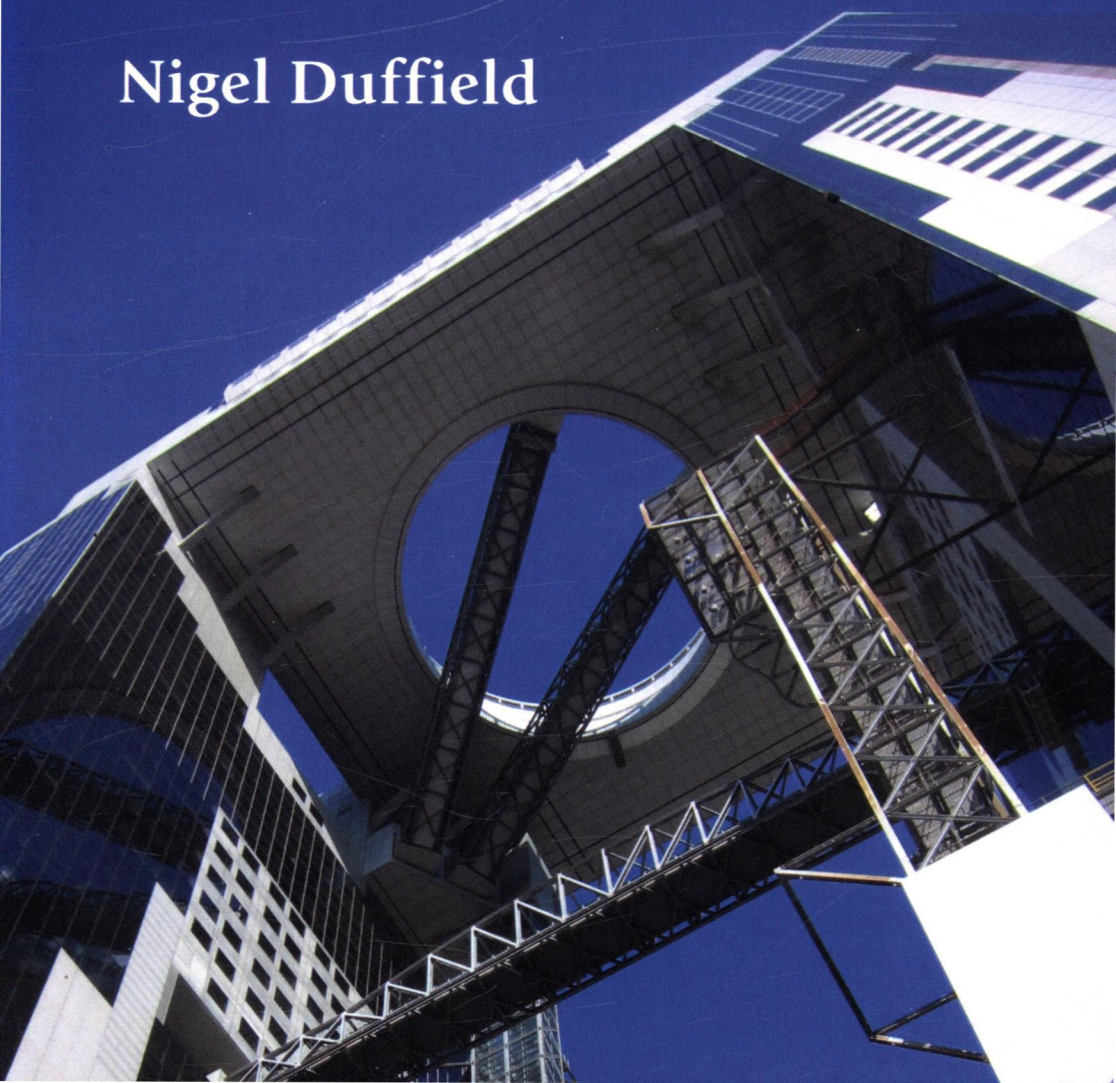


Reflections on Psycholinguistic Theories

Raiding the Inarticulate

Nigel Duffield



'This book is unique. Other books discuss the relationship between formal and experimental linguistics. This book does so through the lens of music, poetry and personal experiences. This melding of art, personal experience and science makes the book an excellent read and a great learning experience.'

