VIEW[z]

VIENNA ENGLISH WORKING PAPERS

VOLUME 5   NUMBERS 1&2   DECEMBER, 1996

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LETTER FROM THE EDITORS

After a whole year of silence (don't ask ...), we are happy to assure that we haven't run out of VIEWS! On the contrary, as you can see from the table of contents, this double number mainly consists of Viennese contributions, thus attesting - so we hope - that the long break has given us the time to express our own VIEWS.

We have tried to realise in this volume our recently (re-)established open editing policy (see VIEWS 4(2): 73-5) so as to turn VIEWS increasingly into an open discussion forum on all linguistic matters and for all linguists who feel a need to talk to and learn from each other across sub-disciplinary boundaries.

In this sense, the present volume contains contributions to the range of linguistic enquiry represented at our department, spanning from the various research questions in historical linguistics to sociolinguistics, applied linguistics and, finally, also semantics. While these contributions are thus completely diverse in subject matter, they all share the same purpose. In contrast to 'polished papers' of the traditional type, they are not written to present fully-fledged theoretical arguments, but to engage in linguistic argumentation. This they try to accomplish by being reactive in response to previous contributions (Roger Lass and Herbert Schendl) as well as proactive by presenting new ideas (Arthur Mettinger, Nikolaus Ritt, Herbert Schendl, Barbara Seidlhofer) and thus inviting further comments, which we hope to get from you in abundance.

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The Editors

Of emes and memes: on the trail of the wild replicator

Roger Lass, Cape Town

> ... it is the holist who sees and understands the dimensions of the problem and it is the reductionist who in the long run will produce the most satisfying explanations.
>
> (Bonner 1980: 8).

1.

In the spirit very properly suggested by the editors in the front matter of *VIEWS* 4/2 (1995), this is not a 'paper' but (I hope) a 'contribution'. At least it isn't a finished piece of work, but a set of somewhat disorderly reflections provoked by Nikolaus Ritt's contribution to *VIEWS* 4/1 (1995). What Ritt attempts to do in this paper is important, timely, and, as a pioneering venture, pardonably not entirely successful. But I think the programme he suggests is so important and challenging that it ought to be challenged in the hope of clarifying those places where there is unclarity, and unpacking some potential conceptual ambiguities.

Ritt attempts to give some explicit substance, in the specific context of linguistics, to Richard Dawkins' rather fuzzy notion of 'meme' (1976). A meme is a subclass of the class 'replicator' (see §2), specifically a non-DNA member (§3: but as Ritt argues, not for all that necessarily nonphysically underwritten). Memes (for some problems see §3 below) are things like words, phonemes, symphonies, ideas ... in fact all or nearly all of the inhabitants of Popper's World 3 (Popper & Eccles 1977). Ritt considers the limiting case of phonemes as potential replicators, and tries to define what they might be if looked at in this way.

2.

A replicator (Dawkins 1989: 293) is 'anything in the universe of which copies are made'. That is, replicators are the underlying engines of all Darwinian systems. Perhaps this term needs further definition: a Darwinian system (or a

'Darwin machine': Plotkin 1994) is a system (of any kind, in any medium) that has the following properties:

(i)   It contains replicators: some kind of objects which are copied;
(ii) Copying is potentially imperfect: i.e. a Darwinian system requires a source of variants (copying errors), or else it will simply be eternal stasis and no history, template matching forever.
(iii) There is post-replication selection or editing: some kind of bias or selective pressure that gives some of the variants generated by (ii) better chances of survival than others.

A proper Darwinian system (whether language can be construed in this way is arguable, but I think it can, as does Ritt in a perhaps somewhat different way: see below) is parsimonious, in the sense that it is radically selectionist; as Plotkin (1994: 166) puts it,

> selectionism involves an overproliferation of entities, the generation of which is un-connected with the organism's needs at the time ... a small number of them are con-served after they have been tested against the organism's requirements, and these are then mixed with other variants at the next stage of proliferation ...

The crucial property of selectionist systems is that they are future-blind, non-prescient; no variation is ever produced 'for' any present purpose (i.e. they are not instructionist, teleological or Lamarckian: present 'needs' cannot pro-duce altered characters that become heritable). Very simply, Darwinian sys-tems are 'dumb' or algorithmic systems that (*inter alia*) produce the illusion of intelligence or design through unintelligent processes (selection operating on random variation: for Dennett 1995 this is 'Darwin's dangerous idea'). Their outputs (things like organisms, for instance, or for that matter languages) are in Dawkins' felicitous term (1996) 'designoids'.

Are languages construable as dumb in that sense? Ritt makes rather a lot of selection by 'positive reinforcement' through the rewards of successful com-munication, but I think one could argue very easily that a lot of what goes on in language use and transmission is dumb or random in precisely the Darwinian sense. In fact a rather similar case has been made, controversially but nearly undefeatably, for consciousness itself by Daniel Dennett (1991). Dennett pro-poses dethroning the 'Cartesian' central observer and agent of consciousness and replacing it by an essentially Darwinian process of 'multiple drafts': the brain is incessantly producing variant brain states, and some of these match up fairly well with perceptual input, etc. and tend to be selected for the moment and serve as 'consciousness' or 'self'.

Dennett even proposes (ch. 8) that speech works rather like this. Rather than pairing pre-formulated meanings with strings of morphemes and pho-

nemes, etc., the brain generates huge amounts of utterance-precursors virtually at random, some of which are selected and eventuate as utterances. While Dennett's view does not turn us into machines (in the sense in which animals were for Descartes), it makes us a lot less agentive and self-propelled. For Dennett there is no 'self' separate from the brain (as Popper & Eccles 1977 or any other dualists would have it), but simply brain-states, with no special 'place' for the self or directing consciousness.

If one can accept a view like this, then a Darwinian account of language and its propagation, short-term (i.e. in acquisition) and long-term ('geological' scale, i.e. language change as usually conceived) becomes unproblematic. We don't have to allow our sense of ourselves as persons to get in the way of the outsider's view of our transactions with language, the world and ourselves as being essentially selectional processes without anybody as it were in the driver's seat who is ontologically separate from and hierarchically prior to the car and all the processes that move it.

It is clear so far that Ritt and I are coming from more or less the same place (though I suspect I am more radically reductionist and anti-teleological than he is). At least we find that a (neo-)Darwinian or perhaps to coin an initialism DD (Darwin/Dawkins) approach is the most satisfying way to treat certain classes of subject matters. Any discipline dealing with lineages (stemmata) and copying errors and variation and transmission of systems over time is the study of DD systems.

3.

But given this background, there are some difficulties that arise in practice. The particular conceptual problem here in fact started in an unusual way: the inventor of a terminology made his own partial transfer, failed to carry it to completion (pardonably, because it wasn't his primary concern), and the rest of us have been stuck with the consequences ever since. The concept in question is that special kind of replicator, the meme.

Memes are troublesome because they're different from 'classical' replicators (genes) in having no immediate canonical physical substrate. I think this is the trap Dawkins (surely unintentionally) laid for non-biologists: being captivated by his own meme (the meme), he flung it out in the world to replicate, and to 'parasitize' (I'm not sure where this image began, but it occurs in Dennett 1995) the minds of scholars in other disciplines. This is not a serious criticism of Dawkins; nobody can be censured for eloquent and imaginative kite-

flying. But it might be a criticism of the sheer appeal of the notion, and the perhaps unseemly haste with which it may have been adopted.

It must be clear that this preliminary objection refers not to the notion 'replicator', but the poor definition and odd status of the meme as a replicator *inter pares* - let alone one as important as Dawkins (and following him Dennett and Henry Plotkin, among others) think. Not that I think the *phenomenon* (or better, cluster of phenomena, perhaps) referred to as a meme is any less important than they do; I just have very bad problems when I try to think of it as a replicator like the more standard kinds.

At the heart of the matter is lack of specificity; as Bonner remarks (1980: 17), 'Dawkins has not attempted a rigorous definition of a meme', and he wisely perhaps refuses to do so either. Instead, he widens out Dawkins' original notion to encompass 'any bit of or any collection of bits of information passed by behavioral means from one individual to another'. Given the topic of his book (the evolution of culture in animals), Bonner is entirely justified; his wry and luminously intelligent sociobiological treatment of the origins of culture requires this kind of looseness to achieve the tightness it eventually does. But in certain classes of very precise and limited cases (and I think language may be one), there are serious difficulties, which are not good for people like me with irritable concept syndrome. In any given instance (and this is often simply ignored by writers like Dennett, though emphatically not by Ritt) we have to specify in fairly precise terms just what it is that is replicating. This tends not to be a problem in biology, because we know more or less what genes are, and we know how both lower level replicators like DNA strands and higher level ones like cells replicate. But on the meme-clouded heights linguists and others in the 'human sciences' inhabit there might be monsters.

