

Unravelling the Threads

The Study of Language in an Era of Global Language Extinction

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What follows is the text of a talk (lightly revised and edited) presented to the Irish Association of Applied Linguistics (IRAAL) in Dublin on December 7th 2004.

The Study of Language

Behind my eyes, inside my skull, there is a piece of meat about the size of a large grapefruit or a small melon—my brain. You have one too, fortunately. Now the cells in that piece of meat are not enormously different from the cells in the calf of my leg, or, for that matter, from the cells in a piece of cabbage or in a grapefruit. Nevertheless there is something about the patterns of connectivity that hold among those cells that mean that this piece of meat is (in the standard phrase of the biologist) the single most complex object in the natural world.

The challenge of understanding how that piece of meat accomplishes its customary but extraordinary tasks is one of the great challenges of human intellectual life.

One small portion of that organ is devoted to the organization and use of language—an area just forward of and slightly above my left ear. It covers, in total, maybe one square centimetre of the cortical surface.

Understanding how that tiny area of flesh can subserve all the complex functions that we call *language* is what linguistics (of the kind at least that I am engaged in) is all about.

And that is one of the things that I meant to refer to when I offered Anne the weird and deliberately ambiguous title *Unravelling the Threads*. I meant to refer to the effort of unravelling the threads of complexity in a way that will give us some understanding of how that square centimetre of flesh does its miraculous work—one part of the even bigger effort to understand the warp and weft of our mental lives.

Viewed in this way, then, the properties and functions of this square centimetre of cortical tissue are a physical part of the natural world, as much a piece of the natural and physical world as a lemon, say, or an iceberg, or a mammal, or a tectonic plate, or a quark. And we can approach the study of language, ultimately the study of this square centimetre of brain tissue, in exactly the same way as we would approach the study of any other aspect of the natural world—the way we would study electromagnetism, or gravity, or biological evolution, or whatever.

And one temptation that we will want to resist (and which will present itself in all sorts of tricky and surreptitious forms) is the temptation to treat this phenomenon as semi-magical or as requiring special modes of explanation—different from those needed to understand other aspects of

the natural world—just because it is one of the things (on some views the thing) which makes our species special.

At the most basic level, then, what we face is a standard kind of problem in science—a very, very hard problem (one that might well be intrinsically beyond our powers to solve), but one that is not different in its essence from other kinds of problems addressed by the methods of the natural sciences.

Viewed in this way, the study of language and language-ability is one aspect of a larger effort—the effort to construct a scientific (that is, rational) understanding of human mental life. Our ignorance here is profound. We understand at present hardly anything about these matters. But there are two areas of investigation in which at least an initial toe-hold of understanding has been achieved—the area of vision and the area of language. Here, naturally enough, I'll be concerned only with language and language ability.

What I've just outlined is what you might call the biological view of language—in which the problem of understanding language ability in humans is conceived of as being of the same logical type as the problem of understanding, say, how bats use echo-location to detect their prey, or the problem of how birds manage complicated navigational calculations as they migrate. Within that broad viewpoint, one nexus of ideas has been particularly important and has been particularly fruitful in stimulating useful work—a set of ideas associated with Noam Chomsky and developed by him and a great many others in collaboration.

This set of ideas, which I will try to outline briefly in what follows, offers a way of understanding some of the most fundamental observations about natural language and (as any good theory should do) unifies and grounds those observations in a beautiful way. To get a feeling for what this theory is, and for what its relevance might be to issues of language-extinction, I want to quickly review eight fundamental truths about the nature of language and review the understanding of those observations that the theory provides.

- Human languages are intricate and open-ended (*i.e.* recursive) systems of extraordinary complexity (not one language has ever been fully described). Despite this . . .
- The development of language ability in a child takes place with extraordinary rapidity. Most children master the intricacies of several languages before they can tie their shoe-laces.
- There is a critical period effect. That is, if a child is exposed to natural language within the critical period, language growth is smooth and

effortless. If exposure takes place too late, language growth will be impaired or will not take place at all.