Natasha Warner, University of Arizona

In a work that is part memoir, part monograph, Nigel Duffield offers a set of lyrical reflections on theories of psycholinguistics, which is concerned with how speakers use the languages they control, as well as with how such control is acquired in the first place. Written for professionals and enthusiastic amateurs alike, this book offers a 'well-tempered' examination of the conceptual and empirical foundations of the field.

In developing his ideas, the author draws on thirty years of direct professional experience of psycholinguistic theory and practice, across various sub-disciplines (including theoretical linguistics, cognitive psychology, philosophy and philology). The author's personal experience as a language learner and as the father of three bilingual children also plays a crucial role in shaping the discussion. Using examples from popular literature, song, poetry and comedy, the work examines many of the foundational questions that divide researchers from different intellectual traditions: these include the nature of 'linguistic competence', the arbitrariness of language and the theoretical implications of variation between speakers and across languages.

NIGEL DUFFIELD received his university education in language and linguistics in England (Cambridge and London) and the USA (Los Angeles). A professor of English and Linguistics at Konan University (Kobe, Japan) since 2012, he has held previous positions in Germany, Canada, The Netherlands and England. His unique perspective on psycholinguistics is informed by his interactions with psycholinguists over a wide theoretical spectrum.

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*So here I am, in the middle way, having had twenty years –
Twenty years largely wasted, the years of l'entre deux guerres –
Trying to learn to use words, and every attempt
Is a wholly new start, and a different kind of failure
Because one has only learnt to get the better of words
For the thing one no longer has to say, or the way in which
One is no longer disposed to say it. And so each venture
Is a new beginning, a raid on the inarticulate,
With shabby equipment always deteriorating
In the general mess of imprecision of feeling,
Undisciplined squads of emotion.*

T. S. Eliot, 'East Coker' (*Four Quartets*, 1943)

There seem to be only two kinds of people: those who think that metaphors are facts, and those who know that they are not facts. Those who know they are not facts are what we call 'atheists', and those who think they are facts are 'religious'. Which group really gets the message?

Joseph Campbell, *Thou Art That: Transforming Religious Metaphor* (2013)

Introduction

In 2011, I was commissioned by a different publisher to produce an undergraduate introduction to psycholinguistics. The brief was to write a textbook that would cover the two main sub-fields of the discipline: EXPERIMENTAL PSYCHOLINGUISTICS – also known as language processing – which is concerned with how speakers understand and produce the languages they control, and DEVELOPMENTAL PSYCHOLINGUISTICS (language acquisition), which focuses on how such control is acquired in the first place. Although there are a number of excellent books available on one or other of these topics – Warren (2013), for example, provides a competent introduction to language processing, while Saxton (2010) offers a balanced and engaging discussion of many aspects of first language acquisition – there is currently no book that does dual service, so the commissioned title would have filled an awkward gap in the textbook market.

The gap remains, however, for this is not that book. It is not a conventional introduction to the field, inasmuch as it critically examines foundational issues in psycholinguistics, and sketches some (partially original) solutions to larger theoretical questions. Nor is it, especially, a survey of psycholinguistic research: I only discuss a handful of the hundreds of experimental studies that are relevant to the issues outlined here, postponing substantive discussion of experimental data to another volume.¹ It's probably not an undergraduate textbook either: whilst I hope that linguistics students will enjoy reading it, the book is unlikely to be assigned as a course text, since it's light on tested facts – an essential commodity of most undergraduate courses – and there are no graded exercises.

Even before the manuscript was halfway complete, it was clear to me (and to the original publisher) that this ugly duckling of a text was not going to walk or talk like a duck. Belatedly cut loose from my original contract, I was able to write unhampered by the need to provide an objective or comprehensive survey of contemporary psycholinguistics. What has emerged instead is a set of personal reflections on psycholinguistic theories; more generally, on the relationship between languages and the speakers who know and use them.

