Adaptation and development: issues, evidence and policy relevance

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Abstract

This paper introduces a new volume on *Adaptation, Poverty and Development: The Dynamics of Subjective Well-Being* (Clark, 2012), sponsored by the ESRC Global Poverty Research Group (Universities of Manchester and Oxford) and the Brooks World Poverty Institute (University of Manchester). The book draws on conceptual and empirical work and utilises a range of methodologies to investigate ‘adaptation’ – in its various guises and forms – in the context of economic and social development in poor countries. This paper is divided into five parts. Following a brief introduction, Section 2 reviews some key concepts and issues associated with adaptation from across diverse and fragmented literatures. Section 3 provides a brief overview of existing theories and empirical evidence. Section 4 considers the rationale and contribution of the book and places it in the context of existing work. And Section 5 provides a brief introduction to the structure, contents, key findings and policy conclusions of the book.

Keywords: adaptation, aspirations, capability, developing countries, poverty, social values, subjective well-being

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This paper is a slightly revised extract taken from the author’s original manuscript. The definitive version of this piece may be found in *Adaptation, Poverty and Development: The Dynamics of Subjective Well-Being* (2012) edited by David Alexander Clark, which can be accessed from www.palgrave.com
1. Introduction

Adaptation is an elusive concept that has been defined in many different overlapping and competing ways. It has also been associated with a range of empirical phenomena. Discussions and analyses of adaptation have taken place across the social sciences, humanities and other disciplines (most notably, biology). According to Frederick and Loewenstein (1999: 302):

[a]daptation, in its broadest sense, refers to any action, process or mechanism that reduces the effects (perceptual, physiological, attentional, motivational, hedonic, and so on) of a constant repeated stimulus’

(see also Section 2 below). While the study of adaptation is inevitably trans-disciplinary, many of the ensuing debates have occurred in relative isolation from one another – typically because they have taken place within the confines of established intellectual disciplines or sub-disciplines. Thus, prominent discussions of adaptation can be found in social psychology, mainstream economics, political economy, sociology and moral philosophy.

In the context of development it is possible to distinguish between two separate streams of work on adaptation. The first stream of work, which is by far the larger, takes its cue from the environmental literature found in anthropology and human geography (e.g. Janssen and Ostrom, 2006). In this literature, adaptation typically refers to the ability of the household or community to adjust to climatic change. This notion of adaptation is usually broadened to include adaptive responses to social and economic stresses, as well as ecological hazards (see the appendix for a brief overview of the literature in this area). While these debates have been extremely influential in development studies and practice, they are not the primary focus of the book this paper is introducing. The second stream of work has a relatively small following in development studies, although it has broader appeal in social and political science generally. In this stream of work, ‘adaptation’ is typically linked with aspirations, subjective well-being and value (or preference) formation. It is this second stream of work, which has equally significant implications for development theory, policy and practice, that constitutes the main focus of the book.

The overarching goal of Adaptation, Poverty and Development (Clark, 2012) is to investigate ‘adaptation’ – in its various guises and forms – in the context of economic and social development in poor countries. This is an area in which relatively little theoretical or applied research has been done. The remainder of this paper is divided into four parts. Section 2 briefly reviews some key concepts and issues associated with adaptation across diverse and disparate literatures. Section 3 briefly reviews existing
theories and empirical evidence. Section 4 considers the rationale and contribution of
the book. And the final section summarises the structure and content of the book and
attempts to highlight key findings and conclusions.

2. Adaptation

As mentioned, adaptation has been defined in a variety of ways and associated with a
range of distinct phenomena. It is therefore important to be clear about what is meant by
adaptation. In particular, we might start by posing three questions. The first asks in which
conceptual space(s) human beings adapt. The possibilities seem almost endless and
include happiness, satisfaction, aspirations, desires, preferences, interests, values,
goals, capabilities, survival strategies and human behaviour generally. The second
question asks: what triggers adaptation? Is it a response to past experience, future
expectations, new possibilities, social comparisons with others or some sort of shock or
crisis? The third and final question asks what shape or form adaptation takes. Does it
involve non-grumbling resignation to fate or valiant struggle against adversity? Or might
it involve greater aspirations in the light of previous success or becoming increasingly
satisfied with improvements in the quality of life? One of the goals of the book is to
identify and clarify different notions of adaptation and to explore their relevance for
development issues. Some of the key notions of adaptation employed in this book are
reviewed in Box 1. The concepts and categories listed are tentative and non-exhaustive,
as they are merely intended to give the reader a taste of the concepts and issues
considered in this volume and the following pages.

Box 1: Forms of adaptation and related phenomena that influence mental
reactions, value formation and human behaviour

<table>
<thead>
<tr>
<th>Adaptation</th>
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<tr>
<td><strong>Non-grumbling resignation in the face of hardship and injustice</strong></td>
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<tr>
<td>• Learn to take pleasure in small mercies or suppress desires to modest – realistic – proportions in order to avoid bitter disappointment (Amartya Sen) (chs. 1-3, 5-6).</td>
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<td>• The subconscious suppression of preferences to avoid loss of welfare (Jon Elster) (ch. 2).</td>
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<tr>
<td>• The deliberate manipulation of values and preferences through social conditioning or cultural/ religious forms of indoctrination (chs. 1, 3).</td>
</tr>
<tr>
<td>• Values and choices that are deformed through violence, abuse and exploitation – especially towards women (Amartya Sen, Martha Nussbaum and others) (chs. 6, 8).</td>
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Valiant struggle in the face of adversity
- The growth of ‘creative discontent’ and demand for social change following the politicisation of the oppressed and disadvantaged (Amartya Sen) (ch. 3).
- The development of ‘compensating abilities’ and dispositions designed to help deal with disadvantage (Mozaffar Qizilbash) (chs. 1, 3).
- The development of survival and risk management strategies intended to improve the quality of life (chs. 1, 8).
- Strategic forms of resistance to change intended to provide protection and benefit (ch. 8).

False expectations, optimism and dissonance
- False expectations – failure to see that aspirations will adapt (rise) in response to new (improved) situations; relatively high aspirations reduce happiness (ch. 4).
- Optimism – high aspirations for the future may lead people to view their current situation as better than actual circumstances suggest (Carol Graham and Matthew Hoover) (ch. 6).
- Dissonance (satisfaction paradox) – the tendency for the objectively well off to be dissatisfied with the quality of life (chs 5, 6).

Hedonic adaptation
- Increases (decreases) in happiness are purely temporary, due to the tendency for aspirations to rise (fall) with actual achievements (chs 1-7).
  - Hedonic treadmill – obliges people to keep achieving major goals in a futile attempt to increase long-term happiness (something that is repeatedly frustrated by rising aspirations) (overlaps with false expectations) (chs 1-5, 7).
  - Failure to achieve key goals leads to lower aspirations, as people learn to be satisfied with less (overlap with resignation) (chs 1-3, 5-7).

