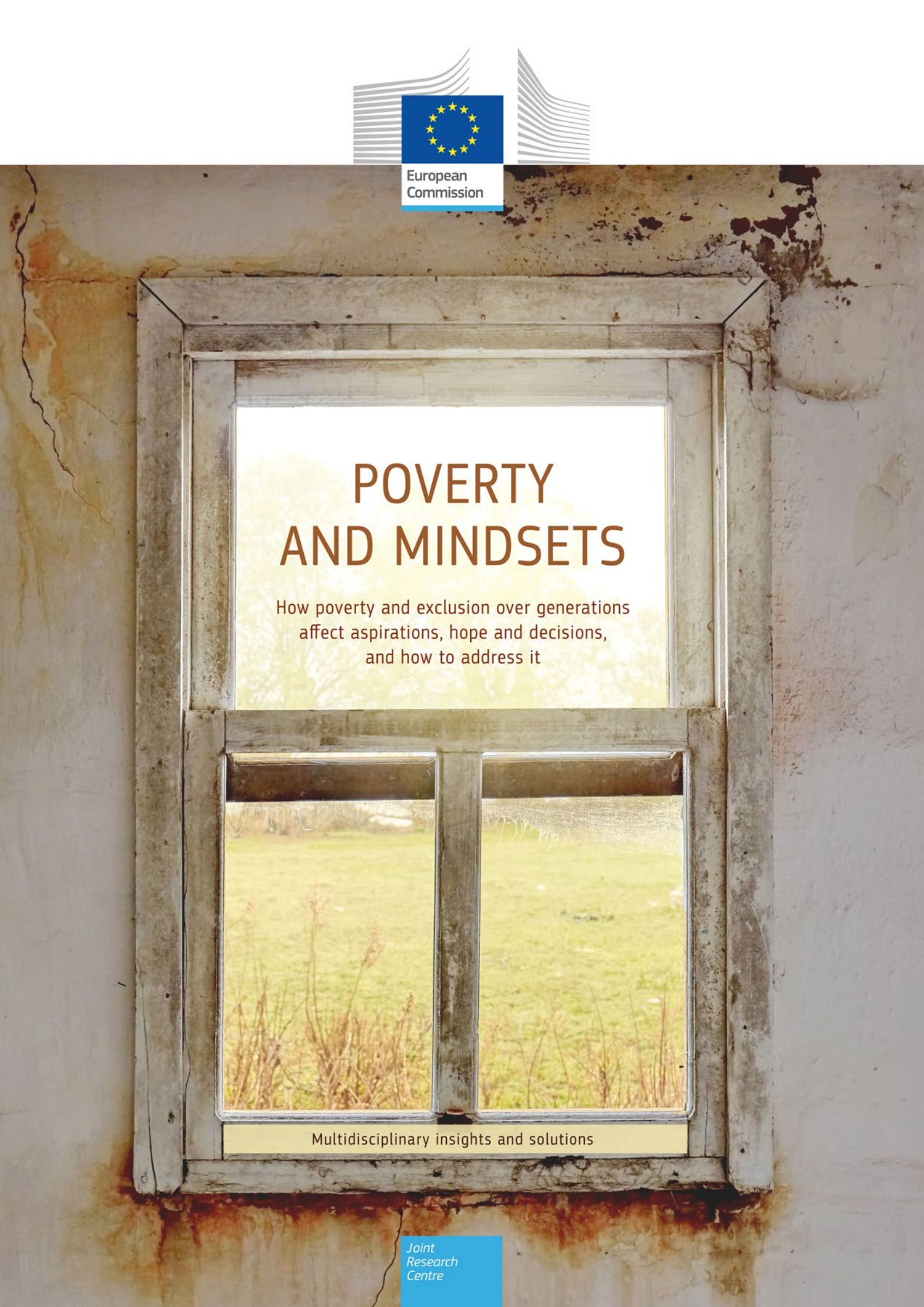
European Commission
POVERTY AND MINDSETS
How poverty and exclusion over generations affect aspirations, hope and decisions, and how to address it
Multidisciplinary insights and solutions
Joint Research Centre

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POVERTY AND MINDSETS

How poverty and exclusion over generations affect aspirations, hope and decisions, and how to address it

Multidisciplinary insights and solutions

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EXECUTIVE SUMMARY

This report looks at how being immersed in poverty and social exclusion for a prolonged period may affect how people consider themselves and their future, and how they act in relation to it.

Understanding it is important for those who plan and implement social policies addressing poverty because it could increase the effectiveness of their work.

Tackling poverty requires improving economic conditions and ensuring real, actual access to quality education, employment, housing and health services. This is essential to break the cycle of poverty. While these issues are already covered by abundant literature and work at EU level, **this report focuses** on a less-studied obstacle – that is, **how poverty and exclusion affect behaviour, aspirations, hope and agency**, which can all be essential drivers to social mobility. Evidence suggests that the experience of poverty itself seems to contribute to the transmission of poverty to the next generation.

Social assistance measures in support of people in poverty usually consist of 'safety net' measures allowing people to recover their strengths and 'pull the pieces together'. They are, in most cases, conceived as temporary. The expectation is that, sooner or later, people should be able to reach economic autonomy. This report explains why this can be difficult for people who have been immersed in an environment of poverty and social exclusion for a long time. The impact of such conditions on their aspirations, self-confidence and decision-making may be a less visible but significant obstacle. Understanding such obstacle, and how to address it, may be crucial for policies to work.

Importantly, the report speaks of the effects of the experience of poverty, rather than 'of the poor'. The findings it presents point to what may happen to any person who has to endure certain circumstances.

The report **gathers and summarises findings from behavioural studies, neuroscience, sociological and economic studies**. Bringing together these diverse sources and scientific evidence can help to better understand this complex issue, and to identify countermeasures that may effectively address the problem.

In this report, we look at poverty and social exclusion together, while acknowledging that the two do not always coincide. Exclusion can be triggered by discrimination on the basis of factors other than income (religion, ethnicity, disability, sexual orientation, etc). Similarly, poverty does not always have to be accompanied by exclusion, for example when it is a mainstream issue in a particular locality.

But in the case of marginalised groups who have been both poor and excluded for several generations, poverty and exclusion often overlap and become inextricable.

A particular interest of this report is the effects of '**multigenerational' poverty** – that is**, poverty that has affected families for several generations**. In fact, the effects of poverty and exclusion are already visible when they are caused by temporary circumstances (such as migration to another country, or a change in personal situations deriving, for example, from the loss of a job). The report argues that people who are in a situation of poverty over many generations may see such effects multiplied. The impact of poverty may be enhanced by the cumulative load of environmental factors, as the absence of experiences of social mobility in the family history and the environment may increasingly undermine aspirations and affect decisions.

The implications of these findings may be particularly relevant to defining inclusion strategies for families and communities that have been marginalised for a long period of time. Their issues may or may not be linked to a situation of ethnic discrimination. The same issues may affect many Roma communities across Europe - **but also families and neighbourhoods which have been in deep poverty for centuries, in deprived areas of several Member States.**

The report is divided into two parts: Section I outlines what different research disciplines say about the impact of poverty and exclusion on the mindset (aspirations, decision-making, hope). Section II outlines possible solutions, as indicated by research and field experience. It contains examples of concrete initiatives that have successfully tackled some aspects of the issue.

Findings outlined in Section I (Chapters 1, 2 and 3) **show how and through which mechanisms poverty and exclusion impact aspirations and decisions.**

1. **Behavioural experiments**, described in Chapter 1, illustrate how poverty – as a particularly severe form of scarcity – may require people to focus on immediate needs, thus reducing their 'cognitive bandwidth', and with that the capacity to look ahead and make pondered decisions for the future.

In another field, behavioural experiments also proved the detrimental effect of stereotypes on performance, and thus on self-esteem. External expectations (by parents, teachers, mentors, employers) may often be based on prevailing stereotypes and narratives about certain social groups, and they tend to become a self-fulfilling prophecy. These low and negative expectations vis-à-vis people in poverty impact their actual performance, their self-esteem and their expectations for the future.

2. Recent findings from **neuroscience** illustrated in Chapter 2 show that, over time, poverty and exclusion impact the development of some brain areas – and namely areas that are crucial for 'executive functions' (e.g. the capacity to plan and implement reasoned decisions for the future). The main reason seems to be the prolonged exposure to toxic stress deriving from the many problems that a family in a situation of poverty and exclusion faces on a daily basis. Such prolonged stress may affect the development of key areas of the brain for cognitive and personal development, such as the prefrontal cortex and the hippocampus. This has consequences on attention, memory, focus and the capacity to plan. In turn, this may create problems in education, with a cascade effect on employment, life-chances and self-esteem. Toxic stress may also hinder parenting, with repercussions on the quality of stimulation given to children, and long-term consequences on their cognitive development. Finally, unhealthy living conditions (poor quality housing, poor nutrition) may significantly compound the problem.

3. Analyses of results from **education surveys,** such as PISA, point to an aspiration issue for people in poverty, as discussed in Chapter 3. Data show that no matter their actual capacities and performance, young people with a lower socio--economic background have lower aspirations for their future careers than wealthier students. To some extent, this may be explained by the lower aspirations of parents and teachers, and whether the education they received enabled, or did not enable, the creation of a 'growth mindset' that supports hope and aspirations. Access to information about educational pathways and exposure to role models also contribute to this.

Chapter 4 looks into the specific issues related to **being in poverty and exclusion for many generations**, when the legacy of a sense of disempowerment in the family is often combined with a broader environmental context of poverty and exclusion. In those cases, the concentration of exposure – the combined frequency, duration and severity of stressors – significantly compounds the impact of poverty and exclusion. A context of spatial segregation may increase exposure to multiple environmental risks and toxic stress. The absence of examples of successful social mobility and role models in the family and in the broader social circle may deeply affect the possibility of imagining a different future. When a community has been excluded for a long period of time, for example as a result of historical oppression, it often develops norms and codes that are functional to its survival. For an individual, access to social mobility in mainstream society may imply breaking such norms. This may be difficult in behavioural terms, but also highly risky and costly in economic and emotional terms, as it may involve renouncing to the support network in the community. This is even worse when the group to which a person belongs is subject to structural discrimination, which hampers any chances of success and recognition in mainstream society.

In Section II we discuss how these findings may be used to address the mechanisms described in Section I.

Chapter 5 presents some **guiding principles** for policymaking. Neuroscience and behavioural experiments show that there are many possibilities and tools to address the impact of poverty on mindset and executive functions. Early intervention, in pre-school years, is of the utmost importance. However, crucial cognitive and executive functions can be re-established until adult age. Support measures can be designed in such a way that they may optimise existing capabilities and behaviours. Above all, it is important to look at the examples of children and adults who have thrived in spite of adverse circumstances. Analysing such examples has allowed psychologists to identify crucial 'protective factors' that allow for resilience. They include positive support from family and the school, and the presence of external support systems.

Chapters 6 to 10 outline measures that may contribute to building such protective factors.

Chapter 6 focuses on **education as the key enabler for long-term change**. It outlines some systemic actions that are widely recognised as essential to improving the delivery of education and better cater for the emotional and cognitive needs of children in poverty. Such measures require political will and long-term strategies and may be difficult to implement; but they may generate long-term improvements. within addition to long-term systemic actions, a wide range of more specific and flexible programmes and interventions may help build resilience, support executive functions and hope. Reflecting on well-being in school, how to make learning attractive and on supporting social and emotional competences can make a difference. Additionally, an emphasis on arts and sports may help reduce stress and improve relationships and trust.

Chapter 7 focuses on **how to support solid and secure attachment relationships**, which are crucial protective factors in enabling resilience. We outline measures to support parental involvement in schools, and discuss the relevance of mentoring programmes as well as of out-of -school support. Creating safe places where children and young people may can meet after school and in during the holidays, to carry out activities supporting their personal development, may prove to be important key to contrast counteracting the impact of the environment.

Chapter 8 looks at how the **creation of aspirations** can be supported: by helping children and adults to develop a growth mindset through a range of training tools and information; by changing the attitude of teachers and staff; by supporting the aspirations of parents; and by fostering exposure to role models, including through the use of media.

Chapter 9 highlights measures to help people **set and achieve their goals in practice**, by using methods such as motivational interviewing, peer support groups and, above all, through long-term coaching, for which some concrete examples are described.

Finally, Chapter 10 argues that such measures seem to work best when they are integrated into a **comprehensive framework**, and the needs of different generations (parents and children) are taken into account. A system to monitor and measure progress is essential to supporting the effectiveness of such measures.

We hope that this collection of multidisciplinary insights and practical examples of measures may be useful for the definition of comprehensive anti-poverty strategies. Beyond tackling material deprivation, addressing the emotional and cognitive needs of children and adults in poverty, reinforcing their resilience and decision-making is crucial to breaking the cycle of poverty and achieving the *right to aspire* for all.

INTRODUCTION

Tackling poverty requires a substantial improvement of economic conditions and equal opportunities in accessing education, employment, housing and health services. It requires implementing a legal and institutional framework giving access to the quality provision of services to all people. And access to opportunities must be real, not hindered by hidden mechanisms of discrimination. These conditions are *sine qua non* to the effectiveness of any anti-poverty and social inclusion policy.

On top of structural obstacles, however, there may also be additional aspects to take into account. Evidence suggests that the way poverty and social exclusion shape attitudes, expectations and social norms may also constitute an obstacle. Such an obstacle seems particularly important when poverty and exclusion have permeated families and the environment for a prolonged period. It may hinder people from fully benefitting from opportunities when they are available.

While the structural obstacles related to access to opportunities are well studied by a vast corpus of literature, this report focuses on how the *experience* of poverty affects expectations and attitudes, and thus contributes to reinforcing the cycle of poverty. It brings together findings from multiple disciplines, such as behavioural studies, neuroscience and sociology. Combining insights from a variety of disciplines may enhance our understanding of this complex issue.

Understanding the multifaceted nature of the problem may be useful when designing a comprehensive anti-poverty strategy. It may be relevant to improve socio-economic mobility for groups who have endured exclusion and poverty for centuries – such as the Roma in Europe – but also many other families and communities living in poverty for several generations.

THE EU POLICY CONTEXT

Combating poverty and social exclusion is an explicit goal of the EU[1]. While the implementation of social policies belongs to Member States, the EU promotes cooperation among them[2]; monitors progress based on a set of indicators and benchmarks; analyses reforms as part of the European Semester process; and provides funding. The European Social Fund (ESF) co-finances actions aimed at supporting the most disadvantaged, namely in accessing the labour market. The Fund will dispose of about 90 000 million euro for the period 2021-2027. Specific actions are aimed at combatting child poverty (through the development of a Child Guarantee) and at the inclusion of particularly marginalised communities, such as the Roma. The Commission coordinates a multi-annual strategic framework for Roma inclusion and it launched a new framework in 2020.

It is important that these and other EU efforts to tackle poverty are informed by current evidence and research. While research at EU level is primarily sponsored by the Horizon Europe programme (that is, a competitive funding programme for large collaborative projects), the Joint Research Centre, as the in-house research service of the European Commission, provides scientific analysis and evidence for direct use in EU policymaking. In line with such a mandate, the present review of what science and practice say regarding an important aspect of poverty aims to support policy developments by contributing to fine-tuning the design of policy measures.

IT IS NOT ABOUT *THE POOR* BUT ABOUT *BEING POOR*

We are well aware that research on the psychological aspects of poverty – from the 'culture of poverty' work developed in the 1960s in the United States to a more recent political debate on aspirations in the UK – has been subject to intense criticism. This stems from the concern that pointing to mindsets and low aspirations as a reason for failing to break out of poverty may equate to blaming the poor for their impediment. Thus, instead of addressing social injustice and developing public policies to address the issue, the responsibility is shifted onto the victims of poverty. Such a concern is valid. As the controversy around the 'culture of poverty' literature showed, even a well-meant anthropological analysis can be distorted for political purposes.

To avoid any possible misinterpretation, we would like to emphasise that looking at the impact of the experience of poverty on people's perceptions and expectations must *complement*, and should *not in any way diminish*, the institutional, governmental and public responsibility for fighting poverty.

1 The Treaty of Amsterdam enshrined the eradication of social exclusion as an objective of Community social policy in 1999.

2 On 7 May 2021, EU Member States agreed to new headline targets for 2030 on the reduction of poverty and social exclusion, namely for children.

Such a fight can only succeed through an implementation of a *full range* of support measures addressing multiple aspects of poverty – through income support, employment, education, housing, health, etc. Among these, there is *also* the understanding of the impact of the environment into which one was born, and its possible role in creating the poverty trap. As Amartya Sen's capability theory[3] points out, poverty is *not only* a matter of deprivation of material goods, but it is *also* deprivation of the capability to make those choices that may lead to personal fulfilment/blossoming. Understanding how this happens, and what can be done about it, is essential to designing effective interventions and breaking the poverty cycle. This is not about *the* poor – it is about the *experience of being poor*[4]. Behavioural sciences and neuroscience point to what may happen to *anyone* who has to endure certain circumstances.

THE FOCUS OF THE REPORT - POVERTY OVER SEVERAL GENERATIONS

This report focuses in particular on poverty and exclusion experienced over several generations. It looks into the 'stickiness' of this condition, and into how a deep immersion in an environment permeated by poverty and exclusion may affect the chances of overcoming it. The notion of "multigenerational poverty" captures the accumulation of issues over generations, as opposed to poverty stemming from occasional circumstances such as personal events or the consequences of an economic or political situation.

MINDSET AND EXECUTIVE FUNCTIONS

In this report, we look at how people perceive themselves and their future in terms of *aspirations* and expectations; if they feel empowered to take action to progress towards their aspirations (sense of agency); and how they take steps and make decisions to get there.

The report looks at this under two distinct but closely intertwined dimensions. One is the notion of 'mindset', stemming from psychology, which broadly summarises the beliefs that each of us have about our own chances and perspectives, which may profoundly affect the way we lead our lives[5]. It is a metacognitive framework about us and the society that largely results from environmental experiences and determines choices and behaviours.

The other is the notion of 'executive functions', stemming from neurobiology – that is, the manner in which the prefrontal cortex and limbic brain structures control elements of human decision-making and behaviour (including the stress response).

These two notions are intertwined and mutually reinforcing[6].

POVERTY AND SOCIAL EXCLUSION ARE NOT THE SAME, BUT OFTEN COINCIDE

While poverty and social exclusion are often treated together in EU policy references[7], in our more analytical approach it is useful to specify the difference between the two.

Poverty, as scarcity of material wealth, may occur without social exclusion. This may be the case of a rural population in developing countries, where the scarcity of resources can afflict the *majority* of the population in a particular place. On the other hand, social exclusion may also affect people who are not poor. They may be excluded from participation and access to opportunities, or their dignity be offended against because of discrimination based, for instance, on religion, ethnicity, gender, disabilities or sexual orientation.

However, in the case of marginalised groups who have been poor and excluded for several generations, poverty and exclusion often overlap and become inextricable. This is why the report mainly focuses on the intersection and cumulative effect of the two.

THE STRUCTURE OF THE REPORT

The report is divided into two main sections. Section I synthesises literature on how poverty shapes aspirations, attitudes and mindsets, and examines evidence of the entrenchment of these characteristics when experienced over several generations. Section II reviews a range of established initiatives and measures that try to counterbalance such impacts.

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3 see Sen, A. Inequality re-examined, 1992

4 As pointed out by Eldar Shafir.

5 Dweck, C. S., 'Mindset – The new psychology of success'.

6 National Scientific Council on the Developing Child, 'Understanding Motivation: Building the Brain Architecture That Supports Learning, Health, and Community Participation', *Working Paper No 14,* 2018. Retrieved from www.developingchild.harvard.edu. Provides a good framework for understanding these dynamics.

7 Such as in the 'Laeken indicators' and the headline targets for the European Pillar of Social Rights.

METHODOLOGICAL APPROACH

The report is a narrative synthesis of published evidence.

Its preparation combined desk research with exchanges with and inputs by academic experts and practitioners in specific fields. In particular, it involved the collaboration with three experts with an established record in implementation of evidence-based anti-poverty strategies[8].

The initial findings were discussed at a seminar organised in February 2021, in the framework of the JRC Community of practice on Fairness, with the participation of Commission staff and external stakeholders.

The report summarizes insights and solutions stemming from a wide variety of disciplines and sources. Sources were selected on the basis of a qualitative assessment regarding their relevance to the topic. It does not aim to provide a systematic review of evidence and literature in a given field, as this would be beyond the scope of the work.

It does refer as much as possible to meta-reviews or high quality synthetic analyses, and it does try to privilege evidence of causal relations (that is, evidence establishing impact) and results from longitudinal studies where available.

It refers to research based on a variety of methodologies with different degrees of external and internal validity, ranging from smaller-scale experiments to comparative, international surveys[9].

It looks into research and examples of interventions from many different contexts (Europe, USA and other world regions). It is clear that the political, economic and cultural context is crucial to determining outcomes for social mobility, and it may affect the effectiveness of interventions. However, this report primarily aims to illustrate the *mechanisms* through which poverty and exclusion impact on mindsets. This is why it does not discuss in depth the details linked to cross-country differences.

The main aim of the report is to highlight a substantial collection of evidence, and to connect the dots among findings that emanate from different perspectives but indicate converging directions. In this way, it endeavours to throw light on a complex issue and provide a better understanding of mechanisms and issues, as well as of possible solutions.

8 **Elisabeth Babcock** is the CEO of EmPath (Boston, USA). She has decades of teaching experience (at Harvard and Brandeis Universities) in relation to non-profit strategy and implementation. She is the author of a uniquely specific analytical work, followed by direct application in directing programmes, on the use of findings from brain science and behavioural science for the improvement of social services.
Jose Manuel Fresno is a key expert on policy analysis related to poverty and social exclusion, equality and anti-discrimination, immigration policies, and ethnic minorities. He has often advised national and regional governments and EU institutions on the implementation of reforms in the area of welfare system and social inclusion.
Paola Milani is Professor of Family Education at the University of Padova. She is Director of the Center of Childhood (CIPPI) of the same University. She had a key role in the design of the PIPPI programme support for prevention of institutionalisation, and she advises national authorities on the implementation of anti-poverty support schemes.

9 In some cases, as for the experiments, the research referred to may have a high level of internal validity, as it demonstrates the causal relationship between the triggering event and the outcome; however, the external validity (that is, the way the results may be applied to other contexts) is less certain On the other hand, tools such as survey studies offer less internal but more external validity.

SECTION I

EVIDENCE ON THE IMPACT OF POVERTY AND EXCLUSION ON MINDSETS

This first section of the report reviews what we know about the impact of poverty on aspirations as well as on the capacity to plan ahead and make decisions that help achieve those aspirations.

Here, we bring together findings from behavioural insights, neuroscience and sociology. Each discipline sheds light on some aspects of the same multifaceted problem. Together, they reveal the mechanisms through which poverty and exclusion impact on the way people look at and plan for their future.

The following four chapters illustrate how poverty and exclusion impact on aspirations and planning for the future through several converging mechanisms.

Research demonstrates that poverty and exclusion affect executive functions and self-regulation skills – that is, the capacity to focus attention, memory and plan decisions.

This has an impact on key decisions that may drive social mobility as well as on performance in education (and consequent life chances). In education, low expectations from teachers and parents may compound the issue.

Performance impacts on aspirations; however, the impact of poverty and exclusion on aspirations is not only mediated by performance. The environment also plays a direct role. The absence of role models, lack of information and peer pressure in marginalised communities may curb aspirations for children in poverty, even when they are high achievers in school.

Clearly, the capacity to aspire, and to make decisions that are conducive to realising the aspirations, is crucial to achieving social mobility. Conversely, low aspirations contribute to perpetuating the cycle of poverty. As Amartya Sen's capability theory points out, poverty is *not only* a matter of deprivation of material goods, but it is *also* deprivation of the capability to make those choices that may lead to personal fulfilment and blossoming.

This section also outlines possible explanations of why and how this happens. Among the many convergent factors, the main one is toxic stress – that is, the continuous and excessive stress deriving from concerns of families in poverty, as well as discrimination. Brain science shows that such stress 'swamps' the prefrontal cortex and the limbic brain, hindering some key functions. The other important element, for people in multigenerational poverty in particular, is the impact of the environment of marginalisation, which increases stress and impedes the imagination of alternative futures.