Several people have asked who this book is written for. The answer is simple: I wrote it for myself, in the first instance, to help me to make some sense of the theoretical issues and professional controversies that have engaged my attention for more than twenty years (*twenty years largely wasted*). To raid the inarticulate. As a reviewer of an earlier draft manuscript pointed out, everyone has their own way of making sense of their personal and professional lives: my way – like the protagonist in Nick Hornby's 1995 novel *High Fidelity* – is through popular music, also poetry, literature and verbal comedy. This book is an attempt to examine the foundations of psycholinguistics by these means.

So I didn't write it with a particular academic audience in mind. Still, I hope it will be of interest to anyone, from the lay reader to the less ideological of my professional friends and colleagues, who shares my passion for languages and love of literature, and who has some appreciation of irony.

Admittedly, some sections will be tough going for the former group. The book might be non-technical and is relatively free of jargon, but it is not 'dumbed down'; on the contrary, this is as intelligent a work as I am capable of writing. It would have been far easier to write a more difficult book. Conversely, the experts who read this will need to approach the arguments presented here in the same ecumenical spirit that I have tried to embrace, in setting them down. There are more inconsistencies and loose ends than would normally be permitted in a more conventional academic monograph: that, I suppose, is the fair price of being interesting. In the final analysis, this is a diversion, not a manifesto.

I am extremely grateful to Helen Barton, my commissioning editor at Cambridge University Press, and to the manuscript reviewers, for sharing my confidence in the feasibility of such an unlikely project. Scores of other people have helped me to bring the work this far: their contributions are acknowledged at the end of the book. See Acknowledgments, credits and permissions.

To set matters in context, I can do no better than to quote from one of the pre-eminent linguists of the modern period, Hermann Paul. In 1886, Paul published the second edition of his seminal work *Principien der Sprachgeschichte*. In the Preface (*Vorwort*), he wrote:

Auch diese zweite auflage wird vor den augen mancher fachgenossen nicht mehr gnade finden als die erste. Die einen werden sie zu allgemein, die anderen zu elementar finden. Manche werden etwas geistreicheres wünschen. Ich erkläre ein für allemal, dass ich nur für diejenigen schreibe, die mit mir der überzeugung sind, dass die wissenschaft nicht vorwärts gebracht wird durch complicierte hypothesen, mögen sie mit noch so viel geist und scharfsinn ausgeklügelt sein, sondern durch einfache grundgedanken, die an sich evident sind, die aber erst fruchtbar werden, wenn sie zu klarem bewusstsein gebracht und mit strenger consequenz durchgeführt werden.²

This second edition will find no more favour in the eyes of many professional colleagues than did the first. Some will find it too general, others too elementary. Some will wish for something more intellectually rigorous. I declare once and for all that I only write for those who share my conviction: that science is not advanced by complicated hypotheses – no matter the intellect or incisiveness of the minds that produced them – but rather by simple basic ideas, which are rather trivial in themselves, but which yield insight once they are clearly articulated, and consistently followed through [original: mit strenger consequenz].

Hermann Paul, *Principien der Sprachgeschichte* (1880: ix)

[M]it strenger consequenz. Not being German, I might have some issues with *streng[e] Konsequenz*, but otherwise, Paul's remarks just about cover it, 130 years on. This book is written for serious amateurs – in the etymologically faithful sense of the word – and for light-hearted professionals like myself, not for ideologues or theoretical purists. To those, like Leon Jaworski, that 'would rather have a competent extremist than an incompetent moderate', I'd point out that there are other logical possibilities, that sometimes one learns more by sitting on the fence than sniping over it.³

No-one likes to lose friends, however. In addition to Paul's predictions, I well foresee that some colleagues will interpret this book as an attack on Chomskyan linguistics; hence – given that I have been a card-carrying generativist for more than 25 years – as some kind of betrayal. If it is so construed, then I will have failed in one of my goals in Part I, namely, to articulate the difference between a 'Level 1 theory' of grammar on the one hand, and a viable theory of psycholinguistics, one that appropriately captures the rich imperfections of our knowledge of languages, on the other. Any regard that I may have as a theoretician for the austere simplicity of Minimalist theory is more than offset by my deep suspicion and antipathy – as a parent, as a human being, as a sentient organism – towards something as unnatural and biologically implausible as invariant perfection. We are, at every level of our being, from the genetic to the metaphysical, confused and contradictory, full of redundancies in some areas, gross inadequacies in others; we are shaped by our material circumstances, by our interactions with others, by our deficiencies.