Hedonic adaptation typically occurs in response to (a) past experience; (b) future expectations; and/or (c) social comparisons with others (chs 1-7). In some cases, adaptation may be asymmetric; for example, Tania Burchardt found that British people tend to adapt to increases in income, but less so to reductions in income (ch. 3).

Natural adaptation
- A natural process that occurs as people inevitably change over the course of life with respect to age, health, occupation, social status and experience, and adapt their goals accordingly (Martha Nussbaum) (ch. 6).

Other
- ‘Forbidden fruit is sweeter’ – unobtainable goals become more, rather than less,
desirable (counter-adaptive preferences – Jon Elster) (ch 1).

- Deliberate character planning – ‘the intentionally engineered adaptation of preferences to possibilities’ (Jon Elster) (chs 1-2).

**Related phenomena**

**Information, positional objectivity and false consciousness**

- ‘Ill-informed desires’ – preferences that are mistaken in some way due to the inability to acquire and process sufficient information for making rational and informed judgements (ch. 3).
- ‘Objective illusion’ – occurs if a belief is objective but false from a given position (Amartya Sen). For example, the sun and the moon may appear to be the same size from the earth, although a ‘trans-positional’ assessment of this belief (which includes other points of view, such as an understanding of distance and projection) may demonstrate it is mistaken (ch. 2).
- ‘False consciousness’ – the Marxian inspired notion that people’s perceptions of the world are misleading and relate to their position in it. In particular, ideological control and class consciousness makes it impossible to understand class relations and the process of capitalist development (ch. 2). (By the same token, it may be difficult for middle class intellectuals to appreciate some of the values and aspirations of the less fortunate – ch. 3).

**Value formation**

- ‘Normal’ processes of socialisation which shape values and attitudes without compromising the capacity for critical reflection on alternatives (ch. 1).
- ‘Informed desires’ – preferences or values formed through learning and experience and/or the balanced assessment of relevant information (chs. 1, 3).
- Public discussion – may help eliminate mistaken value judgments by bringing in a range of viewpoints and information – especially by introducing distant voices* (Amartya Sen and others) (chs. 2-3).
- The finding that people’s value judgements (in contrast to their subjective well-being) are not always muffled by blatant forms of hardship or injustice. In short, they are able to imagine and articulate substantially better or ‘good’ forms of life (Valerie Møller; David Clark; Bina Agarwal) (chs. 1-3, 5).

* In practice, public discussions and deliberative forms of democracy need to confront and overcome a range of blatant inequalities, ranging from the exclusion of weak and vulnerable groups, on the one hand, to inequalities in power and voice, on the other.
These remarks imply ‘adaptation is actually a collective noun for different mechanisms and processes that happen under different circumstances and produce different results in terms of well-being’ (Teschl and Comim, 2005, p. 241). Two common forms of adaptation identified in disparate literatures include non-grumbling resignation in the face of adversity and hedonic adaptation to improved circumstances. The first has been advanced by Amartya Sen in economics and philosophy (Sen, 1985, 2002; 2009) and international development (Sen, 1984; 1990; 1999), who is inspired by the work of Jon Elster (1983). Sen’s argument, which is grounded in his critique of utility, is that unfavourable circumstances can make allies out of the disadvantaged and deprived, insofar as they ‘learn to take pleasure in small mercies and cut down their desires to modest – “realistic” proportions’ in order to avoid bitter disappointment (Sen, 1990: 43; 1992: 55). At the extreme, brutal forms of hardship and grave injustices may not show up at all in the mental metrics of happiness or desire fulfilment (see also Crocker, 1992; Nussbaum, 2000; Clark, 2005).¹ The second type of adaptation is typically discussed in social psychology. In this scenario, known as the hedonic treadmill, increases in happiness following good fortune are purely temporary, due to the tendency for aspirations to keep pace with actual achievements. By the same token, people tend to adapt to misfortune – by lowering expectations – so that their initial unhappiness is short-lived.² Thus, happiness levels tend to remain relatively stable over time, irrespective of economic or social performance (see Brickman and Campbell, 1971; see also Section 3). Empirically, it is not possible to distinguish between adaptation to good fortune (involving rising aspirations) and adjustment to misfortune (involving the lowering of aspirations) using cross-section data. This has been a source of some confusion in the development ethics literature and may have contributed to popular misconceptions about the nature of adaptation in poor countries (see Chapter 3 of the book).

In economics, philosophy and development ethics, it is common to distinguish between adaptation and related phenomena that either influence happiness or shape preferences and value formation (e.g. Elster, 1982; Nussbaum, 2000; Qizilbash, 2006b). For example, Elster (1983) mentions counter-adaptive preference formation, which is the opposite of ‘sour grapes’ (his notion of adaptation).³ According to Elster, counter-adapt-

¹ It is worth noting that Elster’s and Sen’s concepts of adaption are not the same, although they are sometimes conflated. Elster’s notion (discussed further below) is broader, as adaption occurs in response to a change in the feasible set, i.e., the available options from which a person can actually choose (e.g. Elster, 1983: 22). In this sense, adaptation may affect the relatively well-off as well as the disadvantaged and deprived.

² This is essentially a moderated version of Sen’s argument.

³ Elster (1982) also distinguishes adaptive preference formation from preferences based on learning and experience (discussed below), pre-commitment (a deliberate narrowing of the feasible set), manipulation by others (discussed below), character planning (discussed below) and wishful thinking. For Elster, adaptive preferences have five distinct characteristics that distinguish it from other types of preference formation: ‘It differs from learning in that it is reversible; from precommitment, in that it is an effect and not a cause of a restricted feasible set; from manipulation, in that it is endogenous; from character planning, in that it is causal; and from
adaptive preferences are based on the idea that ‘forbidden fruit is sweeter’ – a metaphor for saying that unobtainable goals (such as the fox being able to jump high enough to reach the grapes in Jean de La Fontaine’s fable) may end up becoming more, rather than less, desirable (Elster, 1982: 220). This process differs from hedonic adaptation, which would predict lower satisfaction in the short term (due to rising frustration) followed by a return to typical or average satisfaction levels in the medium to long run (as aspirations adjust to reflect the hardship).

Another distinction involves isolating preferences and values that have been formed through learning and experience. These are normally regarded as more reliable than ill-informed desires that have not been properly weighed. There are, of course, well known limitations to human capacities to acquire, retain and process sufficient information to identify and weigh relevant alternatives (see Nussbaum, 2001; Qizilbash, 2006b; Clark and Alkire, 2008). Moreover, such deliberations can be easily swayed by external influences, such as advertising and other forms of socialisation. For this reason, ‘normal’ processes of socialisation (which do not erode critical reflection) are sometimes distinguished from the deliberate manipulation of values and desires by others (Sumner, 1996; Elster, 1982: 223; Qizilbash, 2006b: 91-93). The latter can involve anything from being ‘brainwashed’ by television to falling victim to oppressive forms of political, cultural or religious indoctrination. In other cases, malformed preferences and values may be the result of blatant forms of inequality and exploitation, such as violence towards women (Sen, 1999; Nussbaum, 2000, 2001). Some of these issues are taken up in Chapter 2 of the book by Mozaffar Qizilbash, who discusses the notion of ‘false consciousness’ with reference to adaptation and paternalism. Other contributions to the book briefly touch on indoctrination (Chapter 3) and the role domestic violence can play in undermining the values and attitudes of subjugated women (Chapter 8).