Take for instance (a non-linguistic example, and maybe therefore simpler) the case of the 'fate' motif that opens Beethoven's 5th symphony. This is surely a canonical instance of a meme that parasitizes the musically literate (as well as many others). But just what *is* the meme? The first and simplest answer might be that it is a triplet of Gs followed by an E-flat. But is it for anybody without perfect pitch, or who doesn't read music and hasn't seen the score? Isn't it perhaps rather not {G G G E-flat}, but {N N N N-m}, where N = a given pitch and m = 'major third'? After all, if you heard {F F F D-flat} it would be the same pattern, and for most people indistinguishable from the original. (Leaving aside the fact that Beethoven's orchestra was almost certainly tuned flatter than a modern one, which throws more darkness or light on the question.)

But if we look at the movement as a whole, or even the next four notes, the question of what's replicating if we know the music at all well becomes more

complex. The three Gs and the E-flat could very well (as they're introduced, in isolation) be two notes out of an E-flat major triad (E-flat, G, B-flat), i.e. {3 3 3 1}; but in fact as we find out as soon as we hear the next four-note sequence, {F F F D}, they're 'really' {5 5 5 3} of a C-minor triad (C, E-flat, G), because the Fs and the D are clearly part of the dominant triad (G, B-flat, D) plus diminished seventh of the triad of the opening, which we now interpret as tonic – especially once the {G G G E-flat} sequence repeats immediately after. (To clarify in case this is getting murky, the D and F tell us auditorily, even if we don't know what notes they are, or have no technical musical knowledge but only a reasonable ear, that the key to which the G and the E-flat were 'alluding' was really C-minor and not E-flat major.) Thus the more musical we are, the better we know the work, the more complex the question becomes. We seem here to be dealing with some kind of weird context-sensitive replicator. And if the contexts are persons, we may not be able to specify what the replicator is at all. The nub is whether meme-domain replicators are all tokens, or whether there are reasonable candidates for types. This is potentially important for linguistic Darwinism, because we have to know whether we are dealing with anything larger than an idiolect when we talk of propagation of linguistic memes; and as my simple musical example suggests this may be harder to do than we think.

The real point is that the concept of meme has to be enormously sharpened and pared down. If anything virtually can be a meme then probably nothing is, since any bag this full is epistemologically empty. First the concept meme has to be clarified and restricted; and then we have to decide at how many levels of resolution it is to be invoked.

4.

I assume that what we want in the end is a coherent and reasonably parsimonious account of linguistic replication, that will account both for relative stasis (e.g. error-free replication as in language acquisition or linguistic history with stability), and replication with mutation and selection (e.g. change, either in acquisition or during adulthood, across generations, etc.). One of the crucial issues in defining a theory for this kind of domain is specifying the level of resolution, and derivatively but importantly the number of replicator types in the domain.

That is: a good Darwinoid theory ought to be able, however complex its outputs, to specify its *primary replicator*. In the most reductionist theories of organic evolution, this has been unproblematically (I think) achieved: the only

replicator of theoretical significance is the gene (Dawkins 1976, 1989, 1996; for a technical exposition Maynard Smith and Szathmáry 1995). In this view there is a single primary replicator and selection target: the gene. All other entities are in a sense epiphenomenal. E.g. there is no real selection at the level of organism or species (Maynard Smith and Szathmáry do not believe that species is a really well formed concept, or that speciation is as crucial as adaptation: indeed there are certainly populations of organisms in which the notion 'species' in its conventional sense as an interbreeding population is incoherent, e.g. among bacteria which neither 'breed' in the usual sense nor retain their genetic constitutions intact). Species are simply in this view epiphenomena of sexual reproduction (Maynard Smith and Szathmáry 1995: ch. 9). In more open, 'hierarchical' models (Gould 1983, Eldredge 1995, Plotkin 1994), at least the organism and the species (and perhaps for Eldredge the ecosystem) are primary domains, and full reduction to the Dawkins view of evolution as battle of the genes and organisms as vehicles is seen as inept and counterintuitive.

We might I suppose want to distinguish 'reductionists' (a term that Eldredge uses with some opprobrium against Dawkins and Maynard Smith, but which they would probably be proud to own to) and 'holists'. Gould, Eldredge, Plotkin are examples of what one might call 'sound holists'; they believe in multiple levels of selection (and hence multiple targeted replicators) within a larger scale hierarchical system. The term 'holist' is rather unfortunate these days, since it has acquired all kinds of flaky 'alternative' and New Age connotations, and could subsume intellectual abuses like the worlds of Teilhard de Chardin, Frijtof Capra or Gaia theory. I am not yet clear precisely how reductionist or holist Ritt is, and as the theory develops I suspect that this will be an important issue. But there is clearly no worry it will become mystical, thank goodness.

5.

Since language in the sense in which linguists (rather than for instance neurologists) study it is not primarily a physical system but a cultural one (whatever that means: though it does of course have a physical substrate), the problem of selecting a primary replicator becomes extremely hairy. Even assuming with Ritt that a phoneme is a replicator, structurally an 'assembly' (though this may be problematic if brain function is as highly distributed as seems to be the case), what about other linguistic objects?

At this point we may find ourselves unable to specify primary replicators or one King Replicator, but may be forced into a kind of hierarchical view of a rather complex sort. It's possible (and I think fruitful) to view linguistic struc-

ture (insofar as it is acquired and moves through history) as made up of sets of assemblies and subassemblies, not all of which are of the same kind, and no one of which may be fully primary in the strong reductionist sense.

(I would not like this to be the case, and it could be nice if Ritt or someone could argue their way around the problems that follow.) A segment, a morph(eme), a word, a phrase, a construction, are all on one reasonable view parts of at least a structural hierarchy (as opposed to a control hierarchy: for this distinction Plotkin 1994), in which each level is 'made-of' elements from the next one down. (This is not to be taken as exhaustive in the sense of ruling out emergence, any more than such structural hierarchies do in biology: a liver is more than an assembly of liver cells, even though it's that too.) The imagery of phonemic composition of morphemes, constituency, headedness, etc. serves to make this commonplace point. (Though control hierarchies do play a part in notions like government, licensing, etc.)

But since the 'materials' (as well as the entities) at each level are not only 'made-of' items from the one below, but as we agree have or may have emergent properties, we are back with our original question: *what replicates*? Do phonemes replicate, and then simply serve as materials for combinatory operations, and so on up? And if so, since the operations are highly specific, they must themselves replicate, i.e. we need some kind of distinction like that between genes that code directly for protein and genes that are primarily controllers. That is: replicating say /ɪ/ and /z/ is fine; but /ɪ, z/ are combined (or may be combined) in /ɪz/ = *is*, and *is* is a word-form of the lexeme BE, with a set of morphosyntactic and semantic properties. And since these properties are language-specific (e.g. *is* is an auxiliary which is moved to the left in English yes-no questions, can be cliticized to certain pronouns and the negator, etc.), how are these properties replicated? If each level is a replicator level, what controls the whole thing? What we need in effect is not just a replicator level, but a notion 'linguistic genome' (and within it some kind of developmental controllers, like timing genes or homeoboxes: cf. Maynard Smith and Szathmáry 1995: chs. 12-14).

Questions like this suggest that either we are looking in the wrong place for reductionist single driving replicators ('linguistic genes'), or misunderstanding the nature of the replication process. In organisms, replication goes along with the specification of structure: genes don't just replicate, but replicate *in company* (replicators must get along with the co-members of their genomes if the genome as a whole is to produce good phenotypic vehicles that allow each gene to replicate); they form parts of elaborate code-and-control systems that provide instructions for making certain kinds of complex objects.

If this is the case, then maybe the linguistic equivalent of a gene is not a phoneme at all, but a whole nested set of replicators of very different types, none of which is *primus* but all *inter pares*, that form part of a self-organizing dynamical system (cf. Ehala 1996, and Ritt's remarks *passim*).

6.

The final problem (for this set of comments only!) has to do with further extensions of replicator-driven models of the standard kind. In the strong DD model, the phenotypes produced by replicators are only 'vehicles' (Dawkins' term) for the genes, which make these big organisms or whatever to ride around in so that they can replicate themselves better. Can some kind of replicator/vehicle distinction be coherently maintained when talking about language propagation? I ask this, because obviously the closer one gets to isomorphism between uses of the same type of theory in ontologically divergent domains, the better. This is so for two main reasons: (a) the Occam's Razor standpoint (ontological minimalism is always to be sought); and (b) because a theory that works ('accidentally') in some domain it was not intended for originally develops extra verisimilitude because of its unexpected utility, and hence it and our knowledge of the previously divergent domains stand on solider epistemological ground. The development of 'universal Darwinism' as a model for both organismic and cultural domains (as in Plotkin 1994) would be, if carried through as successfully in non-organismic domains as in organismic, a stunning breakthrough for intelligent reductionism. The main worry is that until a larger degree of isomorphism can be established between what we might call 'primary' (organismic) Darwinism and 'secondary' (cultural, linguistic) Darwinism, there is an ever-present danger of sloppiness. Once one has adopted a model in principle, how much of its machinery must one adopt, and how much can one *not* adopt? How much domain-specific material can be dumped before you get to mere metaphorizing rather than real *use* of the model?