A clear understanding of these mechanisms is the first, necessary, step to developing effective measures to support people in multigenerational poverty.

1. THE IMPACT OF POVERTY AND EXCLUSION ON MINDS AND BEHAVIOURS

The experience of poverty impacts people's capacity to make decisions based on a balanced and forward-looking analysis of their situation and impedes their ability to control impulsive behaviour.

The threat of being negatively stereotyped based on one's identity can significantly impair performance and self-esteem.

Behavioural science provides useful insights into two different mechanisms:

1. the impact of poverty on 'cognitive bandwidth' and executive functions,
2. the consequences of discrimination and bias on self-confidence.

Poverty and exclusion do not always correspond.

In rich countries, poverty is an issue for a limited proportion of the population. But in many countries across the world, poverty affects the majority of society. In this case, poverty is a mainstream issue rather than a characteristic for a marginalised group.

Exclusion affects a subgroup, which is discriminated or stigmatised for different reasons. Such reasons do not necessarily relate to lower socio-economic status. They may concern gender, ethnicity, sexual orientation or religion, etc.

When poverty and exclusion are combined, as is often the case for people in multigenerational poverty, the mechanisms of scarcity and the effects of bias and stereotyping compound one another. When addressing them, the interaction between the mechanisms needs to be taken into consideration.

1.1. POVERTY CAN MAKE PEOPLE LESS INSIGHTFUL, LESS FORWARD-THINKING AND LESS CONTROLLED

In their ground-breaking research based on numerous experiments, Mullainathan and Shafir[10] document how the experience of **scarcity** (of money, time or other goods) **captures people's minds**. They show that an involuntary preoccupation with an unmet need, such as a shortage of money or time, can capture our attention and impede our ability to focus on other things. Scarcity promotes tunnel vision, helping us focus on the crisis at hand. But it also makes us less insightful, less forward-thinking and less controlled.

10 Mullainathan, S. and Shafir, E., S*carcity: Why Having Too Little Means So Much*, Times Books, 2013.

As the authors demonstrate, scarcity captures our attention to the point that it significantly reduces what they call **'cognitive bandwidth'**. Bandwidth accounts for two main resources: *fluid intelligence* and *executive control*. Fluid intelligence relates to how people process information and the ability to solve problems, retain information and engage in logical reasoning. Executive control concerns our ability to regulate impulsive behaviour.

For example, an experiment demonstrated that simply **raising monetary concerns among participants with scarce monetary resources eroded their ability to think and reason abstractly and solve problems** (fluid intelligence). Asking poorer people to contemplate a hypothetical cost of a car repair impaired their performance on intelligence tests as much as missing a night's sleep – about 13 or 14 IQ points. This is a significant difference that can shift the person being tested from the 'superior' to 'average' intelligence category, or from 'average' to a category labelled 'borderline-deficient'.

Similar results were obtained when measuring ***executive control*, which underlies our ability to manage our cognitive activities, including planning, attention and initiating and inhibiting actions.** Experiments that focused both on poverty and on other forms of scarcity showed that people whose mental capacity was under greater pressure from other preoccupations had more difficulty in controlling impulsive behaviour.

Consequently, **poverty** – as a specific and particularly serious form of scarcity – **impacts people's ability to make decisions based on a balanced and forward-looking analysis of their situation.**

Behavioural experiments also show that people living in poverty react differently in certain situations than those who are better off. This puts them in an even more disadvantaged position.

Furthermore, Haushofer and Fehr[11] argue that **poverty induces psychological outcomes and behaviours that make escaping poverty more difficult by affecting economic decisions of individuals.** For example, those in poverty are less willing to take risks and sacrifice immediate income in favour of higher future revenues. They are less prone to adopting new technologies and investing in long-term outcomes that could help them and their children to escape poverty.

Mullainathan and Shafir argue that this explains a number of otherwise confounding kinds of self-defeating behaviour among those suffering from scarcity, such as the failure of poorer farmers in Africa to weed their fields even though they have the time to do so and would make more money that way, or the failure of low-income Americans to take diabetes drugs and other medication or to eat more healthily even when it is financially viable.

The irony is that the stakes in decision-making are also much higher for the poor. In a situation of scarcity, making the right decision on where to focus the limited available resources is more important than in a situation of abundance. However, **the condition of poverty is so distracting and challenging that the chances of making the right decision are much lower**. The lack of understanding of these mechanisms by institutions dealing with people in poverty only enhances these effects.

Box 1

One famous experiment monitored the behaviour of Indian sugar cane farmers. They tend to get their income in a lump sum, all at once at harvest time. Their fluid intelligence and executive control were measured before and after the harvest. The experiment showed that the farmers performed much worse on both these tests before than after the harvest. The difference on the fluid intelligence test corresponded to about 9-10 IQ points. On the executive control task, they were 11 per cent slower in responding and made 15 per cent more errors.

Mani, A., Mullainathan, S., Shafir, E. and Zhao, J., Poverty Impedes Cognitive Function', *Science*, Vol. 341, 2013, pp. 976-980, https://scholar.harvard.edu/files/sendhil/files/976.full_.pdf.

11 Haushofer, J. and Fehr, E., 2014, cit.

Box 2

A study randomly assigned subjects to a lower ('poor condition') or a higher ('rich condition') budget and then asked them to make a series of 'purchasing' decisions. Naturally, those with a lower budget faced more difficult trade-offs because they could afford fewer of the desirable goods. The study showed that decision-making in difficult trade-offs in the poor condition consumed the cognitive resources of the subjects to the point that it impaired their subsequent performance in tasks that required willpower and executive control.

Haushofer, J. and Fehr, E., 'On the Psychology of Poverty', *Science*, Vol. 344, No 6186, 23 May 2014), pp. 862–67, https://doi.org/10.1126/science.1232491.

1.2. STEREOTYPES AND DISCRIMINATION CAN TURN INTO SELF-FULFILLING PROPHECIES

Stereotypes about social groups may substantially affect their members' intellectual performance and aspirations[12]. The so-called 'stereotype threat' undermines a person's self-confidence because the individual is concerned about being judged or treated negatively based on that stereotype.

Several experiments showed the impact of stereotypes in different fields. For instance, in relation to performance in maths, meta-analyses[13] showed that **stereotype threat undermines performance across diverse types of groups**, and it may explain 50 to 82 per cent of the gender gap on a standardised maths test and 17 to 41 per cent of the gap between non-Asian minorities and white people.

Studies show that the stereotype threat is triggered when a person is explicitly reminded of it. When we become self-conscious of what is expected from us, we tend to stick to those expectations. In India, low-caste boys solved mazes just as well as high-caste boys when their caste was not publicly revealed, but they solved 23 per cent fewer mazes than high-caste boys when their caste identity was revealed in mixed-caste groups (Hoff and Pandey, 2014)[14].

Box 3

The stereotype threat was explored by Steele and Aronson in 1995 in a seminal experiment when black and white college students were asked to take a difficult verbal test. One group of students (stereotype threat) was told that the test was a 'diagnosis of intellectual ability', while the other group (non-stereotype threat) was told that the test was 'a laboratory problem-solving task that was non-diagnostic of ability'. In the stereotype-threat condition, black students – who were matched with white students in their group by performance in standardised tests (SAT scores) – did worse than white students. In the non-stereotype-threat condition, the performance of black students matched that of white students with the same SAT scores.

Steele, C. and Aronson, J., 'Stereotype Threat and The Intellectual Test-Performance of African-Americans', *Journal of personality and social psychology*, Vol. 69, 1995, pp. 797-811.

12 Spencer, S. J., Logel, C., Davies, P. G., 'Stereotype Threat', *Annual Review of Psychology*, Vol. 67:1, 2016, pp. 415-437.

13 Shih, M., Pittinsky, T. L. & Ambady, N., 'Stereotype susceptibility: Identity salience and shifts in quantitative performance', *Psychological Science*, Vol. 10(1), 1999, pp. 81-84.

14 Hoff, Karla and Pandey, Priyanka, (2014), Making up people—The effect of identity on performance in a modernizing society, Journal of Development Economics, 106, issue C, p. 118-131, https://EconPapers.repec.org/RePEc:eee:deveco:v:106:y:2014:i:c:p:118-131

Box 4

In France, supermarket clerks of African origin were 9 per cent more productive than other clerks, except on days when they were supervised by managers who had a bias against minorities (as determined by an Implicit Association Test); on these days, they were of average productivity.

Glover, D. A., Pallais, A., Pariente, W., 'Discrimination as a Self-Fulfilling Prophecy: Evidence from French Grocery Stores ', *Quarterly Journal of Economics*, Vol. 132(3), 2017, pp. 1219-1260.

Box 5

An example of the effects of priming was illustrated by an experiment looking at stereotypes about ageing. The subjects were 'implicitly primed' with words related to the stereotype of elderly people (for example, Florida, forgetful, wrinkle). While the words did not explicitly mention speed or slowness, those who were primed with these words walked more slowly upon exiting the testing booth than those who were primed with neutral stimuli.

Bargh, J. A., Chen, M., Burrows, L., 'Automaticity of social behavior: direct effects of trait construct and stereotype-activation on action', *Journal of Personality and Social Psychology*, Vol. 71(2), August 1996.

Sometimes, however, the activation of the stereotype threat can be implicit – for instance, when it transpires in the expectations of supervisors, mentors or teachers.

The effect of stereotypes can also be **triggered by broader environmental cues**. These cues that can affect our thinking and behaviour beyond our awareness are known as **'priming'.**

The combination of environmental cues with stereotypes about categories of people and their potential may dramatically impact people's chances of success. In a review of behavioural mechanisms of exclusion and their effects, Hoff and Walsh[15] outlined how mechanisms that are related to stereotypes may constitute *de facto* social barriers. They are often triggered by the existence of institutions, or formal hierarchical categorisations (of race or gender, for example), but they may persist long after the institutions have disappeared.

Being reminded of a negative stereotype about one's identity diverts attention and mental capacity away from the task at hand. The stress caused by the stereotype threat creates a bandwidth tax that reduces our working memory, analytic abilities and personal control that are needed to solve difficult questions. It can negatively impact on performance by leading people to pay conscious attention to automatic skills. All of this exacerbates anxiety, which further diverts attention[16].

So, the **belief that a race, gender, caste or other group is inferior can affect how others treat members of the group – but also how members of the group feel about themselves**. This, in turn, creates productivity differences that sustain these beliefs even when no inherent productivity differences exist. In the long run, **the chronic experience of stereotype threat may lead people to withdraw**. People who belong to a stigmatised group are not only more likely to receive negative cues about their potential, but they are also more likely to believe those cues and less likely to expect that their efforts will be successful. This may trigger actions to protect one's self-integrity (such as self-handicapping, self-stereotyping and self-censoring)[17].

15 Hoff, K. and Sonam Walsh, J., 'The Whys of Social Exclusion : Insights from Behavioral Economics,' The World Bank, 11 December 2017.

16 Steele, C. M., *Whistling Vivaldi: How Stereotypes Affect Us and What We Can Do*, New York: W.W. Norton and Co. Inc., 2010 - ref. in Babcock, E.

17 Spencer, Logel, Davies, cit.

Well before experiments demonstrated the impact of stereotype threat on performance, in 1963[18] sociologist Ervin Goffman explored the situation of people who were socially stigmatised through autobiographies and case studies. He examined how they dealt with the rejection of others and showed that a stigma can 'get into people's heads' and degrade their self-concept. Indeed, cross-sectional studies involving diverse minority groups have found that individuals who experience discrimination are more likely to exhibit depressive symptoms and other negative mental health outcomes. As Hoff and Walsh explain, this phenomenon can result in 'adaptive preferences' of the oppressed[19] – when the victims of oppression become accustomed to their circumstances and even come to prefer them. In this way, prejudice and discrimination may lead people to conform to what they consider is expected from them, thus translating it into a self-fulfilling prophecy.

18 Goffman, E., *Stigma*, 1963.

19 As outlined by Amartya Sen and Martha Nussbaum (2001), developing on the work of Jon Elster.

2. THE PHYSIOLOGICAL IMPACT OF POVERTY ON THE BRAIN

Research shows that life in poverty has an impact on the brain, with effects on cognitive and executive functions.

Exposure to toxic stress and parents' limited capacity to provide a nurturing, stimulating and healthy environment can deepen the effects of life in poverty on young people.

2.1. THE LINK BETWEEN SOCIO-ECONOMIC STATUS AND BRAIN DEVELOPMENT

Recent – and still initial – research based on neuroimaging (magnetic resonance imaging, MRI) has analysed the impact of poverty on the brain. These findings add an important source of data to what has already been mapped by social science, as they can verify or corroborate the findings from cognitive studies. They also provide useful guidance in identifying protective factors.[20]

Studies[21] show a clear association between socio-economic status (SES) and the size and surface area of brain regions involved in cognitive functions such as learning, language and emotions. They suggest that the **development of the brain structure in children may be dramatically affected by the socio-economic status of the household where they grow up**.

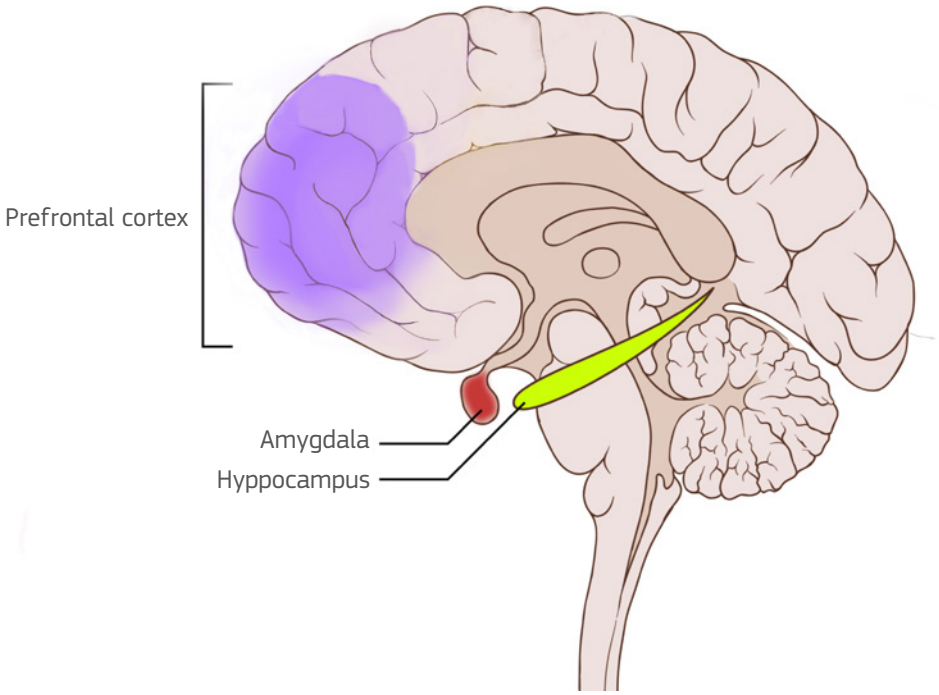
The areas that seem particularly affected are the size of the grey matter and three key regions of the brain that work together during the learning process:

1. **prefrontal cortex**, which helps to **regulate thoughts, emotions and behaviour**. For example, it is critical for carrying out a specific set of skills called executive functions, which include working memory, cognitive flexibility, inhibitory control, complex problem-solving, planning, etc. It controls **the capacity to make and implement decisions;**
2. **amygdala**, which reacts to stress and emotional arousal. It facilitates emotional reactions, including responding to stress, fear and danger by triggering the body's '**fight, flight or freeze'** response;
3. **hippocampus,** a part of the brain responsible for **memory**

20 This section benefitted from a conversation with Marta Farah, Director of the Centre for Neuroscience and society at the Penn University, in January 2020.

21 For instance: Noble K. G. et al., 'Family income, parental education and brain structure in children and adolescents', *Nat Neurosci*., Vol. 18(5), 2015, pp. 773-778; McDermott, C. L., Seidlitz, J., Nadig, A., Liu, S., Clasen, L. S., Blumenthal, J. D., Reardon, P. K., Lalonde, F., Greenstein, D., Patel, R., Chakravarty, M. M., Lerch, J. P. and Raznahan, A., 'Longitudinally Mapping Childhood Socioeconomic Status Associations with Cortical and Subcortical Morphology', *Journal of Neuroscience*, Vol. 39(8), 20 February 2019, pp. 1365-1373. DOI: https://doi.org/10.1523/JNEUROSCI.1808-18.2018 showed that in people aged 24, who had been poor at age some areas of the prefrontal cortex were reduced, and the ability to suppress amygdala activation was compromised; Hanson, J. L., Hair, N., Shen D. G., Shi, F., Gilmore, J. H., et al., 'Correction: Family Poverty Affects the Rate of Human Infant Brain Growth', *PLOS ONE*, Vol. 10(12), 2015, e0146434, https://doi.org/10.1371/journal.pone.0146434.

FIGURE 1. Prefrontal cortex, amygdala and hippocampus



2.2. HOW LIFE IN POVERTY MAY INFLUENCE BRAIN DEVELOPMENT

Research points to a number of reasons why the conditions of poverty can influence brain development: stress, limited nurturing and feedback and unhealthy living conditions.

Children living in poverty often have to deal with highly unpredictable circumstances and are exposed to a world full of tension and danger. They have few resources and limited opportunities for richer conversations, and they are often exposed to higher environmental risk factors. All these factors can impact upon their brain development.

TOXIC STRESS

Stress can be a healthy and useful mechanism. However, **a prolonged activation of the stress response systems can disrupt the development of the brain** and increase the risk of cognitive impairment. This is what experts call 'toxic stress'. The impact of toxic stress on brain development has been extensively studied by the Center on Developing Child at Harvard University[22].

Evidence shows that within and across countries, **poorer people tend to be more stressed** and have higher levels of cortisol, the body's main stress hormone, than richer people[23]. Poorer people may have to face more frequent life adversities: economic hardship, bad quality or lack of housing, worse health conditions, life in neighbourhoods where concerns over the safety of themselves and loved ones are common, hunger, worries over where they will be living in the future, etc. The circumstances that they have to face daily are less predictable and scarier than those of better-off groups.

A child in poverty may suffer from a toxic stress response when experiencing strong, frequent and/or prolonged adversity such as physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, exposure to violence and/or the accumulated burdens of family economic hardship. This effect is heightened when there is no adequate adult support available to the child. Importantly, the effect of stressors is cumulative – each stressor builds on and exacerbates other stressors.

22 https://developingchild.harvard.edu

23 For example: Almeida, D., Neupert, S., Banks, S. & Serido, J., 'Do Daily Stress Processes Account for Socioeconomic Health Disparities?', *The Journals of Gerontology: Series B – Psychological sciences and social sciences*, Vol. 60 Spec., No *2*, Vol. 34-9, 2005. 10.1093/geronb/60. Special_Issue_2.S34.

Research shows that such prolonged stress may affect the development of the prefrontal cortex and the hippocampus[24]. In turn, this may affect cognition and personal development in a number of ways. It **hijacks attention, drowns focus and impairs judgement**[25].

As previously outlined, the prefrontal cortex of the brain is associated with many of the analytic processes necessary to solve problems, set goals and execute strategies ('executive functions'). It works in tandem with the limbic system, which processes and triggers emotional reactions to environmental stimuli. When the limbic brain registers a strong desire, it signals this to the prefrontal cortex. The activated prefrontal cortex then applies itself to attaining a goal or solving a problem. The 'executive function' skills include working memory. This is the ability to hold information over short periods of time and simultaneously think of multiple things. It enables us to temporarily stop doing something and return to it later, without a loss of continuity. However, when the limbic brain is overactive and sending out too many powerful signals of desire, stress or fear, the prefrontal brain can get swamped and the wave of emotion can drown out clear focus and judgment[26].

Toxic stress also affects impulse control and social skills. Stress and fear cause the limbic brain to trigger the release of dozens of hormones, such as adrenalin and cortisol, developed to help the mind and body prepare for self-protection. These hormones, in conjunction with the activation of the inflammatory response, create the effects referred to as the 'fight or flight' or 'acute stress' response. The 'fight or flight' effect includes the override (also referred to as 'swamping' or 'hijacking') of many of the reflective, analytical mental processes that might slow the body's rapid response to danger. It hijacks impulse control (or inhibitory control) – that is, the skills used to filter distractions, override impulses, resist temptation, maintain focus, pause and reflect before taking action and maintain persistence in the face of worry or despair[27].

Impulsive behaviour triggered by 'swamping' may negatively influence individuals' social outcomes and make them appear to be 'troublemakers'. This may have heavy consequences in all moments of life, and already affect children's school experience when young. For instance, children can get so easily frustrated that they give up on a task even when success was just moments away. Additionally, it may inhibit students' ability to work well in groups, leading to their exclusion by the other members of the group, also affecting academic performance[28].

LIMITED PARENTAL NURTURING

Research on the protective role of nurturing care and supportive family environments is conclusive. As convincingly outlined by John Bowlby in his 'attachment theory'[29], a key element for the healthy social and emotional development of young children is to have a solid, loving and predictable relationship with at least one primary caregiver. Having a 'secure and attached' relationship with parents is a strong predictor of the quality of future relationships with teachers and peers[30], and it plays a leading role in the development of social functions such as curiosity, emotional regulation and social competence.

Neuroscience has confirmed these findings by showing the impact of the absence of such attachments on the brain. Low-responsive caregiving – which has been demonstrated to cause significant physiological impacts for children living in institutions or exposed to maltreatment – negatively influences the stress-response, threat-response and regulation of emotions throughout development[31].

In short, research shows that **nurturing care is essential for the healthy development of many brain functions – and mainly of emotion regulation**. The problem is that **providing such nurturing care and a supportive environment is more difficult when parents are troubled by poverty and exclusion.**

24 Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., Garner, A. S., Wood, D. L., 'The lifelong effects of early childhood adversity and toxic stress', *PEDIATRICS*, Vol. 129(1), 2012, pp. e232–e246. https://doi.org/10.1542/peds.2011-2663.

25 Center on the Developing Child at Harvard University, 'Building the Brain's "Air Traffic Control" System: How Early Experiences Shape the Development of Executive Function', *Working Paper No 11*, 2011.

26 Casey, B. J., Somerville, L. H. et al., 'Behavioral and Neural Correlates of Delay of Gratification 40 Years Later', 2011, PNAS, 1108561108.

27 As in Babcock, E. cit.

28 Jensen, E., *Teaching with poverty in mind*, 2009.

29 Bowlby, J., *Attachment and Loss*, 1969.

30 As outlined by Jensen, 2009, cit.

31 Loman, M. M., Gunnar, M. R.; Early Experience, Stress, and Neurobehavioral Development Center, 'Early experience and the development of stress reactivity and regulation in children', *Neurosci Biobehav Rev. 2010*, Vol. 34(6), pp. 867-876. doi:10.1016/j.neubiorev.2009.05.007.

Box 6

For example, the Bucharest Early Intervention Project conducted by Harvard University researchers used a randomised clinical trial to study the impact of child neglect on brain development. It compared children in quality foster care and care institutions in Romania with children in similar conditions who stayed in their families. The study highlighted that many aspects of postnatal brain development are heavily dependent on experience. In particular, serious violations of what is known as the 'expectable environment' can lead to profound changes in neural development.

Bick, J., Zhu, T., Stamoulis, C., Fox, N. A., Zeanah, C. and Nelson, C. A., 'Effect of Early Institutionalization and Foster Care on Long-Term White Matter Development', https://dash.harvard.edu/bitstream/handle/1/27002081/nihms679612.pdf?sequence=1.

Box 7

A large study on poverty and brain development enquired about the stressful life events of research subjects and described the direct link between encouraging and supportive behaviour from mothers and brain development. The effects of poverty on the brain were stronger in children whose mothers were less nurturing or who experienced stress at home.

Luby, J. et al., 'The effects of poverty on childhood brain development: The mediating effect of caregiving and stressful life events', *JAMA Pediatr.*, Vol. 167(12), 2013, pp. 1135-1142.

Clearly, there is no deterministic relation between poverty and limited child nurturing. However, the overstress and overwhelming worries of poverty and exclusion may affect caregiving and lead to weak or anxious attachments[32].