Notice that alternative forms of adaptation and value formation have different implications for autonomy as well as welfare. Indeed, Elster (1983) is concerned with adaptive preferences precisely because welfare is preserved by sacrificing autonomy. In his narrow view of adaptation, the fox in an extraordinary feat of self-deception, decides that the grapes, which remain out of reach, are sour after all and must therefore only be wishful thinking, in that it concerns the evaluation rather than the perception of the situation’ (ibid., p. 226).

4 Education is an interesting though controversial example. Even in liberal democracies some aspects of education can become highly political and even oppressive. I can recall discussing topics such as the Iraq war, abortion, capital punishment, the monarchy and the welfare state in English Language classes at secondary school. In many cases, both sides of the argument were not adequately heard and students were put under pressure to endorse a particular point of view. Sometimes possible counterarguments were censored altogether (those who disagreed with the teacher’s view lost speaking privileges fairly quickly). In contrast, A-Level Government and Politics at the same school seemed decisively less reactionary and respected free speech (even though many of the same topics were discussed). I understand that my niece and nephew (from the age of 11) are required to attend Citizenship classes at school!
fit for ‘boors’ (goujats). One way around this dilemma involves comparing adaptive preferences with deliberate character planning, which is described as ‘the intentionally engineered adaptation of preferences to possibilities’ (pp. 110, 117). According to Elster this process works in the following way: ‘If... I perceive that I am frustrated and understand why, I may deliberately set out to change my wants so as to be able to fulfill a larger part of them’ (Elster, 1982: 224). Thus, a shrewd person may be able to maintain autonomy and welfare through intentional character planning, even though he or she is quite unable to achieve certain goals.⁵ (Incidentally, intentional character planning may be of little use to the fox featured in Elster’s book, as he is dying and needs to devour the grapes in order to survive and be capable of achieving other good things, such as autonomy and welfare).

Some commentators argue for a broader view of adaptation, which recognises it can be a positive as well as a negative force (Nussbaum, 2000; Teschl and Comim, 2005). For example, in her response to Elster’s critique of adaptation, Nussbaum argues that adjusting to what is possible is sometimes a good thing: ‘We get used to having the bodies we do have, and even if, as children, we wanted to fly like birds, we simply drop that after a while, and are probably the better for it’ (Nussbaum, 2000: 137). Moreover, in the context of global poverty, it can be argued that adapting to what is feasible may be a good thing, inasmuch as it reduces the amount of suffering and misery associated with objectively straitened circumstances (an issue briefly contemplated in Chapter 3 of the book). It is worth noting that loss of autonomy may not be an issue here. The tendency to report relatively high levels of happiness or life satisfaction in relation to objective circumstances does not always go hand in hand with low aspirations or malformed value judgements (again see Chapter 3 of the book).⁶ In fact, several studies have shown that the poor and disadvantaged are capable of articulating a good form of life, which includes many of the capabilities, rights and needs advocated by philosophers and social theorists (see Clark, 2002; 2003; Narayan and Petesch, 2002; Okin, 2003; Ibrahim, 2008). In fact, some of these studies suggest important revisions to existing accounts of human well-being and show that philosophers and social theorists have much to learn from ordinary people.

⁵ According to Elster, ‘character planning... may improve welfare without loss of autonomy’. He also argues that: ‘Release from adaptive preferences... may be good on the autonomy dimension while bad on the welfare dimension’ (Elster, 1982: 235; see also Colburn, 2011). For a critique of Elster’s work on adaptation and character planning, see Sandven (1999a,b). Brucker (2009) develops a means to distinguish between rational (‘worthly’) and irrational (‘unworthy’) adaptive preference formation. Khader (2009) provides a critique of the idea that adaptation should be understood in terms of non-autonomous preferences and argues in favour of a theory of the good to identify adaptive preferences.

⁶ Similar points have been made by Teschl and Comim (2005: 238-239) and Qizilbash (2006b: 100-101). Møller (1996) has shown that while the South African poor report high levels of satisfaction, they are extremely good at advancing their interests and demanding a better quality of life.
Another type of adaptation involves actively developing strategies to deal with hardship and disadvantage. One possible example of an adapted survival strategy is sometimes mentioned by Sen in his critique of utility:

The most blatant forms of inequalities and exploitations survive in the world through making allies out of the deprived and the exploited… As people learn to adjust to the existing horrors by sheer necessity of uneventful survival, the horrors look less terrible in the metric of utilities (Sen, 1984: 309).

The hopeless beggar, the precarious landless labourer, the dominated housewife, the hardened unemployed or the over-exhausted coolie may all take pleasures in small mercies, and manage to suppress intense suffering for the necessity of continuing survival, but it would be ethically deeply mistaken to attach a correspondingly small value to the loss of their well-being because of this survival strategy (Sen, 1987: 45-46).

In these passages, reduced mental reactions actually constitute a survival strategy for dealing with otherwise dismal lives. For Sen the tendency to downplay hardship and enjoy small breaks ‘is one way of being able to live peacefully with persistent deprivation’ (Sen, 2009: 283-4). In this sense, the behaviour of the landless labourer or dominated housewife ‘may not necessarily involve “too much of a surrender” to their situation’ (Qizilbash, 2006b: 95). More generally, people may adjust to deprivation and hardship by developing ‘compensating abilities’ and dispositions designed to improve their lot in life (Qizilbash, 1997: 253). For example, women might compensate for their perceived disadvantage in career prospects by working harder than men (ibid.:256).7

These sorts of issues have been explored in depth in a separate literature on livelihoods in the field of applied development, which rarely has any interaction with the debates on adaptation in development ethics and political philosophy considered above. This literature is vast and explicitly discusses a range of survival and risk management strategies that help people cope with shocks and mitigate threats to livelihoods (see Scoones, 1998; DFID, 1999-2001; Ellis, 2006). Some of the contributions to this literature explicitly use the notion of adaptation in an attempt to understand the ways in which the livelihoods of the poor and vulnerable adjust to changes in demographic, economic and environmental conditions (Davies, 1996; McCarthy et al., 2001; Tanner and Mitchell, 2008).8 In this literature, adaptation has more to do with valiant struggle against adversity than surrender to fate. In Chapter 8 of the book, Bhim Reddy and Wendy Olsen pave the way for analysing adaptation with reference to the interaction

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7 Agarwal (2008) considers a range of survival strategies and covert forms of resisting gender inequalities from a capability perspective. In contrast, Nussbaum (2000) expresses concern about ‘the many ways in which habit, fear, low expectations and background conditions deform people’s choices and even their wishes for their own lives’ (p. 114).