- Children in widely separated times and places and ‘learning’ very different languages go through a common sequence of maturational steps as language development proceeds.
- Language development takes place in the absence of explicit instruction and error-correction plays only a marginal role in the process.
- Despite an initial appearance of heterogeneity and variety, the differences among known human languages are actually rather small. There are deep and detailed commonalities of structure across languages and language families separated by large tracts of time, space and cultural distance.
- The ability to learn and use a natural language is specific to the species *homo sapiens*.
- The ability to learn and use a natural language is uniform across the species.

Every one of these claims is controversial, and we could spend the rest of the night poring over any one of them. My own assessment is that they are all well supported by the available evidence. Say this is so. How are we to understand these facts about the world? The understanding proposed in the Chomskyan mode comprises these elements:

- Human beings come to the world with a biologically determined and physically realized language faculty. That is, we are ‘language ready’—shaped by our biology to expect to encounter language around us and prepared for the encounter.
- The experience of language used in a community is what awakens the language faculty.
- The language faculty, once awakened, shapes and guides the growth of grammars in the child—grammars for all the systems she has to master as she comes to maturity in the network of communities to which she belongs.
- Hence the speed, ease and regularity of language acquisition.
- Hence the critical period effect for language, since critical period effects are characteristic of biologically driven development in general.
- This genetically determined language faculty also imposes limits on possible outcomes (there are certain imaginable systems which are not learnable and which are not possible human languages).
- Hence the commonalities of structure found across languages and language-families. Why are Hebrew, Irish and Chamorro so simi-

lar? Because they happen to have wandered, by accident, into the same regions of a very limited possibility-space.

- The faculty of language is part of human biology (ultimately). It is therefore unsurprising that it should be unique to humans (like bipedal posture) and also unsurprising that the ability to learn and to use a language should be as uniform across the species as the ability to see or the ability to learn to walk.

This set of ideas constitutes one of the most beautiful theories in all of modern science. Like any great theory, it grounds and unifies an array of seemingly disparate observations in a single set of very simple and general ideas. Exploring and fleshing out these ideas remains (in my view) the single most exciting intellectual adventure that a person interested in language and language-structure can embark on today. Further, the effort of exploring, expanding on, and questioning those ideas has resulted in an explosion of new knowledge about language and languages over the past 40 years or so. This is just what one would ask of, and hope for in, a successful theory.

Nevertheless, when confronted with this general view, many people are made unhappy. Many feel that its biological and individualistic emphasis undercuts and excludes what they see as the central, the crucial thing about the nature of language—its rootedness in community and culture, in social practice.

I've never understood this unease, this objection, myself. I see no conflict whatever between the Chomskyan view I've just outlined and the understanding of language as cultural and social practice. Now that's a topic for another day, and I don't want to linger on it here, but let me make too small observations.

First: on the view just outlined, the kind of experience which awakens the language instinct and sets it to work is the experience of language in a community. Nobody imagines that listening to tapes is going to be enough to prod that faculty into life and activity. In this, vision differs from language. For the mere physical experience of light (within the bounds of the critical period for vision) is enough to awaken the faculty of vision and bring it to life. But the corresponding triggering experience for the language faculty is the experience of living language in a community—the warm, reciprocal, and playful crosstalk (teasing, scolding, warning, joking, singing, imitating) that is the child's first experience of the languages she must master.

Secondly, there is an interesting analogy here with walking. Nobody doubts that learning to walk is a biological process under the control of a genetically-determined bio-program. It would be irrational to believe otherwise. But walking is also a social and cultural practice with important symbolic and cultural functions. We learn to walk under the watchful eyes of parents, siblings and peers, and their encouragement and guidance seems (to us and to them) to be central in our learning to walk. Further, we don't just have to learn to walk; rather we have to learn to walk in the particular way or ways that are right for the various interlocking communities that we are members of. There are men's walks and women's walks. There is a distinctive working-class Derry walk, and there is a distinctive walk for women from the midwestern states of America. No-one (as far as I've ever heard) imagines any conflict between the view of walking as a central social and cultural practice, important in our symbolic lives, and the view of walking as an ability under biological and genetic control, shaped in turn by the mechanisms of evolution. But so it also goes with language. There is no conflict, as far as I can see anyway, in any of this.