Longitudinal research on health indicates that living in a low socio-economic status environment over a prolonged period of time tends to deplete the energy reserve capacity and leads to negative emotional states such as anxiety, depression and hostility, which in turn lead to poorer relationships with family members and friends[33] Research also found that parents' disciplinary strategies often become harsher as income decreases[34]

Therefore, in yet another vicious cycle, poverty and exclusion may make it more challenging to provide effective and attentive parenting. In turn, weak parenting may deeply affect the personal and emotional development of children, with significant consequences for their educational and social outcomes.

LOWER LEVELS OF STIMULATION

There is an obvious link between the linguistic stimulation given to children and their language development[35]. **Lower levels of stimulation are more common among low-income parents** than parents with a higher income.

Research found that not only was the volume of conversation lower in low-income homes, but the nature of the conversation was also different. Lower-income

32 For example, McLoyd (1990) found that distress among poor parents can lead to the overuse of negative control strategies, low warmth and responsiveness and failure to adequately monitor children.

33 for instance see the analysis of social determinants of health by Marmot, M. and Wilkinson, R., Social Determinants of Health, 2nd Edition. Oxford: Oxford University Press, 2006

34 Bradley, R. and Corwyn, R. F., 'Socioeconomic Status and Child Development', *Annual Review of Psychology*, Vol. 53:1, 2002, pp. 371-399.

35 Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., Hedges, L. V., 'Sources of variability in children's language growth', *Cogn Psychol.*, Vol. 61(4), 2010, pp. 343-365. doi:10.1016/j.cogpsych.2010.08.002.

Box 8

Research conducted in the early 1990s suggested that by the age of four, children of caregivers receiving welfare support heard 32 million fewer words than children raised in what the researchers termed 'professional families'. This was due to both the quantity of words known by the family and the children's exposure to fewer stimulating experiences. Several follow-up studies (such as a recent one carried out using more sophisticated recording devices) substantially confirmed the findings, and showed that these differences in language and interaction experiences may be predictive of child vocabulary and have lasting effects on a child's performance later in life.

Hart, B. and Risley, T.,'Meaningful differences in the everyday experience of young American children', Paul H Brookes Publishing, 1995.
Gilkerson, J., t al. 'Mapping the Early Language Environment Using All-Day Recordings and Automated Analysis', *American Journal of Speech-Language Pathology*, 17 May, 2017,

Box 9

Another longitudinal study examined the role of caregiver speech in language development, looking at the diversity (variety) of words and syntactic structures produced by caregivers and children. It confirmed a direct link between socio-economic status and language growth.

Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., Hedges, L. V., 'Sources of variability in children's language growth', *Cogn Psychol.*, Vol. 61(4), 2010, pp. 343-365. doi:10.1016/j.cogpsych.2010.08.002.
(Huttenlocher et al., 2007).

caregivers asked fewer questions (particularly guiding questions) and were more negative and directive than higher-income caregivers[36].

Such increasingly limited parental stimulation is compounded by the more limited access to a wide variety of different recreational and learning materials from infancy through to adolescence[37]. Poor children usually receive less stimulation both at home and out of the house. Owing to financial limitations, poor children are often excluded from enriching extra-curricular activities.

Apparently, such **weaker stimulation may also broadly affect executive functions** (the capacity to focus, analyse issues, plan ahead, etc.). Children with a low socio-economic status perform worse than middle-socio-economic-status children on most measures of these functions. Brain images confirmed the apparent relationships between language, executive function, socio-economic status and specific aspects of early childhood experiences[38].

UNHEALTHY LIVING CONDITIONS

Another important factor explaining the impact of poverty on the brain is found in the living conditions of poor people. Research shows that **brain development is strongly affected by environmental risk factors**,

36 For example, Perkins, S., Finegood, E. and Swain, J., 'Poverty and language development: roles of parenting and stress', *Innov Clin Neurosci. Apr. 2013*, Vol. 10(4), pp. 10-9. PMID: 23696954; PMCID: PMC3659033.

37 Bradley, R. & Corwyn, R., 'Socioeconomic Status and Child Development', *Annual review of psychology*, Vol. 53, 2002, pp. 371-99. 10.1146/annurev.psych.53.100901.135233.

38 Noble, K., Norman, M. & Farah, M., 'Neurocognitive Correlates of Socioeconomic Status in Kindergarten Children', *Developmental Science*, Vol. 8, 2005, pp. 74-87. 10.1111/j.1467-7687.2005.00394.

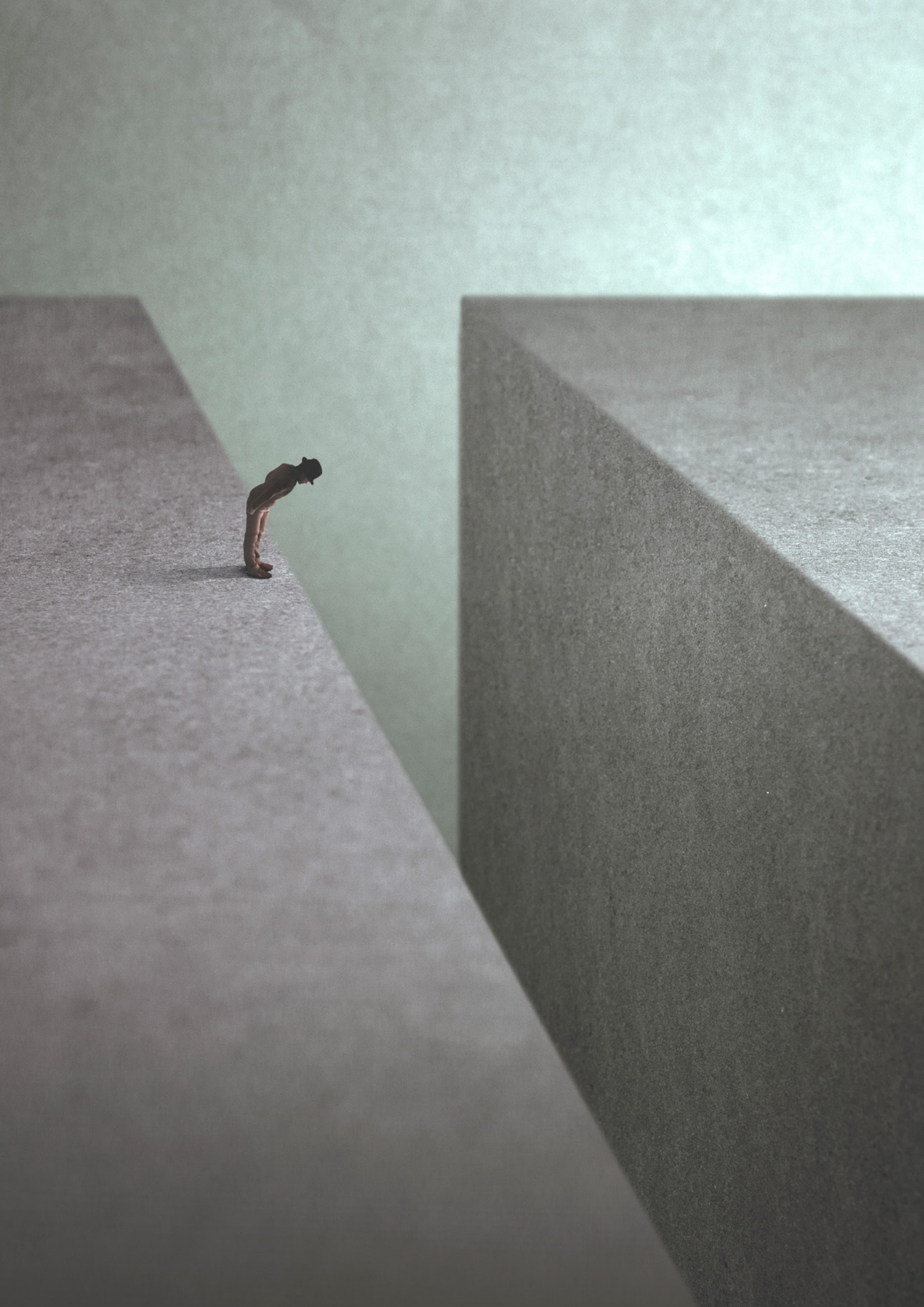
including exposure to toxins, poor nutrition or prenatal drug use, all of which are more prevalent in low-income households[39].

Research also shows that poverty and exclusion are associated with poor sleep quality[40], possibly due to poor quality and cramped housing, with potential exposure to noise and to the numerous worries. Sleep deprivation impacts on many cognitive functions, such as memory[41] and the ability to process information, as well as impacting on health. It may thus represent another factor preventing people in poverty from accessing opportunities.

39 Hackman, D., Farah, M. and Meaney, M. (2010), 'Socioeconomic status and the brain: Mechanistic insights from human and animal research', *Nat. Rev. Neurosci.,* Vol. 11(9), pp. 651-659.

40 Patel, N. P., Grandner, M. A., Xie, D., Branas, C. C., Gooneratne, N., '"Sleep disparity" in the population: poor sleep quality is strongly associated with poverty and ethnicity, *BMC Public Health*, 11 Aug. 2010, Vol.10, p. 475. doi: 10.1186/1471-2458-10-475. PMID: 20701789; PMCID: PMC2927542.

41 Björn Rasch and Jan Born, 'About Sleep's Role in Memory'; Stranges, Tigbe, Gomez-Olive, Thorogood, Kandala, 'Sleep Problems: An Emerging Global Epidemic? Findings From the INDEPTH WHO-SAGE Study Among More Than 40,000 Older Adults From 8 Countries Across Africa and Asia'.



3. THE IMPACT OF POVERTY ON ASPIRATIONS AND EXPECTATIONS

Even if equally gifted, students of lower socio-economic status have significantly lower aspirations for their future than those from richer families. However, a causal link between aspirations and success is yet to be established.

The expectations of influential others such as parents, teachers or mentors can affect young people's aspirations and performance. The belief that intelligence can be shaped and improved is also crucial to aspiration.

Adequate provision of information about educational pathways and the mitigation of the risk-averse behaviour of people living in poverty can have a significant impact on young people's choices about their future career.

Aspirations have, for some time, been the focus of social research. It is suggested that poverty hinders the 'capacity to aspire'[42], or that people with a disadvantaged background tend to reduce their aspirations when facing the unattainability of their original goals[43]. Either way, lower aspirations for people with low SES can have far-reaching consequences, as it may lead to lower investments in their future (in children's education, for instance), which in turn will make it more difficult – if not impossible – for them to escape poverty. This may create a 'poverty-aspiration trap' when low aspirations may not only be a consequence of but also a cause of poverty[44].

42 Appadurai, A., 'The Capacity to Aspire', *Culture and Public Action*, Stanford, CA: Stanford University Press, 2004.

43 Ray, D., 'ASPIRATIONS, POVERTY AND ECONOMIC CHANGE', 2003, p. 12.

44 Dalton, P. S., Ghosal, S. and Mani, A., 'Poverty and Aspirations Failure', *The Economic Journal*, Vol. 126, No 590, 1 February 2016, pp. 165–88, https://doi.org/10.1111/ecoj.12210.

3.1. YOUNG PEOPLE IN POVERTY HAVE LOWER EXPECTATIONS

Educational data collected since the 1970s in and outside Europe have consistently shown that **young people from disadvantaged socio-economic backgrounds**[45] **have lower expectations**[46]**, irrespective of their school outcomes**. Poorer students tend to express lower ambitions regarding their future educational and occupational career than their counterparts from more affluent backgrounds[47].

Such findings from individual countries have been confirmed and further elaborated by several large-scale comparative studies, primarily building on PISA data. The 2003 PISA data showed that students' expectations of attending higher education is strongly linked to their parental background in all EU MSs – even when academic performance is maintained[48]. These tendencies were also confirmed by subsequent PISA studies, including the latest 2018 results, as depicted in Figure 1. While cross-country variations are interesting, the main tendencies seem almost universal: between the OECD countries there is an average of a 35-percentage point difference in higher education expectations within the most and the least advantaged quartiles of the student body. The difference is smaller, yet still remarkable, as it reaches 20 percentage points between students with similarly high test scores, but who come from different family backgrounds [49].

Educational expectations are important because they are predictors of college attendance and persistence, as illustrated by a major study in the US[50]. They also predict occupational status, according to another study based on cohort data collected in the UK from generations born in 1958 and 1970, respectively, showing that ambitious career plans at age 16 were related to being in a high-level job at age 30-33.

Box 10

For example, in France, a study found a 16-percentage point difference in the probability of aspiring for college between students with or without at least one parent with a higher education degree – despite them having similar academic achievements.

Guyon, N. and Huillery, E., 'Biased Aspirations and Social Inequality at School: Evidence from French Teenagers', *LIEPP Working Paper*, R&R at The Economic Journal, 2016.

45 Most of these studies look at 'low socio-economic background' in a general sense and do not focus on material poverty or deprivation. Usually, a combined measure of socio-economic background is used that includes information on the parents' education, occupation as well as their income or financial situation. As children living in poverty are most likely to be concentrated at the lower end of such scales, we can assume that the evidence linking socio-economic background to aspirations is implicitly also linking poverty to aspirations. Schoon et al. (2007), however, also assess the additional influence of economic hardship at the age of 16 both on parents' and on students' aspirations. They find that such circumstances are negatively associated with both, suggesting that economic hardship in itself can deteriorate aspirations.

46 Expectations refer to what people think will happen, while aspirations refer to what they would like to come true. Expectations being more realistic, aspirations tend to be higher than expectations. As widely used research tools – primarily PISA – only collect information on expectations and not on aspirations, research is increasingly reliant on this concept and loses the opportunity to analyse the gap between the two. Saha, L. J. and Sikora, J., 'The Career Aspirations and Expectations of School Students: From Individual to Global Effects', *Education and Society*, Vol. 26, 2008,pp. 5-22.

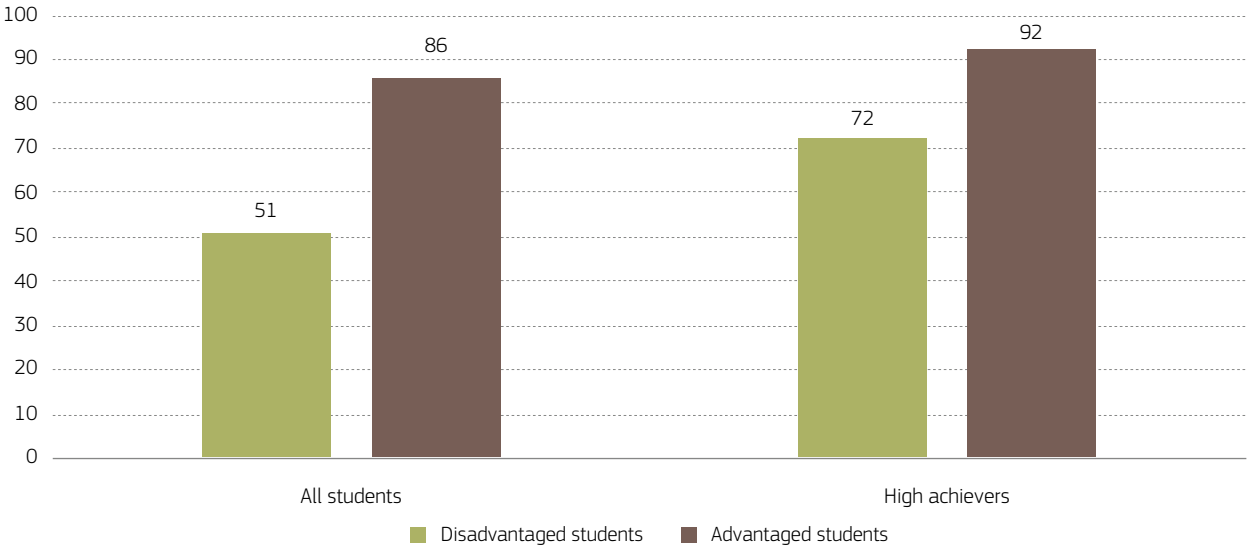
47 E.g. Croll, 2008; Guyon & Huillery, 2016; Schoon, Martin & Ross, 2007; Schoon & Parsons, 2002.

48 Vincent Dupriez et al., 'Social Inequalities of Post-Secondary Educational Aspirations: Influence of Social Background, School Composition and Institutional Context', *European Educational Research Journal 11*, No 4, 2012, p. 504, https://doi.org/10.2304/eerj.2012.11.4.504.

49 There is no significant difference by socio-economic background in the entire student population in Singapore and Ukraine and no difference was found in the group of high achievers in Mexico, Singapore, Bosnia Herzegovina, the United Arab Emirates, Chile, Montenegro, Brazil, North Macedonia, Malaysia, Baku, Uruguay and Ukraine.

50 Jacob, B. A. and Wilder, T., 'Educational Expectations and Attainment', National Bureau of Economic Research, 2010, http://www.nber.org/papers/w15683.

FIGURE 2. Percentage of students who want to complete higher education in the OECD countries. By socio-economic background and school performance



Note: Students' expectations of completing tertiary education. OECD averages by socio-economic status / socio-economic status and achievements on the PISA test. Disadvantaged / advantaged students are those with the 25% lowest / highest socio-economic background.

Disadvantaged (advantaged) students are among the 25% with the lowest (highest) socio-economic background.

Source: PISA 2018 Results (Volume II) - © OECD 2019.

3.2. WHY DO PEOPLE IN POVERTY HAVE LOWER ASPIRATIONS?

Research points to a range of mechanisms that operate jointly, to the point that it may be difficult to disentangle their roles. There is, for instance, a complex relationship between aspirations and achievement: does achievement drive aspirations? Or do aspirations drive achievement? Or can both be driven by external expectations and by self-belief?

EDUCATIONAL ASPIRATIONS AND SCHOOL ACHIEVEMENT: A CHICKEN AND EGG PROBLEM?

Literature shows a consistent direct link between socio-economic background and school achievement. This is not surprising. As already discussed above, children in poverty receive less stimulation and opportunities for learning at home and are more exposed to stress and environmental hazards. However, achievement is also influenced by external expectations and self-belief. The experience of school failure may lead some children to lower their aspirations. Conversely, academic success reinforces self-esteem, which raises aspirations.

If coming from a low SES family already undermines aspirations, this may also undermine the motivation to work hard and to achieve high marks in school. **Low performance may reinforce low aspirations, which will then be even further adjusted to the reduced performance** and, eventually, to a low level of education, low social status and low income. This is a vicious circle where low marks reinforce lower aspirations and vice versa. The evolving poverty aspiration gap would then reinforce social inequalities in school and hinder higher achievements and the upward social mobility of children from disadvantaged backgrounds[51]. This is often referred to as the 'poverty aspiration-trap' in school.

However, the causal link between aspirations and school achievement needs to be better explored. While several authors conclude that the increasing amount of evidence suggests causality[52], others are more sceptical. In an extensive review of research on the possible

51 Guyon, N. and Huillery, E., 'The Aspiration-Poverty Trap: Why do Students from Low Social Background Limit Their Ambition? Evidence from France', 2014, https://www.unamur.be/en/eco/eeco/pdf/paper_autocensure_feb2014.pdf.

52 Jacob and Wilder, cit.; Saha and Sikora, cit.

causal association between attitudes and educational attainment, Gorard[53] concludes that 'aspiration could be an indication of success, not its cause' (p. 4). In fact, Gorard's review found no rigorous evaluations that would confirm the causal link between students' aspirations and their later success. Instead, causality claims are primarily based on longitudinal research that shows the sequence in the relationship, and which try to control a range of other factors that could otherwise be the real component that explains both high aspirations and success.

ASPIRATIONS OF THE PARENTS

Low aspirations of poor children are to some extent a consequence of their parents having low aspirations for them. Parents' and children's expectations are strongly interrelated[54] and become increasingly aligned towards the final years of secondary school[55]. Ambitious parents can make a difference to their children's later educational and occupational attainment, even when the academic achievements and the aspirations of the child themselves are not so outstanding.

Having ambitious parents that expect their children to achieve high levels of education is also directly and positively related to their children's achievements.

Evidence shows that poverty is associated with lower parental expectations, while educated and parents with a high socio-economic status develop higher expectations towards their children [56]. For example, Brody and colleagues (1999) reported that economic hardship reduced the likelihood that mothers would set high developmental goals for their children and engage in competency-promoting activities.

EXTERNAL EXPECTATIONS (OF TEACHERS, MENTORS, ETC.)

Research, starting with the famous works of psychologists Robert Rosenthal and Lenore Jacobson, pointed to the influence of teachers' expectations on their students' achievement (the 'Rosenthal effect', also referred to as the 'Pygmalion effect'[57]).

These mechanisms have already been outlined in Chapter 1 in relation to stereotype threat.

According to the theory developed by Rosenthal, the targets in the expectations internalise their positive labels, and those with positive labels succeed accordingly. A similar process works in the opposite manner in the case of low expectations. The idea behind the Pygmalion effect is that increasing the leader's expectation of the follower's performance will result in better follower performance.

Box 11

The UK AVON Longitudinal Study (University of Bristol) shows, for example, that mothers' expectations that their children would attend higher education accounts for around 6 per cent of the gap in test scores between children from richer and poorer families at age 11 – even after controlling for their test results four years earlier.

Goodman, A. and Gregg, P., 'Poorer Children's Educational Attainment: How Important Are Attitudes and Behaviour?', Joseph Rowntree Foundation, 2010; Schoon, I., Martin, P. and Ross, A., 'Career Transitions in Times of Social Change. His and Her Story', *Journal of Vocational Behavior*, Vol. 70, No 1, February 2007, pp. 78-96

53 Gorard, S., 'Querying the Causal Role of Attitudes in Educational Attainment', *ISRN Education 2012*, 2012, pp. 1–13, https://doi.org/10.5402/2012/501589.

54 Goodman, A. and Gregg, P., 'Poorer Children's Educational Attainment: How Important Are Attitudes and Behaviour?', Joseph Rowntree Foundation, 2010.

55 Robert Bozick et al., 'Framing the Future: Revisiting the Place of Educational Expectations in Status Attainment', *Social Forces 88*, No 5, 2010, pp. 2027–2052.

56 Ashby and Schoon, 'The Role of Aspirations, Ambition and Gender in Predicting Adult Social Status and Earnings'; Goodman and Gregg, 'Poorer Children's Educational Attainment: How Important Are Attitudes and Behaviour?'; Schoon, I., Martin, P. and Ross, A., 'Career Transitions in Times of Social Change. His and Her Story', *Journal of Vocational Behavior 70*, No 1, February 2007, pp. 78–96, https://doi.org/10.1016/j.jvb.2006.04.009.

57 Rosenthal, R. & Jacobson, L., *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*, New York: Holt, Rinehart & Winston, 1968.

Box 12

Through their experiments, Rosenthal and Jacobson showed that students 'labelled' as intelligent showed significant improvement in test performance. Their experiment consisted in pointing teachers to a group of students that had reportedly been identified as 'intellectual bloomers' through an IQ test. The group was actually chosen through a randomised process. At the end of the study, students that had been labelled as 'intellectual bloomers' showed statistically significant gains compared to the others, especially in the lower years. According to Rosenthal and Jacobson, the information about the students' potential significantly affected the attitudes and behaviour of teachers, who unconsciously gave these students more positive encouragement and attention.

The initial study by Rosenthal spurred widespread investigation into the impact of teacher expectations on student outcomes, which Rosenthal later synthesised in a meta-analysis of 448 of the most rigorous studies[58]. He found that, on average, across all the studies, when all other factors were controlled for, **teacher expectations accounted for 30 per cent of the changes (positive or negative) in student performance.** This is why the expectations of teachers and mentors have been described as a 'self-fulfilling prophecy'.

Rosenthal's meta-analysis showed that teachers' expectations influenced their own behaviour towards the students. Teachers created a warmer socio-emotional climate for their 'special' students (students for whom they had high expectations) through both verbal and non-verbal cues. They taught more challenging material to their 'special' students. They encouraged 'special' students to respond more and gave them more time to respond. They also gave them more feedback, both verbally and non-verbally, on their performance. Similarly, PISA 2018 results revealed that students who perceived their teachers to be more supportive scored higher in reading, particularly after accounting for their socio-economic status.