*There's a divinity that shapes our ends
Rough-hew them how we will.*

William Shakespeare, *Hamlet* (5.2.10–11)

Throughout the history of philosophy and religion – those 'B-class cell-mates' of the Library of Congress Classification (LCC) – people have found different ways of interpreting these famous lines from *Hamlet*. To the more religious or spiritual, divinity means just that: a divine spirit. To some atheists, especially those unduly impressed by biological determinism, what 'shapes our ends'

more than the vagaries of experience is the genetics of our ‘initial state’: UG, as Chomskyans would have it. But divinity can just as profitably be understood in terms of our personal histories, the incremental sum of our prior interactions. It could even be claimed that it is the apprehension of these histories – more than general consciousness or the faculty of language – which distinguishes us from other animals. Whether or not that is the case, I am convinced that all of this rich imperfection is reflected in our knowledge and use of languages, and that an appropriate theory of psycholinguistics is one that embraces a significant chunk of that flawed estate. Echoing Hermann Paul, I write for those who share this conviction.

For what it is worth, even though I ultimately reject UG as an explanatory concept in language acquisition, and am sceptical of its relevance to theories of language processing, I subscribe to a considerably stronger and more substantive form of Universal Grammar than most current Chomskyans would be comfortable with. My theoretical research on the grammar of Modern Irish (latterly, on the syntax of Vietnamese) leads me to endorse Chomsky’s early claim that:

[A]ll languages are cut to the same pattern.

Noam Chomsky, *Aspects of the Theory of Syntax* (1965: 30)

Or, as the thirteenth-century English philosopher Roger Bacon (1214–1294) had it:

Grammatica una et eadem est secundum substantiam in omnibus linguis, licet accidentaliter varietur.

*Grammar is in its essence one and the same in all languages, even though it differs in superficial features.*⁴

Roger Bacon, *Grammatica Graeca* ‘Greek Grammar’

What we disagree on is the evidential base. My theoretical hunch about a version of the UNIVERSAL BASE HYPOTHESIS, broadly construed,⁵ stems from a comparison of the surface properties of genetically and areally unrelated languages – properties that Chomsky once designated part of E-LANGUAGE when he still appeared interested enough in *languages*, in the popular understanding of the term, to dismiss them as objects of study. My intuition does not arise from any consideration of ‘the child’ as an idealised object, of ‘discrete infinity’, or of ‘virtual conceptual necessity’. And since this book is about the fragments of languages in our minds, and not about generativist typology, I’ll have very little to say here about the substance of any kind of Universal Grammar, abbreviated or otherwise.

I am also keenly aware of the fact that many of Chomsky's students and colleagues – some of whom I count as friends – have devoted their research careers to exploring grammatical variation within particular language families and across an extraordinarily diverse range of languages, and that the discoveries they have made in the course of these explorations have been inspired, facilitated and guided by some version of generative theory. From at least the 1980s onwards, the constant flow of MIT dissertations offering detailed analyses of the grammatical properties of almost every language family on earth gives the lie to the idea that generativist linguists (as a group) do not care about grammatical variation. However, virtually none of that work crucially depends on the deeper metatheoretical assumptions concerning innateness and the mental representation of grammar(s) that are the subject of this book, any more than the proper characterisation of String Theory depends on infants' understanding of gravity or object permanence. See Chapters 2 and 3 below.

The important thing, in science as in the law, is to respect the evidence at hand. It's no better to acquit an innocent defendant on the basis of a false alibi than it is to convict a guilty one on tainted testimony. So, even if it turned out that languages as diverse as French and Mohawk and Navajo were cut from the same grammatical cloth – see Mark Baker's excellent *Atoms of Language* (2001) for some compelling arguments in support of this idea, also Jonathan Bobaljik's *Universals of Comparative Morphology* (2012) – this wouldn't rescue UG from the charge of irrelevance when it comes to human psychology. In short, this book is not against Chomsky or Chomskyan theory, supposing it were rational to be against a theory, any more than a handbook on mediaeval architecture is against a theory of quantum mechanics. It is *for* something else.