At the moment there is no Darwinian theory of supra-organismic domains (culture, etc.) that looks as good and can tell as detailed and convincing stories as Darwinian evolutionary theory proper, *sensu stricto*. But that's no reason to stop trying. We have very interesting attempts at Darwinian views of consciousness (both synchronic and diachronic: Dennett 1991), of knowledge (the same: Plotkin 1994), and some programmatic handwaving about language in Dennett in particular. But Ritt's paper is a first step toward a specified, vulnerable, and relatively parsimonious (and technical, eventually) theory of evolution of linguistic materials. It may be preliminary in flavour and occasionally

retract itself when it seems to be going over the edge, but this edge is the only one to go over, and now Ritt has allowed us at least a peek into the abyss.

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(Image-) Schematic properties of antonymous adjectives[1]

Arthur Mettinger, Vienna

1. Introduction

This paper presents some ideas concerning the search for the cognitive basis of semantic contrast.[2] This search is motivated by what I feel to be major limitations of the 'classical' (structuralist) accounts of antonymy. Both the sense-relations approach advocated by Lyons (1963; 1977) and Cruse (1986) and the semantic feature-approach (adopted in Mettinger 1994) exhibit the following shortcomings:

- they operate within an 'autonomous semantics'[3] framework, i.e. they focus on the systematic properties of language as a system of signs (rather than on language as one of the basic cognitive tools that humans have);
- they regard semantic opposition as a basically linguistic phenomenon (rather than as a linguistically coded conceptual phenomenon);
- they focus on description (rather than on explanation);
- they focus on the paradigmatic aspects of opposites (rather than on both paradigmatic and syntagmatic aspects);
- they focus on describing contrastive relations that seem to be firmly established in the lexicon of a particular language (rather than on the description of the basic principles governing the interpretation of usage events as contrastive).

From a Cognitive Linguistics[4] (CL) perspective a linguistically manifest phenomenon such as semantic contrast should be regarded and investigated as an epiphenomenon of the human mind. This view is based on the axiomatic as-

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[1] Paper presented at the workshop "Cognitive Linguistic Approaches To Lexical Semantics", Turku, 15-16 November, 1996.

[2] The term 'semantic contrast' is used as a cover-term for antonymy, complementarity, gradable complementarity, and converseness.

[3] '... because the subject matter of [structuralist] semantics consists of an autonomous linguistic structure of semantic relationships among words, the methodology of linguistic semantics is autonomous, too.'(Geeraerts 1992:259)

[4] For brief introductions to CL see, e.g., Radden (1992) or Ungerer & Schmid (1996).

sumption that language is "an expression of stable conceptual patterns" and that "the shape of language discloses the structure of cognition" (Turner 1991/1994:48). The 'meaning' of a linguistic unit can be defined as "a conceptual structure conventionally associated with this unit"; it has to be characterised "with respect to relevant knowledge structures (variously labelled as 'conceptual domains', 'scenes', 'folk models', or 'cognitive models')" (Rudzka-Ostyn 1993:1f.). There is no distinction in principle between linguistic knowledge and encyclopedic knowledge.

Before this background I am trying to discover the cognitive 'principles' that account for our understanding and interpreting of contrast relations when we come across them in spoken and written texts. The goal of my investigations thus is to find out which concept of CONTRASTIVITY[5] might be assumed as being shared by speakers of a particular language or language variety. With this goal in mind I intend to demonstrate how the CL notions of 'schema' in both Johnson's (1987) and Langacker's (1987, 1991a,b) sense could be successfully employed in the characterisation of linguistic manifestations of CONTRASTIVITY.

In the following I am going to concentrate on instances of CONTRASTIVITY that have been linguistically coded as adjectival antonyms, which involves looking first on word-class specific conceptual properties (as suggested by Langacker) and then on non-linguistically grounded, more general cognitive schemas. Before doing so, however, I want to present some ideas I hold about CONTRASTIVITY as a more general frame of reference.

2. Six theses about CONTRASTIVITY

I. CONTRASTIVITY is a mental phenomenon, a concept, a pattern inherent in thought.

II. CONTRASTIVITY is a concept that the conceptualiser superimposes on (usually) two other concepts, thus creating a particular kind of link between these concepts (or aspects thereof).

III. CONTRASTIVITY is employed as a device for internally structuring a number of cognitive domains.[6]

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[5] I have coined the term 'Contrastivity' to indicate that I am referring to the conceptual plane; my hypotheses of the most relevant properties of CONTRASTIVITY are sketched in section 2. Concepts are typographically represented by SMALL CAPS.

[6] There is still considerable disagreement in CL with regard to what a 'domain' is. Langacker (1991a:3) claims that "... semantic structures ... are characterized relative to 'cognitive domains', where a domain can be any sort of conceptualization: a perceptual

IV. CONTRASTIVITY is a non-basic concept that depends on a number of 'cognitive models';[7] these can be either 'image schemas' (as defined by Johnson (1987)) or 'cultural models' (as defined by Ungerer & Schmid (1996:55)). The basic difference between these two types of cognitive model is that image schemas are claimed to be acquired by our own direct experience and are primarily grounded in our bodily sense of spatiality, while cultural models are acquired via cultural transmission.

V. CONTRASTIVITY is a non-lexical concept that is internally 'structured' in terms of an array of interrelated schemas; in analogy with polysemous lexical(ised) concepts it could be characterised as a 'poly-schematic' network consisting of a number of individual image schemas and cultural models.

VI. CONTRASTIVITY is ultimately grounded in spatial cognition.

Especially the last point was raised repeatedly in pre-cognitivist discussions of semantic contrast. Ogden (1932/1967:94f.) explicitly emphasises the experiential, bodily grounding of opposition:

> Opposition is based on spatial experience. ...
> In the first place, the spatial cut has been identified with the body itself, and more specifically with its vertical axis, in the opposition of *sides*, right and left, and the opposed rectilinear directions, right and left, along the arms in an horizontal position.
> Secondly, the *extremes* of the scale are represented by the head and feet, the two opposite ends of a single continuum, measured primarily upwards, from the base to the top, as with the minimum and the maximum of the thermometer.

Moreover, he regards 'direction' as the most fundamental feature in opposition, and is in this respect followed by Cruse, who also claims that "a directional opposition, perhaps in an extended sense, underlies all opposites" (Cruse 1986:261). In this contribution I am going to show that opposition is indeed grounded in spatial cognition, but that 'directionality' is characteristic of some instantiations of CONTRASTIVITY only.

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experience, a concept, a conceptual complex, an elaborate knowledge system, etc." Domains are typographically represented by *ITALICISED SMALL CAPS*.

[7] In line with Ungerer & Schmid (1996:47ff.) these could be defined as the sum of experienced and stored cognitive representations an individual has for certain fields.

3. Adjectival opposites

3.1. Basic assumptions

One way of gaining access to CONTRASTIVITY is by looking at its manifestations in (oral and written) discourse. What we can observe there is 'semantic structure' as conceived of in CL:

> Cognitive grammar seeks an accurate characterization of the structure and organization of linguistic knowledge as an integral part of human cognition. ... [I]n large measure, semantic structure is language specific rather than universal. I make a terminological distinction between 'semantic structure' and 'conceptual structure'. Conceptual structure is the ongoing flow of cognition: any thought or concept, whether linguistic or nonlinguistic. Semantic structure is specifically linguistic, referring to the semantic pole of linguistic expressions (fixed or novel). Semantic structures are conceptual structures established by linguistic convention – the form which thoughts must assume for purposes of ready linguistic symbolization. Thus semantic structure is conventionalized conceptual structure. (Langacker 1991a:102ff.)

It seems reasonable, therefore, to take 'semantic structure' as the basis for claims on conceptual structure; this, in turn, necessitates taking into account word-class specific conceptual properties as well. Thus, in Langacker's (1987, 1991a,b) cognitive grammar framework every 'predication' (i.e. the meaning of a linguistic expression) imposes a 'profile' on a 'base' where "the base of a predication is its domain" (Langacker 1991a:5) and the profile "is a substructure elevated to a special level of prominence within the base, namely that substructure which the expression 'designates'" (Langacker 1991a:5). Moreover, a broad distinction is made between basic classes of predications depending on the nature of their profile: a noun is regarded as a symbolic structure that designates a 'thing', "where 'thing' is a technical term defined as a 'region in some domain'" (Langacker 1991a:20), whereas verbs, adverbs, adjectives and prepositions are regarded as 'relational' expressions profiling "the 'interconnections' among conceived entities" (Langacker 1991a:20). They are thus conceptually dependent in that "one cannot conceptualize interconnections without also conceptualizing the entities that they interconnect" (Langacker 1987:215). Relational expressions must therefore always be characterised in terms of two participants, viz. the 'Trajector' (Tr) and the 'Landmark' (Lm). "The Tr is the more salient participant in the relation. The less salient participant constitutes the Landmark ..., which serves as a kind of reference point for the specification of the Tr." (Taylor 1992:10).

Adjectival opposites require a treatment from two perspectives: on the one hand, as members of the category 'adjective', they require a characterisation

along the lines suggested by Langacker as outlined above. This, however, is just one type of 'schematic' characterisation. On the other hand, as linguistic manifestations of CONTRASTIVITY as sketched in section two, they must be shown to be grounded in spatial experience and to be characterisable in terms of image schemas. This is another type of 'schematic' characterisation. In the following, I will try to briefly sketch both types of 'schema' and then suggest ways in which they might be combined.

