

# Introduction

Cambridge University Press & Assessment  
978-1-108-49409-0 — Language Development  
Edited by James Law , Sheena Reilly , Cristina McKean  
Excerpt  
[More Information](#)

---

## 1

# Language Development

## Individual Differences in a Social Context

James Law, Sheena Reilly and Cristina McKean

Children's language development has for centuries been a source of fascination to those with an interest in what it is to be human. Like many other phenomena, it emerges so naturally we often take it for granted. Yet it has attracted attention from such a wide range of commentators and such a broad range of disciplines that it is sometimes difficult to recognise that they are referring to the same construct.

Clearly, there are some universal biological characteristics that we all share, as outlined in the 1960s in Lenneberg's *Biological Foundations of Language* (Lenneberg, 1967), a story which did so much to underpin our understanding of cognitive and psycholinguistic aspects of language development. Yet many see language development as the product of a variety of different mechanisms. For example, we have a neural theory of language represented in Jerome Feldman's *From Molecule to Metaphor* (Feldman, 2008) which brings together biology, computer science, linguistics and psychology to describe the mechanisms through which language emerges from the substance of the brain through multiple biological, cognitive and linguistic levels to become the powerful tool that it is. Yet a functional approach (such as that proposed by Tomasello, 2019) would suggest that there is nothing inherently special about language. Rather it is the product of general cognitive processes and mechanisms. Language development is thus simply an aspect of the evolution of general intelligence, and the critical word here is *evolution*.

Normal human ontogeny thus requires both the maturation of species specific cognitive and social capacities and also individual experience in such things as collaborative and communicative interactions with others, structured by cultural artefacts such as linguistic conventions and social norms.

(p. 7)

But, for others, it is not the language that follows cognitive development but the other way round. The human brain has evolved much more slowly than have the languages themselves and it is the languages in the child's environment that shape the way that they think. As Terence Deacon puts it in *The Symbolic Species*:

Children's minds need not innately embody language structures if languages embody the predispositions of the children's minds ...  
Languages are social and cultural entities that have evolved with respect to the forces of selection imposed by human users.

(Deacon, 1997, pp. 109–110)

and it is the symbolic nature of the needs of those human users which is key to understanding how language arose (Deacon, 1997). It is also this symbolic element which is central to our understanding of how concepts are transmitted. While it is likely, for example, that social learning, or indeed walking, does not involve intentional teaching, a great many of the symbolic systems used by humans, for example literacy and mathematics, do need to be actively taught (Jablonka & Lamb, 2014). Oral language falls somewhere between the two; it has an instinctual element, like social learning, but is always shaped by the environment in which they grow up. The key is that language is a bridge between these instinctual and learned systems and it is language that translates these functions into symbolic systems.

Yet for others the study of language goes much further than the distinction between the internal and the external, between competence and performance, between *langue* and *parole*. Rather it needs to be seen in a sociohistorical and political context and within the social conditions of communication as laid out in Bourdieu's book *Language and Symbolic Power*, in which he maintains that language is always a function of social context or what he terms 'markets' which in turn are endowed with certain values. Indeed, he uses the term *linguistic capital* as something that is acquired but in the context of a society that especially values that capital:

the major classes of modes of expression correspond to the classes of modes of acquisition, that is, to different forms of the combination of the two principal factors of production of legitimate competence, namely the family and the educational system.

(Bourdieu, 1991, p. 62)

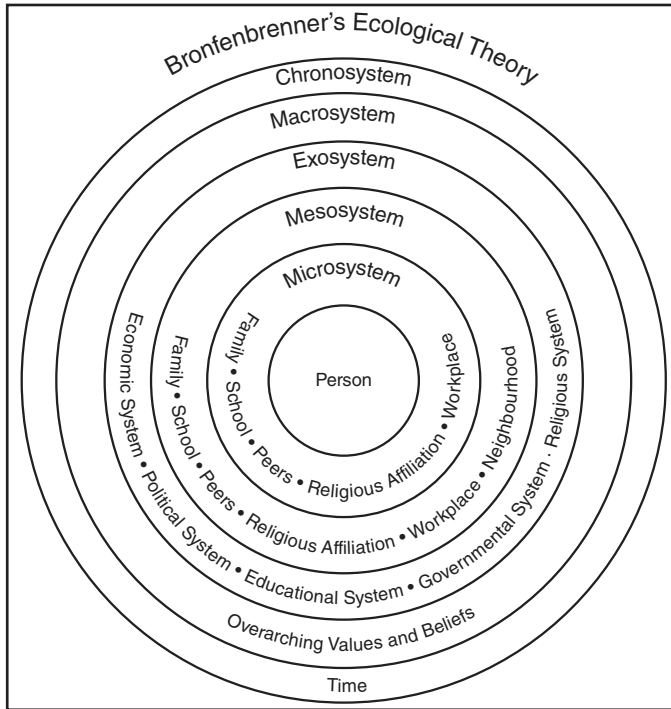
Thus, there is a history of very different approaches to the same phenomena and this is mirrored in the approaches to research questions adopted by investigators. Key to this is an epistemological question of what we consider to be evidence both about the typical language acquisition process and about how we account for social variations in those patterns of language acquisition, whether multilingualism, deafness, extreme deprivation or simply variation in the nature of experience and exposure: questions that theorists sometimes overlook. Equally, studies vary in their design, some