8 The adaptable livelihood framework is described in the Appendix.
between values and attitudes, on the one hand, and changes in workers’ overall strategies, on the other.

3. Theory and evidence

The first to associate adaptation with the ‘hedonic treadmill’ were Brickman and Campbell (1971), who argued that mental reactions to good and bad events are temporary. Thus, increases in pleasure quickly fade, which in turn repeatedly compels people to achieve greater things in the mistaken belief that long-term happiness is just on the horizon. The essence of this approach is modelled in Helson’s (1948; 1964) adaptation level theory, which states that people affectively develop a hedonically neutral adjustment point that is equivalent to the average of all previous stimuli. The hedonic treadmill has become the subject of much debate and some controversy in social psychology. Some commentators have proposed a system that homeostatically maintains subjective well-being within a narrow range (Cummins, 2000). Others have argued for more sweeping revisions that include allowing for multiple set points across domains and taking on board individual differences in the rate and extent of adaptation to the same events (Diener, Lucas and Scollon, 2006).

A lot of theoretical work that sheds lights on adaptation is concerned with the relationship between income and happiness. One example is ‘livability theory’, which suggests that income will only increase subjective well-being up until the point that inborn needs are met (Veenhoven, 1991; 1993). Thus, income should have a greater effect on subjective well-being in poor countries than rich countries, as any increase is more likely to be spent on basic needs, such as food, shelter and clothing. A more sophisticated approach can be found in Maslow’s (1954) theory of needs, which recognises that increases in income over and above the basic needs level can also increase satisfaction, as long as it is spent on ‘self actualisation’ activities. In contrast to theories of need, relativistic judgement models suggest that people assess the adequacy of their income, either in terms of past riches (e.g. Parducci, 1995) or social comparisons with others (e.g. Easterlin, 1974, 1995). Many of the studies collected in the book have implications for these models (see especially Chapters 4 to 7).

The empirical evidence on income and happiness has been reviewed by Argyle (1999), Diener and Oishi (2000), Easterlin (2001) and Frey and Stutzer (2002), amongst others. The stylised facts to emerge from work in this area include: (i) richer people, on average, tend to report higher subjective well-being; (ii) increases in income are typically associated with increases in happiness, but at a diminishing rate (the statistical relationship is curvilinear); (iii) there is a low correlation between income and

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9 For further discussion of these theories and a critical assessment in the light of available evidence see Diener and Oishi (2000).
happiness, indicating that other factors influence happiness; (iv) raising everyone’s income may not raise happiness (as relative income in comparison to others has not improved); (v) rich people typically set higher ‘adequate’ income thresholds than poor people; (vi) over the course of life, happiness levels tend to remain fairly static, even though income and wealth increase; and (vii) the rapid growth in the incomes of advanced economies since the 1950s has typically been associated with stable or declining happiness scores (known as the ‘Easterlin Paradox’). In addition, Diener and Oishi (2000) have suggested that happiness tends to increase with prosperity in poor countries, although the available evidence to support this claim is limited, due to large data gaps, and further research is required to corroborate their findings.

Most of this work is based on cross-section data which cannot be used to identify causal relationships or distinguish between adaptation to good fortune, on the one hand, and adjustment to misfortune, on the other. However, a handful of studies in high income economies have managed to use panel data to track the same individuals and households over time. Some of these studies are reviewed at greater length in Chapter 3 of the book (see Chan et al, 2002; Stutzer, 2004; Burchardt, 2005; Di Tella, Haisken-De New and MacCulloch, 2007). The study with the richest dataset (ten waves of panel data from the British Household Panel Survey) suggests that both annual declines and annual rises in income lead to unhappiness. Over a longer time horizon, however, people with falling income trajectories are less happy than those with stable incomes, while people with rising income trajectories are no happier than those with stable income.

The correlation is slightly higher in poor countries, indicating that income has a greater effect on life satisfaction. Studies also indicate that the correlation between income and happiness is much higher across countries than within countries, which is partly a statistical artefact (see Diener and Oishi, 2000: 195-196, 198-201).

Stevenson and Wolfers (2008) and Sacks, Stevenson and Wolfers (2010) reassess the relationship between income and subjective well-being using larger datasets and slightly different methods. In contrast to conventional wisdom (which implies no relationship between economic growth and rising satisfaction), their results suggest a positive relationship between growth and satisfaction within countries, between countries and over time. Unlike Easterlin and many others, they observe that ‘raising the income of all does indeed raise the well-being of all’ (ibid.:4), although they recognise that there may be some important exceptions. These results have been challenged (e.g. Easterlin, McVey et al. 2010) and are the subject of further debate (e.g. Diener, Helliwell and Kahneman, 2010, esp. Chapters 1, 6-9 and 12).

There is also qualitative evidence from participatory poverty studies to suggest there was a big difference between people in Eastern and Central Europe, who thought they were really badly off (as their living standards had dropped), and really poor people in Africa and Asia, who did not feel things were so bad as they had never experienced anything better (see Narayan, Patel et al, 2000, esp. pp. 34, 56-57; Narayan, Chambers et al., 2000).

Nor is it clear if the dynamics of adaptation are symmetrical upwards and downwards, i.e. does the loss of a dollar lead to a decline in subjective well-being that is equivalent to the increase in subjective well-being associated with gaining a dollar? And does adaptation to the extra dollar take the same amount of time as adjusting to a dollar less? Cross-section data is also silent on the issue of causation, i.e., do people first aspire and then achieve, or do they achieve and then aspire? I have benefited from useful discussions with Abigail Barr on these topics.

Argyle (1999: 357-358) briefly reviews some additional studies that hint at causal relationships between income and happiness.
incomes (see Burchardt, 2005). This implies that ‘over a longer period, adaptation to changes in income is asymmetric: people adapt to rising incomes, but less so [to] falling incomes’ (ibid.: 57, 93). If asymmetric adaptation is the norm, many important theories and policy conclusions may have to be rethought (as Chapter 3 shows). While the book adds to the relatively small number of empirical studies that investigate adaptation in developing country contexts (Chapters 4 to 8), none of these studies were able to use panel data. However, some of these contributions have managed to examine the causal processes behind adaptation by combining survey data with qualitative ‘story telling’ methodologies (see Chapters 6 and 8).

Some studies, particularly in social psychology, have investigated adaptation in other (non-income) domains of life. These studies have looked at how people adapt to negative events, such as noise, incarceration, disability, disease, and bereavement, on the one hand, and positive events, such as marriage, having children, cosmetic surgery, enjoying food and sexual activity, on the other (see Frederick and Loewenstein, 1999; Diener et al., 1999; Easterlin, 2005). A striking conclusion to emerge from these studies is that adaptation tends to take place in some domains but not in others. Moreover, when it does occur, it tends to be more rapid or complete in some domains than in others (Frederick and Loewenstein, 1999: 314). Clearly, much work remains to be done in terms of studying adaptation across domains that are relevant for development policy, such as education, health and housing. In Chapter 5 of the book, Abigail Barr and David Clark make a start on work in this area by studying adaptation in a multidimensional context.