3.2. Taylor's (1992) schematic representation of scalar adjectives

As a starting point for the first type of schematic characterisation of adjectival opposites I want to sketch Taylor's (1992) suggestions for scalar adjectives. In this paper Taylor discusses the three distinct senses of the English adjective *old* (OLD as in *old box*, OLD' as in *old friend*, and OLD'' as in *old regime*) "as more specific instantiations, or 'elaborations', of a single, more abstract, or 'schematic' sense" (Taylor 1992:20) vis-à-vis the background of scalar adjectives in general. He assumes the following schematic representation of a scalar adjective:

Figure 1
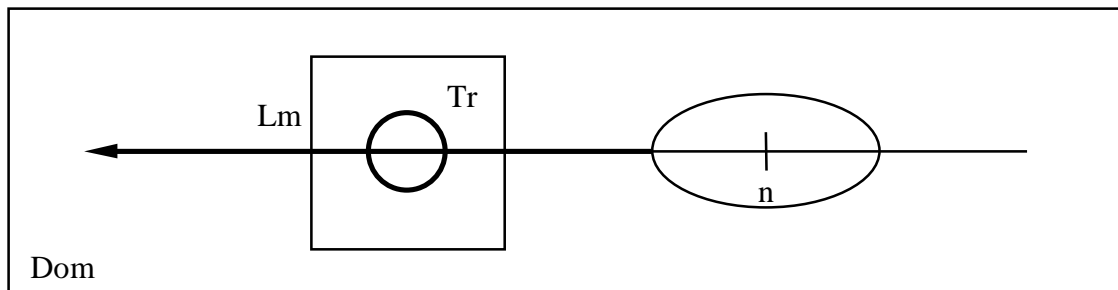
[A scalar adjective] designates a relation between its Tr (a thing) and its Lm, a region on a scale....The large box encloses the relevant cognitive domain of the adjective, e.g., 'length', 'height', 'speed', etc., symbolized by [Dom], while the horizontal line represents the dimension itself. The heavy portions of the diagram represent the profiled elements of semantic structure. The heavy circle represents the Tr of the adjective, the small box surrounding the circle symbolizing the cognitive domain of the Tr. The Tr is located within a profiled region of the dimension, represented by the heavy portion of the horizontal line. The profiled region of the dimension lies in excess of some norm, represented by the region surrounding the point *n*. The norm is represented as a region so as to capture the 'fuzziness' of scalar adjectives. There is, namely, no precise point on the dimension of, e.g., tallness, which clearly cuts off the class of 'tall' entities from the class of 'not tall' entities.   (Taylor 1992:10f.)

The semantic structure of the adjective *old* in attributive position as in *old man*, *old box* can be represented as an elaboration of the scalar adjective schema, cf.:

Figure 2
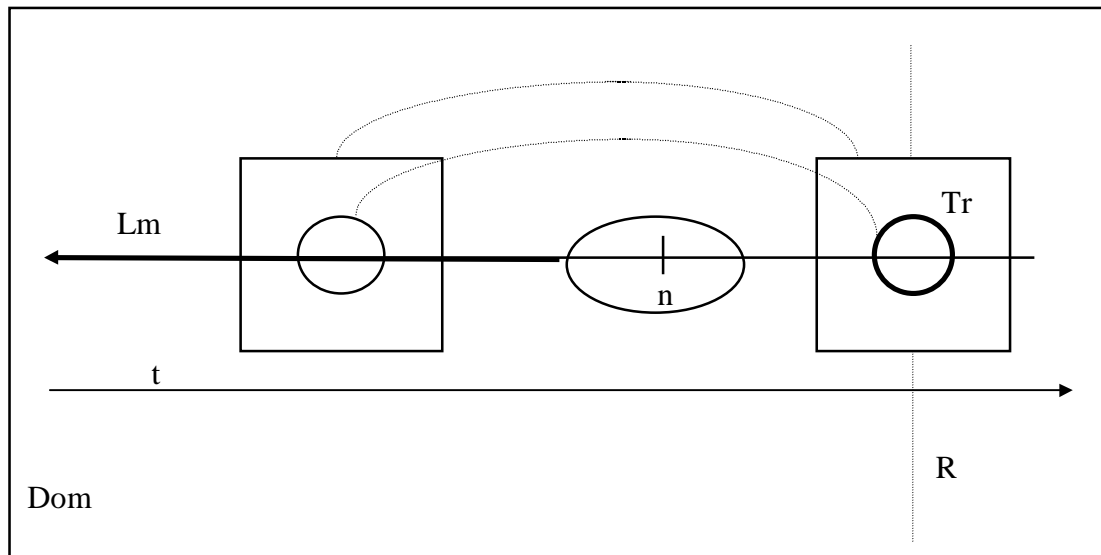
> Essentially, *old* denotes that its Tr has been in existence for a period of time in excess of some norm. In Schema 2, the passage of time is represented by the horizontal time-line, at the bottom of the diagram, while the double appearance of the Tr entity represents the continued existence of the Tr over the intervening period of time. The broken line linking the two instantiations of the Tr symbolizes the perceived identity of the Tr at the different times. R denotes the reference time, i.e. the time at which the Tr is characterized with respect to its oldness.   (Taylor 1992:11)

The combination of *old* with a nominal predication is possible if this nominal predication is able to elaborate the schematic Tr of the adjective. Moreover, the norm *n* associated with the adjectival predication receives its precise value only in this composite structure in that it depends on the kind of entity that serves as the adjective's Tr. (Taylor 1992:12f.)

Such schematic representations are meant to capture degrees of specificity: a schema (such as Figure 1) is more abstract and less specified than its elaborations (Figure 2) or instantiations. An instantiation is always fully compatible with the specifications of the schema it instantiates, but is characterised in finer detail.

3.3. Image schemas

The postulation of and search for these mental 'images' is based on the assumption that "in order for us to have meaningful, connected experiences that

we can comprehend and reason about, there must be pattern and order to our actions, perceptions, and conceptions" (Johnson 1987:29). A schema is thus defined in the following way:

> *A schema is a recurrent pattern, shape, and regularity in, or of, these ongoing ordering activities.* These patterns emerge as meaningful structures for us chiefly at the level of our bodily movements through space, our manipulation of objects, and our perceptual interactions.
>
> It is important to recognize the dynamic character of image schemata. I conceive of them as *structures for organizing* our experience and comprehension...
>
> They are dynamic in two important respects. (1) Schemata are structures *of an activity* by which we organize our experience in ways that we can comprehend. They are primary means by which we *construct* or *constitute* order and are not mere passive receptacles into which experience is poured. (2) Unlike templates, schemata are flexible in that they can take on any number of specific instantiations in varying contexts... (Johnson 1987:29f.)

Image schemas, it seems, were first introduced in connection with the analysis of spatial prepositions: in contradistinction to cognitive categories (such as OBJECT,[8] ORGANISM, and ACTION categories), which exhibit a rich categorial structure and are best conceived of in terms of the prototype hypothesis of categorization (with attribute lists, typicality gradients and gestalts), locative relations such as UP - DOWN, IN - OUT, FRONT - BACK, LEFT - RIGHT, OVER - UNDER etc. reflect "basic experiences" (Ungerer & Schmid 1996:106ff.) and are best treated in terms of image schemas.

This type of characterisation seems most suited to the cognitive nature of adjectives, too. Adjectives serve the purpose of linguistically coding property concepts which are usually predicated of members of OBJECT/ORGANISM categories (coded as nouns)[9]. When an adjective collocates with a noun, then, either one of the many properties the nominally coded concept possesses is highlighted,[10] or the nominally coded concept becomes equipped with an 'extra' property it did not possess as one of its 'regular' properties.[11] The former case can be illustrated by collocations such as *old man*, *tall man*, *wise man* etc.

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[8]   Concepts and categories will be typographically represented by SMALL CAPS, domains by *ITALICISED SMALL CAPS,* image schemas by CAPITALS.

[9]   Cf. Wierzbicka (1988:463) on the semantic basis of the distinction between nouns and adjectives.

[10]   In technical terms, we would say that nominally coded concepts are usually characterisable relative to a multitude of cognitive domains (a so-called domain matrix; for details see Langacker 1987:147 ff.).

[11]   This is possible only if the domain of the adjectival concept does not clash with any of the domains relative to which the nominal concept is characterised. Within non-CL frameworks this phenomenon has been known as 'lexical solidarities' or 'selection restrictions' (cf. Likpa 1992:160f.)

(where MAN is characterised against the domains of *AGE, SIZE, MENTAL ABILITIES*, respectively), the latter case by *dead man* (which is a characterisation with regard to the *LIFE CYCLE* domain).

3.4. Schema versus image schema

It is vital, though, to be aware of the fact that 'schema' and 'schematic' as used in Taylor (1992) and 'image schema' as outlined in 3.3. above are of a different nature.