relying on a handful of cases, perhaps the author's own children, describing language skills and intuiting about the structure of the language used. Others take their data from groups of children with distinct profiles, such as those with multilingual backgrounds or clinical cases of children with identifiable language learning difficulties relative to peers. Still others draw on observational data from large-scale representative samples of children who are often followed over time.

In this book many of the contributors focus on the last of these three because we consider that these large population studies are likely to capture more accurately the general and replicable nature of the relationship between the child's environment, the way that they interact with their cognitive development and the nature of individual differences across children in these relationships. One of the great advantages of many of these studies is that children are assessed at a number of different time points across childhood, making it possible to capture both changing patterns of development and the way that these patterns interact across domains of child development, but also how they respond to different factors in the child's environment. It is not, of course, that these relationships are necessarily causal. It is impossible to establish causality without some sort of experimental manipulation. But they do point to mechanisms, many of which have the potential to be modifiable in later interventions. Thus, observational studies can set up the hypotheses which can be causally tested in controlled intervention studies, although, of course, this is not always possible if the observed predictor is not modifiable (for example, familial history of language disorder or the child's sex).

This makes it possible to examine the social context in which language develops, which is the focus of this book, within the framework that is often described as Bronfenbrenner's bioecological theory of human development (see Figure 1.1; Bronfenbrenner, 1979), long recognised and often cited in developmental psychology. The key issue here is that the individual and their competencies, temperament, etc. are in the centre with a range of different strata affecting their development from the family and peers (the micro system), to the school (the mesosystem), society (the exosystem) and shared belief systems (the macrosystem). And finally, although conceptually rather different from the concentric circles, is the concept of these relationships playing out over time (the chronosystem) (Bronfenbrenner, 2005). At the centre is the child's biological endowment which predisposes them to respond to these external factors in different ways.

It is important to stress, of course, that this model encompasses all aspects of child development. Bronfenbrenner himself had no particular interest in the language or communication development of children, but he was expressly concerned with the way that different societal elements interact with one another and shape the child's development and well-being and it is this link with well-being that is the key to understanding a child's emerging communication skills (Law et al., 2017). Many of the chapters in this book reference Bronfenbrenner's work or draw on authors who do so.



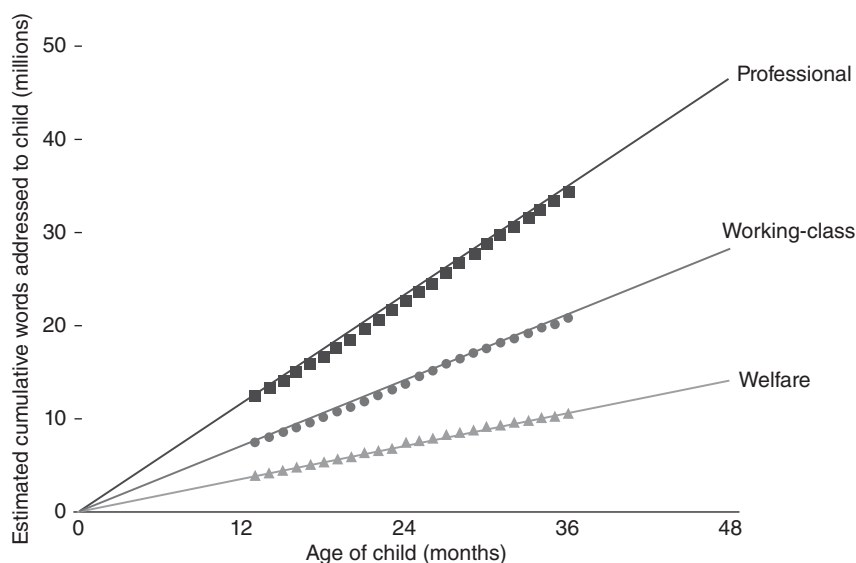
**Figure 1.1** The bioecological model  
 (Bronfenbrenner, 1979)

This book is about the way that individual differences in the child's language development interact with their social environment to shape their subsequent development. It is important to understand the different aspects of language development and the way they interact with one another, but equally it is essential to understand how a child's individual experiences shape that development. The book focuses on language development as a whole but pays particular attention to the way that external factors play a part in steering the development of those with language skills, especially those with skills at the lower end of the language distribution, namely children with *developmental language disorders*.