The Critical Period and its Consequences

In this larger context, I want to draw out a couple of more particular themes.

The gift of a language faculty is one of the greatest gifts we have been presented with by whatever or whoever designed us. It enables every human child to accomplish the intellectual miracle of learning at least one (more often several) systems of astounding complexity—complexity of a kind that has so far defied all scientific analysis. No scholar or scientist has any understanding of how the grammars of Chinese or Irish or English work, but young children internalize their grammars effortlessly. If placed in the right environment, those same children will furthermore internalize all three simultaneously, with ease and with grace. For thousands of years parents, uncles, and grandparents in immigrant communities around the world have watched in grateful awe as their youngest children have put this magical ability to use and have come to control with no apparent effort the new languages around them and have thereby come to act for parents and grandparents as translators, interpreters and spokespeople.

This magical ability to absorb language from the environment belongs to children and to children alone, and there comes a point when it evaporates. The window opens around the 33rd week of gestation—a point at which the auditory system has matured, the foetus is bathed in noise within the womb, and somehow has the ability to distinguish those noises that are language

from those noises that are not. The window closes around the age of 10 or 11, at the time of the onset of puberty. And then it's gone.

There is a great puzzle for evolution in this. If the ability to absorb languages is so useful to us (and it surely is), why hasn't evolution ensured that it will stay with us into adulthood? I don't think anyone knows the answer to that question (though there is some speculation), but what is clear is that that property (the existence of a critical and a limited window for the growth of some capacity) is a completely general property of biologically driven development—both physical and cognitive. It's the evolutionary price we pay, so to speak, for the gift of language as we have it.

But that in turn introduces a certain kind of fragility into the system. For it means that the window of time during which a language can be passed on intact to a new generation is relatively short—ten brief years.

And that brings us to the second theme. For so far we've been talking about unravelling threads in the sense of trying to understand how a beautiful and complex object is put together. But now we should look at a different, and less happy, understanding of the metaphor. And here we're looking not at a conscious and creative effort to understand complexity, but rather at the unravelling of the web of linguistic diversity that has been a steady feature of human life on earth for tens of thousands of years but which is disappearing in our own time.

The Unravelling of Linguistic Diversity

Probably everyone here knows what is happening. Languages are today disappearing at a rate never before seen in human history—in first world communities, in third world communities, on every continent. Small and medium-sized languages of apparent vibrancy are being swept aside and are being replaced by a handful of languages of global reach. When we talk about these matters here, we generally focus on the role of English and its apparently unstoppable march across the globe. Whether or not English will continue in this role is interesting and debatable. There is more than one sign at present that the true language of global dominance will soon be Chinese rather than English. We may well now be at the exact pivot-point of that change, and that's a struggle that is going to be interesting to watch.

But it is also, in a certain sense, unimportant. For what is clear is that the economic, political, technological and cultural forces that are driving these

transformations are not going to change or abate any time soon. With that, we're stuck.

Nor do I want to dwell here on what the consequence of these changes are—for people like me, the loss of huge masses of crucial scientific data, for the people of the world, the loss of crucial cultural and intellectual resources—histories, chants, philosophies, dirty jokes, novels, puns, prayers, operas, curses, poems, metrical schemes, songs, satires—all that rich store of stuff that has amused us and educated us and guided us over thousands of generations. The question of why all that matters has been well rehearsed in public before.

What I would like to do instead is to think a little about how understanding this larger context can change our thinking about our own experience (the Irish experience I mean), and how the Irish experience can contribute to and enliven discussion of the broader issues.

Finally, I also want to draw out some connections with the themes of the first part of the talk.