4. Rationale and contribution

It follows that much can be learned from cross-disciplinary research on adaptation that either brings together the results of work from individual disciplines (multi-disciplinarity) or attempts to integrate work from two or more disciplines in a rigorous and comprehensive way (inter-disciplinarity). Indeed, some progress in terms of multi-disciplinary research has already been made by economists who have increasingly shown interest in the work of social psychologists following the recent revival of happiness research (e.g. Frey and Stutzer, 2002; Graham, 2005; Layard, 2005; Kingdon and Knight, 2006; Fleurbaey, Schokkaert and Koen, 2009; Sacks, Stevenson and Wolfers, 2010). In addition, a small number of scholars have attempted to achieve a richer inter-disciplinary understanding of adaptation through the deeper integration of theoretical and applied knowledge from specific disciplines. Notable examples include

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15 The distinctions between cross-, multi- and inter-disciplinary forms of research were originally drawn by Kanbur (2002). The relative merits of cross-disciplinary forms of research on well-being and development are discussed by Clark (2006), Harriss (2002), Hulme and Toye (2006; 2007) and Molteberg, Bergstrøm and Haug (2000), amongst others.
work in economics and philosophy (Sen, 2002; 2009; Qizilbash, 2006b), economics, politics and psychology (Teschl and Comim, 2005; Welzer and Inglehart, 2010), and Ethics and Development (Sen, 1984; Nussbaum, 2000).16

Most of the applied work on adaptation in the social sciences has been done by social psychologists and more recently economists, who typically investigate the association between income (or some other achievement), on the one hand, and aspirations, happiness or subjective well-being, on the other. This typically involves utilising cross-section data in order to draw comparisons within or between countries. In most of these studies, however, developing countries in general and the poorest nations in the world in particular are seriously under-represented. For example, in the ‘Introduction’ to Ed Diener’s and Eunkook Suh’s landmark volume, *Culture and Subjective Well-Being*, they write:

> Originally, the sample of nations for which SWB [subjective well-being] data were available was small, and most studies came from highly industrialised western countries. In recent years, however, larger samples of nations are available... Nevertheless, very poor countries such as those in Africa are still under-represented. In addition preliterate societies are virtually absent from this area of study... (Diener and Suh, 2000: 8).

On closer inspection, Diener and Oishi’s (2000) own contribution to this volume (which reviews existing evidence on material prosperity and happiness across cultures) rests on a sample of 19 countries drawn from the *World Value Survey II* and their own international study of college students. Their data from the *World Value Survey II* is later augmented to include Veenhoven’s (1993) study of happiness amongst nations, producing a total sample of 42 countries (Diener and Oishi, 2000: 198-200). Only 14 of these countries, however, are classified as developing and almost half of these are located in Europe or Central Asia, rather than Africa, East Asia or Latin America.17 Moreover, none of these countries qualify as low-income economies. Nor do any of them appear on the United Nations’ list of the 48 Least Developed Countries, which are

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16 Such studies are the exception rather than the rule. One might add seminal contributions from political economy, including John Stuart Mill’s (1861) *Utilitarianism* and Marxist inspired notions of ‘false consciousness’. On this, see Chapter 2 of the book and the discussion between Qizilbash (2006a) and Sen (2006).

17 These figures are derived from the sample of 42 countries recorded in Diener and Oishi (2000, Table 8.2) and the World Bank’s (2011) current list of developing nations, which consists of any country that falls into the low- or middle-income category. The developing countries included in Diener and Oishi’s sample are Argentina, Belarus, Brazil, Bulgaria, Chile, China, India, Lithuania, Mexico, Nigeria, Romania, Russia, South Africa and Turkey. Some of the countries included in Diner and Oishi’s analysis have made considerable progress in terms of moving up the income ladder since their review article appeared (e.g. Estonia, Latvia and Poland) and have recently been reclassified as high-income countries by the World Bank. The author does not wish to impugn Diener and Oishi’s work and would point out that their analysis of subjective well-being – like everyone else’s – is constrained by the availability of suitable data.
characterised by extremely low levels of socio-economic and human development (UN-OHRLLS, 2011; see also Ghai, 2006). It should also be noted that the common practice of relying on samples of college or university students in psychological studies of happiness and subjective well-being is likely to exclude many of the poorer and more disadvantaged members of society.

Some studies have attempted to investigate the association between economic growth and changes in life satisfaction over time. For example, Diener and Oishi (2000) use growth rates from the *World Development Report* (World Bank, 1992) and life satisfaction figures from Veenhoven (1993) for the 14 countries for which at least four identical survey instruments were administered at different points in time. All the countries satisfying their criteria are highly developed, so their analysis was repeated for three poorer nations (India, Mexico and the Philippines), where only three surveys were available. In the case of the 14 developed countries, they report that the subjective well-being ‘slopes across these countries are virtually flat, despite steep economic growth in most of these countries’ (Diener and Oishi, 2003: 202 and Table 8.3). This suggests that economic growth does not produce happiness or life satisfaction, which are phenomena often attributed to adaptation to increasing income and wealth (see Section 3). In the case of the three developing countries, however, the subjective well-being slopes are all positive, which implies that growth can increase happiness and subjective well-being, although results based on only three slope points may be unreliable (ibid.: 204). These findings imply that further research may well reveal different results for poorer countries vis-à-vis more advanced countries, which in turn may lead to different policy conclusions.

One of the chief methodological problems with empirical work on adaptation, aspirations and subjective well-being involves establishing causation. In most cases, one time cross-sectional data is employed, which makes it impossible to draw conclusions about causal direction. In these cases, it is difficult to tell whether, for example, growth is producing happiness (due to higher consumption) or happiness is driving growth (perhaps because

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18 A recent study of the relationship between happiness and growth in developing countries (which draws on five waves of the World Values Survey, including 2005-07) only manages to cover 13 countries, including Japan, South Korea and Turkey (Easterlin and Sawangfa, 2010). With the exception of Nigeria, Peru and Venezuela, these countries feature in Diener and Oishi’s (2000) sample. Recent efforts to augment existing surveys with new data on subjective well-being from the Gallup Organisation’s World Poll (first wave 2006) has made it possible to cover many new countries, including several in Sub-Saharan Africa. Initial analyses of the Gallup data include Deaton (2008) and Diener, Helliwell and Kahneman (2010).

19 This partly depends on which universities the students in question belong to. In some cases cash prizes and financial incentives are offered, which suggests poorer students may ‘self select’ into these studies.