The significance of these findings cannot be underestimated. If teachers and mentors hold (even unconscious) prejudices against social groups to which a child belongs, these prejudices can then be reflected in their expectations and behaviour towards that child. For instance, evidence often shows that teachers' expectations are lower for students of colour in the USA[59] and for those who are from low-income families.

In addition to (and as a consequence of) influencing student, teachers' expectations shape students' self-belief, and as a result their aspirations also. As E. Babcock points out[60], 'mentors, such as teachers, managers, and coaches, are the people in our lives who not only provide some of our strongest cues as to who we are and what we can expect to achieve, but they are also the ones who provide us with crucial information about how to achieve it.'

GROWTH VS FIXED MINDSET

Does it matter if people believe that it is possible for intelligence and competences to grow and change? Carol Dweck analysed the issue, opening the floor for abundant literature on how such belief influences actual chances of progress[61].

Dweck speaks of a 'growth mindset' to indicate the belief that people are born with significant abilities to learn and improve, and the degree to which they do so is a function of how much they invest in building their skills.

'Fixed mindset', on the contrary, is the belief that most people are born with an inherent set of abilities and little can be done to substantively alter them.

Studies point to a direct and **strong correlation between a growth mindset and educational achievement**. In practice, students fare better if they believe that their intellectual abilities can be developed than if they believe that their intellectual abilities are immutable[62]. Students with a fixed mindset tend to avoid situations in which they might struggle or fail because

58 Rosenthal, R., 'Teacher Expectancy Effects: A Brief Update 25 Years after the Pygmalion Experiment', *Journal of Research in Education*, Vol. 1, No 1, Spring 1991, p. 3-12.

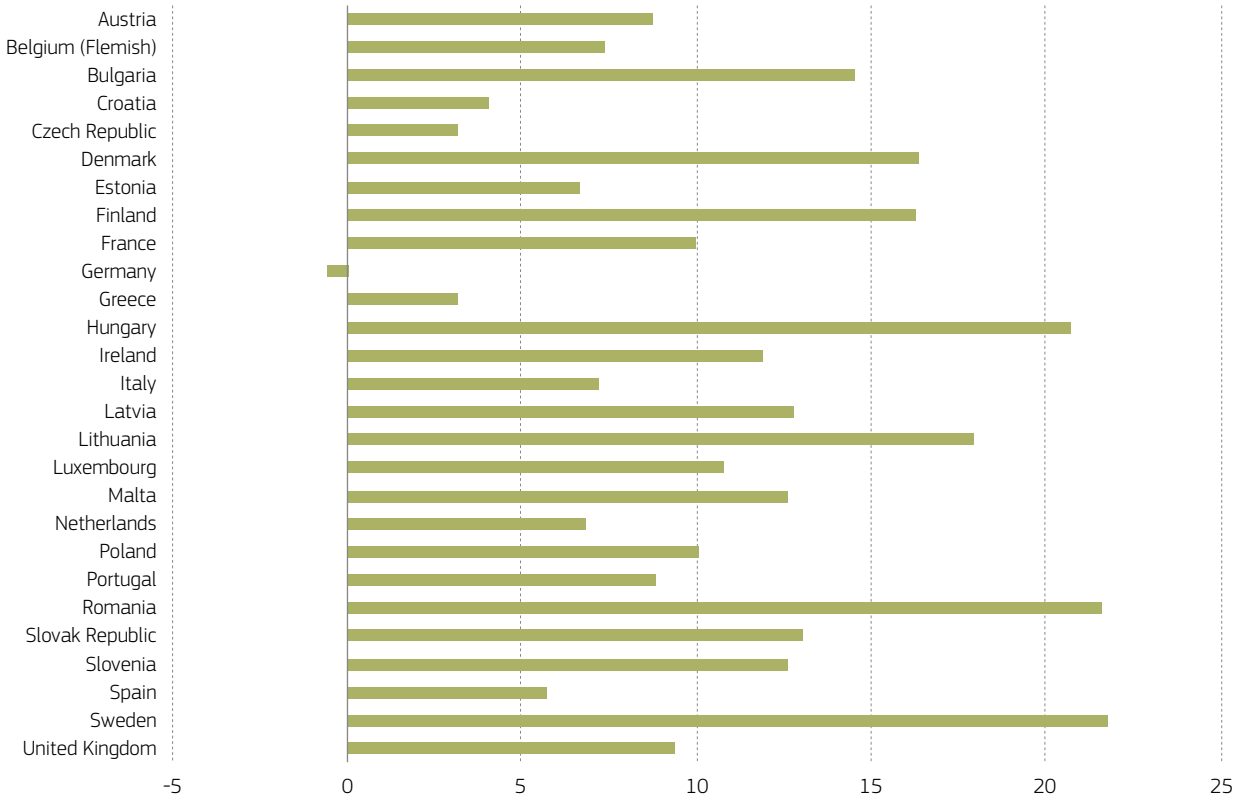
59 See, for instance: Hua-Yu Sebastian Cherng, 'If they think I can: Teacher bias and youth of color expectations and achievement', 2017; Boser, U., Wilhelm, M. and Hanna, R., 'The Power of the Pygmalion Effect: Teachers' Expectations Strongly Predict College Completion', 2014, etc.

60 Babcock, E., 'Harnessing the power of high expectations', 2018.

61 Dweck, C., cit.

62 Blackwell, L. S., Trzesniewski, K. H., Dweck, C. S., 'Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention', Vol. 78(1), 2007, pp. 246–263.

FIGURE 3. Percentage points difference between advantaged and disadvantaged students who disagreed or strongly disagreed that "your intelligence is something about you that you can't change very much".



Note: Disadvantaged / advantaged students are those with the 25% lowest / highest socio-economic background.

Source: PISA 2018 Results (Volume III) - © OECD 2019

these experiences undermine their sense of intelligence. In contrast, students who have a growth mindset tend to see difficult tasks as a way to increase their abilities and seek out challenging learning experiences that enable them to do so. As a consequence, students who have a growth mindset tend to achieve better marks than students who hold a fixed mindset, especially in the face of difficulty.

Students with lower socio-economic backgrounds are more likely to have a fixed mindset than more advantaged students[63]. Figure 2 shows that this is the case within most countries, albeit to different degrees.

Importantly, however, research also shows that those students from low socio-economic backgrounds who did hold a growth mindset were appreciably buffered against the deleterious effects of poverty on achievement. The analysis of a survey[64] in Chile showed that the small number of low-income students who had managed to acquire a growth mindset scored, on average, at the level of students whose families earned 13 times more (on language and maths tests[65]). Research also indicates that a fixed mindset is a more significant predictor of failure for low-income students than for their high-income peers. In brief, a 'fixed mindset is more debilitating (and growth mindset is more protective) when individuals must overcome significant barriers to succeed[66].'

The latest PISA survey also showed that not only is the growth mindset related to achievement, but it is also related to having higher expectations. Students who believe that they can influence their level of intelligence are 15 to 47 per cent more likely to aspire for a university degree, irrespective of their family background or how well they are doing in a performance test.

63 Schleicher, A., https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf.

64 Claro, S., Paunesku, D. & Dweck, C. S., 'Growth mindset tempers the effects of poverty on achievement', *Proceedings of the National Academy of Sciences*, Vol. 113(31), 2016.

65 idem.

66 idem.

Box 13

The (lack of) awareness may explain 25 per cent of the social aspiration gap within French lower secondary students at the moment when they need to decide upon further studies at upper secondary level.

Guyon, N. and Huillery, E., 'Biased Aspirations and Social Inequality at School: Evidence from French Teenagers', LIEPP Working Paper, R&R at The Economic Journal, 2016.

In a nutshell, the growth mindset can be a measure of how hopeful people are about their future. Again, if being poor leads to a fixed mindset, and a fixed mindset limits achievement and aspirations, the mechanism may operate as a self-fulfilling prophecy.

INFORMATION BIAS AND INSUFFICIENT INFORMATION

Studies show that **insufficient knowledge of available options is at least partially responsible for the aspiration gap between students from different socio-economic backgrounds**. Parents and other adult members of their social environment may lack knowledge and experience of how the education system works, and the practical skills to navigate their children through complex application procedures. The absence of role models in the immediate circle (that is covered extensively in Chapter 4) compounds the problem.

This is particularly evident when observing a crucial turning point in career development; that is the time of applying for university at the end of secondary school. Pupils from the most disadvantaged families often do not even consider attending university – even if their marks and abilities would allow them to do so. Research also shows that less privileged students are often misinformed about other aspects of higher education, such as the range of available courses, the costs and benefits of further studies or available financing options[67].

Poorer young people tend to have fewer career options in mind, or do not know how some options may be reached. Because of this incomplete picture, they may tend to overestimate some costs.[68]. They may also struggle to properly assess the benefits of investing in longer study programmes – which involves postponing the period of having a personal income from working. Clearly, such information gaps and biases are particularly detrimental for students from low-income families, who need to be more careful when assessing the financial aspects of continuing their studies.

RISK-AVERSION

Discounting future payoffs and risk-aversion are among the most typical effects of poverty on people's mindsets. They can prevent poor people from making investments with long-term benefits.

In their review of the psychological impacts of poverty, Haushofer and Fehr[69] provide several examples of how present bias leads to under-valuing the benefits of a longer period in education that typically pays off in the longer-term future and involves uncertainty. At the same time, it also prioritises immediate rewards (such as early entry into the labour market) vis-à-vis immediate costs involved in schooling.

Such risk-averse behaviour by the poor is, of course, to some extent a predictable consequence of their financial situation. Not having sufficient financial resources to meet their immediate needs and having no access to formal credit markets are rather straightforward reasons for their risk-aversion. This is, however, only part of the story. Research shows that fear, stress and anxiety – all being more common among low-income people – also induce risk-aversion and time-discounting. In experimental situations where a group of respondents were shown sadness-inducing films, members of this group systematically chose an immediate but smaller reward as opposed to a delayed, bigger sum when compared to the control group. Here, we again see that the findings from neuroscience and behavioural experiments coincide[70].

67 Martin Ehlert et al., 'Applying to College: Do Information Deficits Lower the Likelihood of College-Eligible Students from Less-Privileged Families to Pursue Their College Intentions?', *Social Science Research 67,* September 2017, pp. 193–212, https://doi.org/10.1016/j.ssresearch.2017.04.005; Wiswall, M. and Zafar, B., 'How Do College Students Respond to Public Information about Earnings?', *Journal of Human Capital 9,* No 2, June 2015, pp. 117–69, https://doi.org/10.1086/681542.

68 Herbaut, E. and Geven, K., 'What Works to Reduce Inequalities in Higher Education? A Systematic Review of the (Quasi-)Experimental Literature on Outreach and Financial Aid', *Research in Social Stratification and Mobility*, November 2019, 100442, https://doi.org/10.1016/j.rssm.2019.100442.

69 Haushofer, J. and Fehr, E., 'On the Psychology of Poverty', *Science* 344, No 6186, 23 May 2014), pp. 862–67, https://doi.org/10.1126/science.1232491.

70 Haushofer and Fehr, cit.

4. THE CUMULATIVE EFFECT OF POVERTY AND EXCLUSION OVER SEVERAL GENERATIONS

The effects of life in poverty are more persistent and harder to overcome when growing up in an environment where close and extended family members and the surrounding community have lived in conditions of poverty and exclusion for multiple generations.

Multigenerational poverty is often combined with spatial segregation which enhances its effects through, among others, a lack of relatable role models of success and social mobility, peer pressure that limits aspirations and the high costs of breaking away from the community.

Material deprivation, even when due to occasional circumstances such as sudden job loss or another adverse event, may lead to deteriorating living conditions, malnutrition or a lack of resources for home learning. It may result in moving to a poor neighbourhood with reduced access to quality services and/or poorer housing conditions. So, even a temporary spell of poverty may affect children's educational outcomes and, hence, their further opportunities.

The impact is much greater when poverty reflects the structural vulnerability of a family of origin due to, for example, low education, long-term unemployment or ill health, and when a longer period or the entire childhood is spent in poverty. In such circumstances, the mechanisms described in Chapters 1 and 2 enter into play, and they may hinder educational prospects and the children's subsequent life chances, thus activating the cycle of transmission of poverty. A systematic review of evidence[71] conclusively shows that the poverty of parents has a strong influence on children's attainment in adulthood. However, evidence shows that things get even **worse when poverty and exclusion persist over *several* generations.**

This has two main consequences. One is that **poverty and exclusion permeate the *family history* for the time that can be remembered**. Social mobility research based on three generations' data has shown that grandparents also play a pivotal role in educational outcomes. Focusing on education as a proxy for SES, an extensive review of studies on social mobility[72] concludes

71 Cooper, K., Stewart, K., 'Does Household Income Affect children's Outcomes? A Systematic Review of the Evidence', *Child Ind Res,* 2020. https://doi.org/10.1007/s12187-020-09782-0.

72 Anderson, L., Sheppard, P. and Monden, C., 'Grandparent Effects on Educational Outcomes: A Systematic Review', *Sociological Science 5,* 2018, pp. 114–42, https://doi.org/10.15195/v5.a6.

that there is often a direct link between the status of the grandparents and some of their grandchildren's educational outcomes[73].

When in place for several generations, poverty usually permeates not only the direct family line, but also the extended family (uncles and aunts, etc.). Thus, it may be difficult to identify inspirational role models in the family, insofar as socio-economic success is concerned. This impacts on the assessment of what is feasible and realistic for one's future.

The other consequence is that multigenerational poverty usually means immersion in *an environment* of poverty. Poverty and exclusion **may also characterise the significant social relationships between the family.** Owing to social and economic dynamics, poverty and exclusion very often (although not always, and to varying degrees depending on places) also permeate the neighbourhood. Thus, tackling poverty and exclusion involves dealing with a whole **environment of marginalisation**. Such environment can trap people in poverty and exclusion even when opportunities improve.

The impact of poverty over generations is the subject of the widely-debated work of anthropologist Oscar Lewis. He observed that people who have lived in deep poverty for generations have developed a sense of hopelessness and desperation that is passed on through generations. This may hinder people from taking advantage of opportunities, and it may work against social mobility.[74]

The most extreme form of exclusion happens with ranking, when a group has been forced into a position subordinate to the dominant groups in their countries for many generations. This may happen as a consequence of a traumatic history (enslavement, loss of homeland) or of an institutional system of discrimination (such as castes). These rankings may or may not be linked to race – as shown by the parallels in the situation of African Americans in the USA and Dalits in India, or Burakumin in Japan. The effects of ranking are known to persist well after the institutional framework changed. A full understanding of this would require delving deeper into the history and mechanisms of discrimination, which is out of the scope of this report. A thorough analysis of the situation and challenges of ranked groups across the world is carried out by Jacob Meerman.[75]

4.1. WHAT HAPPENS IF POVERTY PERMEATES THE FAMILY HISTORY?

SUPPORT FROM GRANDPARENTS AND EXTENDED FAMILY

Family supports the development of children's minds through intellectual stimulation and nurturing and by instilling the importance of education. All of this is crucial to cognitive development and children's later educational achievements. If parents find themselves in a vulnerable situation, grandparents can assume parental care and offer children the solid attachment they need. Having relatively well-off grandparents can, to some extent, counterbalance the disadvantages of growing up in a poor nuclear family. However, if there is a lack of such support generation after generation, the **disadvantage accumulates and gets transmitted not only from parents, but also from grandparents.**[7475]

When grandparents are in direct contact with their grandchildren, their behaviour, values and norms will serve as models for their grandchildren. Their joint activities can influence children's development. A typical example is book reading, which is less common when grandparents are poorly educated and are not readers themselves.

Grandparents can have an influence even when direct personal contact with the grandchildren is missing – either because of their early death or simply due to

73 Such findings are largely in line with those from the smaller number of studies that consider multigenerational (i.e. more than two-generational) transmission of social class in the UK (Chan & Boliver, 2013) or Sweden (Dribe & Helgertz, 2015). A recent paper (Colagrossi, D'Hombres and Schnpef, 2018) also relying on a unique dataset covering three generations within the EU-28 countries confirms that, on average, in Europe, children with at least one grandfather who pursued higher education are, *ceteris paribus*, 9 percentage points more likely to achieve the same educational attainment as counterparts whose grandfathers both have a lower level of education.

74 This was also the focus of subsequent anthropological and social studies associated with the controversial notion of a 'culture of poverty'. Among them, the 1965 'Moynihan report' commissioned by the Assistant Secretary of Labor under President Lyndon B. Johnson looking at 'ghetto culture' among African Americans and pointing at the deleterious effects of the prevalence of single-parent families. John Ogbu found that the consequences of the exclusion endured by communities persisted even when the socio-economic conditions improved. Disengagement in relation to education may be explained by a frame of mind which includes self-perceptions and the perception of 'the other group's' efforts and values. Understanding the specificities of the frame of mind deriving from multigenerational poverty is also the focus of the recent work by Ruby Payne.

75 Meerman, J., *Socio-economic mobility and low status minorities*, Routledge, 2009.

geographical distance. In such cases, mechanisms for transmitting advantages not only involve the inheritance of material resources but also the availability of grandparents' social networks. Finally, grandparents can also serve as reference points for the younger generations when their own aspirations are developed[76]. When grandparents, as well as parents, live in poverty and social exclusion, such positive effects do not subsist.

Besides, being in poverty and exclusion for the third generation often means that poverty also permeates the extended family that comprises uncles, aunts and cousins.

THE TRANSMISSION OF DISEMPOWERMENT

Anthropological studies, such as the work of Oscar Lewis, pointed to a feeling of 'disempowerment' that is transmitted across generations. Brain studies also demonstrated that crucial elements of executive functioning are transmitted through the family[77]. In particular, an external locus of control – that is, the sentiment that one cannot be in charge of one's destiny and decisions – is often passed on by adults to the children in their care[78].

As previously discussed, the stress that comes with life in poverty and exclusion may significantly affect individual's executive functions**.** If not only the parents, but all the significant adults surrounding a child are affected by it, it may severely hinder the possibility for a child to fully develop such functions. In turn, this negatively affects children's educational and social outcomes.

The impact on executive functions may, in practice, hinder the ability to make pondered decisions about the future. As already discussed in Chapter 3, people who are struggling to make ends meet may be less involved in their children's education. Thus, they may overlook strategic decisions that affect the children's future. These may concern the choice of education, job choices, health precautions, decisions about money that involve long term planning[79]. In turn, this may have very practical consequences for children's actual life opportunities.

BELIEF IN SOCIAL MOBILITY AS A REALISTIC OPTION

If social mobility has not been a part of family history for generations – as is the case for multigenerational poverty – the lack of belief in the benefits of individual effort and an individual's capacity to shape one's future will contribute to lowering aspirations. As Breen argues in his seminal work, 'beliefs evolve in the light of experiences'. **A series of failures within and over generations can give rise to pessimistic beliefs** about the importance of effort[80].

In line with similar findings on the growth mindset, a strong belief that moving ahead in life is beyond the individual's control can reduce aspirations. Dynastic learning can further reinforce negative beliefs about moving ahead in life – and thus about getting out of poverty.

As a World Bank report on social mobility state, 'Beliefs about mobility influence the aspiration window of the individual[81]'.

76 Anderson, L., Sheppard, P. and Monden, C., 'Grandparent Effects on Educational Outcomes: A Systematic Review', *Sociological Science,* Vol. 5, 2018, pp. 114-42. https://doi.org/10.15195/v5.a6.

77 See, for instance, https://www.ncbi.nlm.nih.gov/pubmed/19243871.

78 Freed R. D., Tompson, M. C., 'Predictors of Parental Locus of Control in Mothers of Pre- and Early Adolescents', *Journal of Clinical Child & Adolescent Psychology*, Vol. 40(1), January 2011.

79 For example, a report by Pew Charitable Trusts outlined that the capacity to save, also in low-income families, is an accurate predictor of opportunities for social mobility.

80 Breen, B., 'Beliefs, Rational Choice and Bayesian Learning', *Rationality and Society 11*, No 4, 1999, pp. 463–79, https://doi.org/10.1177/104346399011004005.

81 Narayan, A. et al., 'Fair Progress? Economic Mobility across Generations around the World', The World Bank, 2018, https://doi.org/10.1596/978-1-4648-1210-1.

4.2. THE IMPACT OF THE BROADER ENVIRONMENT ON ASPIRATIONS AND DECISIONS

Poverty over generations increases the accumulation of multiple environmental risks, which also significantly affects the brain[82]. In many cases, being exposed to poverty for more than one generation often leads to living in low-income neighbourhoods.

THE IMPACT OF SPATIAL SEGREGATION

Living in segregated neighbourhoods may increase exposure to risks and stressors. In highly segregated and poor neighbourhoods, young people are more often exposed to violence, vandalism, drug dealing, etc. than youths in middle- or upper-class settings. They also often have fewer (or inferior) community resources such as parks and youth activities. The segregation mechanisms often mean a lower quality of schools and day care in poor neighbourhoods.

Furthermore, the lack of exposure to people with different life patterns may have a strong negative impact on aspirations, as it **deprives young people from role models and references for social mobility.**

The negative impact of living in segregated neighbourhoods has been widely explored, especially in the USA. The research of Raj Chetty[83] confirms the clear negative effect of spatial segregation on economic mobility: it finds that the features of the neighbourhood (e.g. share of households headed by one parent, divorce rate, crime rate, etc.) are strongly correlated to children's outcomes in terms of upward mobility[84].

Communities defined by lower levels of racial/economic segregation had access to better schools, more income equality, more social capital and more two-parent families. All of this is more likely to promote economic mobility. Raj Chetty's work also shows that overcoming segregation is good for all. The five main factors of good schools, high levels of social cohesion and two parent families and lower levels of income inequality and racial/ethnic segregation benefitted the economic mobility of all residents, not only the most disadvantaged.

Mookherjee, Napel, and Ray[85] show that the decisions of parents to educate or not educate their children are affected by the place where they live. They found that parents' aspirations for their children also depend on the earnings of their neighbours. Income segregation in neighbourhoods is a driver for decisions to invest in education and for occupational outcomes. This is also confirmed by some analyses in Europe. In Sweden, for instance, a quasi-experimental study[86] found that long-term welfare dependence for immigrants increased when new immigrants were placed in enclaves with higher rates of welfare dependence. A follow-up study[87] analyzed specifically the influence of peer effects on educational attainment. They find that school performance was positively related to the number of highly educated adults in the community that shared the student's ethnicity.

Thus, ***socio-economic spatial segregation directly influences aspirations.***

Some studies[88] even point to a **link between hopelessness and neighbourhood outlooks.** Some aspects of neighbourhood ecology (such as the presence of litter, graffiti, abandoned buildings and also certain types of social interaction – e.g. the presence of numerous homeless people, drug dealers, etc.) may affect risk behaviour and feelings of hopelessness. As Gary W. Evans points out, it is the *accumulation of multiple environmental risks,* rather than singular risk exposure, that represents a particularly pathogenic aspect of childhood in poverty[89].

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82 For example – Joseph, R., 'Environmental Influences on Neural Plasticity, the Limbic System, Emotional Development and Attachment: A Review', *Child Psychiatry Hum Dev 29*, 1999, pp. 189-208, https://doi.org/10.1023/A:1022660923605.

83 http://www.equality-of-opportunity.org/assets/documents/race_paper.pdf.

84 Chetty, R. et al., 'Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States', *Quarterly Journal of Economics 129,* 2014, pp. 1553–1623, https://doi.org/10.1093/qje/ qju022.

85 Mookherjee, D., Napel, S., Ray, D., 'Aspirations, Segregation, and Occupational Choice', 2010. https://doi.org/10.1111/j.1542-4774.2010.tb00498.x

86 Åslund, O. and Fredriksson P. Peer Effects in Welfare Dependence: Quasi-Experimental Evidence J. Human Resources July 1, 2009 44:798-825; doi:10.3368/jhr.44.3.798 - referred to in J-PAL European Social Inclusion Initiative, Review Paper December 2018

87 Åslund, O., Edin, P-A., Fredriksson,P., and Grönqvist, H. Peers, Neighborhoods, and Immigrant Student Achievement: Evidence from a Placement Policy." American Economic Journal: Applied Economics, 3 (2): 2011. 67-95. - referred to in J-PAL, cit.

88 Mair, C., Kaplan, G. & Everson-Rose, S., 'Are there hopeless neighborhoods? An exploration of environmental associations between individual-level feelings of hopelessness and neighborhood characteristics', *Health & place,* Vol. 18, 2012, pp. 434-9. 10.1016/j.healthplace.2011.12.012.