Breaking the Generational Link

How does language-extinction come about? There are probably two slightly different paths:

1. A local language can become so associated symbolically with poverty, oppression and marginalization that it becomes an object of hatred for its own speakers and is actively thrown off by them. There emerges an evil kind of cooperation between external cultural managers and prominent figures within the marginalized community (teachers, priests, politicians . . .) to eliminate use of the language and discourage its transmission. This is probably what happened in the case of Irish in the 19th century, and it has also been the fate of numerous Native American languages. (Signed languages might well have suffered a similar fate after the Milan conference, if there had been an alternative language which deaf people and deaf communities could actually use.) This is also the mechanism by which, with the eager intervention of the French state, Breton has been so reduced in recent decades.

2. Languages can also be lost through a kind of inattention, an eye-blink of inattention. It is extraordinarily easy to pass on a language to the next

generation. In the absence of external social pressures, the effort required is not to pass it on. For that very reason (and for reasons alluded to in the first part of the talk), it is very easy to take for granted that one's first language will be transmitted to children. If parents are eager to provide the benefits of some powerful and accessible language to their children, they may well deliberately choose to speak that language (Russian, Chinese, English whatever) to their children. In so doing, they will often simply take for granted that those children will still learn the local language. After all, their children are members of the community, and the local language is a community language. How then could they fail to learn that language? Parents in this situation often look around when their children are in their teens and suddenly and to their surprise recognize that their children now know only the outside (powerful) language. And they will also often come to see that, because their friends, relatives and neighbours had made similar decisions, there is a whole generation of children in the community who know little or nothing of its original language. It has become the old people's language.

And at that point it is too late. The window of opportunity has closed and a crucial intergenerational link has been broken—that link which is in one sense so robust, flexible and easily maintained, and at another level so vulnerable. For exactly because our remarkable ability to absorb language from our community implies a critical period (that is what biologically based abilities are like), that crucial intergenerational link, once broken, has been broken forever. In such situations, very complete linguistic shifts can happen with great speed; 10 years is all it takes—the length of time it takes for a generation of children to grow beyond the critical window of opportunity, and for true native ability in the community language to be forever lost to them.

I have seen this happen in a number of places in the world, and read accounts of many more.

There is something sad and ironic in the truth that it is exactly that capacity which makes it so easy to pass a language on to a following generation which also renders that link so very vulnerable.

The Irish Experience

We know something about all of this in Ireland, since we have, in official and community attempts to maintain or to 'revive' Irish, one of the earliest attempts ever to consciously organize against language decline. Because

of the acceleration of the forces which threaten global language extinction since 1922, many other communities have since had to tread the same path, often with their eyes set firmly on the Irish example.

In Ireland itself, the ‘revival movement’ is usually regarded with cynicism and taken to be a failure. This is a point of agreement which unites almost all who participate in debates about language policy and language politics; and it’s fair to say, I think, that this thread of cynicism, pessimism and anger is one of the pervasive themes of Irish cultural and political life. I am myself often taken aback by the force with which these feelings are expressed.

What lies behind all this? At one level the answer is obvious. At the beginning of the maintenance effort, there was a great deal of excessive optimism and a sense that large gains could be made relatively quickly and relatively easily. That this was so is not surprising, because there were few if any models to use as guides, and there was at that point therefore no well of knowledge and experience to draw from which could guide people in the setting of realistic goals. It was not known at that time how difficult the task would turn out to be, or how difficult it is in general to work against those forces which lead to language abandonment by a community.

But heightened expectations lead quickly and inevitably to disappointment when they are not met. And that must be part of the explanation for the fog of disillusion and cynicism that covers almost all talk of language maintenance in Ireland.

But it has always seemed to me that there was something darker and less rational at play here as well. When you listen to a young man or a young woman speak with a kind of defiant and furious pride about how little Irish they know after years of schooling, you know that the language is acting as a symbolic lightning rod for feelings that will never attach to more routine subjects like geometry, chemistry or French. Some of this anger and sourness clearly grows out of a distaste for the authoritarian and parochial turn of mind with which language activism in Ireland has been, fairly or unfairly, associated (witness Hugo Hamilton’s chilling memoir *The Speckled People* for instance). But it is equally clear, I think, that such feelings grow and flourish in the long, long, long postcolonial shadow.