Of course, there will also be those on the other side of the fence (and there are so many fences in linguistics) who may give this book a warmer reception, while protesting 'This is what we've been saying for years.' If your name is Joan Bybee, Peter Culicover, Hilary Putnam,[†] Stephen Levinson or Brian MacWhinney – to name only a few, on the other side of some fence or other – your complaint may be especially well-founded.⁶ To those critics, my response must be that you haven't said it loudly, clearly or entertainingly enough, or with enough empirical evidence, for most generativists to pay attention. They're not a charitable bunch, on the whole, generative linguists: some of them are downright mean. In most cases, the problem lies with the fact that you haven't used their discourse or engaged with their data. With the exception of the discussions in I is for Internalism and O is for Object of Study below – which will probably be no more congenial to mainstream psychologists than to Chomskians – I don't pretend to offer any original thesis in this book.⁷ What *is* fairly unusual about the approach taken here is its critical engagement with the kinds of grammatical phenomena that generativists care about: co-reference relations, VP-ellipsis, constraints on *wh*-movement, *that*-trace

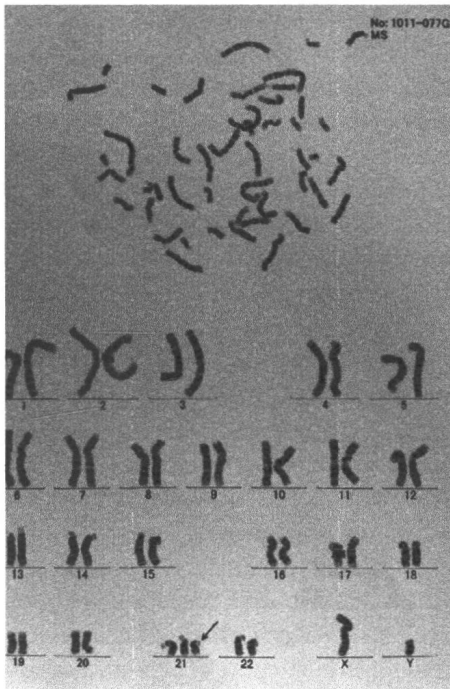


Figure 1 Austin's karyogram.

effects, discontinuous agreement, recursivity and the like. Twenty-something years of teaching generative syntax has given me a better appreciation of the empirical pressure points of grammatical argumentation than is enjoyed by many of Chomsky's opponents, and in this book, I aim to test them all – the pressure points, that is.

Before we begin properly, I need to mention the person who has taught me more about language and linguistics than I have learned in half a lifetime of research and teaching, through his *inarticulate speech of the heart*. I am not referring to my countryman Van Morrison (though several of his songs feature in this book), but to my youngest child, Austin,⁸ born on 1 November 2010.

The circumstances leading up to Austin's birth were unremarkable – at least to me, as the father of two boys already – yet the events that immediately followed his arrival, from the initial reaction of the obstetrician through the downward glances of the nursing staff, intimated that Austin was not a typical baby. Although it was ten days before we received official scientific confirmation (in the form of the karyogram in Figure 1), we knew by the next morning that our third son *had* – or, as we have now learned to say, *was a child with* – Down's Syndrome (US Down Syndrome). A different book could be written

about how our feelings changed in the first year: from shock, to acceptance, to something much more complex and altogether more joyful. That is not relevant here, other than to say that I will never again begin a lecture or a research paper on language acquisition with the dismissive words: 'Barring pathology, all children ...'

What is much more significant is that, six years on, Austin has grown into a more beautiful, healthy, communicative and unusually empathetic child than I ever could have wished for, who knows where he is, who his friends are, what he likes, what he did last week, what he wants to do tomorrow. A child with excellent metalinguistic skills, who says <adyu, ada> <'<_{than}>k you, dad'> in English and <ou, mama> <<あ、り、が、と う、 マ マ> <'thanks, mum'> in Japanese, who bows appropriately or offers his hand when he meets someone for the first time, and who just laughs at me whenever I say anything in his mother's language. My Japanese pronunciation is not so terrible – I can get by with most adults and other children of his age – but to him, it is a source of derision mingled with mild irritation.