Taylor's use of 'schema' follows Langacker's understanding of 'schema' as "[a] semantic, phonological, or symbolic [= grammatical (A.M.)] structure that, relative to another representation of the same entity, is characterized with lesser specificity and detail. A 'coarse-grained' (as opposed to a fine-grained) representation." (Langacker 1991b:552) Schemas are abstractions capturing what is common to the members of a category (semantic, phonological, or symbolic), the process of abstraction taking usage events, i.e. "actual utterances in the full richness of their phonetic detail and contextual understanding" (Langacker 1991b:2) as its starting point. Langacker's schemas (as I see it) thus evolve as the result of bottom-up cognitive procedures and are primarily grounded in linguistic experience.

Image schemas, on the other hand, are abstractions grounded in non-linguistic experience:

> An image schema is a recurring, dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience. The VERTICALITY schema, for instance, emerges from our tendency to employ an UP - DOWN orientation in picking out meaningful structures of our experience. We grasp this structure of verticality repeatedly in thousands of perceptions and activities we experience every day, such as perceiving a tree, our felt sense of standing upright, the activity of climbing stairs, forming a mental image of a flagpole, measuring our children's heights, and experiencing the level of water rising in the bathtub. **The VERTICALITY schema is the abstract structure of these VERTICALITY experiences, images, and perceptions** [emphasis A.M.].   (Johnson 1987:XIV)

For the characterisation of adjectival opposites both types of schema are called for: the SCALE schema (for scalar opposites) and the CONTAINER schema (for non-scalar opposites) account for the experientially grounded conceptual properties shared by all these adjectival opposites; on the other hand, as members of the category ADJECTIVE they share the properties of this word-class and can be represented in terms of the schemas suggested by Langacker (and Taylor, as far as scalar adjectives are concerned).

In the following I will, therefore, map the relevant (general) image schematic properties on the word-class specific schema.

4. Scalar opposites and the SCALE schema

According to Mark Johnson "the SCALE schema is basic to both the quantitative and qualitative aspects of our experience" (Johnson 1987:122) and exhibits the following properties:

    i) the SCALE schema has a more or less fixed directionality. ... Normally, the further along the scale one moves, the greater the amount or intensity...

    ii) Scales have a cumulative character of a special sort. If you are collecting money and have $15, then you also have $10....

    iii) SCALES are typically given a normative character; ... Having more or less of something may either be good or bad, desirable or undesirable. Having more heat in the winter can be desirable, while having more heat in the summer might be awful. In either case, however, norms are mapped on to the scale.

   iv) [Scales] can be either closed or open...

At any rate, SCALARITY does seem to permeate the whole of human experience, even where no precise quantitative measurement is possible. Consequently, this experientially basic, value-laden structure of our grasp of both concrete and abstract entities is one of the most pervasive image-schematic structures in our understanding. The image schema which emerges in our experience of concrete, physical entities is figuratively extended to cover abstract entities of every sort...

<div align="right">(Johnson 1987:122f.)</div>

If this image schema is accepted as basic to scalar adjectival opposites we can characterise a pair of such opposites as in Schema SC:
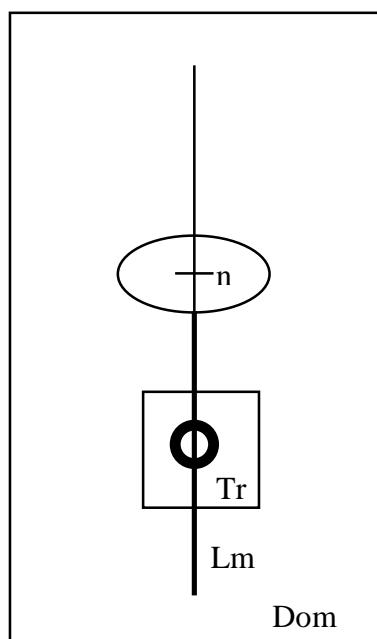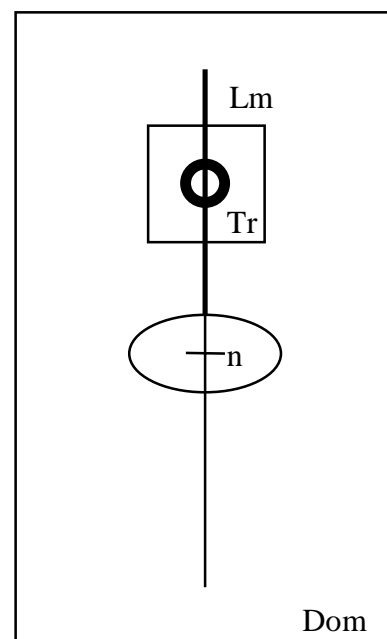
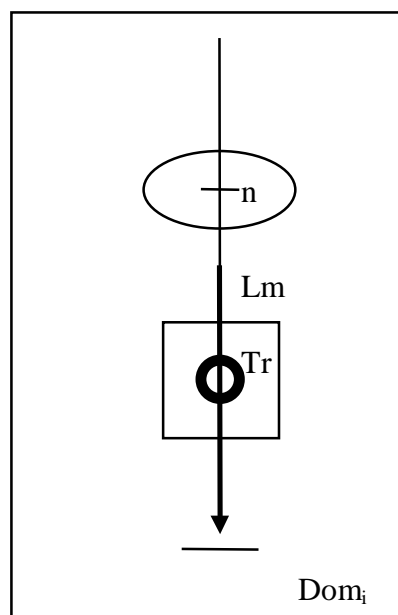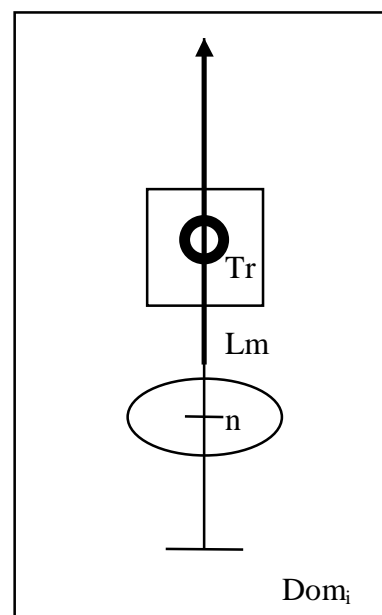Schema SC/a   Schema SC/b

Schema SC/a captures the basic schematic properties of gradable adjectives denoting LESS of a scaled property (e.g. *young, short, low, little* etc. in combination with an appropriate nominal Trajector), Schema SC/b supplies the properties of the pair member denoting MORE (e.g. *old, long, high, much* etc. in such a combination). In both cases the Trajector is located within a profiled region on the scale that is situated either BELOW or ABOVE some norm (*n*).

In view of Johnson's characterisation of the SCALE schema it seems more plausible to adopt a vertical representation rather than a horizontal one as has been done by Taylor. Moreover, it must be noted that in each of the following schema representations the "a" and "b" versions of the respective figures highlight the difference between the members of an antonymous pair of adjectives; they are meant to be identical except for the profiled region on the scale and the position of the Trajector. The domains are identical as well (hence: Dom$_i$).

The schema suggested above must, however, be elaborated, as it does not contain any information as to the directionality and boundedness of the SCALE, i.e. the profiled regions on the scale where a Trajector might be located must be specified in greater detail; this elaboration of the schema is necessary to account for three types of antonymous adjectives:

Schema SC/a/1   Schema SC/b/1

a) Adjective pairs like *long - short, high - low, much - little* etc. can be interpreted on the basis of a SCALE that is bounded at the lower end. *Short, low, little* profile the lower part of the scale, and the Trajector is then positioned anywhere in the region between the norm and the zero-point on the scale: the *shorter, lower, less* something is thought to be, the closer the Trajector is

moved towards the zero value (Schema SC/a/1, see above). On the other hand, *long, high, much* etc. profile the part of the scale above the norm, and in case of intensification the Trajector is positioned higher up on the scale which is unbounded at its upper end (Schema SC/b/1, see above).

b) In the case of *beautiful - ugly, good - evil* etc. the Trajector is again positioned either ABOVE or BELOW the norm region. The SCALE is bidirectional and unbounded: it extends into the "positive" direction as well as into the "negative" one. When an expression such as *ugly* or *evil* is used the Trajector is always situated in the "negative" part of the scale; the more negative it is conceived of, the farther the Trajector is removed from the norm which represents some kind of "neutral state" (Schema SC/a/2, see below). Intensification of *beautiful*, *good* etc. involves moving the Trajector towards infinity along the profiled "positive" part of the scale (Schema SC/b/2, see below).
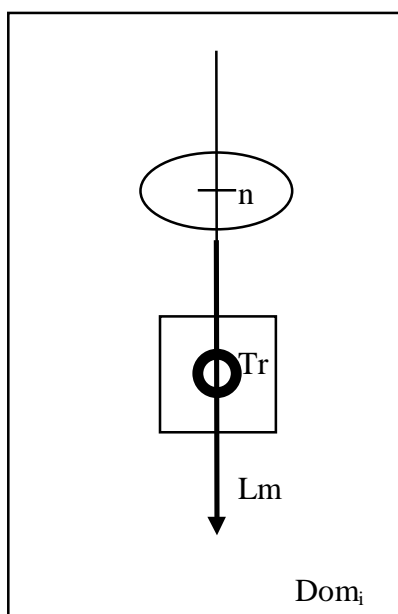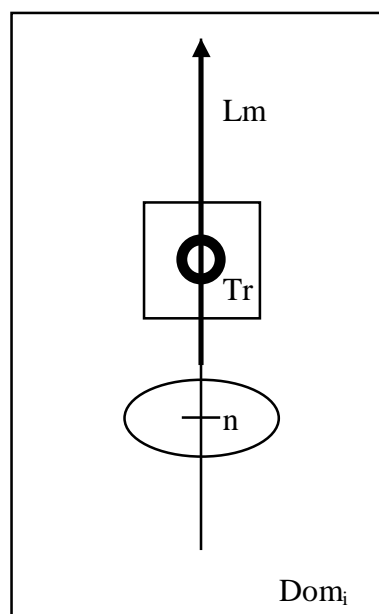
Schema SC/a/2   Schema SC/b/2

c) The third variant concerns cases like *safe - dangerous, dry - wet, innocent - guilty*, traditionally termed 'gradable complementaries', which are characterised by the fact that very often the scaled property is evaluated negatively:

> In the case of an UNDESIRABLE property ... the most important question for the language user is whether the property is present or absent. The desirable status is zero value of the property, and this is signalled by one of the terms of the opposition; any positive value represents an unsatisfactory state, and this is signalled by the other term of the opposition. (Cruse 1980:23)

The scale is thus bounded at one end by the norm. In expressions such as *a dangerous road, a wet towel, a guilty person* the Trajector is placed in the

"negative" region of the scale, and the *more dangerous, wetter* or *guiltier* the Trajector is thought to be the farther it is removed from the norm (Schema SC/a/3, see below). The other member of the pair, on the other hand, coincides with the norm and thus represents the desirable status of the Trajector with regard to the domain (Schema SC/b/3).
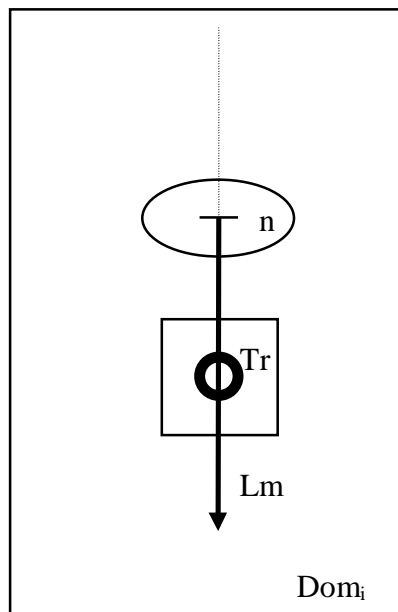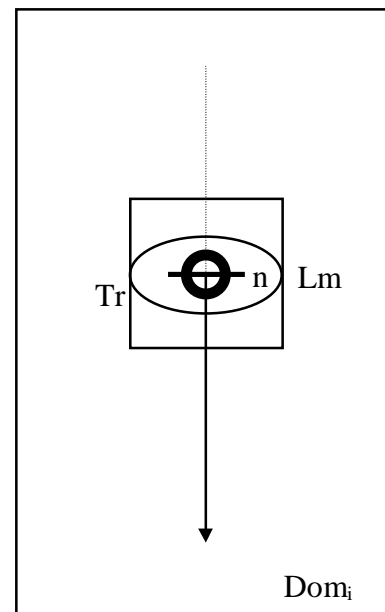
Schema SC/a/3   Schema SC/b/3

5. Non-scalar opposites and the CONTAINER-schema

I suggest that non-scalar adjectival opposites of the type *right - wrong, true - false, male - female, civilian - military*, etc. should be regarded as linguistic manifestations of the CONTAINER schema - "a schema consisting of a *boundary* distinguishing an *interior* from an *exterior*. The CONTAINER schema defines the most basic distinction between IN and OUT" (Lakoff 1987:271). Johnson (1987:39) claims that this schema is also responsible for our understanding of negation: together with the metaphorical understanding of propositions as locations we assume that to hold a proposition is understood in terms of being located in a definite bounded space (the space defined by the proposition), whereas to hold the negation of that proposition is understood as being located outside that bounded space.

And yet, although non-scalar adjectival opposites are semantically analysable in terms of negation (each member of the pair can be characterised as the negation of the other member in such a way that 'male' = 'not female' and 'female' = 'not male'), the assumption of the CONTAINER-schema as defined

above cannot do justice to the conceptual properties of non-scalar opposites as it does not specify the space outside the bounded region, i.e. the space that is occupied by the negation of a proposition.[12]

Therefore the schema has to be modified so as to account for the observation that certain domains are conceptualised as "bi-compartmental" and that the Trajector can be placed in either of the two compartments. If it is positioned in one compartment of the respective domain (Schema CONT/a) it is automatically excluded from the other compartment of the same domain and vice versa (Schema CONT/b).

Schema CONT/a   Schema CONT/b
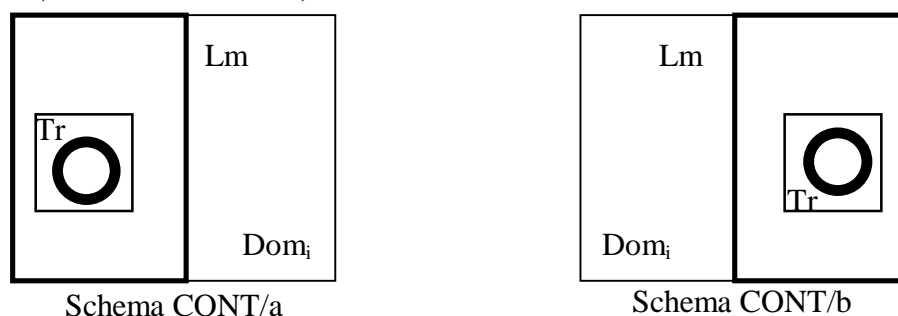
This schematic representation is basically compatible with Lyons's (1977:271f.) statement that "[u]ngradable opposites, when they are employed as predicative expressions, divide the universe-of-discourse ... into two complementary subsets. It follows from this, not only that the predication of either one of the pair implies the predication of the negation of the other, but also that the predication of the negation of either implies the predication of the other".[13]

This schema can also accommodate cases like *almost true* (the Trajector is moved into the direct vicinity of the Lm in Schema CONT/a) or *half true* (the Trajector is conceptualised as having in part entered the Lm) as well as *slightly false* (the Trajector is located partly inside and partly outside the Lm in Schema CONT/b).

6. Conclusion

In this contribution I have tried to show how the notion 'schema' in both the Johnsonian and Langackerian understanding could be successfully implemented in the study of contrast in language. I am well aware of the fact that the picture I have presented is incomplete and lacking in both scope and detail. And yet I think it shows a major step in the right direction with regard to the

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[12] Cf. in this context Steinthal's (1890:361f.) statement that "...negation ... and opposition are not the same thing: an opposite is as positive as the thing whose opposite it is..." [transl. A.M.]

[13] Although Lyons discusses the predicative use of ungradable adjectival opposites I will take his statement to be basically valid for the attributive use of these opposites as well.

study of CONTRASTIVITY: just as a polysemous lexical item can be shown to have a number of senses related network-wise via extensions of one sense to another on the one hand and via elaborations of a more abstract, schematic sense on the other hand, CONTRASTIVITY can be seen as a 'poly-schematic' network composed of a number of individual image schemas.

In order to substantiate this claim a lot more information will be needed, of course. On the schematic level, an inventory of the image schemas responsible for nominal, verbal, and prepositional opposites must be established, on the basis of which research into the way these image schemas arrange themselves with regard to CONTRASTIVITY should be made possible, the ultimate goal being a characterization of the internal conceptual structure of CON-TRASTIVITY.

On the lexical level we will have to show how opposites instantiate these schemas (including all sorts of metaphorisation processes), how our interpretation of lexical items as opposites is guided by these schemas, and how different readings of (a pair of) opposites can be accounted for by invoking different schemas. If this can be accomplished, the CL approach will have proved its superiority over all extant accounts of lexical opposition.

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Darwinising historical linguistics: applications of a dangerous idea

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0. Introduction

This paper attempts to introduce and advocate a Darwinian approach to language and language change. Its central idea is that any particular language at any given point in time and space is just as it is because its characteristics, i.e. the elements it consists of, its inventories, oppositions, structures, rules, processes and so on, have a history of relatively successful replication, in which they have copied themselves into the language under investigation. Explaining the existence of any element, or characteristic, of any language is therefore tantamount to explaining how it came into existence and why it has managed to replicate before disintegrating.

Obviously, this approach owes much to evolutionary biology[1] and has been derived through the analogical transfer of concepts central to the scientific framework employed in that science. It is of course recognised that analogies, while often useful for heuristic or pedagogical purposes, normally 'break down' at a certain point and neither can nor are meant to compete with the descriptive adequacy and explanatory power of conceptual frameworks derived from and adapted to the patterns inherent in the primary phenomenon under investigation itself. Therefore, the attempt will be made to show that an evolutionary perspective on language can be derived on linguistic grounds alone, and that, if connected with one another in a just slightly unusual way, the concepts on which our discipline is based readily organise themselves into a paradigm that is just as 'evolutionary' as Darwin's theory of biological species originating through random mutation and natural selection.