20 Recent studies which draw on the World Gallup Poll and include a much larger sample of developing countries tend to support this finding. For example, Graham, Chattopadhyay and Picon (2010) point to a stronger income-subjective well-being link in poorer countries (p. 277), while Di Tella and MacCulloch (2010) argue that ‘it is the absolute level of the logarithm of income that matters for happiness’ in the poorer half of countries they survey (p. 237).
a more content workforce is a more productive workforce). Fortunately, a small number of longitudinal or panel studies are available that provide some insight into the direction of causation (e.g. Burchardt, 2005; Stutzer, 2004; Krause, 2005; Di Tella, Haisken-De New and MacCulloch, 2007). Most panel studies, however, concern themselves with changes in income, income aspirations and happiness levels rather than with adaptation in other (non-income) dimensions of well-being.\footnote{21} Moreover, virtually all of these studies have been conducted in Western Europe rather than developing countries.\footnote{22} Clearly a lot of work remains to be done in this area.

The goal of Adaptation, Poverty and Development (2012) is to investigate adaptation in the context of economic and social development. It brings together theoretical and applied research from across the social sciences and philosophy, while drawing on single or cross-disciplinary perspectives. The first part of the book tries to identify and clarify abstract concepts of adaptation and to consider their relevance for development theory, policy and practice. The remainder of the book adds to the relatively small number of empirical studies that investigate adaptation in poor countries. While these contributions draw on cross-section rather than longitudinal data, some manage to get at the causal processes and mechanisms behind adaptation by drawing on qualitative narratives and ethnographic techniques (Chapters 6 and 8). The studies collected in this volume provide some evidence to suggest that adaptation in poor countries can take many different forms, which is not always consistent with prominent notions of resignation advocated by philosophers and social theorists (e.g. Elster, 1983; Sen, 1985; Nussbaum, 2000). Some of the evidence presented in the book is also consistent with the tentative finding – from international studies of happiness – that people in poor countries may be less susceptible to adaptation than people in rich countries (see above and Section 3), although much more work is required to adequately test this hypothesis. Another contribution involves integrating work on the formation of values, attitudes and norms with changes in strategic behaviour that either involve adapting to, or resisting, elements of change in order to improve the quality of life.

5. Content and structure of the book

The book is divided into three parts, which sometimes overlap. Part I is concerned mostly with conceptual and theoretical issues relating to adaptation and the corresponding implications for development broadly construed. Part II focuses on empirical analyses of adaptation in developing countries through three prominent case studies, which cover China, South Africa and India. Part III takes a closer look at specific

\footnote{21} A notable exception is Oswald and Powdthavee (2008), who focus on disability using British and German panel data.

\footnote{22} Chan, Ofstedel and Hermelin (2002) use two wave panel data to explore the links between actual income and perceived income adequacy among the elderly in Singapore and Taiwan.
issues closely associated with adaptation through detailed studies of disability, class, migration and gender. All three parts relate the discussion to development policy and practice.

5.1. Conceptual and theoretical issues

Part I considers adaptation in relation to two fundamentally different frameworks for thinking about human well-being and development: classical utilitarianism, which has origins in Jeremy Bentham’s writings on happiness; and the capability approach pioneered by the Nobel Prize winning economist and philosopher, Amartya K. Sen. An effort is also made to identify and clarify distinct forms of adaptation that are relevant for development and to dispel some of the myths that have become entrenched in the diverse and highly fragmented literature on this topic.

In Chapter 2, ‘Utilitarianism, “adaptation” and paternalism’, Mozaffar Qizilbash evaluates Richard Layard’s (2005) revival of classical utilitarianism in the light of the ‘adaptation’ critiques of utility associated with Elster (1983) and Sen (2002). While there are diverse phenomena covered under the title of ‘adaptation’, as well as distinct meanings, Layard concedes Sen’s point that the deprived might ‘adapt’, while implicitly suggesting that Sen’s position is paternalistic in a way that it is not. Qizilbash argues that while Elster’s and Sen’s positions are subtly different, both suggest that progress – or development – should be evaluated at least in part in terms of the expansion of freedom (not merely welfare). It is also argued that Sen’s worry that ‘adaptation’ can be seen in a positive light because it promotes species survival on a Darwinian view of progress is confirmed by Layard’s position, which in part endorses that view. In fact Layard’s utilitarianism implies precisely the view that Sen’s critique would suggest it would on disability policy, relatively neglecting those who ‘adapt’ to their disabilities. Finally, Qizilbash shows that Sen’s views on capability, ‘false consciousness’ and objective illusion are not obviously paternalistic, while Layard’s position is clearly paternalistic.

In Chapter 3 David Clark explores the implications of ‘adaptation’ in its many forms and guises for development theory and practice. In particular, the idea that people adapt to poverty and deprivation by suppressing their wants, hopes and aspirations is considered. Clark argues that, while this type of adaptation is often cited as one of the primary arguments for abandoning utility-based concepts of well-being in favour of the capability approach, it also has serious implications for the capability approach and development more generally (for example, it might seriously weaken the case for

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23 In a longer book it would have been pertinent to include separate chapters on ‘religion and spirituality’ and ‘slavery’, which are likely to be inextricably linked with different forms of adaptation in many developing countries.

listening to the poor and allowing them to influence development policy). These implications are rarely discussed or acknowledged in the well-being and development literature. Fortunately, Clark shows that the available empirical evidence suggests that adaptation is not ubiquitous. Moreover, where adaptation occurs, there is some evidence to suggest that it takes a different – and far less damaging – form than the type discussed in work on well-being and human development. This naturally raises the question of why some philosophers and social theorists are so preoccupied with one particular form of adaptation, despite some evidence to the contrary.

5.2. Empirical studies

Part II of the book focuses on empirical studies of adaptation in three developing countries – namely, China, India and South Africa. A range of quantitative and qualitative methods are employed, ranging from standard econometric techniques (Chapter 4) to mixed methods that integrate statistical analyses with either innovative surveys of human values and aspirations (Chapter 5) or qualitative narrative studies that look behind the statistics in an attempt to explain why people adapt – or fail to adapt – in specific contexts (Chapter 6).

In Chapter 4, ‘Aspirations, adaptation and subjective well-being of rural-urban migrants in China’, John Knight and Ramani Gunatilaka pose the question: why do rural-urban migrant households settled in urban China have an average happiness score lower than that of rural households? They examine the hypothesis that migrants have false expectations because they cannot foresee how their aspirations will adapt to their new situation and they draw on research in both psychology and sociology. Estimated happiness functions and de-composition analyses, based on a 2002 national household survey, suggest that their high aspirations in relation to achievement, influenced by their new reference groups, make for unhappiness. Thus, the evidence is consistent with their aforementioned hypothesis. In addition to shedding light on the nature and extent of adaptation in one of the world’s largest and poorest countries, Knight and Gunatilaka are among the first to link the literature on migration and subjective well-being in developing countries (a theme returned to in the final chapter of the book).