Yet Austin *is* different from other typically developing six-year-olds in several ways, and the most striking contrasts are observable in his spoken language.

After six years of continuous language input and rich interaction, in spite of demonstrating a clear willingness to communicate, and excellent use of compensatory paralinguistic gestures, his comprehension of Japanese hardly extends beyond contexts where the utterance-meaning is obvious from the context. As for his production, this is mostly limited to proper names, a few highly frequent concrete nouns, some deictic terms, and a moderately large set of unanalysed greetings and formulaic phrases (<こんにちは、ごちそうさまでした、すみません、。、>) ... Very few utterances contain more than two or three morphemes. His production lags well behind that of a typical four-year-old Japanese child.

That's me, sadly. Given that I'm a fifty-something late learner of Japanese, it's perhaps unsurprising that my control of the language is so poor. It may be frustrating to my colleagues and is certainly personally disappointing, but it's hardly unusual. In Austin's case, on the other hand, Japanese and English are his two first languages, and his production abilities in either language (at the time of writing) are little better than is implied by the same description. This makes him special when compared to almost all children of his age, irrespective of ethnicity, gender or social experience.

It's unclear whether Austin will eventually come to understand and produce English or Japanese as his older brothers do, whether he will ever be able to express his needs and desires, aspirations and regrets – always supposing that regrets, and the counterfactual thoughts they imply, are possible without complex syntax: see F is for Functions of Language below. The range of outcomes for adults with Down's Syndrome is much wider than for typical children from

similar backgrounds: a few will graduate from university, a few may become film and television actors, some will manage their own businesses. And some will remain as dependent and socially inept as typical five-year-olds, requiring constant supervision and support throughout their lives. Most, like the rest of us, fall somewhere in between: in many cases, towards the lower end of the general population in terms of lifetime income, towards the upper end in openness, empathy and likeability.

Austin's medical prognosis is equally uncertain: even though life expectancy for people with Down's Syndrome has improved dramatically over the last forty years,⁹ the condition still brings with it markedly higher health risks than for typical children and adults, including – for those who make it to their forties or fifties – a significantly higher risk of early onset dementia.

Given all these imponderables, it's hard to be certain of much. What I am reasonably sure of, however, is who I should talk to to gain a better understanding of what's going on in Austin's mind, of how he represents and processes his fragments of Japanese and English, of how linguistically able he may be in five or ten years' time. First and foremost, I should talk to him: if I can learn to ask the right questions – and ask the questions right – I am certain that no-one can tell me more. After that, I should talk to other children in his class, then to his nursery teachers, then to specialist paediatricians. Then perhaps to other parents of children with Down's Syndrome, since – though children like Austin do not all show the same personality or behavioural traits – they are 'similar enough in their difference' that I can learn from their experience.

The only specialist it would be wholly pointless to talk to is the geneticist who analysed Austin's karyotype. There are no answers to be found there. I might as well consult an astrologer, or read tea leaves, as attempt to divine grammatical knowledge or specific cognitive abilities from a chromosomal pattern. For while it is incontrovertible that the ultimate cause of Austin's language difficulty lies in his genetic makeup – the chromosomal evidence is there towards the bottom of Figure 1, quite literally in black and white – it would be asinine to assume that this ultimate cause plays any significant role in understanding his language development, or indeed of any other aspect of his psychology.

Genetics is at once crucial and irrelevant in this case – the more so than with other acquired disorders – since what makes children with Down's Syndrome biologically distinct does not lie in the genes themselves, but in their disposition: as far as is known, it is that extra twenty-first chromosome (trisomy) that *makes all the difference in the world*, not a deletion or translocation of genetic material. Furthermore, even if a particular set of genes were somehow implicated in language acquisition, this wouldn't make genetics a relevant source of explanation of what we know about how languages are acquired and processed. *Pace* Chomsky, there is no reason to suppose that the genetic writ