89 Evans, G. W., 'The Environment of Childhood Poverty', 2004.

Living in segregated settings also affects mindsets and behavioural adaptation. Hoff and Walsh[90] analysed the implications of Daniel Kahneman's theory on fast and slow thinking on people living in segregated settings. 'Fast' thinking is intuitive and automatic, and 'slow' thinking is deliberate and effortful. Fast thinking is generally well-adapted to environments that individuals know well; but in less familiar environments, fast thinking may lead to systematic mistakes. Thus, living in economically and racially segregated neighbourhoods puts disadvantaged individuals in a difficult position when they try to access more privileged settings, as they have to learn the mental models, norms and rules of thumb needed to thrive in such environments.

As Hoff and Walsh put it, children who live in areas plagued by high rates of crime must learn one set of rules of thumb to survive in their neighbourhood, and another set to thrive at school. School environments are heavily regulated by formal authority and the norms of civility. In contrast, in high crime neighbourhoods, power and authority are fluid and negotiable. **In practice, children have to adapt fast thinking to two worlds, and that is difficult.** In particular, for males who live in dangerous neighbourhoods, there is generally no set of automatic responses to the assertion of authority that they can apply successfully in both their neighbourhoods and more orderly places like schools. An automatic response of compliance would endanger them in their neighbourhoods, whereas an automatic response of non-compliance at school could lead to suspension or expulsion. Middle-class young people do not normally face this problem. For them, the appropriate response to authority is similar at home and at school.

THE EXPERIENCE OF EXCLUSION CAN NEGATIVELY AFFECT PEOPLE'S PREFERENCES

Some research argues that social exclusion may have a particularly perverse effect when an oppressed group starts viewing its oppression as natural or even preferred. As Hoff and Walsh point out, in contrast to the assumption of traditional economics that preferences are fixed, behavioural economics has proven that preferences are malleable and strongly influenced by experience.

The preferences and self-belief of the socially excluded often adapt to the (low) expectations and negative views of their environment. When this mechanism is applied, then members of the socially excluded groups internalise the views and beliefs that others hold of them. Children who are exposed to negative stereotypes, and 'learn' that they are not capable of higher achievements and are not likely to succeed, will develop less self-belief and adapt their aspirations accordingly. Indeed, institutions in which people undergo socialisation, serve as reference points relative to which they imagine alternative realities and futures or often fail to do so.

Recent JRC analysis [91] on Eurobarometer data shows that people who live in poor neighbourhoods are particularly prone to believe that moving ahead in life depends on factors that are not under the individual's control – including family wealth, connections or ethnic belonging. This tendency is even stronger among those who experience multigenerational poverty, which usually means that they were also brought up in a poor neighbourhood.

Members of an excluded group can enhance each other's belief that their fate is out of their control, and this belief will then further reinforce their self-belief, low aspirations and low educational investment.

LACK OF EXPOSURE TO RELATABLE POSITIVE ROLE MODELS NARROWS POOR PEOPLE'S ASPIRATION WINDOWS

Individual aspirations are born into a social context; they do not exist in a vacuum[92].

Lifestyles, social and political norms and the economic well-being of people around us determine our own goals and aspirations. Individual desires and standards are often defined by the observation of lives and achievements of others. Debraj Ray defines it as an 'aspirations window'. This window is shaped by individual's social referents – people in the closest as well as the broader environment. However, only individuals that are broadly similar to oneself, or relevant to one's experiences, enter the aspirations radar screen. The examples of multimillionaires or pop stars do not really work as a useful comparison for most individuals because their experiences seem too remote.

Ray looks at the central role of the aspiration gap – the distance between what an individual might aspire to and the conditions they currently find themselves in. This gap is what affects future-oriented behaviour. Interestingly, both a large and a small aspiration gap may be inimical to investment effort to better one's own conditions. Individuals, whose aspirations (based on examples of people they know) are closely aligned to their current standards of living, have little incentive to

90 Hoff, K. and Walsh, J. S., 'The Whys of Social Exclusion : Insights from Behavioral Economics ', 2017, cit.

91 Blaskó, Z. and Boldrini, M. (2021): The experience of poverty and perceptions of equal opportunity. Manuscript.

92 Ray, D., 'Aspirations, Poverty and Economic Change', *Understanding Poverty*, 2003, 10.1093/0195305191.003.0028.

raise those standards. Both large and small aspiration gaps are more likely to be found in societies defined by high socio-economic polarisation.

In Ray's analysis, it is not the condition of poverty alone which is responsible for aspiration failure. It is **poverty in conjunction with the absence of a critical mass of persons who are both better off than the person in question, yet not so much better off that their economic well-being is thought to be unattainable.**

This is the problem that concerns people who are deeply immersed in multigenerational poverty, and whose environment is composed of people in the same situation. If the people in one's cognitive world are all in a similar situation and the only exceptions are celebrities, movies stars, etc., there is no point in investing to change the situation.

PEER PRESSURE CAN ENHANCE MARGINALISATION

Literature also points to the strong impact that peer pressure may have on personal choices – either in a positive or negative sense. Being surrounded by people who are in the same situation of deprivation and lacking personal prospects may act strongly against individual efforts to plan one's future.

Group social norms and peer group members' behaviour and attitudes are usually useful to determine which behaviour is most appropriate in a given situation. Several recent field experiments in economics[93] have demonstrated how concerns about social image may impact behaviour and preferences. This also means that complying with perceived norms can perpetuate negative behaviours[94], as people may imitate the negative behaviour of peers in order to confirm their affiliation to them.

As Ray[95] explains, if an individual lives in a community in which the majority of peers do not aspire to educational success, then their own aspirations are dulled. They do not fear a relative loss of standing among their peers and may therefore not endeavour to succeed.

This is particularly important for young people at school age. A seminal book by Judith Harris[96] showed the hugely important role played by peers in shaping children's identities and characters. She argued that such an influence may be even greater than the parents' influence on school-age children.

The interplay between cognition and emotion is very strong. When students feel socialised and accepted, they perform better academically. This means that **academic success has a much higher chance of happening if it is supported as a value among peers.**

For instance, not having people with higher education in one's immediate circle may curb their desire to attend university[97], even when financial obstacles can be overcome. This may be both a result of the lack of information on practical steps, and of the strain deriving from being 'the odd one out'[98]. Peer pressure has been proven to impact on substance abuse, risky sexual behaviour and delinquent school behaviour[99]. Some researchers even point to the issue as a sort of 'contagion[100]' that is particularly strong in relation to educational choices – which in turn have a major impact on future life prospects.

As Simons-Morten and Chen[101] illustrate, strong parental involvement is crucial to counterbalance the negative effect of peers – but again, as previously discussed, the circumstances of long-term poverty and exclusion often reduce parents' capacity to engage with their children's education. Otherwise, making a decision that goes in a different direction to what is standard in one's community requires focus and a strong sense of agency, but this is precisely the ability that is most impacted by toxic stress emanating from poverty.

THE COSTS OF BREAKING SOCIAL NORMS MAY BE TOO HIGH

Peer effects – or the 'social contagion' deriving from it – may permeate a whole community when poverty and exclusion are deeply rooted into it. Adaptive preferences at community level may come into play, making it even more difficult for the individual to overcome the condition

93 Bursztyn, L., Jensen, R., 'Social Image and Economic Behavior in the Field: Identifying, Understanding, and Shaping Social Pressure', *Annual Review of Economics*, Vol. 9, August 2017, pp. 131-153, https://doi.org/10.1146/annurev-economics-063016-103625.

94 Schultz, P. W. et al., 'The Constructive, Destructive, and Reconstructive Power of Social Norms', *Psychological Science 18,* 2007.

95 Ray 2003, cit.

96 Harris, J., *The Nurture Assumption*, The Free Press, 1998 - revised version in 2009.

97 Hallinan, Maureen & Williams, Richard. (1990). Students' Characteristics and the Peer-Influence Process. Sociology of Education.

98 https://njleftbehind.org/2014/12/the-impact-of-peer-pressure-on-student-achievement/.

99 El-Tahch, M., 'Student-see, Student-do:Perceptions of Conformity among Friends',2009.

100 https://www.researchgate.net/publication/328109715_The_Influence_of_Social_Contagion_Within_Education_A_Motivational_Perspective.

101 Simons-Morton, B. & Chen, R., 'Peer and Parent Influences on School Engagement Among Early Adolescents', *Youth & society*, Vol. 41, 2009, pp. 3-25, 10.1177/0044118X09334861.

Box 14

Two concepts introduced by Kahneman and Tversky are relevant here: 'loss aversion' refers to a situation when, for some people, 'losses loom larger than gains' (Kahneman & Tversky, 1979). Similarly, 'regret avoidance' suggests that people may feel more regret for bad outcomes that result from new actions than for bad consequences that are the consequence of inaction (Kahneman & Tversky, 1982). These tendencies can also be framed as the 'status quo bias', also widely studied in behavioural economics – which explains that people prefer things to stay the same by doing nothing, or by sticking with decisions made previously (Samuelson & Zeckhauser, 1988).

of deprivation. **Adapting to the norms** and survival strategies dictated by the existing structural hardship **may result in self-limitation**, creating an additional obstacle for the individual to overcome[102].

When a community has been excluded for a long period of time, as a result of historical oppression for example, it often develops norms and codes that are functional to its survival. For the individual, access to social mobility in mainstream society may imply breaking such norms and codes. It can lead to complying with social norms that curb personal improvement, rather than breaking them to explore new pathways.

A decision not to break the rules of a community may also be highly rational. Depending on how tight and isolated the community is, breaking the norms may result in separation from the community of origin. The risk for the individual may be extremely high at both the emotional but also the economic level. Following the norms of the community allows for survival, even if in a suboptimal manner, as social ties may be essential to finding a job[103] or ensuring alternative means of subsistence. Leaving the community means losing access to its safety net. In sociological terms, it means losing one's social capital, with no clarity on what is obtained in return.

If the external support is not strong enough – for example, when the outside world is permeated by discrimination and the social protection system is weak, and if the individual is equipped with scarce resources because of poverty and low education – breaking ties with the community may leave the individual worse off[104].

102 Vargas, C., Nathali, C., 'Analysis of adaptive preferences through the voices of the poor in Ecuador', *Economics of Development (ECD)*, 4 December 2018. Retrieved from http://hdl.handle.net/2105/46552.

103 Montgomery, J. D., 'Social Networks and Labor-Market Outcomes: Toward an Economic Analysis', *The American Economic Review,* Vol. 81, No 5, Dec. 1991, pp. 1408-1418.

104 Chantarat, S. & Barrett, C. B., 'Social network capital, economic mobility and poverty traps', The Journal of Economic Inequality, Vol. 10, 2012, pp. 299-342.

SECTION II

HOW TO USE THIS KNOWLEDGE IN ADDRESSING THE EFFECTS OF MULTIGENERATIONAL POVERTY

Section I outlined multiple vicious circles that long-term poverty may create by impacting on executive functions and aspirations, thus hindering social mobility.

But this is not an immutable destiny. Research also gives indications of possible strategies to address such impact.

It is clear that tackling poverty requires a substantial investment in structural support. If a person is concerned about basic needs such as personal safety, shelter, food, this will inevitably draw on their entire mental capacity, occupy all of their cognitive bandwidth and leave no space for other planning. Policies and programmes in support of people in poverty first of all need to ensure that people are in a position to meet their basic needs in terms of safety, nutrition, health, etc. and that they have access to education and employment. The eradication of child poverty has to be a policy target.

Additionally, the question of whether opportunities are really accessible needs be considered. Structural discrimination and racism often constitute a pervasive obstacle that undermines the actual access to opportunities even when they *seem* available.

It is then, when opportunities are realistically attainable, that policies supporting executive functions, aspirations and hope can make a difference in breaking the cycle of poverty.

Chapter 5 provides an overview of guiding principles for policies and programmes that counterbalance the impact of poverty on personal development. It shows that such a multifaceted problem needs to be tackled through a multifaceted approach. Some fundamental actions, outlined in Chapter 6, relate to education. They may often consist of complex systemic interventions requiring political will and long-term strategies. They are difficult to implement but may ensure long-term and sustainable changes. In addition, a wide range of more specific and flexible programmes and interventions may help to build resilience, supporting executive functions, aspirations and hope. Such measures are described in Chapters 7, 8 and 9. Lastly, Chapter 10 elaborates on some meta-conditions that may optimise the effectiveness of measures, such as the setting of interventions, the comprehensive approaches and a rigorous data collection.

5. GUIDING PRINCIPLES TO ADDRESSING THE IMPACTS OF POVERTY AND EXCLUSION

Interventions that mitigate the negative cognitive effects of life in poverty in early childhood are crucial but there are other critical periods when interventions can have an impact due to the plasticity and adaptability of the brain.

Understanding why some children succeed even when coming from difficult socio-economic conditions is the key to better interventions. Attachment and support from influential figures in life is an important factor that can be addressed through interventions.

5.1 EARLY INTERVENTION IS CRUCIAL

Life experiences are crucial to cognitive and emotional development, and hence influence individual chances for success in education, employment and social integration. Ensuring that such experiences are less stressful for people born into poverty may positively impact on their future chances.

Brain science shows that the impacts of poverty occur very early in life, just a few months after birth, as described in Chapter 2. It is therefore **essential to support children and prevent the possible effects of poverty from a very early age** to ensure that they can fully develop their potential. This points to the importance of early childhood education and care, and of preschool programmes that provide high-quality supplementary caregiving and a safe haven for vulnerable young children, but also support for parents.

5.2. CRUCIAL BRAIN FUNCTIONS CAN ALSO BE DEVELOPED AFTER CHILDHOOD

Science also shows that the brain is highly plastic. The impact on executive functions caused by growing up in poverty can be positively influenced by caregiving and positive events later in life[105].

Even if early childhood is a crucial moment for brain development, **there are other critical periods in which the brain responds easily to stimulation.**

Most of the school years are important for the development of executive functions. In particular, **adolescence represents a critical moment**, as it is a period of re-opened sensitivity to the environment. It is also a key moment for developing decision-making and defining life prospects – such as completing secondary school and enrolling into higher education.

For now, little is known about how long into adulthood the brain is capable of developing new functions, but it seems that some critical functions can still be developed until *at least* the age of 30[106].

Therefore, besides support to childhood, measures that target adolescents and young adults and support them in the definition and pursuit of aspirations can be important and effective.

While it is easier to build and rebuild executive functions in children, adolescents and young adults, science shows that new 'brain wiring' and skills can be acquired throughout adult life.

Just like glasses may remediate the effects of impaired vision, **smartly designed support measures may remediate the impact on executive functions in adults**. Behavioural experiments point to tricks to redesign support services so that they are more effective. Building on this evidence may also help design tools and environments that support better brain functioning and self-regulation in adults.

5.3. UNDERSTANDING RESILIENCE CAN HELP DESIGN BETTER INTERVENTIONS

When analysing the impact of poverty on executive functions and aspirations, the research looks at averages. This may hide many variations in what happens in real life. There are examples of children and adults who do not suffer from – or can overcome with relative ease – the issues described in Section I, even though they are in the same stressful circumstances of poverty and exclusion. Some children in multigenerational poverty manage to perform outstandingly well against all odds.

Looking at these children and at the factors that allow them to counterbalance, or be protected from, the impact of poverty may help identify more effective support strategies. According to psychological research, individual differences in children's responses to poverty may depend on protective cultural or personal traits that foster what psychologists term 'resilience'. The topic was first studied by Norman Garmezy[107]. He focused on protective factors for children exposed to stressful and traumatic life circumstances. He found that these protective factors include, beside the dispositional attributes of the individual, also **family affectional ties** and **external support systems**.

Individuals who managed to perform well in spite of adversity reported similar patterns of experience: frequent school contact initiated by parents; child's exposure to stimulating and supportive teachers; and infrequent family conflict. Children who demonstrated resilience proved to have well-developed social skills; a self-perception founded on a sense of power rather than powerlessness; and highly performant cognitive skills and styles. Garmezy's analysis suggested that children who had developed more of such skills were less likely to experience negative outcomes later on, and that they had outcomes that seemed to level off their initial disadvantage in comparison with more advantaged children. This was confirmed by further studies.

105 The Harvard study on institutionalisation demonstrated that children who had previously been neglected in institutions, and who had eventually entered into high-quality foster care, recovered white matter development.

106 As gathered by the authors in a conversation with Martha Farah, University of Pennsylvania

107 Garmezy, N., 'Children in poverty: Resilience despite risk', *Psychiatry*, Vol. 56(1), 1993, pp. 127–136.

Box 15

As part of a larger investigation of low-income families, a study by the Harvard medical school (Buckner, Mezzacapa and Beardslee, 2003) examined the characteristics that differentiated resilient from non-resilient school-age young people, with a focus on self-regulation skills (e.g. executive function and emotional regulation). They found that, beyond statistical averages, a sizable percentage of economically disadvantaged young people are free of significant mental health problems and exhibit competences in the face of adversity. Controlling for other explanatory variables, resilient young people were notably different from non-resilient young people in terms of having greater self-regulatory skills and self-esteem, as well as in receiving more active parental monitoring.

Buckner, J., Mezzacappa, E. and Beardslee, W., 'Characteristics of Resilient Youths Living in Poverty: The Role of Self-Regulatory Processes', Development and Psychopathology, Vol. 15, 2003, pp. 139-62. 10.1017/S0954579403000087.

Masten & Coatsworth[108] reviewed implications from research on resilience in children and adolescents for policy and interventions designed to foster better outcomes among children at risk. Their study pointed to the importance of a **strong positive attachment relationship,** either in the family or with a mentor or a teacher. It highlighted the importance of self-esteem, which can lead to a sense of power rather than powerlessness. It also showed that highly performant cognitive skills and styles can make up for other lags.

108 Masten, A. & Coatsworth, J., 'The Development of Competence in Favorable and Unfavorable Environments: Lessons from Research on Successful Children', *The American Psychologist*, Vol. 53, 1998, pp. 205-20. 10.1037/0003-066X.53.2.205.

6. IMPROVING EQUITY AND WELL-BEING IN EDUCATION

- Preventing the educational segregation of children who live in poverty and ensuring high-quality teaching is key to education being a path towards social mobility.
- Investment in early-childhood care generates long-term returns in terms of better lives as well as public budgets. But there needs to be continuity with subsequent stages of education to maintain the positive effects.
- Teachers need to be equipped to deal with the effects of life in poverty on students' cognitive and emotional abilities.
- Drawing on scientific evidence, education systems can put emphasis on the development of cognitive and socio-emotional skills that are most likely to be affected by the conditions of life in poverty.
- An inclusive school environment that focuses on students' well-being and engaging activities can mitigate the effects of toxic stress and significantly enhance educational performance.

6.1. PREVENT SEGREGATION AND ENSURE HIGH QUALITY IN EDUCATION

Chapter 4 outlines how living in a community defined by marginalisation may deeply hinder aspirations and hope. If the majority of peers do not aspire to educational success, then children's own aspirations are dulled. They may not endeavour to succeed and do not fear a loss of standing among these peers due to lack of success. Therefore, **being exposed to a variety of diverse people and life paths is important in developing aspirations** and decisions leading to upward social mobility.

Decades of research have demonstrated how racial and socio-economic segregation increases disadvantages for groups with a low socio-economic status and analysed

measures to overcome it. School is the place where meaningful encounters can be made and integration can take place. **Ensuring a balanced distribution of ethnic groups and groups from different socio-economic backgrounds across schools** is therefore of high importance for inclusive education policies.

Preventing segregation whenever possible is much easier than overturning it once it has occurred. When the concentration of children with a poverty background depends upon residential distribution, it is particularly difficult to tackle. Strategies to overcome it often encounter public resistance and are the object of difficult controversies. At the same time, the concentration of pupils from a disadvantaged background in education may also drive residential distribution (for instance through the 'white flight' phenomenon).

A key factor in preventing educational segregation, especially in systems with free school choice, is the **rigorous monitoring and enforcement of quality standards**. This can guarantee an equivalent quality of education independent of the location of the school, and it can minimise parents' concerns about the negative effects of integrated education.

However, desegregation alone is not a sufficient guarantee of improvement of achievement and opportunities for children in poverty. Access to social mobility very much depends on the structure of available opportunities, and on the quality of support that people in poverty receive[109].

There is also evidence of schools with a high proportion of children living in poverty that managed to support their social mobility, in spite of segregation[110]. The quality of education was key to that success[111]. Jensen summarises factors that characterise high-performing high-poverty schools. They need to be equipped to enhance children's cognitive and social competences, set ambitious academic and work-oriented goals, express appreciation of good work and maintain a positive atmosphere[112].

The quality of teaching is therefore essential.

Chapter 2 outlined how, on average, children in poverty receive less stimulation both at home and outside, and how this may negatively impact their cognitive development. To compensate for such reduced stimulation, children need to have access to high-quality education providing enrichment and stimulation. Children from low-educated families living in poverty do not have the opportunity to compensate for low-quality teaching with input received from parents. Therefore, addressing issues of educational performance for children in poverty first of all means ensuring that they have **access to high-quality teaching**[113].

Sanders and Rivers[114] assessed the influence of individual teachers on students' academic success. They demonstrated that **placing high-quality teachers in the most disadvantaged schools generated the highest benefits**. Unfortunately, it is common for schools with a high concentration of pupils in poverty to suffer from a high turnover of often inexperienced teachers.

Additionally, the analysis of PISA 2018 points to some successful strategies to achieve quality in high-poverty schools[115].

As outlined by the recent Eurydice report on equity in school education in Europe[116], teachers who specialise in dealing with low-achieving students are rarely available, but such teachers can be of use in reducing the differences between schools in terms of student achievement, especially at secondary level.

109 See a reflection on this aspect at https://www.tc.columbia.edu/articles/2004/march/how-desegregation-changed-us-the-effects-of-racially-mixed-/.

110 Cunningham, Patricia M., Struggling Readers: High-Poverty Schools that Beat the Odds *Reading Teacher*, v60 n4 p382-385 Dec 2006 https://eric.ed.gov/?id=EJ749455.

111 Reeves, 'High Performance in High Poverty Schools: 90/90/90 and Beyond', 2003.

112 Jensen, E., *Teaching with Poverty in Mind*, 2009.

113 See Hanushek, E. A., Kain, J. F. and Rivkin, S. G., 'Teachers, Schools, and Academic Achievement', August 1998.

114 Sanders, W. L., & Rivers, J. C., 'Cumulative and Residual Effects of Teachers on Future Student Academic Achievement', Knoxville, YN: University of Tennessee Value-Added Research and Assessment Center, 1998.

115 https://ec.europa.eu/education/sites/default/files/document-library-docs/pisa-2018-eu_1.pdf.

116 European Commission/EACEA/Eurydice, 'Equity in school education in Europe: Structures, policies and student performance'. *Eurydice Brief*, Luxembourg: Publications Office of the European Union, 2020.

Box 16

For example, the 'Cooperation for the Best School possible' (Samverkan för bästa skola (SBS) in Sweden offers support to schools that face the most severe challenges in providing high quality teaching, and where a high proportion of pupils do not complete their education. The schools receive tailor-made support that is practice-oriented, based on evidence and experience and is accompanied by teachers' professional development. The support is based on a development plan with responsibilities, milestones, attainment targets and evaluation. Surveys show that the programme is highly valued and headteachers believe that it will lead to more collaborative learning between teachers, better school outcomes for pupils and improved equity between and within schools.

6.2. PRIORITISE EARLY CHILDHOOD EDUCATION AND CARE

High-quality early childhood education and care prepare children for primary education, boost academic performance at all future levels and can have a particularly positive impact on children from disadvantaged and migrant backgrounds because it can significantly enhance crucial non-cognitive skills such as confidence and perseverance. The Nobel Memorial Prize-winning American economist James Heckman and his collaborators have gathered an overview of conclusive evidence on the substantial returns on public investment in quality early care for low socio-economic status children[117]. Additionally, in the EU context, there is a growing body of research that documents the positive effects of high-quality early childhood education and care and provides examples of good practices around the EU[118].