Whatever its source, the theme of failure is strong and constant in almost all discussions of Irish in Ireland.

When you take a longer and colder view, however, and look at the matter more soberly, what you find, I think, is that the effort to maintain

Irish emerges as one of the more successful efforts so far in the business of language-revival. It is in fact the single most successful instance of language revival or maintenance known to me (the very strange and complex case of Hebrew set aside for the moment). What is un-paralleled in the Irish situation is not what has happened in Gaeltacht communities, but rather the creation of a large, active, creative and energetic second language community, a community now many times larger than the traditional Gaeltacht. The social and cultural trappings of that community are varied and interesting (in music, literature, journalism, broadcasting, humour . . .) and being part of it is a lively and interesting business. I know of no parallels to this situation anywhere else in the world.

In the face of that truth, it is really important not to give in to easy optimism. All communities of Irish speakers face great difficulties, and it is rational to take the bleak view that the Irish experience reveals nothing except what the limits of the possible are in the area of language maintenance. Nevertheless, what has been achieved is real enough and it deserves to be celebrated and thought about carefully. When we think it through, there are a number of questions we can ask.

How was it done? Clearly, it was a community (rather than an official) achievement. The crucial actors have been parents and teachers, and among the crucial institutions have been the *Gaelscoileanna* and the *coláistí samhraidh*. More often than not, whatever was achieved was achieved in spite of, rather than thanks to, the efforts of the state (whose actions have often been shameful—as in the closing of the Coláistí Ullmhúcháin, the resistance to parents' groups trying to set up Irish-medium schools, or the inexplicable failure to provide public services in Irish to Gaeltacht communities). Maybe the most important single part of the community effort has been the epic feats of hospitality performed by Gaeltacht communities, as they open their houses, schools and communities to students from outside the community each summer—efforts that were perhaps self-sacrificial in that the influx of thousands of English speakers stretched already fragile linguistic communities to the limits of tolerance.

Does it matter that we recognize this achievement for what it is? Well, perhaps that realization might help dissipate the corrosive smell of defeatism and negativity that continues to envelope the maintenance effort and which distorts almost all public discussion of the issues (already hopelessly distorted, in my opinion, by the postcolonial legacy).

Perhaps also, there are things to learn, in thinking about the Irish experience, about what successful language maintenance efforts might look like.

There is a great range of language-varieties called 'Irish' in use in the 'second-language' community. There are people like me who work hard at speaking some close approximation of traditional Gaeltacht Irish, and there are many people who speak (fluently and carelessly) new urban calques, heavily influenced by English in every way. For the communities of children growing up around Irish-medium schools in urban centres it may be right to speak of pidginization and creolization (along with a lot of clever inter-language play like the recent 'cad-ever'). Many teenagers are thoroughly bidialectal, switching easily from the version of Gaeltacht Irish they have from their parents to the new urban varieties in use among their peers.

It will be interesting to see what happens to these varieties in the sad event that traditional Gaeltacht Irish should become a memory. One thing, though, that is completely clear is that these new linguistic communities are not going to fade away just because the Gaeltacht fades away.

And maybe that is what a half-successful language maintenance effort has to look like (maybe that is the best that can be hoped for). It seems to be very difficult in general to work against the historical processes that lead to language-shift. But what the Irish experience teaches us is that it is far from impossible to create a new community of second-language users with all the usual and lively public trappings of a language community (literature, music, radio, TV, journalism, schools, drama, politics, comedy). Of course what is 'maintained' or 'revived' in this process, is very different indeed from the language which was the original focus of revivalist efforts. But in this context, as in most, purism is surely misplaced. For you probably cannot 'revive' a seriously weakened language without in the very process transforming it in deep and unexpected ways, and the processes of pidginization and creolization will inevitably play a role in forging new languages and new versions of old languages. We need not be alarmed or put off by these developments, for, if current research is on the right track, creolization is a true and bare reflection of the human language faculty, and is therefore the furnace in which new languages will be formed.