In Chapter 5, ‘A multidimensional analysis of adaptation in a developing country context’, Abigail Barr and David Clark add to the small set of studies that investigate adaptive aspirations among the relatively poor and extend the analysis to educational and health as well as income aspirations. Their work draws on the 2001 Essentials of Life Survey

25 An argument I do not wish to endorse.
26 In addition, the case of Ethiopia is considered in Part III, Chapter 7 and India is revisited in Part III, Chapter 8.
27 See also De Jong, Chamramrithrong, and Tran (2002) and Knight and Gunatilaka (2010).
28 Clark and Qizilbash (2008) briefly consider the housing dimension of well-being in addition to education and health, but do not consider income or utilise econometric techniques.
in South Africa, which is unique insofar as it includes data on aspirations and actual achievements for several different dimensions of poverty and well-being. In agreement with previous studies, it is found that income aspirations increase with both personal actual income and the incomes of proximate others (the reference group). There is also a positive relationship between actual and aspired education. However, the analysis shows that people aspire to more rather than less health when greater proportions of proximate others are ill or disabled.

These results suggest that the process of adaptation may not be robust across dimensions of well-being in poor countries. This hypothesis is consistent with the results of psychological studies across domains of life (see Section 3) and with the other analyses of adaptation in developing countries presented in the book (compare, for example, the findings in Chapter 4 with those in Chapter 7). There is also evidence to suggest that not everyone adapts to poverty (Chapter 6) and that people actively pursue complex strategies that involve adapting to some aspects of change whilst resisting others (Chapter 8). Of course, much more work needs to be done in this area to ascertain the nature, scope and speed of adaptation across dimensions of well-being in development countries.

In Chapter 6, Daniel Neff considers the possibility that different kinds of adaptation to poverty might undermine the reliability of subjective well-being measures defined in terms of ‘life satisfaction’ (rather than happiness or individual components of human well-being). His main goal is to explore whether, and if so, how and to what extent, adaptation affects subjective well-being reports by drawing on fieldwork in two Indian villages. In contrast to previous chapters, Neff develops a methodology that combines rigorous quantitative analysis with a selection of qualitative in-depth interviews intended to help explain the processes behind adaptation. The main finding to emerge from the quantitative analysis is that there is no widespread evidence of adaptation to poverty. The majority of the poor are less satisfied with their lives on average compared to their non-poor counterparts, as are lower castes and Muslims compared to higher castes. Nonetheless, roughly a fifth of those surveyed exhibit signs of adaption, i.e. report to be satisfied with their lot in life, despite living in poverty. The qualitative analysis adds value by showing how different life histories shape life satisfaction and make subjective well-being reports unique. The main finding is that people tend to evaluate life satisfaction by comparing their current situation with both their past and their future expectations. It also becomes clear that the past, current situation and future prospects are heavily influenced by social structures and institutions. In concluding, Neff distinguishes between two different adaptation processes (resignation and optimism) and develops a

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29 The significance of this finding depends on the nature of the claim being made about adaptation. If the claim is about measuring subjective well-being and data bias, adaptation in around one-fifth of the survey sample is likely to be a problem (as Daniel Neff recognises). If, on the other hand, the concern is about widespread adaptation undermining the values and goals of the poor, moderate adaptation in around one-fifth of people is far less likely to be insurmountable.
preliminary framework to illustrate how these phenomena can affect subjective well-being. He argues that misplaced optimism regarding the future tends to influence the reliability of subjective well-being in ways that resignation to poverty (hopelessness, passive acceptance of fate) may not, although in any case subjective well-being is likely to remain a useful indicator of life cycle changes.

One implication of Daniel Neff's chapter is that information on expenditure and subjective well-being may be insufficient to capture some types of adaptation – most notably, resignation to fate. The disadvantaged and deprived may lose hope and even come to mistakenly believe they are unable to escape their plight (effectively trapping them in poverty) without learning to become satisfied with their lot in life. While this type of adaptation is overlooked by subjective well-being measures, it does show up in qualitative analyses of life histories and case studies (as Neff's chapter demonstrates), which are particularly suitable for studying adaptable livelihood strategies.

5.3. Adaptation vis-à-vis key issues

Two additional case studies explore adaptation in relation to disability, on the one hand, and migration, social class and gender, on the other. The first draws on evidence from Ethiopia, while the latter revisits India.

Disability is an important welfare concern – particularly in developing countries, where relatively large numbers of people are typically disabled in one way or another and lack access to social protection. In Chapter 7, Marcel Fafchamps and Bereket Kebede contribute to the meagre number of studies that focus on the impact of disability in poor countries. Using cross-section data collected from rural parts of Ethiopia in 2004, they analyse how disability affects the subjective well-being of people and whether households with disabled members adapt over varying periods of time. The subjective well-being of male and female spouses in households is measured by two questions. The first question asks, given their overall condition, whether households are ‘very happy’, ‘pretty happy’ or ‘not too happy’. The second question asks respondents where they place themselves in a zero to ten scale – visualised as rungs of a ladder – zero representing the worst and ten the best possible life. Responses to these questions are compared with perceptions of material welfare in the form of absolute and relative wealth rankings. The empirical results stand in stark contrast to notions of hedonic adaptation found in the psychology literature. While there are weak signs of adaptation with respect to some forms of disability (loss of hearing, eyesight), on the whole disability is

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30 The World Health Organisation estimates that more than one billion people (around 15 percent of the world’s population) live with some form of disability (WHO, 2011). Disability disproportionately affects people in developing countries with 18 percent of adults in lower income countries qualifying as disabled (ibid., pp. 26-28). John Iliffe’s (1987) remarkable history of African poverty graphically captures the links between disability and destitution over the centuries in some of the poorest countries in the world.
associated with lower subjective well-being, irrespective of the amount of time that has elapsed since the onset of disability (a result that contradicts hedonic adaptation and notions of resignation). The empirical results also suggest that disability is associated with significantly lower material welfare. In fact, in an economy that relies heavily on physical labour and has no social protection, it is shown that this lower material welfare is the main mechanism through which disability reduces subjective well-being.

It is worth noting that the disability result for Ethiopia ties in with Abigail Barr’s and David Clark’s analysis of health in South Africa (Chapter 5). Both studies suggest that the available evidence does not support the idea that people adapt to ill-health and disability, although both chapters concede that more work needs to be done to verify these results. In the case of South Africa, Barr and Clark found that people tend to appreciate the value of health more when they are surrounded by those who suffer from ill-health; similarly, in the case of Ethiopia, Marcel Fafchamps and Bereket Kebede have shown that disability is generally associated with lower subjective well-being over various time horizons. Together, these studies imply that ill-health is absolute rather than relative with respect to its impact on aspirations and subjective well-being. In stark contrast to these findings, at least one detailed study of disability in Western Europe points to partial hedonic adaptation over time (Oswald and Powdthavee, 2008).