Substantial evidence based on randomised control trials[119] demonstrates the **relevance of high-quality early childhood education and care for improving future school success for children from low socio-economic backgrounds.** Studies into adulthood indicate that this effect is followed by increased success in employment, social integration and sometimes reduced criminality.

The benefits of exposure to quality early childhood education and care relate, above all, to social skills and improved motivation, which in turn allow the reduction of school failure and the attainment of higher educational achievement. Furthermore, cognitive, language and academic skills can all be enhanced by early education and care. Beyond the impact on children, there is also evidence of positive outcomes for mothers in terms of improved life opportunities and parent-child relationships due to the access to good early childhood education and care.

However, the children who would benefit most are often the ones with the least access to early childhood education and care. This is either because of entitlements and practical obstacles, or because of costs or lack of knowledge and awareness of its benefits. In the EU, participation in early childhood education and care has increased over recent years but remains problematic for children under the age of three, and especially for disadvantaged children. Participation, affordability and quality are unevenly distributed within and between countries. The benefits of early childhood education and care and existing shortcomings in access by children in a disadvantaged situation have been recognised in the 2019 recommendation of the Council of the EU devoted to High-Quality Early Childhood Education and Care Systems[120]. Full implementation of these guidelines would significantly contribute to improving educational outcomes for all children.

While disadvantaged children can greatly benefit from high-quality pre-school provisions, these benefits will only persist in the long term if followed by good quality

117 https://heckmanequation.org/topic/early-learning-and-family-support/

118 For example, an EU-funded CARE project covering all EU regions (2014-2017) https://ecec-care.org or a more recent OECD Early Learning and Child Well-being Study of five-year-olds in England, Estonia and the United States - http://www.oecd.org/education/school/early-learning-and-child-well-being-study/early-learning-and-child-well-being-3990407f-en.htm.

119 Cunha, F., Heckman, J. J. & Lochner, L., 'Interpreting the Evidence on Life Cycle Skill Formation', *Handbook of the Economics of Education*, Elsevier, 2006; García, J. L., Heckman, J. J., Leaf, D. E. and Prados, M. J., 'Quantifying the Life-cycle Benefits of a Prototypical Early Childhood Program', NBER Working Paper No 23479, June 2017, revised February 2019, JEL No C93,I28,J13.

120 Council Recommendation of 22 May 2019 on High-Quality Early Childhood Education and Care Systems: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2019.189.01.0004.01.ENG#ntc31-C_2019189EN.01000401-E0031.

primary school education[121]. Early childhood education and care is of extreme importance, but it cannot fully compensate for unfavourable learning conditions in disadvantaged milieux in the long run.

6.3. ENABLE SUCCESS FOR ALL IN EDUCATION SYSTEMS

Chapter 3 analyses the impact of external low expectations on children's performance. To support aspirations and a growth mindset, the **education system needs to make sure that nobody is excluded from the chance to succeed**.

The recent Eurydice report on equity in school education in Europe[122] carries out a thorough review of factors enabling equal chances for all pupils in education, as well as trends in EU Member States.

A crucial obstacle to equity is represented by the early 'tracking system', which has been proven to lead to socio-economic selectivity among pupils and result in education outcomes shaped by socio-economic inequality.

It was shown that the earlier the stratification takes place, the greater the resulting educational inequalities[123]. Furthermore, systems with school segregation by academic performance and socio-economic background are associated with higher proportions of students who are underachieving in reading[124].

The analysis of PISA 2018 reveals that educational systems in many countries are embracing the idea that all students can achieve at high levels. Several of the highest-performing countries in PISA gradually moved away from a system in which students were stratified into different types of secondary schools, with curricula demanding various levels of cognitive skills.

Sweden had already replaced tracking with comprehensive schooling in the 1950s and Finland followed suit in the 1970s. Socio-economic inequalities in education outcomes subsequently declined in both countries[125]. Other countries implemented similar policies later on.

However, as the Eurydice report underlines, the effects of tracking can vary depending on how it is organised, with particular respect to the age at which students are first assigned to a track or pathway. The number of tracks, the degree of differentiation and the relative proportion of upper secondary students in vocationally-oriented programmes are also important.

In addition, the abandonment of tracking systems is not the ultimate solution to social segregation in education. Sweden and Finland have seen educational inequalities increased or stagnating over the last two decades, while countries such as Germany or Italy that use tracking have experienced an opposite trend. This points to the role of multiple mitigating national education policies[126]. Other polices that demonstrated a positive impact on reducing the socio-economic gap in educational achievement include, for example, an increase in instruction time both by the greater inclusion of children at pre-school age and by the expansion of compulsory school age[127].

121 See McKey's evaluation of the HeadStart programme and several articles by P. P. M. Leseman.

122 European Commission/EACEA/Eurydice, 2020, cit.

123 Contini, D. and Scagni, A., 'Inequality of Opportunity in Secondary School Enrolment in Italy, Germany and the Netherlands', *Quality & Quantity,* Vol. 45, No 2, 1 February 2011, pp. 441–64, https://doi.org/10.1007/s11135-009-9307-y.

124 European Commission, 'PISA 2018 and the EU – Striving for Social Fairness through Education', 10 December 2019, https://ec.europa.eu/education/sites/default/files/document-library-docs/pisa-2018-eu_1.pdf.

125 Schnepf, S. V. et al., 'Cross-National Trends in Addressing Socioeconomic Inequality in Education', in Volante, L. et al., *Socioeconomic Inequality and Student Outcomes: Cross-National Trends, Policies, and Practices – Education Policy & Social Inequality,* Springer Singapore, 2019, pp. 207-23, https://doi.org/10.1007/978-981-13-9863-6.

126 Schnepf et al.

127 Schnepf et al.

6.4. EDUCATE AND TRAIN TEACHERS AND EDUCATORS ON EMOTIONAL AND BEHAVIOURAL RESPONSES

As pointed out by Eric Jensen[128], teachers who work with low socio-economic status students need to help them build emotional responses that are socially acceptable. Teaching may embed the development of social skills from early years to secondary school, for example through an emphasis on cooperative learning.

Teachers may require **specific training to understand the reasons for impulsive behaviours by students with a poverty background**. They need to understand the impact of stress and what it does to their attention and key executive functions.

For this purpose, teacher training and staff development activities are essential. A wide range of techniques to support socio-emotional learning have been developed in the USA since the 1980s – such as PATHS, Conscious Discipline and Love and Logic; in Europe, the focus on socio-emotional learning in teacher training has increased since the 2000s[129].

Evidence points to the importance of training teachers on the growth mindset to instil the understanding that intelligence is not fixed and that cognitive capacities can be built (more in Chapter 8.2).

Even though research is rather scattered on this, some randomised studies (such as the Tennessee STAR experiment) also demonstrate that **reducing the student-teacher ratio** may be particularly beneficial for students with a disadvantaged background[130]. This may help teachers who work in more difficult environments to deploy their energies and support students with one-to-one attention and guidance, building the students' resilience and self-esteem.

6.5. BUILD CORE SKILLS THROUGH EDUCATION

Academic performance requires some core cognitive abilities, such as attention, focus, memory and problem-solving. It also requires perseverance, self-esteem and social skills. These are precisely the skills that are most challenged by the experience of poverty, as outlined in Section I.

The lack of cognitive abilities may hinder performance and impact on self-esteem and motivation, thus making it difficult to persist, especially under negative peer pressure. To support students with a poverty background, the education system needs to **help them develop those core skills that are a foundation for learning.** This is what Eric Jensen calls 'retooling of the operating system'.

Jensen points out that such **retooling starts with a diagnosis to fully assess and understand students' cognitive abilities by dissecting the roots of the problem**. For instance, if a student has troubles with reading, it is essential to understand if it is an issue of vocabulary or comprehension, or perhaps vision. Several diagnostic tools are available and can be used to assess different aspects of cognitive abilities. Jensen insists that such individualised 360-degrees assessments of needs is essential to define support strategies to strengthen skills and to evaluate their effectiveness.

Based on such a diagnosis, programmes may focus on developing those neurocognitive abilities that are most needed and that vary most considerably with socio-economic status (working memory, vocabulary, ability to defer gratification, self-control, language skills). Programmes should include teaching fluid intelligence through methods such as brainstorming, mind mapping, etc. All this contributes to increasing the students' 'processing capacity'. The delivery of such programmes is effective when constantly based on positive guidance – this is of utmost importance for students with cognitive issues, who may get easily discouraged. Importantly, such core skills can also be supported outside of strictly academic instruction, in arts, sports, cooking, IT, chess, etc.

128 Jensen, E., *Teaching with Poverty in Mind*, cit.

129 Cefai, C. et al., 'Strengthening Social and Emotional Education as a core curricular area across the EU', *NESET II analytical report*, 2017.

130 Finn, J. D. and Achilles, C. M., 'Tennessee's Class Size Study: Findings, Implications, Misconceptions', *Educational Evaluation and Policy Analysis*, Vol. 21, No 2, 1999, pp. 97–109, https://doi.org/10.2307/1164294.

6.6. ENHANCE SOCIO-EMOTIONAL SKILLS

Low socio-economic status children are often left at home alone while caregivers work long hours. They spend more time watching TV or on mobile phones and less time in extra-curricular activities. This may have significant socio-emotional consequences.

It is therefore crucial to **compensate this at school, by helping children build important social skills.** This can be done through various techniques[131]. They include conflict resolution skills; how to deal with anger and frustration; emphasising the value of giving restitution (if you disrupt the class, you need to make it right by doing something positive for the class); giving students a weekly life problem to solve collectively; introducing stress reduction techniques (dance, yoga, meditation); teaching social skills (thanking, greeting, etc.).

Research from the USA suggests that a positive psychological experience at a key life juncture can increase college enrolment for young people with a disadvantaged background. If students receive some form of positive validation in school, the stigmatised and low-performing groups in particular are then able to achieve much more than is often thought, including admission to college. However, such an affirmation is only effective when there are additional resources that support students in pursuing a college pathway, such as advanced courses, motivated teachers and other channels of opportunity[132].

Research also emphasises how **social and emotional education may lay the foundations for more effective learning** in many aspects[133].

Carmen Cefai et al.[134] conducted a wide review of meta-analyses of studies on the integration of social and emotional education (SEE) into school curricula in the EU and at global level. The analysis showed that school-based, universal SEE has positive social, emotional, cognitive and academic outcomes. When such programmes are offered to all school children, they have an aggregate positive impact, including on at-risk children from ethnic and cultural minorities, from low socio-economic backgrounds and those experiencing social, emotional and mental-health difficulties. Such programmes can therefore help promote equity, social inclusion and justice. They are most effective if introduced from as early as early childhood education.

In particular, rigorous randomised evaluations showed that well-implemented SEE enhances social and emotional competences, improves pro-social behaviour and positive attitudes towards oneself and others and reduces behavioural and emotional problems, including delinquency, anti-social behaviour, substance use, mental health problems, anxiety and depression. The programmes develop a positive attitude towards school and increase academic achievement substantially, thus serving as a meta-ability for academic learning. Such positive outcomes have been observed in follow-up studies three years after an intervention.

6.7. RETHINK THE LEARNING EXPERIENCE AROUND INCLUSIVENESS AND WELL-BEING

Section I illustrates the impact of toxic stress on some key cognitive and executive functions, and it shows how this is particularly important for people in poverty. This calls for strategies to be put into place that reduce stress and enhance well-being, and additionally and foremost in a setting – such as in school – that is key for personal development.

Research shows that **positive environments and relationships can buffer the potentially damaging effects of stress and catalyse learning and development**[135]. However, school is often a place of frustration and tension, especially for children from a disadvantaged background and those with low academic achievement. As outlined in Section I, for many

131 E. Jensen

132 Goyer, J. P. et al., 'Self-Affirmation Facilitates Minority Middle Schoolers' Progress along College Trajectories', *Proceedings of the National Academy of Sciences,* Vol. 114, No 29, 18 July 2017, pp. 7594–99, https://doi.org/10.1073/pnas.1617923114.

133 Cohen,J., '*Social, Emotional, Ethical, and Academic Education: Creating a Climate for Learning, Participation in Democracy, and Well-Being',* Harvard Education Review, 2006.

134 Cefai, C. et al., cit.

135 Osher, D., Cantor, P., Berg, J., Steyer, L. & Rose, T., 'Drivers of human development: How relationships and context shape learning and development', *Applied Developmental Science*, Vol. 24:1, 2020, pp. 6-36, DOI: 10.1080/10888691.2017.1398650. https://turnaroundusa.org/wp-content/uploads/2020/03/Stress-and-the-Brain_Turnaround-for-Children-032420.pdf

students in such a situation, instead of a 'nurturing'[136] experience, education often translates into a traumatic experience of failure.

Therefore, it is essential to reflect on how well-being may be fostered in education.

A stronger **focus on well-being in education** has been advocated by several important educationalists in the last 150 years. The pedagogical methods developed by Maria Montessori, John Dewey, Celestin Freinet, Olivier Decroly and others, for example, all insisted upon the importance of supporting social and emotional competences, active learning, the respect of the individual needs of pupils and full participation of all stakeholders (pupils, families, teachers and staff, broader community) in the education process.

At global and European level, the focus on well-being at school has increased over the past decade, and also through the analysis of PISA results[137]. Increasing well-being in schools – according to the analysis by the Council of Europe – means, among other things, providing opportunities for all members of the school community to participate in meaningful decision-making in school; developing a welcoming environment where everyone at school can feel supported and safe; taking steps to reduce the anxiety students feel about examinations and testing through the introduction of less stressful forms of assessment such as formative assessment; and using teaching methods that contribute to a positive classroom climate and well-being, such as cooperative learning. It is also important to 'mainstream' well-being as a whole-school issue[138].

Improving well-being also means **fighting boredom at school**. A meta-analysis[139] showed that boredom, especially in class, has a significant negative effect on academic motivation, study strategies; behaviour as well as achievement. The findings suggest that education professionals should identify strategies to alleviate students' boredom in academic settings. 'Engaging learning' should be promoted as opposed to an unproductive focus on maintaining discipline – in fact, student engagement has been proven to be strongly correlated to performance[140].

Research on how to measure and support student engagement is ongoing – the multifaceted nature of the issue makes it difficult to define a fixed set of indicators for measurement. Eight indicators, which were a foundation for further reflection, were proposed by Jones and Valdez in 1994[141]. When they are engaged, students volunteer, do not have to be nagged, listen attentively and participate in their own learning.

As Eric Jensen suggests, measuring engagement requires *asking* students how often they feel excited, supported or bored. Surveys suggest that students enjoy engaging in discussions and debates, group projects and the arts. Fun games and intellectual challenges stimulate social interactions and enthusiasm.

Importantly, a strategy for well-being in school also needs to include **all the stakeholders** in the education process – that is, **not only the pupils but also parents**, as seen in previous chapters, and **teachers**. In fact, there is increasing evidence that in many countries, teachers are suffering at work[142], and this certainly has consequences on their ability to be effective at work. As data from the recent OECD teacher survey (TALIS 2018[143]) shows, the teachers' well-being and stress scale is negatively associated with both self-efficacy and job satisfaction for nearly all TALIS countries and economies. The problem tends to be more acute in disadvantaged schools. Empowering teachers in the process (staff development, school management, administration); acknowledging teachers' achievements; providing teacher support services; joint planning, etc. may be important to reinforce teachers' engagement and well-being.

136 As expressed by Kathleen Lynch, University College of Dublin.

137 OECD, PISA 2015 Results (Volume III) – Students' Well-Being,. Paris, France: OECD Publishing, 2017; OECD, *PISA 2018 Results (Volume III) – What School Life Means for Students' Lives*, PISA, OECD Publishing, Paris, 2019, https://doi.org/10.1787/acd78851-en.

138 https://www.coe.int/en/web/campaign-free-to-speak-safe-to-learn/improving-well-being-at-school.

139 Tze, V. M. C., Daniels, L. M. & Klassen, R. M., 'Evaluating the Relationship Between Boredom and Academic Outcomes: A Meta-Analysis', *Educ Psychol Rev*, Vol. 28, 2016, pp. 119-144. https://doi.org/10.1007/s10648-015-9301-y.

140 Chang, D. F., Chien, W. C. & Chou, W. C., 'Meta-analysis Approach to Detect the Effect of Student Engagement on Academic Achievement', *ICIC Express Letters,* Vol. 10, 2016, pp. 2441-2446.

141 Jones, B., Valdez, G., Nowakowski, J. & Rasmussen, C., 'Designing Learning and Technology for Educational Reform', Oak Brook, IL: North Central Regional Educational Laboratory, 1994.

142 https://www.csee-etuce.org/en/news/education-policy/3259-world-mental-health-day-teachers-wellbeing-matters.

143 OECD, *TALIS 2018 Results (Volume II) – Teachers and School Leaders as Valued Professionals*, TALIS, OECD Publishing, Paris, 2020, https://doi.org/10.1787/19cf08df-en.

6.8. PROMOTE COGNITIVE AND SOCIAL SKILLS AND WELL-BEING THROUGH 'ENRICHMENT' ACTIVITIES

While beneficial for all, 'enrichment' activities at school may greatly enhance the development of cognitive abilities and social skills and constitute a real game-changer for children in poverty. Poor children often do not have access to enrichment opportunities at home, while they would need them more than other children. Evidence cited below points to the huge benefits of non-subject-related learning in areas such as different forms of arts and sports.

Importantly, research also shows that **arts education reduced the stress levels of low-income students.** An experimental study investigated the influence of arts on cortisol for economically disadvantaged children, on a group of 310 children aged 3–5 years who were randomly assigned to participate in different schedules of arts and other classes on different days of the week. Results indicated that cortisol or music, dance and visual arts, grouped and separately, results suggested cortisol was lower after an arts (music, dance or visual arts) versus other classs (with results being more noticeable in the middle and at the end of the year, rather than at the start of the year)[144]. This may have interesting implications on strategies to reduce stress in schools with a large population of students facing poverty risks.

Research also points to the importance of **physical exercise**. Evidence shows that exercise increases the release of brain-derived neurotrophic factor (BDNF), a protein that supports learning and the production of brain cells[145]. In line with such findings, research has found links between exercise and academic outcomes[146] and graduation rates.

Box 17

A particularly rich support for learning comes from drama. The EU-funded DICE study looked at the impact of drama in education through a rigorous, quantitative analysis focused on competences such as communication in the mother tongue; learning to learn; interpersonal, intercultural and social competences; entrepreneurship and cultural expression (Cziboly et al., 2010). The study analysed data from 4 475 students from 12 different countries, who have participated in 111 different types of educational theatre and drama programmes. It showed that theatre in education brings tangible results in many aspects. For instance, it enhances academic performance, self-confidence, pleasure in going to school, problem-solving, stress resistance, tolerance, civic competences and empathy as well as the sense of initiative and a future-oriented vision. It also reinforces general well-being, both at school and at home.

Cziboly, A./DICE Consortium, *The DICE Has Been Cast – A DICE Resource – Research Findings and Recommendations on Educational Theatre and Drama*, ed. 2010, http://www.dramanetwork.eu/file/Policy%20Paper%20long.pdf.

144 Brown, E. D., Garnett, M. L., Anderson, K. E., Laurenceau, J.-P., 'Can the Arts Get Under the Skin? Arts and Cortisol for Economically Disadvantaged Children', *Child Dev.,* Vol. 88(4), July 2017, pp. 1368-1381. doi: 10.1111/cdev.12652. Epub 2016 Dec 6. PMID: 27921313.

145 https://www.the-scientist.com/features/this-is-your-brain-on-exercise-64934.

146 Pellegrini, A. & Bohn-Gettler, C., 'The Role of Recess in Children's Cognitive Performance and School Adjustment', *Educational Researcher*, Vol. 34, 2005, pp. 13-19. 10.3102/0013189X034001013.

Box 18

Similar findings were reported in a very large analysis in the USA (Catterall, Chapleau, Iwanaga, 2000), which looked at associations between the arts (music and theatre in particular) and achievement. The study was based on data from the National Educational Longitudinal Survey, a panel study that followed more than 25 000 students in American secondary schools for 10 years. The work addresses developments among children and adolescents over the period between 8th and 12th grade. It showed that engagement in music and theatre significantly related to student performance, and that the difference was particularly important for low socio-economic status students.

Box 19

The UK Creative Partnerships programme (funded by the government between 2002 and 2011) took a more radical approach. It aimed to develop young people's creativity, and improve teaching, not through separate arts interventions but through long-term artists' involvement in selected schools with a high proportion of low-income pupils. Even though the programme was eventually stopped, research (by the National Foundation for Educational Research, 2006, 2008, 2010 and 2011) showed a positive correlation between participation in programmes and improvements in pupil attainment for tests that young people in England take at ages 12/13 and tests that young people in England take at 16. Results also showed improved attendance and better engagement of disengaged parents.

Catterall, J. R. ChapleauIwanaga, J., 'Involvement in the Arts and Human Development : General Involvement and Intensive Involvement In Music and Theatre Arts', 2000.

7. REINFORCING POSITIVE SUPPORT FOR YOUNG PEOPLE IN POVERTY

Closer ties between the school and the family that are built on trust can help provide young learners with the support structures needed to overcome the disadvantages of life in poverty.

When parental support is lacking, mentoring can be an effective way to raise the educational and career prospects of disadvantaged children, even at adolescent age.

Evidence points to the many benefits of well-designed out-of-school support in safe places, where young people can spend their free time and engage in arts and sports, or receive psychological and academic support.

Chapter 4 illustrates how deep immersion in an environment and a history of poverty impacts on aspirations and perspectives about one's options. It is therefore crucial to counterbalance the impact of such immersion, by **reaching out and establishing positive relationships and contacts outside of the context of marginalisation**. This can be done by reinforcing relationships between parents and the school, through measures such as mentoring and by enabling young people to spend time in safe and stimulating environments that support personal development.

Box 20

One example of a programme aimed at building a closer relationship between parents and the school is the Home School Community Liaison Scheme (HSCL) in Ireland. It aims at establishing collaboration between parents and teachers in the interest of children's learning. It targets families and/or neighbourhoods identified as being 'at risk' (poverty, unemployment, high rates of or early school leavers). Disadvantaged parents' negative experiences of the education system can make them hesitant to engage with their children's school and therefore amplify existing problems leading to school disadvantages (lack of books in the house, poor linguistic skills, poor nutrition, family-related problems). The programme aims to recover the parents' trust and establish a comfortable relationship between them and the school. Each targeted school has a home-school coordinator who acts as a mediator and contact person. The coordinator regularly visits homes and intervenes in crisis situations, after absences from school or in cases of disruptive behaviour. Parents are involved in the educational project. Their belonging to the school is recognised, for example by having a room for parents with kitchen facilities. They are also offered adult education courses. Once a week, over a period of six weeks, parents come to school and give classes (mathematics and reading) to primary school children divided into small groups. This has a large number of benefits, as parents are trained to help children and it becomes easier for them to do it at home. They also acquire an understanding of the work of teachers and build a better relationship of trust and knowledge with the school. The most important changes that emerged from the evaluation of the programme included an attitude change by the school towards parents, greater parent participation, school development and more effective integration of the school into the community.

https://www.citizensinformation.ie/en/education/primary_and_post_primary_education/attendance_and_discipline_in_schools/home_school_liaison.html; https://www.tusla.ie/services/educational-welfare-services/hscl/

7.1. INCREASE PARENTAL INVOLVEMENT AT SCHOOL

Having a solid and secure attachment to a caring adult is crucial to the development of social skills and resilience. The chronic stress caused by poverty may affect parenting skills. In turn, disengaged parenting impairs self-esteem and school performance, with long-term consequences for children who grow up in poverty.

Research on the factors behind the high achievement of low socio-economic status students[147] points to the importance of parental engagement in education. High achievement in spite of poverty was possible when parents provided educational material, supported structured reading and study time, limited television viewing and emphasised the importance of education. Implicitly, the research shows that many of the factors of poverty that negatively affect school performance may be counterbalanced by developing closer ties between the school and the family.

147 Milne, A., Plourde, L., 'Factors of a Low-SES Household: What Aids Academic Achievement?', *Journal of Instructional Psychology*, Vol. 33, No 3, September 2006, pp. 183-193.

Box 21

The oldest and most established of such programmes is probably the US Big Brothers Big Sisters programme, which was eventually replicated in locations worldwide (Big Brothers Big Sisters International). In Europe, established examples of such programmes often aim at the inclusion of young people with migration or minority backgrounds (for example, the Roma mentor programme, projects coordinated in Spain by Mentoria Social).