We start with a number of broad empirical findings about the individual differences in children's language development which underpin much of the writing in this book.

## Finding 1: Not All Children Learn Languages at the Same Rate

In the most commonly cited study describing the relationship between how parents speak to their children and the level of their children's subsequent language development, Hart and Risley (1995) recorded in detail and on a



**Figure 1.2** Amount of language (in words spoken to children from different social groups) (Hart & Risley, 1995)

very regular basis the way that 42 parents from different social groups in the USA talked to their children between 10 and 30 months of age. Specifically, they studied the relationship between the amount of input that such children receive and their language development at 3 years. The cumulative language experience, measured in terms of the number of words heard, of children from three groups (professional, working-class and 'welfare' families) is summarised in Figure 1.2.

In this study the number of words directed towards a child over a given year ranged from 11 million in the 'professional' families to 3 million in a 'welfare' family. This pattern was reflected in parenting style and in the amount of encouraging feedback that the children had experienced, and also in the non-verbal IQ and tested vocabulary scores that they achieved. Hart and Risley concluded:

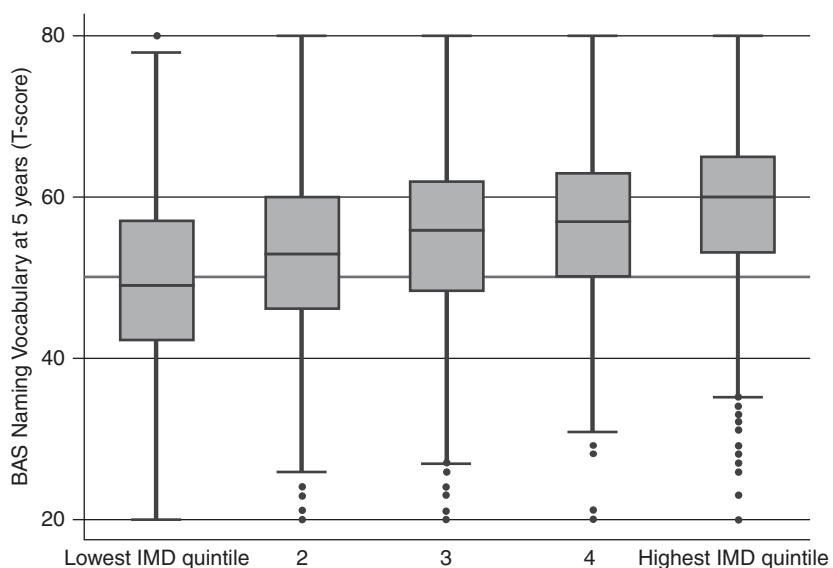
The social distinctions between professional and working class have increased. In our small sample of American families we saw virtually all the professional families preparing their children for symbolic problem solving from the very beginning of their child's lives. We saw them devoting time and effort to giving their children experience with the language diversity and symbolic emphasis needed for manipulating symbols; we saw them using responsive and gentle guidance to encourage problem solving; we saw them providing frequent affirmative feedback to build the confidence and motivation required for sustained independent effort. We saw how strongly related the amount of such experience was to the accomplishments of children from working-class

families. But we saw only one third of the working-class families and none of the welfare families similarly preparing their children.

*(Hart & Risley, 1995, p. 204)*

This ‘gap’ in words heard over a year in the Hart and Risley study has been extrapolated with estimates of a ‘30 million word gap’ over the first 3 years of life between high- and low-income families finding significant traction amongst charitable and lobbying organisations. For example, it has featured as one of the pledges of the Clinton Foundation (Clinton, 2013).

These claims are not without controversy, and the Hart and Risley study has received significant and legitimate criticisms. Here, and in this volume as a whole, we argue that to really address the question of these sorts of differences it is necessary to use large representative population samples because this makes generalisation of the findings more convincing. For example, in Figure 1.3 we see expressive vocabulary at 5 years plotted for five sociodemographic quintiles in the 18,000 children of the UK’s Millennium Cohort Study. At one level the picture is similar. Across the five, rather than the three groups used in Hart and Risley, we see significant differences in the language skills of the children concerned, although note that this lacks a chronosystem dimension so it does not give the sense of whether the gaps widen (as Hart and Risley would suggest) or narrow. An important point to note is that those children with higher Index of Multiple Deprivation (IMD) scores on average tend to have lower vocabularies.