The final chapter by Bhim Reddy and Wendy Olsen is concerned with a different type of adaptation, the economic aspects of which are sometimes emphasised in the livelihoods literature. Specifically, Reddy and Olsen combine qualitative ethnographic interviews with survey data in order to investigate migration as a complex and evolving strategy that impacts positively and negatively on the life chances of Indian migrants. According to Reddy and Olsen, adaptation to migration is firmly embedded in social relations (class, caste and gender) and takes the form of strategic changes in behaviour designed to take advantage of new circumstances and opportunities. Many of the factors driving adaptation are social or cultural, rather than purely economic, and vary across people and households. Having said this, there are also areas of resistance to change which offer forms of protection and benefit to migrants.

In many cases, migrants can actively improve their lot in life through strategic forms of adaptation and resistance. Relevant strategies include changing their occupational niche, developing new child care or child education strategies (consistent with the caretaker role of grandparents back at the village), learning new languages and skills, and using mobile phones, on the one hand, and resisting ethnic strife in urban areas, avoiding ‘harmful’ forms of debt bondage and striving to retain rural dwellings, on the other. However, their relative success is constrained by a rigid and inflexible class

31 These strategies reflect underlying values and norms, which may also be subject to adaptation. Over time, people ‘shape and develop the values intrinsic to their overall strategies’ (see Chapter 8, Section 1).
system that restricts mobility between social classes. The main exception to the general rule of strategic adaptation is that women migrant workers seem to experience ongoing patriarchal subjection and physical abuse which in turn undermines their autonomy. Thus, many opportunities for women to progress are wasted, as they typically face crippling restrictions on their education, mobility, employment opportunities and earnings (amongst other things). These findings suggest that broader social change is required to break the cycle of poverty and deprivation in India. Reddy and Olsen briefly speculate that necessary interventions are likely to include land reform, compulsory education for children, the abolition of child labour and greater equality for women.
Appendix: adaptation, livelihoods and the environment

Common conceptions of ‘adaptation’ in development studies focus on environmental change, livelihood strategies, technological innovations and institutional change. The majority of existing work consists of micro-level case studies of rural communities in Africa and Asia.

A broad definition of ‘adaptation’ in the social sciences and humanities which is capable of embracing environmental, social and economic aspects of change is provided by Barry Smit and Johanna Wandel (2006):

Adaptation in the context of human dimensions of global change usually refers to a process, action or outcome in a system (household, community, group, sector, region, country) in order for the system to better cope with, manage or adjust to some changing condition, stress, hazard, risk or opportunity (p. 282).

Many different concepts of adaptation can be identified in this literature, although most are variations on this general theme. In many cases, ‘adaptation’ is linked with the allied notions of ‘adaptive capacity’, ‘vulnerability’, ‘resilience’, ‘exposure’ and ‘sensitivity’ (see Box A.1). For a review and analysis of the environmental change literature in this area, see Janssen, Schoon, Ke and Börner (2006) and related papers found in the same journal issue.

Box A.1 Vulnerability, resilience and adaptive capacity

- Adaptation – ‘adjustment in social-ecological systems in response to actual, perceived or expected environmental changes and their impact’ (Janseen and Ostrom, 2006: 237).

- Vulnerability – ‘the state of susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt’ (Adger, 2006: 268).

- Exposure – ‘the extent to which the system is in contact with, or subject to, perturbation’ (Gallopín, 2006: 296) or external stress.

- Sensitivity – ‘...the extent to which a human or natural system can absorb impacts without suffering long term harm or other significant state change’ (Gallopín, 2006: 295*); ‘...the degree to which the system is modified or affected
by an internal or external disturbance or set of disturbances’ (Gallopín, 2006: 295).

- Resilience – ‘determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist’ (Holling, 1973: 17); social resilience is ‘the ability of groups or communities to cope with external stresses and disturbances as a result of social, political, and environmental change’ (Adger, 2000: 347).

- Adaptive capacity – ‘... is the system’s ability to adjust to a disturbance, moderate potential damage, take advantage of opportunities, and cope with the consequences of a transformation that occurs’ (Gallopín, 2006: 296); ‘... the ability of a system to evolve in order to accommodate environmental hazards or policy change and to expand the range of variability with which it can cope’ (Adger, 2006: 270).

* Gallopín appears to mistakenly attribute this definition to Adger (2006).

In development studies and practice the notion of ‘adaptation’ has itself been modified to focus on adaptable livelihood systems (see Figure A.1). Susanna Davies and Naomi Hossain (1997) explain the basic framework. Livelihood adaptation refers to ‘the dynamic process of constant changes to livelihoods which either enhance security and wealth or try to reduce vulnerability to poverty’ (p. 5). The process of livelihood adaptation can be positive (leading to greater security and sometimes more assets and wealth) or negative (leading to greater vulnerability and the loss of assets, which is irreversible in the worst cases). Livelihood systems include ex-ante risk reduction strategies, as well as ex-post survival and coping strategies. Positive forms of adaptation involve livelihood intensification (the expansion or strengthening of existing systems) and livelihood diversification (the adoption of new or more diverse strategies), while negative forms of adaptation may consist of more fundamental changes to basic subsistence (such as asset depletion, begging or prostitution) if the shock to existing livelihood systems is sufficiently severe.
Figure A.1 Vulnerability and adaptable livelihoods

Note: As livelihood systems evolve over time and there are many complex interactions between the various elements in this framework. This figure resists the practice of drawing arrows or lines denoting causal relationships between categories.


In addition to the livelihood strategies or changes in human behaviour that enable individuals and households to survive and even thrive, are the technological and institutional innovations that allow people and societies to respond to change. In particular, new agricultural technologies can increase food production, promote livelihood diversification and reduce vulnerability to socio-economic shocks and stresses (e.g. FAO, 2004) as well as address climate change (e.g. Lybertt and Sumner, 2010). Similarly, institutional change at the local, regional and global level has the potential to transform livelihood systems in a variety of ways. The removal of oppressive regimes, the dismantling of trade barriers, the growth of a functioning democracy and free media, the establishment of public work or welfare programmes, the abolition of laws and practices that discriminate against women and minorities, the rise of social networks (which provide information and support), the formalisation of microfinance arrangements...
and the development of insurance markets have all had profound impacts on livelihoods of the poor.

Although *Adaptation, Poverty and Development* (2012) is largely concerned with other types of adaptation (relating to values, aspirations and life satisfaction), it is worth reflecting further on the ways in which human behaviour adapts to socio-economic and environmental stimuli. Some of the chapters in this book pave the way for exploring the synergies between these two disparate streams of work. For example, Chapter 6 shows how life histories influence subjective well-being, while Chapter 8 considers how strategic forms of adaptation and resistance to change (in terms of livelihood strategies) reflect underlying values, attitudes and norms which may also be subject to adaptation. More work is clearly required, however, to integrate these two streams of work and explore the corresponding insights for development theory and policy. One promising line of future research involves exploring how aspirations and livelihoods interact with (and reinforce) one another. Another line of research involves distinguishing between ‘achievable and aspired capabilities’ in order to identify and tackle ‘capability deficits’ in areas in which the aspirations of the poor are frustrated (Ibrahim, 2011).
References


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