Box 22

A recent study in Germany (Resnjanskij et al., 2021) examined a nationwide mentoring programme aiming at improving the labour-market prospects of school-attending adolescents from disadvantaged families by offering them a university-student mentor. The programme is based on regular mentor-mentee meetings that focus on developing the adolescents' individual potential through career orientation, assistance with school requirements and leisure activities. It is organised as a social franchise with a centralised concept and support structure and is implemented in 42 self-governing locations around Germany. It has grown from one to more than 40 locations within just ten years. The study was based on a randomised controlled trial (RCT) among 308 adolescents in ten city locations. All participants were surveyed before the start of the programme and 98.7% were contacted one year later. It investigated the programme effectiveness on outcomes related to maths marks, patience/social skills and labour-market orientation. After just one year, adolescents with a low socio-economic status who went through the one-to-one mentoring process saw significant increases in each outcome. Interestingly, adolescents with a more favourable family environment, even if disadvantaged in other regards, did not substantially benefit from the programme. This evaluation shows that the mentors were able to fill a role of attachment figures and provide important guidance for the disadvantaged young people's future that would otherwise be lacking. The study provides evidence that mentoring can be a viable and a highly cost-effective way to raise the prospects of disadvantaged children in difficult family environments even at adolescent age.

Resnjanskij, S., Ruhose, J., Wiederhold, S. / Woessmann, L."Can Mentoring Alleviate Family Disadvantage in Adolescence? A Field Experiment to Improve Labor-Market Prospect", CESifo Working Paper No. 8870, 2021

7.2. DEVELOP AND SUPPORT MENTORING PROGRAMMES

Sometimes parents cannot provide the secure and attached relationship that children need in order to thrive. Research on the experience of resilient children, who thrived in spite of extreme difficulties, shows the invaluable importance of having support from at least one meaningful person. It could be a relative, a teacher, a mentor or a friend. Youth mentoring programmes may achieve this. **Mentors may effectively act as role models.** They can affect the way young people view themselves and the world around them. As a symbol of special achievement, a role model shows younger people that they can accomplish their goals. This is why it may be important to have **mentors with the same background** (in terms of ethnicity, gender) as the person being mentored.

A wide range of such programmes exist throughout the world, aimed at improving the opportunities of young people with a disadvantaged background.

Box 23

For instance, in Hungary the network of Tanoda centres consists of centres operated by local NGOs in disadvantaged areas (supported by the Roma Education Fund and national and EU funding). They are places where children and adolescents may spend time after school, and they receive both educational support (help with homework) and opportunities to engage in arts and sports activities. Evaluations show that participants highly value the empathetic atmosphere and emotional security, which enhances the motivation to learn and become self-regulated learners. Often, the centres also provide support to parents such as training and counselling. The initiative shows a significant impact on behaviour, social skills and motivation, and some (although less substantial) impact on academic performance. In terms of cost-benefit analysis, evaluations assess the initiative as an extraordinary success.

https://www.kuntaliitto.fi/sites/default/files/media/file/Hungary%20Tanoda.pdf

Box 24

In Italy, Save the Children created a network of centres (Punti Luce; 'points of light', under the motto 'let's light up the future') in some highly disadvantaged neighbourhoods. They are described as 'high educational intensity' youth centres. Children receive support with homework and counselling as needed and participate in quality arts and sports activities; the centres also provide counselling on legal, psychological or job-related issues to parents. Children receive a monetary 'endowment' allowing them to take part in external activities or to buy equipment (musical instruments, etc.) that may support their development. The use of the monetary endowment is planned with the children, families and the school, on the basis of a shared evaluation of needs. Evaluations of the initiative show an important positive impact on socio-emotional skills and on resilience, and a sizeable impact on motivation and aspirations – especially for younger children. The impact on school achievement was positive but more modest .

('Qui nessuno ci giudica', evaluation commissioned by Save the Children Italy)

Substantial research has looked into the impact of such programmes. Results vary significantly depending on the structure, clear aims and longevity of the mentoring. Such evaluations have also allowed for the specification of criteria for good quality mentoring programmes[148] – among them, the **creation of a long-term and stable relationship appears as a key factor.**

All in all, mentoring has significant positive effects on reducing absenteeism and improving behavioural problems (including the likelihood of substance abuse)[149]. Mentoring also has significant effects on the likelihood of enrolling in higher education for young people with a low socio-economic status[150]. Importantly, according to some research[151], a strong and consistent benefit of mentoring is a reduction in depressive symptoms[152].

148 See the European Center for Evidence-Based Mentoring, https://www.ecebmentoring.eu/pageid=3431/Global_.html.

149 Kennely and Moran, *Public/Private Ventures Study of Big Brothers Big Sisters*, 2007.

150 *The Mentoring Effect,* 2014, https://www.mentoring.org/resource/the-mentoring-effect/.

151 Herrera, C., DuBois, D. L., Grossman, J., *The Role of Risk – Mentoring Experiences and Outcomes for Youth with Varying Risk Profiles*, 2013.

152 www.mentoring.org.

7.3. HAVE A GOOD, SAFE PLACE TO GO

While school is essential to personal development, the issues raised by multigenerational poverty and illustrated in Chapter 4 point to the relevance of having broader support in the time after school, at weekends and during holidays. Evidence points to the **many benefits of well-designed out-of-school support in safe places**, where young people can drop in during the afternoon or during holidays and engage in arts and sports or receive psychological and academic support.

A meta-analysis in the UK looked at eight models of out-of-school support for young people based on arts and sports and found promising evidence that such interventions increase young people's self-confidence, self-efficacy and emotional regulation[153].

153 Clarke, A., Morreale, S, Field, C. A., Hussein, Y. & Barry, M., 'What works in enhancing social and emotional skills development during childhood and adolescence? A review of the evidence on the effectiveness of school-based and out-of-school programmes in the UK', 2015.

8. SUPPORTING THE ASPIRATION-CREATION PROCESS FOR CHILDREN AND ADULTS

Aspirations and a 'growth mindset' can be taught to students as well as parents and teachers who will then be better placed to support them.

Schools and support organisations can develop and nurture a culture of high expectations and make sure that negative stereotypes among their staff are countered.

Media can be used as a powerful tool to expose young people to new role models and to influence their values and behaviour towards having higher expectations and learning about realistic ways of achieving them.

As outlined in Section I, life in poverty may breed a sense of hopelessness. It is not an intrinsic or genetic feature, but a natural adaptive response to life conditions[154]. To contrast this, hope is an absolute necessity for people in poverty. As Martin Seligman (2000) puts it, hopefulness can be taught.

Developing a 'growth mindset' is essential to supporting improvement. It is about believing that change and success are possible – thus raising self-esteem and aspirations.

Well-designed interventions to raise the educational (and occupational) ambitions of disadvantaged children and/or their parents can induce positive changes in their school achievements, which then positively reinforce their ambitions. A growth mindset and high expectations can be supported by continuous help and encouragement from teachers and mentors.

154 Peterson, C., Maier, S. F. and Seligman, M. E. P., *Learned Helplessness – A Theory for the Age of Personal Control* –, 1995.

8.1. SUPPORT A GROWTH MINDSET AMONG CHILDREN AND ADULTS

Research shows that a growth mindset (the belief that intelligence is not fixed and can be developed) is a key factor of positive change, and it reliably predicts school achievement[155]. As outined in Chapter 3, PISA data show that in students who exhibited a growth mindset reported less fear of failure than students with a fixed mindset. Thus, a growth mindset is closely linked to self-esteem. Students' confidence in their abilities and their fear of failure affect their performance and their well-being.

At the same time, evidence (as already shown in Chapter 3) indicates that a growth mindset is less diffused among students from lower-income families.

Among low-income students, however, those who do hold a growth mindset are appreciably buffered against the deleterious effects of poverty on achievement[156].

Therefore, finding ways to support the development of a growth mindset may be essential to improving outcomes, aspirations and self-esteem for people in poverty.

Importantly, research has demonstrated that supporting the development of such growth mindset is feasible, and may also be surprisingly easy. A number of field experiments have shown how this may be done through interventions in education, and how mindset interventions may have a direct and rather dramatic impact on raising achievement for students facing greater adversity and impacted by stereotype threats.[157]

Notably, a large field experiment, conducted by David Paunesku et al,[158] consisted in delivering brief growth-mind-set and sense-of-purpose interventions through computer-based modules to almost 1600 students in 13 geographically diverse high schools in the US.

The intervention consisted of two 45 minutes computer-based modules, administered at a distance of two weeks, The aim was to verify the practical usefulness of introducing scalable techniques such as online short modules. These techniques, unlike those of previous experiments, had not been tailored to specific contexts and did not require extensive training of participating staff.

The interventions target students' core beliefs about school and learning, such as "Can I learn and grow my intelligence? they interventions convey the message that intelli- gence can grow when students work hard on challenging tasks—and thus that struggle is an opportunity for growth, not a sign that a student is incapable of learning

Students read an article describing the brain's ability to grow and reorganize itself as a consequence of hard work and good strategies on challenging tasks. The article focused on the implications of neuroscience findings for students' potential to become more intelligent through study and practice. In keeping with our focus on underperforming students, the article stressed the fact that struggle and setbacks in school do not indicate limited potential; rather, they provide opportunities to learn. This message was reinforced through two writing exercises (). In one, students summarized the scientific findings in their own words.

In the second, they read about a hypothetical student who was becoming discouraged and beginning to think of himself as not smart enough to do well in school. Participating students were asked to use what they had read to advise this student. In the control condition, students read and completed similar-seeming materials; however, these materials focused on functional localization in the brain, not neural plasticity. They thus lacked the key psychological message that intelligence is malleable.

155 Claro, S., Paunesku, D. and Dweck, C. S., 'Growth mindset tempers the effects of poverty on academic achievement', PNAS, Vol.113(31), 2 August 2016, pp. 8664-8668; first published 18 July 2016, https://doi.org/10.1073/pnas.1608207113.

156 idem.

157 Aronson, J., Fried, C. B., Good, C., 'Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence', *J. Exp. Soc. Psychol.*, Vol. 38(2), 2002, pp. 113-125; Good., C., Aronson, J., Inzlicht, M., 'Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat', *J. Appl. Dev. Psychol.*, Vol. 24(6), 2003, pp. 645-662Yeager, D. S. et al., 'Using design thinking to make psychological interventions ready for scaling: The case of the growth mindset during the transition to high school', *J. Educ. Psychol.*, Vol. 108(3), 2016, pp. 374-391.

158 Paunesku, D. et al., 'Mind-set interventions are a scalable treatment for academic underachievement',*Psychol. Sci.*, Vol. 26(6), 2015, pp. 784-793;

Among students at risk of dropping out of high school (one third of the sample), each intervention raised students' semester grade point averages in core academic courses, and increased the rate at which students performed satisfactorily in core courses by 6.4 percentage points. Crucially, these effects were obtained across a sample of heterogeneous schools and in response to interventions that could be scaled to virtually unlimited numbers of students at low marginal cost.

There are several ways in which a growth mindset can be instilled in students[159]. Other successful interventions include encouraging students to explain the growth mindset to other students; instilling a growth mindset amongst parents and teachers; offering a single online session about the growth mindset; and playing with a social robot that displays growth mindset beliefs. Additionally, disadvantaged students improved their marks after being regularly tasked to write essays about their most important value and therefore increasing their sense of self-worth. For instance, a programme run by a private non-profit in Portuguese schools consisted of several sessions held in small groups or one-to-one, where selected low-achieving students received tutoring in non-cognitive skills (e.g. self-esteem, motivation) and were taught a method for studying. The programme evaluation indicates that it reduced the repetition of school years and dropouts, although improvements in performance for subjects that were particularly intensive on cognitive skills (such as maths) were modest[160].

8.2. EQUIP STAFF WITH A GROWTH MINDSET AND STIMULATE HIGH EXPECTATIONS

As outlined in the previous paragraph, to help students or programme participants develop a growth mindset, it is crucial that the system and the professionals who work with people in poverty (either teachers or coaches) have such a mindset. They have to believe in the possibility of success, not assuming that people in poverty are doomed to fail. In fact, studies show that **having mentors or teachers with high expectations can become a life-changing boost to future success**. The problem is that previous experiences of failure may make it hard for them to sustain this belief. Teachers and mentors must therefore be shown the evidence that success is possible and be trained on ways to teach hopefulness.

Several techniques to increase teachers' expectations are listed by Robert T. Tauber[161], gathered from a broad set of research on the topic. **Making teachers aware of the impact of expectations as a 'self-fulfilling prophecy'** is the starting point for change.

Box 25

A study supported by randomised control trials showed the impact of training teachers in raising expectations. Teachers in the intervention group attended four workshops on instructional strategies and the practices of high-expectation teachers. At each workshop, the intervention group planned practices to introduce to their classrooms modelled on the behaviours of high-expectation teachers. The study showed that students in the classes of the intervention group teachers significantly improved their mathematics achievement over one year, showing a rate of improvement beyond that shown by the students of the control group teachers. In addition, teachers reported high levels of satisfaction with their new practices.

Rubie-Davies, C. M., Peterson, E. R., Sibley, C. G. & Rosenthal, R., 'A teacher expectation intervention: Modelling the practices of high expectation teachers', *Contemporary Educational Psychology*, Vol. 3(3), 2014, pp. 361-476.

159 Schleicher, A., *PISA 2018 – Insights and interpretations*.

160 Martins, P. S., 'Can Targeted, Non-Cognitive Skills Programs Improve Achievement? Evidence from EPIS', *IZA Discussion Paper Series*, 2010, p. 40. - cit by La Ferrara

161 Tauber, R., *Self-fulfilling prophecy – A Practical Guide to its Use in Education*, New York, Praeger, 1997.

Evidence[162] also suggests that in order to build staff with high expectations, it may be good to **hire diverse staff who represent the participants they will be serving** – both because they are more likely to hold high expectations for people like them, and also because their participants are more likely to positively respond to their mentorship. For example, studies show that black teachers have higher expectations of black students than white teachers. Furthermore, the outcomes of black students are more highly influenced by these expectations than their white peers, with the most significant impacts occurring for the lowest performing students.

As E. Babcock points out, creating and then maintaining an organisational culture of high expectations starts with an organisational environment that fights against prevailing stereotypes and low expectations – in other words, an environment that forcefully counters what staff and participants typically hear about their low chances of success. To support this, it is essential to consistently celebrate successes achieved by staff and participants, even if they are small.

The organisation also needs to provide a solid narrative on participant success. For example, it is useful to have statements on posters and in reports that underline success stories, if possible, with clear facts and figures[163]. Wall art that depicts successful people who resemble the programme's participants can trigger higher expectations and hope in people enrolling on the programme. Such messages are more powerful and effective when they refer to people with whom participants feel a similarity, and who attain goals they want to achieve. For example, one study of adolescents showed that when students heard messages by the former First Lady Michelle Obama about growth mindset, their outcomes were better than when the same message was delivered without her.

Box 26

Some programmes have done so by putting parents in contact with educated professionals. A Mexican anti-poverty programme, for example, targets poor parents and aims at increasing the educational aspirations they have for their young children. Different groups of programme beneficiaries are exposed to educated professionals (nurses and doctors) on a range of occasions. Parents who had the highest exposure had almost half a year's higher school-attendance aspirations for their children six months after the intervention than parents with lower levels of exposure. Frequent visits to healthcare professionals can potentially have such effects as they can broaden the perspectives of the parents and can also generate an information flow regarding possible opportunities for the children not otherwise available to these parents.

Chiapa, C., Garrido, J. L. and Prina, S., 'The Effect of Social Programs and Exposure to Professionals on the Educational Aspirations of the Poor', *Economics of Education Review*, Vol. 31, No 5, October 2012, pp. 778-98. https://doi.org/10.1016/j.econedurev.2012.05.006.

162 Babcock, E., 'Harnessing the power of high expectations', 2018.

163 E. Babcock.

Box 27

A field-experiment in rural Madagascar tested the impact of (1) the provision of statistical information on the return to schooling and (2) presenting positive role models to parents. The aim was to strengthen the incentives for schooling among poor children in the area. The intervention thus assumed the existence of an information gap between the perceived return to schooling and reality, and that narrowing this gap could make parents choose higher education for their children. Aspirations or expectations only played an implicit role in this case, remaining an underlying factor behind a parents' decision on whether or not to send their children to school. Findings from the experiment were particularly positive when statistical information was offered: this treatment led to both improved test scores and reduced retention rates among students, showing that poor households 'lack information, but are able to process new information and change their decisions in a sophisticated manner'.

Nguyen, T., 'Information, Role Models and Perceived Returns to Education: Experimental Evidence from Madagascar', 2008, p. 51.

Box 28

Goux et al. (2017) evaluated a programme in France that targeted low-achieving students in lower secondary school to help them with upper secondary school track choices. Parents were invited by school headteachers to attend collective meetings in which each student's aspirations were discussed and compared with realistic options given their performance. The evaluation, based on randomised controlled trials, found that this induced students to shift their application in a way that was better suited to their aptitudes, thus reducing the repetition of school years and dropouts by 25% to 40%.

8.3. SUPPORT PARENTS' ASPIRATIONS FOR THEIR CHILDREN

As outlined in Chapter 3.2, parents' expectations of their children's success are important drivers in the status attainment process because there is mutual reinforcement between parents' and children's expectations. The problem is that parents with a low socio-economic status also tend to have low ambitions. Specific policies aiming to raise parental and young people's educational expectations are therefore particularly relevant[164].

Several programmes aimed at supporting the aspirations of parents have been subjected to a systematic evaluation (based on experimental or quasi-experimental evidence), making it possible to identify their actual impact. In general, such evaluations confirm that it is indeed possible to raise the aspirations of both poor children and their parents.

Providing parents with better information can also have a substantial impact..

164 Goodman and Gregg, 'Poorer Children's Educational Attainment: How Important Are Attitudes and Behaviour?', John Rowntree Foundation, 2010, p. 35.

Box 29

In urban Tanzania, an experiment aimed to raise the aspirations of secondary school students. An educational entertainment TV show portrayed the lives of six young entrepreneurs. Two years after the intervention, students exposed to the show had a 30 per cent higher probability of starting a business compared to the control group. However, the programme had the unintended consequence of worsening student academic performance in secondary school and their likelihood of continuing with post-secondary education, possibly due to the emphasis on work and the lack of focus on the role of education. This result suggests the importance of tailoring the message that role models convey to the characteristics of the target audience.

Bjorvatn, K., Cappelen, A., Helgesson Sekeiz, L., Sørensen, E.,Tungodden, B., 'Teaching Through Television: Experimental Evidence on Entrepreneurship Education in Tanzania', *Working paper*, NHH Norwegian School of Economics, Bergen, Norway, 2015.

8.4. ROLE MODELS THROUGH THE MEDIA

In addition to the influence of real people familiar to a person, the media (documentaries or soap operas) also have an influence in shaping choices and aspirations[165]. Evidence shows that exposure to alternative life outcomes and social patterns of fictional characters can inspire individuals to consider these personas as new role models.

As illustrated by Melissa Kearney and Phillip Levine[166], well-designed programmes involving role models, mentors and the media can be deployed deliberately, effectively and often inexpensively to improve children's social and economic outcomes. Young children from low-income families spend considerably more time exposed to media and considerably less time in school, as compared to higher-income children, and the two groups encounter very different role models in their neighbourhoods. This makes **media content particularly important as a means of developing preferences and aspirations.** Scholars in the field of communication have speculated that entertainment education may offer a more effective way to influence attitudes and behaviour than traditional messages.

One obvious way that entertainment media are used for educational purposes comes in the form of educational children's programming. Another example comes in the form of educational or pro-social messaging embedded in an entertainment narrative. For example, when Rachel and Ross's unplanned pregnancy was revealed in a 2001 episode of the NBC sitcom Friends, the efficacy of condoms was discussed.

Media exposure does not just impart information to viewers – it can also change individual attitudes and preferences. It can do so by either glamorising or, alternatively, vilifying or mocking an activity, or by associating an activity with an admired or maligned media character. For instance, seeing 'cool' characters work hard in school might make being a serious student more acceptable to young viewers.

165 La Ferrara, E., 'Can we use television to fight poverty?', https://www.readcube.com/articles/10.1111%2Fjeea.12181.

166 *Kearney, M. S. and Levine, P. B.,* 'Role Models, Mentors, and Media Influences', 2020, https://files.eric.ed.gov/fulltext/EJ1262726.pdf.

Some examples were gathered by Eliana La Ferrara[167]. For example, a series of documentaries in rural Ethiopia presented the experiences of local men and women who had succeeded in setting up a small business. Random exposure to these videos improved the viewers' aspirations and made parents invest more into their children's education. The effects persisted five years after the end of the intervention.

As La Ferrara suggests, it would be interesting to study whether scalable and cost-effective interventions (e.g. media programmes) can combine role modelling with the portrayal of new norms that counteract stereotypes to improve people's aspirations – maybe looking in particular at the interplay between the possibilities represented by role models and the constraints imposed by societal norms.

167 La Ferrara, 'Presidential Address', cit.

9. SUPPORT THE ACHIEVEMENT OF ASPIRATIONS

- Verbalising and pursuing realistic goals with clear milestones in between can be an important motivational factor that enhances progress for children and adults alike.
- Coaching can provide the structure and support needed for successful goal setting and achievement.
- Access to information matters in achieving goals but the intensity and methodology of information provision can make a difference. There is scientific evidence that shows which ways are most effective.
- A peer group can be a crucial and cost-effective source of support and learning for people living in poverty.

The impact of poverty on executive functions means that, even when broad aspirations are present, taking actual steps to achieve them may be difficult. Some practical obstacles such as the lack of information and the need to cater for pressing daily concerns are compounded by the impact on decision-making, agency and focus stemming from the stress of poverty. This is why support measures are needed to help people identify and focus on achievable goals and follow them to achieve the desired results.

9.1. ENHANCE DECISION-MAKING BY SETTING CONCRETE AND REACHABLE GOALS

Brain science shows that a **structured goal-setting process may be effective in making the desired change happen**. To be useful, goals should be 'SMART' (Specific, Measurable, Achievable, Relevant and Time-bound). Setting goals enhances self-regulation through its effect on motivation, learning, self-efficacy (perceived capabilities for learning or performing actions at given levels) and self-evaluations of progress. Goals motivate people to exert effort necessary to meet task demands and be persist over time. Goals also direct individuals'

Box 30

In motivational interviewing, staff members encourage participants to speak freely about their situation and the things they would like to do to improve their lives – including why and how they would like to achieve these goals. Such verbalisation can become 'change talk', and there is a proven correlation between the amount of time spent on change talk and the likelihood of the participant's success. In the case of young people, the technique may enhance their ability to set clear aspirations and connect their day-to-day activities to longer-term plans. Being able to visualise aspirations and consider potential obstacles to achieving them is an effective method to enhance motivation. Evaluations have shown substantial effects, with results in health being particularly notable, but also in other sectors. For instance, a study in Romania signalled a 61 per cent reduction in truancy rates in adolescents. This is frequently used as a complement to wider programmes in support of employment, welfare-to-work initiatives, housing stabilisation, school-based parental engagement and criminal justice programmes.

Enea, V., Dafiniou, I., 'Motivational/solution-focused intervention for reducing school truancy among adolescents' *Journal of Cognitive and Behavioral Psychotherapies*, Vol. 9, No 2, September 2009, pp. 185-198.

attention to relevant task features, behaviours to be performed and potential outcomes, and goals can affect how people process information. Goals help people focus on the task, select and apply appropriate strategies and monitor goal progress[168].

The first step for goal setting may be to **verbalise desires**. Since the 1930s, behavioural research has shown that when participants spoke about their desires to overcome problems and achieve important goals in life, the act of speaking about these things increased the likelihood of achieving them. Based on these findings, in the 1980s, Michael Miller, a behavioural psychologist from the University of New Mexico, designed a specific technique aiming at a guided verbalisation of the desire to change (**'motivational interviewing**'). The aim was to train people for enhanced decision-making and self-regulation, and thereby strengthen their ability to achieve desired goals.