**Figure 1.3** Data from a population study illustrating the social gradient in language outcomes among 5-year-old children: naming vocabulary of 5-year-old children in the Millennium Cohort Study (MCS)  
 (Reilly et al., 2014, fig. 4)



But equally it is important to acknowledge that there are a great many children in all the groups who perform very well.

There is now broad acceptance of this social gradient for language development as there is for many other aspects of child development (Marmot, 2010; Maggi et al., 2010) and some evidence that these gaps are evident for language may not be apparent at 12 months (Brushe et al., 2020) but has emerged by 18 months of age (Brushe et al., 2021; Fernald et al., 2013). Concerns expressed about the Hart and Risley study (Fernald & Weisleder, 2015; Kuchirko, 2017) focus on both the analysis and the interpretation of their findings and specifically whether talking more to children or perhaps interacting with them more effectively is, in itself, likely to be enough to redress any imbalance (Wasik & Hindman, 2015). There have also been reservations about the sample size, especially in the more disadvantaged groups, which makes generalisation to other populations difficult. These criticisms have themselves led to a reiteration of the basic thesis that different language experiences lead to different language performance in the child (Golinkoff et al., 2019). Forty-two families is not a very large study upon which to base such dramatic claims. Concerns have been expressed about the deficit model implicit within the analysis focusing as it does on perceived ‘weaknesses’ from a very particular sociocultural standpoint rather than describing differences and strengths across differing social and cultural groups. There has been concern that large-scale public health campaigns such as those focusing on closing the gap may be based on such a small-scale and potentially ethnocentric analysis. The picture from more recent and more representative population studies, however, indicates that the gap is there and that the finding is replicated across international examples, but that it tends to be less pronounced than Hart and Risley predicted. Crucially, these differences, where they do exist, have already opened up well before the start of compulsory schooling.

Understanding the mechanisms that contribute to this ‘gap’, the topic of many of the chapters in this book, should lead to more appropriate approaches to reducing inequalities, a goal seen as desirable for reasons of social justice for policy makers and commentators from more left-leaning or liberal traditions. The premium associated with good communication skills is likely, therefore, to become increasingly salient. The more sophisticated, the better educated and the more automated, or digitalised, the society becomes, the greater the shift from blue-collar manual employment towards white-collar ‘communication-focused’ jobs, something which creates particular challenges for the less advantaged, particularly in times of economic downturn. Young people are, by definition, ‘less advantaged’ in the job market because they are less likely than older workers to have skills or experience, and are thus more vulnerable to economic exigencies (Foundation for Young Australians, 2011). This makes it difficult for a young person with poor language and communication abilities and/or any sort of communication disability to break into and progress within the job

market (Ruben, 2000). As Ruben observes, following this ‘shift from brawn to brain’, a young person with a communication difficulty has become more vulnerable than one with a physical disability:

During most of human history a person with a communication disorder was not thought of as ‘disabled’. The shepherds, seamstresses, plowmen, and spinners of the past did not require optimal communication skills to be productive members of their society, as they primarily depended on their manual abilities. Today a fine high-school athlete – a great ‘physical specimen’ – who has no job and suffers from poor communication skills is not unemployed, but, for the most part, unemployable. On the other hand, a paraplegic in a wheelchair with good communication skills [and he could have added modern prosthetics and AI-driven aids] can earn a good living and add to the wealth of the society. For now and into the 21st century, the paraplegic is more ‘fit’ than the athlete with communication deficits.

(p. 243)

Acknowledgement of the significance of communicative competence is also reflected in the Industry Skills Council (Australia) report *No More Excuses* (2011), in which Australian Federal Member of Parliament John Dawkins states:

There is undeniable evidence to demonstrate that poor communication skills adversely affect productivity in the workplace and productivity suffers, as does our global competitiveness.

(p. 3)

However, its salience has also increased for those with a more neo-liberal agenda when issues of employability and the needs of the future workforce are considered. It is becoming increasingly clear that the symbolic skills underpinning oral language skills, what Hart and Risley call *symbolic problem solving*, are the skills that set young people up for achievement in school and for movement into the increasingly ‘white-collar’ workforce in the third industrial revolution, and will only become more important as societies move to a ‘no-collar workforce’ in what has come to be called by some the fourth industrial revolution (Schwab, 2015).

Of course, there is a risk in being too instrumental here. It is not all about employment. But, as Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, has suggested, the pattern for the fourth industrial revolution will change the dynamic again as connectivity becomes the driving force for society and the ability to exploit the new technologies in order to remain linked to others is key to successful interaction in the home as in the workplace. Like previous industrial revolutions, this one has the potential to exacerbate considerable inequality as working patterns shift, and the place of individuals with limited language and communication abilities in this revolution is particularly vulnerable.