Apart from arguing that a Darwinian approach to language is highly adequate to its particular nature, this paper will attempt to show that the evolutionary perspective makes two notorious problem areas of our discipline appear in an interesting new light, and look more approachable and potentially answer-

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[1]   In my particular case primarily to Dawkins 1982 and 1989, but also to the other biological and related titles listed in the bibliography.

able than they seem to be within many current, non-evolutionary frameworks: first, the very general problem of linguistic ontology, and secondly, the problem that otherwise plausible, functional accounts of linguistic changes are not really good at explaining why any particular change did in fact occur where and when it did (see Lass 1980).

Although this is not immediately obvious, the two problems are closely related. Consider accounts of linguistic change which propose that a particular innovation occurred within a language, because the novel element fulfilled a particular function either more efficiently or more effectively.[2] A case in point would be the common belief that when in a language diphthongs come to be replaced by monophthongs this is 'because' the pronunciation of the latter consumes less energy than that of the former. The relevant function here, i.e. articulatory efficiency, is rooted in human physiology. Other functional explanations may be based in different domains, of course. Thus, it has been proposed that changes like monophthongisations (i.e. backgroundings or weakenings) are preferably implemented in peer-to-peer communication among socially underprivileged groups, or informal settings, because they serve to indicate solidarity and a lack of social distance among speakers. Conversely, it has been argued that listener-friendly pronunciations serve to indicate respect for the listener, and are therefore preferred in more formal social settings and within higher social strata. When articulatorily more costly pronunciations spread to the speech of lower social strata, it has been said that this may be because those pronunciations are felt to indicate social prestige and confer it onto their users. Functional accounts like those have a rather wide currency within the community of historical linguistics, the present author being no exception to this rule. As already indicated, however, it is usually accepted that they do not explain, in the strong nomological sense, why in particular languages, at particular times, particular changes have occurred, nor predict when and where they will. Nonetheless, they are regarded as helpful in distinguishing changes which are probable because functionally plausible from changes which are not, and which are therefore more 'surprising' and in need of further explanation. Often, however, changes identified as 'improbable' by that rationale (e.g. diphthongisations, i.e. phonological strengthenings, originating among lower social strata, such as typical of Cockney Speech) are given similar functional explanations (such as ease of perception outweighing ease of production), and eventually the explanatory power of the functional approach finds itself widened to the extent of

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2   Such accounts are widespread and have a long tradition, but find their most radical expression in Natural Linguistics as represented by David Stampe, W.U. Dressler or W.U. Wurzel, to name just three.

near emptiness.[3] Again this problem is widely recognised. However, attempts at constraining the power of functional explanations through rules governing parameter interaction are undertaken much less frequently than one should expect,[4] given that a community should be interested in strengthening the theoretical basis of one of its favourite approaches. Thus, while the sheer number of physiological, psychological and social parameters proposed to account for linguistic changes has risen significantly during, say, the last three decades and a half, the mechanics of their interaction is still mostly dealt with in a manner that - while often quite appealing to intuition and common sense - is equally often impressionistic and/or *ad hoc*.

The most plausible reason for this widespread, yet inherently contradictory attitude might lie in the fact that the area where the rather diverse types of functional parameters so far identified are supposed to 'come together' is - essentially - the human mind. Were it not for the fact that they equally influence the communicative behaviour of individual speakers, the mechanics of articulation and the 'mechanics' of social interaction, for example, would for most purposes be attributed to completely separate ontological or epistemological domains. Within human minds, however, they meet and interact to govern linguistic behaviour and language change, generating the familiar problems for prediction. This means that the ultimate reason why languages tend to behave so unpredictably is generally assumed to be the same as the reason for the unpredictability of human behaviour in general, which is that it is subject to the free will of human individuals. It may be regarded as just possible that physiologically based parameters might influence linguistic behaviour via 'the unconscious', thus escaping to some degree the influence of the free-willed self - and could therefore be relatively more reliable predictors than, say, psycho-social ones. But parameters like the latter are typically regarded as being accessible to human (self-) awareness and thus more or less beyond predictability altogether. This means, however, that the chances of tackling the ways in which <u>all</u> sorts of functional parameters interact to determine linguistic behaviour are viewed generally pessimistically, since if their interaction is even only partly governed by the free decisions of individual selves, then - or so it seems -

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[3]   See, once again, Lass 1980 for an in-depth treatment of the issue.

[4]   While Natural Linguistics represents very much a minority programme, the recent rise of Optimality Theory looks like a blatant counter example, of course, because it specifically claims to address and, actually, solve the problem of 'constraint interaction'. Quite apart from being plagued by inherent circularity, however, it is grammar-focused and formalist and does not consider extra-systemic parameters such as physiological or social ones. Thus, it fails to qualify as a functional approach in the sense employed in this paper.

there can be no mechanics, in the normal sense, to it at all and it is pointless to search for underlying rules.

Now, the free-willed human mind does not only represent an apparently unsurpassable barrier when one searches for the mechanics underlying linguistic changes, but it equally seems to frustrate our efforts to discover the medium in which language as such, i.e. 'competence', as opposed to its open manifestation in discourse processes and textual products, i.e. 'performance', resides. Linguistic concepts such as 'phonemes', 'morphemes', 'lexemes', 'syntactic structures', 'schemas', 'meanings' and so forth, tend to be regarded as mere heuristic devices for describing (and to a degree understanding) the essentially mind-based and thus inaccessible principles underlying human linguistic behaviour. They are not normally treated as referring to entities of a material nature, but tend to be relegated to Popper's 'World Three', the immaterial world inhabited by the constituents of 'objective knowledge', such as concepts or (scientific) theories. The inherent unconstrainedness of World Three - false or bad theories can 'live' there just as well as plausible ones - thus renders theories about World-Three objects such as language not only equally unconstrained, but principally unconstrainable. This is why prominent critics of the linguistic enterprise, such as Robert de Beaugrande for example, prefer to think of competence as representing a merely 'virtual system' which is by its very nature not a good object of scientific investigation, and suggest that the linguistic community should concentrate its efforts on the investigation of linguistic performance instead, and dedicate itself to the study of text and discourse rather than of language(s) as (a) system(s).

Interestingly, the readiness among members of the linguistic community to relegate elements of linguistic competence to the domain of the inaccessible world of mental phenomena is based on a long-lived, but ultimately untenable dualist position which has come to be challenged particularly strongly within the community of cognitive science (see in particular Dennet 1991). And when asked if they believed that mental phenomena actually existed in a medium of their own which was radically different from physical matter, few linguists would not admit that this idea is probably as false as the former view that light existed in the medium of *aether* or that life depended on the presence of *élan vital*. Thus, we are faced with the paradoxical situation that the ultimate reason normally given for both the inexplicability of linguistic changes and the impossibility to determine the ontological status of linguistic concepts is one that few people actually believe in, if they 'really come to think about it', so to speak. In this paper, therefore, it will be assumed that linguistic concepts do in fact have material referents and that they refer to pieces of information which are

stored in human brains. It will be shown that this assumption has rather en-lightening consequences.
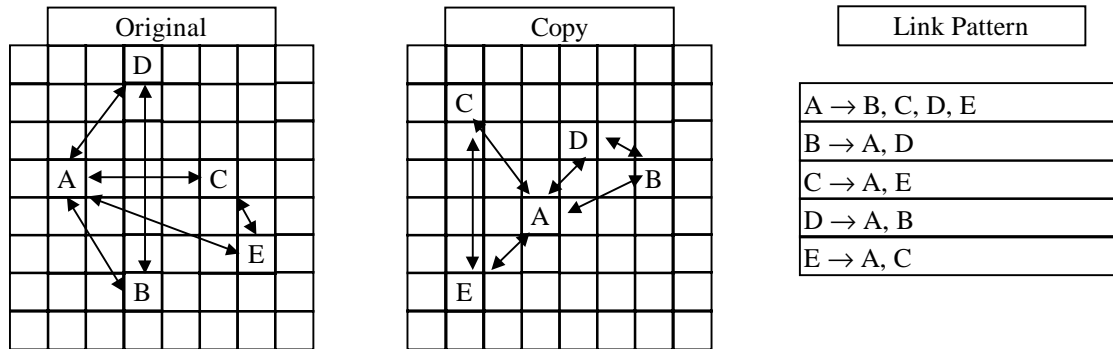
1. Languages as neural networks

Let me start by considering the following example. If, from a materialist point of view, one were to ask oneself which similarities can be assumed to exist between two situations in which a speaker makes one and the same utterance, and if one regarded as established that in both cases, the same languages, the same phonemes, the same morphemes, the same syntactic structures, and the same semantic representations were involved, one would have to conclude that this could be interpreted to mean that in both situations the brains of the speaker (and the listener) involved were in similar states.