The technique has been widely used and evaluated. When deployed with appropriate training and fidelity, motivational interviewing has been highly effective at enhancing outcomes in many areas that require behavioural change[169]. These include the management of various medical conditions and addictive behaviours, but also the prevention of early school leavers or support for job searches.

In education, goal setting should translate into **individual education plans** consisting of clear, measurable goals as checkpoints. An individual education plan should outline student's strengths and weaknesses and should be discussed and agreed with students, parents, the most involved teachers and other actors such as school counsellors. They may be underpinned by a variety of data, establishing agreed benchmarks[170].

In the case of adults**, structured coaching may support and be supported by goal setting.**

168 Schunk, D., 'Regulation through Goal Setting', *ERIC/CASS Digest*, 2001.

169 Rubak, S., Sandbaek, A., Lauritzen, T., Christensen, B., 'Motivational interviewing: a systematic review and meta-analysis', *Br J Gen Pract*, Vol. 55(513), 2005, pp. 305-312.

170 Eric Jensen.

Box 31

A well-known example of coaching in support of adults in poverty is EMPath Mobility Mentoring. The programme supports participants in improving problem-solving and goal attainment across the whole range of domains necessary to complete the pathway out of poverty. Participants are expected to work with a mentor to self-assess where they stand on their path to self-sufficiency. Coaching covers a whole range of areas critical to long-term economic success, including family stability, health, financial management, education and employment. Such areas are clearly defined in a scheme, which helps participants identify their own situation and the steps that are required to improve it. By practising and taking consistent actions over time, participants may achieve better clarity on how their decisions interconnect and prioritise longer-term needs over short-term ones.

The coaching model proposed by EMPath takes into account findings from brain science on how poverty affects behaviour and decision-making. Rather than simply directing participants on where to go, coaches help participants make their own decisions and set their own goals. In doing so, coaches assist participants in securing necessary services. Moreover, participants strengthen the decision-making and self-regulation skills that poverty, trauma and stress so seriously strain, yet that are so critical to getting out of poverty.

The programme helped 92 per cent of participants, who were previously living in shelters, to obtain stable permanent housing. At the end of the programme, 80 per cent of active participants had a bank account (as opposed to 69 per cent measured in the overall population at comparable income levels); and as an average, the income of participants almost doubled since the start of the programme.

[1] https://www.empathways.org/approach/mobility-mentoring.

9.2. PROVIDE EFFECTIVE CAREER AND EDUCATION COUNSELLING

Information and counselling may provide a useful support for decisions on careers and education choices, when it comes to supporting aspirations and chances for students from low sSES to enter tehriary education. In certain cases, the simple provision of information may help to promote ambitions of high-achieving but low-aspiring students. This may concern information on available courses, or on the costs and benefits of entering higher education, as well as available financing options[171]. Low-income students are generally more concerned about the costs of entering higher education[172]. Therefore, accessing clear information about the costs and returns from attaining a university degree can be of particular importance for students with fewer financial resources.

There is some (albeit inconclusive) evidence that **carefully designed information provisions may help young people adapt their decisions on higher education to their capacities,** rather than to their socio-economic status, and boost university attendance for low-status students. European examples on the provision of information show some promising results.

The examples show that the intensity and methodology of providing information and counselling (personal and long-term counselling versus the simple provision of information) can make a substantial difference. Results in terms of actual enrolment may be stronger when the provision of information is enhanced by intensive education counselling. They also show that, inevitably, outcomes in terms of actual enrolment depend on existing opportunities and costs of access.

Similar tentative results were found in relation to the transition from education to work and on job-search counselling programmes.

171 Ehlert, M. et al., 'Applying to College: Do Information Deficits Lower the Likelihood of College-Eligible Students from Less-Privileged Families to Pursue Their College Intentions?', *Social Science Research,* Vol. 67, September 2017, p. 193-212, https://doi.org/10.1016/j.ssresearch.2017.04.005; Wiswall, M. and Zafar, B., 'How Do College Students Respond to Public Information about Earnings?', *Journal of Human Capital,* Vol. 9, No 2, June 2015, pp. 117-69, https://doi.org/10.1086/681542.

172 Ehlert et al., 'Applying to College: Do Information Deficits Lower the Likelihood of College-Eligible Students from Less-Privileged Families to Pursue Their College Intentions?', *Social Science Research,* Vol. 67, September 2017, p. 193-212, https://doi.org/10.1016/j.ssresearch.2017.04.005.

Box 32

In Berlin, students were given a 25-minute presentation by a trained researcher the year before graduating from secondary school. Content included statistics on earnings and the unemployment risks of university graduates, as well as a discussion on different fields of studies and funding opportunities. After the information session, students whose parents did not have a higher education degree increased their intentions to enter college and this increased level was even maintained one year after the intervention. The change was the most notable among low socio-economic background students that were already considering entering higher education . The study, however, does not provide evidence on whether these increased aspirations were later also translated into actions.

Peter, F. H. and Zambre, V., 'Intended College Enrollment and Educational Inequality: Do Students Lack Information?', *Economics of Education Review*, Vol. 60, October 2017, pp. 125-41, https://doi.org/10.1016/j.econedurev.2017.08.002.

Box 33

A major Italian experiment offered three particularly comprehensive counselling sessions, of altogether five hours, to selected students in the final year of upper secondary education. Topics included the costs and benefits of entering university – with a focus on the return per field of study and degree. It also included information on vocational higher education. Such a provision of information about costs and benefits led to a more efficient - but not a more equal – selection of educational pathways. On average, students moved away from the university courses that offered a lower return and towards higher-return post-secondary vocational programmes. From an economic point of view, the initiative led to a more efficient distribution of preferences. However, it was primarily the students from less-educated families who moved from the university fields into vocational programmes. The more privileged students reacted instead by moving from the less towards the more rewarding university fields. Therefore, findings suggest that better information might lead to better decisions, but not necessarily to more equal access to university.

Abbiati, G. et al., 2017; Barone, C. et al., 2017.

Box 34

Another Italian programme worked with immigrant children to improve their performance and motivation to enrol in academically-oriented secondary schools. A large-scale, randomised intervention provided tutoring and career counselling to high-ability immigrant students. Treated male students increased their probability of enrolling onto the high track at the same level of natives, also closing the gap in terms of retaining marks. The elements that were most conducive to the change were increased motivation and changes in the guidance given by teachers.

Carlana, M., La Ferrara, E. and Pinotti, P., 'Goals and Gaps: Educational Careers of Immigrant Children', *HKS Working Paper Series*, 2018, p. 60

Box 35

A randomized evaluation tested the effectiveness of a job-search assistance program implemented in 28 French universities. The program targeted youth with weaker academic records, with a majority of participants having dropped out of university. Researchers randomly assigned participants to receive different combinations of job counseling geared towards sectors facing recruitment difficulties, as well as professional mentorship, and job-search contracts. After nine months, intensive counseling and additional services increased the number of job interviews by 16 percent. These services were particularly effective when participants were encouraged to look for work in sectors experiencing recruitment difficulties, and when job counseling required them to sign a contract. The combination of the three services also increased the likelihood of finding work and had a positive psychological impact on participants, while mentorships alone did not.

Cahuc, R., Crépon, B., Fremigacci, F. and Zamora P. 2012 Professional Advising, Job Search Support and Apprenticeships for University Drop-Outs in France (AFIJ), retrievable at https://www.povertyactionlab.org

A broader topic concerns the provision of in-depth guidance and counselling as a continuously accessible service for all, overcoming the distinction between educational, vocational and personal guidance. At EU level, since 2000 [173] substantial analyses have been dedicated to how to ensure that guidance is provided with a demand-side approach, putting users' needs and demands as the central concern. Some quality criteria include the accessibility of services, their capacity to work in networks by pooling jobs, social and educational services and working in a multidisciplinary way – the way they guarantee transparency and impartiality and respect and monitor delivery standards.

9.3. ENABLE PEER-GROUP SUPPORT

Chapter 3 discussed how peer pressure and the social network may play against social mobility. In some cases, breaking away from a negative social network may be a *sine qua non* condition for personal development. But often, simply **being exposed to somebody from the community who succeeded can change what people imagine for their future**. As Ray (2003) puts it, groups are repositories of information, which they can credibly share with and transmit to every member of the group. For example, if group members are saving (or are making a commitment to save), the information can be conveyed – with good effect – to other group members. The **experience of peers is fundamental guidance in deciding what is feasible and worthy of effort and investment**. Additionally, according to Ray, groups are 'coordination devices', as aspirations align with those of the majority of the group. For instance, if my neighbours are known to save on a regular basis, it will spur my desire to save. This is the reason why, for example, savings groups have proven very effective in developing countries.

Along the same lines, several programmes have integrated **peer-group support** into a broader set of measures to support people in poverty. The idea behind peer support is that people who have faced, endured and overcome adversity can offer useful support, encouragement, hope and perhaps mentorship to others facing similar situations. Shared experience, which can often be negative or challenging for the individual, is the connecting point. Peer support can inspire others, give them hope through self-disclosure and by being an example of recovery.

173 Communication from the Commission – Making a European area of lifelong learning a reality, COM(2001) 678; see also a recent analysis on policies and practices, Lifelong guidance policy and practice in the EU, April 2020, https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8284&furtherPubs=yes.

Box 36

For example, the MIRIAM project, set up in 2015 by the Belgian Federal Public Service Social Security in a number of Public Social Welfare Centres to support single mothers in poverty. In addition to individual support measures, the promoters found that collective/group-level support was found effective in helping single mothers overcome their isolation through the sharing of experiences with others who faced similar problems and found support within the group.

Peer Review in Social Inclusion and Social Protection, 2017, https://ec.europa.eu/social/main.jsp?catId=1024&langId=en&newsId=9005&furtherNews=yes.

Peer support has been widely used in the health field. It has also been found to increase participants' sense of hope and control and their ability to effect changes in their lives, to increase their self-care, their sense of belonging in the community and satisfaction with various aspects of their life and to reduce recipients' levels of depression.

In the fight against homelessness, an increasing number of services are developing peer support and peer worker roles[174]. A paper by the European Federation of National Organisations working with the Homeless (FEANTSA) reviews examples of practices and proposes guidelines for the effective implementation of peer support groups.

174 Peer support: a tool for recovery in homelessness services, https://www.feantsa.org/download/peer_support_policy_paper2951723577548485776.pdf.

10. AN ENABLING FRAMEWORK

Many programmes demonstrate that addressing the needs of children and parents living in poverty in a comprehensive way make interventions more effective.

Taking into account findings about how poverty shapes mindsets when designing programmes and interventions can result in stronger results. Even relatively small adjustments in terms of timing or setting expectations of the beneficiaries can make a difference.

Long-term perspectives and monitoring progress are key to demonstrating results and motivating all actors involved in programmes and policy design.

This chapter looks at some meta-conditions that enable the effectiveness of interventions. First of all, and very importantly, there is the need to ensure a comprehensive and tailor-made approach that addresses the needs of parents and children simultaneously. This is crucial to addressing the mechanisms illustrated in Section I, which show how the impact of poverty is easily transmitted across generations. The chapter also looks at some lessons from behavioural insights that may increase the effectiveness of services, and at the need to ensure proper data collection as a precondition to be able to assess if the interventions are working or not.

10.1. ADDRESS THE NEEDS OF BOTH PARENTS AND CHILDREN

Breaking the intergenerational transmission of disadvantages requires helping parents so that they may help their children[175]. Firstly, supporting the resilience of the child means **strengthening the entire family** so that parents are enabled to give children the support and protection they need. Parent's ability to meet their life goals is strictly intertwined with the well-being of their children. If the parents manage to address the challenges linked to poverty, this may trickle down to a positive sense of self and, hence, better family relationships. In turn, this will likely benefit their children too.

The most effective approach may therefore consist of integrated strategies, **looking simultaneously at the needs of children and parents** through a 360-degree support system. This requires the close alliance of a wide range of actors and agencies (in education, health, social and community services), and the development of individualised plans addressing the specific needs of the members of the family.

Another remarkable example of this approach (more specifically addressing very vulnerable families) is

175 As outlined in the Commission Recommendation of 20 February 2013 – Investing in children: breaking the cycle of disadvantage (2013/112/EU).

Box 37

An example of such an approach is the UK Sure Start programme, targeting parents and children under the age of four who live in the most disadvantaged areas. It is a nationwide programme, initiated in the 1990s, and based on local centres that network and integrate existing services. These include a range of core services including home visits; support for families and parents; play, learning and childcare; primary and community healthcare; and advice about family health and child development. They may also provide extra services such as skills training for parents, personal development courses and practical advice and support such as debt counselling and language or literacy training. The ultimate aim is to support children's learning skills, health and well-being and social and emotional development. While a systematic counterfactual evaluation had not been included in its initial design, reviews showed that it was effective in increasing positive child behaviours and improving parent-child interaction. It also demonstrated positive effects on children's health and on the atmosphere and well-being in families (more stimulating and less chaotic home environments, less harsh discipline and greater life-satisfaction). However, funding for the programme has been subject to substantial cuts in recent years.

Sure Start – UK Department of Education (education-ni.gov.uk).

Box 38

The PIPPI programme is aimed at fostering positive parenting and the full, well-rounded development of the child. It is based on a comprehensive assessment, looking at the needs but also at the strengths of the family and of the community, which can be important resources to build upon. Notably, all people who are important to the child's development (parents, teachers, practitioners, other relatives, etc.) are expected to work together to foster their development. This focuses on three aspects that may be crucial to improving the parental functions: helping parents to reflect on the situation; providing emotional support to children; improving the organisation of children's lives.

The programme provides a range of support activities for home-care intervention as part of a shared care plan developed jointly with parents and children. Practitioners meet with the families approximately twice a week for a minimum of four hours a week. The aim is to support parenting capacities and parent-child relationships (e.g. in terms of health, education, care, emotional and cognitive development, etc.). Regular meetings involving parents in group activities with other parents are also offered. Parent group activities foster reflective practice and encourage exchange and interaction in relation to the parent-child relationship (emotional warmth, guidance, boundaries, etc.); they improve parental skills such as decision-making and problem-solving and organising daily life. Family helpers offer support in concrete aspects of daily life (learning to use social resources, family support organisations and problem-solving in daily life, encouraging enjoyable activities with children, etc.). Cooperation between schools/families and social services is also an important aspect of the programme. The child's school (kindergarten, nursery or primary school) is invited to be a full member of the multidisciplinary team working with the family and to be responsible for its own intervention. Teachers, other professionals and the families outline actions (both individualised and involving the entire class) that will favour a positive school environment where children can learn social and emotional competencies. Since its start in 2011, the programme has been continuously monitored through counterfactual methodologies. It proved highly successful in preventing the removal of children from their birth families and in improving family situations.

Milani, P., et al. (2020). P.I.P.P.I. Programma di Intervento Per la Prevenzione dell'Istituzionalizzazione. Rapporto di valutazione: Sintesi 2018-20,.

the Italian PIPPI framework. It is an intensive-care-programme for families whose children are at risk of being institutionalised because of neglect. Its name (an acronym for Programme of Intervention for Prevention of Institutionalisation) is inspired by the fictional character Pippi Longstocking as a symbol of child resilience[176].

10.2. DESIGN SERVICES TO COMPENSATE FOR REDUCED COGNITIVE BANDWIDTH

Expecting programme beneficiaries to change their behaviours shaped by scarcity and to make no mistakes is likely to result in disappointment. When designing a programme, it is essential to take into consideration that scarcity may deeply affect cognitive bandwidth, and to address that with countermeasures.

The insights on scarcity may explain, for example, why policies such as cutting off access to benefits after a fixed number of years won't motivate people to find jobs – a deadline of several years is too distant to feature in the calculations of people only concerned with paying the next bill. Additionally, well-intended interventions, such as financial education or job-readiness training, could backfire when perceived as yet another class to attend, yet another item to tick off the to-do list.

Taking scarcity into consideration may mean **targeting interventions so that they arrive at times when the recipients are likely to be least constrained by the scarcity mindset** and most open to listening and absorbing. Research[177] shows that introducing **simple nudges** may lead to beneficial behaviours and small adaptations can complement or improve the efficiency of measures[178]. For example, behaviours that require constant, energy-depleting vigilance (like trying to resist non-essential spending) should be replaced by one-off actions (like automatically transferring a percentage of your wages to a savings account). Processes can be automated through default settings. The systems can be designed so that inattentiveness leads to better outcomes, for example, by making savings schemes opt-out, not opt-in.

Taking into account participants' reduced bandwidth, **programmes should incorporate prompts and reminders** – for example, by introducing deadlines that frame a future action as important and urgent and discourage the tendency to prioritise today's needs over tomorrow's needs (e.g. 'All you need to do is come to the office by 29 March'). Messages should be simple, also by using techniques such as colour coding (e.g. via a tip sheet, 'For these forms you need to have: 1. a signature in every place that asks for it; 2. a date next to every signature'). Prompts can be used to encourage the completion of an action, often in the form of a text message or a postcard (e.g. 'Your payment is due in three days; pay on time to avoid penalties'). Some adaptations of the physical environment can also be useful for the same purpose – for instance, making sure that signage and other aspects of logistical design are easily understood.

Behavioural insights can be used to improve participant outcomes through social influence. Participants may be encouraged by references to the positive outcomes of their peers. Additionally, loss aversion can be used as a trigger for beneficial outcomes by using incentives and language that capitalise on people's natural preference to avoid losses over acquiring gains (e.g. 'By not attending your appointment, you may LOSE up to XX euro a year in benefits').

However useful, these interventions should not be regarded as a comprehensive solution to address a deeply rooted and complex issue such as multigenerational poverty.

Furthermore, services addressing people in poverty (from education to social and health services) need to take into account the traumatic impact of stress deriving from living in poverty and exclusion. To reduce such stress, it is important to **emphasise physical, psychological and emotional safety.** Environments that feel physically and emotionally safe by being calm, predictable and consistent are less likely to activate a hyper-alert stress response system. By creating a safe and supportive environment, educators and mentors may support people's healthy development and learning. As E. Babcock spells out, to promote a sense of safety, services should

176 Innovative practices with marginalised families at risk of having their children taken into care. Peer Review in Social Protection and Social Inclusion - 2014 European Commission (paper by Milani, P., Serbati, S., Ius, M., Di Masi, D., Zanon, O., Ciampa, A, Tangorra, R.).

177 BIAS project, cit. by Babcock, E.: in 11 of the 15 randomised controlled trials, the subtle and modest 'nudges' introduced to help improve individual decision-making (such as reminders or simplified, personalised letters) had a statistically significant impact on at least one primary outcome of interest – for instance, increases in payment rates for child support, attendance at scheduled programme appointments, subsidy renewals and engagement in programmes. While the gains were modest, the costs were extremely low (on average, less than $2 per person per month), and the 'nudges' improved human services outcomes for tens of thousands of clients.

178 Haushofer - look for cit.

emphasise trustworthiness and transparency; enhance opportunities for peer support; recognise the inherent strength and worth of all participants by fostering individual personal control, agency, decision-making and self-advocacy; recognise and mitigate the impacts of stereotypes and biases.

Finally, to effectively reduce stress, **the way places are designed is also important**. Research in environmental psychology shows that environmental design can improve human cognition, behaviour and health outcomes. It also shows that people, especially under stress, are highly influenced by environmental cues that can 'prime' certain behaviours. A well-designed environment promotes a sense of safety and reinforces self-esteem and inclusion. For example, some changes to the physical environment in schools or places where people are supported may help reduce stress, improve focus and concentration, promote self-regulation and increase self-efficacy and well-being. Such changes include a conscious use of colours, sound reduction and the use of ambient sounds from nature or music; natural lighting, the availability of windows and the use of natural elements such as interior and exterior landscaping in design; and artwork and decorative elements that promote a sense of inclusion or well-being[179].

10.3. MEASURE PROGRESS, MONITOR AND REDIRECT STRATEGIES

Strategies to address mindsets and improve the situation of people who have been in poverty for a prolonged period need to have a long-term horizon. The effort is substantial, and it may be easy to lose momentum and motivation. In addition, it may be necessary to redirect strategies if they do not work. Thus, it is of the utmost importance to **keep track of progress through the collection of accurate, relevant and specific data**. Keeping track of progress is necessary to support a culture of continuous self-evaluation in relation to shared targets.

Such a data collection should not only be seen as a tool for ex post evaluation. It may enable participants (students, people supported by social services) and mentors (such as teachers) to adapt their strategies through formative assessment. It is important to share such data with the community (parents, staff, policymakers) to create a sense of common direction. Using data can also support a culture of high expectations, when they are used by both staff and participants to improve their work together. Data can effectively show progress and support growth mindset attitudes in an organisation.

179 Babcock, E., cit.

CONCLUSIONS

The evidence gathered in the report shows how a prolonged experience of marginalisation constitutes, per se, an obstacle to social mobility through its impact on mindsets and executive functions.

Some general conclusions may be drawn on that basis.

1 The impact of long-term poverty and exclusion on self esteem, aspirations and executive functions may have cascade effects, inter alia on performance in education and consequent life chances, contributing to the perpetuation of poverty across generations. Thus, **tackling material conditions – albeit indispensable – may not be sufficient enough** to help out of poverty people who suffer from prolonged marginalisation. Promoting social inclusion also requires measures to support people in improving their **capacity to aspire, and to take decisions that are conducive to realizing the aspirations**. The range of measures outlined in Section II may be conducive to this purpose.

2 The concept of ***resilience*** is crucial when analysing how the impact of poverty may be counterbalanced. In fact, not all children in poverty suffer from the same problems. Looking at the characteristics of those children who thrive in spite of adversity, research identified some key factors, such as **solid attachment relations**, strong support by parents or alternative adults in charge, but also **how teachers and parents support self-esteem** and a "growth mindset".

3 **Education**, as a crucial life experience and enabler of social mobility, may play a **pivotal role in supporting resilience and aspirations**. Apart from crucial broader systemic reflections on equity in education (briefly outlined in Chapter 6), it seems important to equip teachers and school leaders with skills to prevent stereotyping, support building of core cognitive skill, and enhance socio-emotional competences in the education environment at all levels.

4 Evidence also points to some **easily implementable techniques** in education to support a **growth mindset** among students and staff. Similarly, **behavioural research** points to measures to improve the efficacy of social assistance provision. Such interventions are striking for their **scalability** and low-cost applicability, and it appears natural to recommend their systematic implementation.

5 Aspirations may drive social mobility only when they may be realistically achieved. This is why **efforts to support the creation of aspirations must be accompanied by support to their achievement**, through measures such as **step-by step goal setting**, coaching, counselling, peer support

6 The report focuses on the **effects of the environment.** The absence of role models, lack of information, peer pressure in marginalised communities may curb aspirations for children in poverty, even when they are high achievers in school. It is essential to deploy measures to contrast the impact of the environment (be it marginalised neighbourhoods, or vulnerabilities in extended family) by providing **safe and positive alternatives. It may be essential to create places where children can spend time after school and in holidays and engage in stimulating activities (culture, sports, but also psychological support and counselling).** Also measures such as **mentorships** may be highly useful to help children and young people imagine a different future and get information and support.

7 Research points to toxic stress as a main cause for the impact of poverty on key cognitive and executive functions. **Reducing toxic stress** for people in poverty is thus important to allow for improvements. And - reducing toxic stress in children largely depends on improving conditions for parents. This points to the importance of income support, combined with **long term coaching** for economic mobility. It also points to the relevance of measures to **support parenting as well as parents' involvement and support in education.**

8 Indeed, while intervening in support for children is determinant to break the cycle of transmission of poverty, this can hardly happen without addressing the impact of poverty on parents. Thus, the ideal standard of support may consist of **comprehensive frameworks of support around the child and the family.** Such frameworks may work optimally through multidisciplinary collaboration, leveraging existing resources in and around the family, and addressing specific needs in a tailor-made way.

The measures listed in the report present only a small selection of possible directions.

Evidence of what works is conclusive in some aspects, and it would thus deserve to be used in support of mainstream practices. In other aspects, evidence is promising but scattered – so it will be important to collect and further share data on what works to help fine-tune strategies. At EU level, an exchange of evidence and the sharing of promising practices may contribute to the efforts of national and local governments and organisations tackling poverty and exclusion.

In a perspective of equity and social justice in line with the fundamental EU values, this could lay the foundation for achieving the *right to aspire* for all.

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