This is not necessarily as simplistic as it sounds, because even if one as-sumes that phonemes and all the other concepts may be caused by brain activ-ity, the relationship between these higher-level entities and their physiological substrates may still be complex and non-linear, so that one might still have no way of telling, when looking at a brain state in whatever fine graining one chooses, which linguistic elements it encodes and/or activates. And indeed there is very clear and obvious evidence of the complexity in the relation be-tween physical brain states and linguistic behaviour. If, for example, the as-sumed speaker had suffered a stroke between the first and the second utter-ance, which rendered his left hemisphere dysfunctional, and had to re-learn language in his right one, the neurones involved in the second utterance event would obviously be different ones from those active in the first one. But such complexity does not invalidate the materialist stance, because it does not nec-essarily imply that linguistic knowledge is not encoded in neurones or neural assemblies that have absolute loci in human brains. Instead, it may be stored in terms of networks established among nodes of neural activity. Although possi-bly arranged differently within different brains or at different times in one and the same brain, such functional networks can still be isomorphic or similar to one another, if one considers their higher level structures, i.e. the nodes they consist of and the way those nodes connect with one another. The illustration below shows how two networks can resemble each other with regard to their link patterns, while differing in terms of the local arrangement of their ele-ments.

Linguistic elements could, under such an interpretation, be viewed as nodes or configurations of nodes identifiable by their positions within larger networks

of such nodes. This is in fact the view that underlies many of the so-called connectionist approaches to cognitive psychology and linguistics.[5]

(1)

Original	Copy	Link Pattern
D, A, C, E, B (nodes)	C, D, A, B, E (nodes)	A → B, C, D, E
		B → A, D
		C → A, E
		D → A, B
		E → A, C

Once more back to our example, then. Two utterance events involve similar neural activities. Since an utterance can be regarded as the effect of such activity, a speaker's linguistic competence must then be what constrains the possibilities of neural activity within his/her brain so that only - or at least typically - utterances in the language which the competence represents get effected. If, furthermore, linguistic competence is also inherent in the way a brain is organised, the most plausible way to think of it is as the network of linguistic elements - and constellations of such elements - available for activation in utterance events. Competence thus being the complete network underlying all utterance events, the latter then involve only those of its sections which are momentarily active.

Viewing such a network in terms of neural cell assemblies in the sense of Donald O. Hebb (1949), the competence of a person would be a network of such assemblies, while an utterance would involve those sections of the network that fire at the relevant moment, that are turned on, in other words. An utterance act itself would be viewed as a mere effect of neural activity. The evolutionary biologist Richard Dawkins would call cell assemblies which make up the neural network underlying human cognition and communication 'memes'. Since this term is so obviously compatible with linguistic terminology, I cannot help but prefer it to 'cell assembly', but I take the two terms to encode the same concepts. A 'competence' may thus be defined as a system of me-

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[5] A much bleaker perspective one would get if one assumed that there was absolutely no correlation at all between physiological brain states and linguistic behaviour, i.e. that completely different brain states could underlie identical utterances or reception acts and that practically identical brain states could yield completely different utterances or, even worse, yield 'I hate broccoli' at one time, and at another result in the sudden urge to play a round of Solitaire on your computer, and at yet another make you fall asleep. I refuse to believe in such a scenario.

mes, while an utterance would involve the activity of a subset of a meme system. The technical term for a system of memes is 'memome'.[6] According to Dawkins, a person's memome does not only contain linguistic competence but also all other types of information stored in the brain, so 'competence' is in fact just a part of, or maybe a module, within a person's complete memome. This being a specifically linguistic paper, however, linguistic competence will henceforth be referred to, simply, as the 'memome', the fact that it is just part of a larger whole being implied. Language in its social sense might then be thought of as the sum of all memomes around in a speech community at any particular time, or on the next lower level as the complete 'meme pool' available in the brains of a speech community at a given time.[7] Utterances would be the outward expressions of memes which are turned on at a given point of time, in other words phenotypic expressions, or effects of 'memotypic' structure.

The value of such an interpretation is that neither an individual 'competence' nor a 'language' needs to be thought of as a virtual system. Rather, both clearly represent World-One constituents in Popper's sense. Both 'memomes' and 'meme pools' are spatially and temporally bounded, and can be involved in history because they may change their makeup over time.

2. Linguistic elements as replicators

Having established that two identical utterances made by one speaker on different occasions permit the assumption that on both occasions not only similar sound waves are around, but also similar neural activities take place, and that these activities take place in corresponding sections of similarly organised neural networks, or 'memomes', further steps can be taken. First, consider two persons making the same utterance. Extending the scenario developed above, one could once again claim that within the brains of the two persons similar memes are active, their similarity deriving from the fact that they occupy similar positions in largely isomorphic neural systems, the persons' memomes. It is worth while to remember at this point the case of a single speaker having suffered a stroke and re-learned language between two instances of two identical (or at least very similar) utterances. It was claimed that, in spite of different actual neurones being involved in the two utterances, it still made sense to say that the neural activities taking place on the two occasions were similar because the networks of 'memes', i.e. the 'memomes', were largely isomorphic

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[6] In analogy to the genes within the cells of an organism making up its 'genome'.

[7] The biological counterpart is the 'gene pool', the complete set of genes available within a population at a given time.

with regard to their link patterns. Thus, 'memomes' derive their identity not from the particular medium within which they are realised but from the way they are structured. If, however, it is irrelevant whether a memome is imprinted within one part of a brain at one time and in a different part at another, it must be similarly irrelevant whether the brain matter within which it is realised belongs to one speaker at one time, and a different speaker at another. In both cases, it is plausible to speak of the same memome, or actually of two instances belonging to a probably fuzzy set of relatively isomorphic memomes.[8] It is of course possible, if not very likely, that interpersonal differences between memomes might tend to be (possibly significantly) greater than differences between memomes being hosted by a single brain at different times, but this seems to be a question of degree rather than one of principle. In principle, however, the level of the speaker as an individual is irrelevant for the study of 'memomes'.

From a memetic perspective, language does not need to be viewed as something being 'used' by anybody and not, therefore, as a tool in the unpredictable hands of free-willed selves. In a sense the memetic perspective allows one to look at language without having to look at speakers as autonomous agents.[9] At any one given time, if one looks at a speech community, or rather at their brains, a number of similar linguistic memomes will be around. In England, for example, a certain number of fairly similar 'Englishes' will be around. Although they will certainly not all be alike, there will be enough correspondences among them, so that when one compares any two 'English memomes', large parts of them, i.e. many of the memes that make them up will be the same. On the next lower level, one can say that of any given meme, such as the

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[8]   As a linguist, one feels tempted at this point to think of particular 'tokens' of similar memomes as representing a single 'type' of memome. However, such an abstraction would reintroduce to the memetic approach an idealisation of the very kind it attempts to overcome, because a 'memome - type' would clearly be once more a virtual, or abstract system and have to be relegated to Popper's World Three, and one would be back on square one, so to speak.

[9]   The obvious fact that differences between linguistic manifestations often seem to correlate with differences between individuals is not to be denied of course. Under a memetic view, however, differences between individuals would in turn be seen to result from differences between 'memomes' in the general sense, i.e. systems representing all sorts of information stored within individual brains, not just linguistic knowledge. The point is that such differences can be described without making reference to speakers as agents.

'phone memes' /r/ or /aɪ/, for example, a certain number of copies will exist in a given speech community.[10]

Of the many questions that a memetic view of language raises one is how memes happen to get into the brains they occupy. In established linguistic terminology one would say 'through language acquisition', speakers having the innate faculty of acquiring linguistic competence. From a memetic view, however, speakers are 'invisible'. The question: how does language get acquired? needs therefore to be re-phrased accordingly and would look somehow like this: by what mechanism do brains organise themselves into structured systems which become stably established in their vehicles, i.e. the organisms that happen to host them?

How indeed should we imagine such self organisation to take place? A model that is highly compatible with the views outlined so far has been proposed by Henry Plotkin, a psychologist from University College London. According to him, the whole cognitive development of a brain is a process during which different brain states compete with one another for stability (see Plotkin 1994). A rudimentarily organised brain changes states rather randomly - within certain genetically determined boundaries of course. Though originally random, however, the brain states get filtered by the brain itself, because the latter is sensitive to how the effects which its states have on its environment[11] feed back on the organism including the brain itself. Thus, brain states with effects that are positively evaluated get a higher chance of occurring again, while less positively evaluated ones tend to become rare. The development of a cognitively mature brain is therefore a complex series of adaptive processes during which the brain generates states, tests them, and then either regenerates them or not, as illustrated in the graph below. Because cognitive development thus involves 'random' variation and selection, Plotkin has dubbed brains *Darwin Machines*.[12]

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[10] Again, the expression 'copies of a meme' should not be read as 'tokens of a type'. Nor should it be read as 'copies' of some 'original' meme. Rather, memes count as copies of one another by virtue of the mere fact that they are alike.

[11] Mind that the closest environment of a local brain state are neighbouring brain states, more remote parts of the environment being the organisms body, and the remotest part the rest of the world.

[12] Other scholars, such as Murray Gell-Mann, Stuart Kaufmann or John Holland, all based at the Sta. Fe Institute prefer the term 'Complex Adaptive System'.

(2) The G(enerate)-T(est)-R(egenerate) Cycle in cognitive development
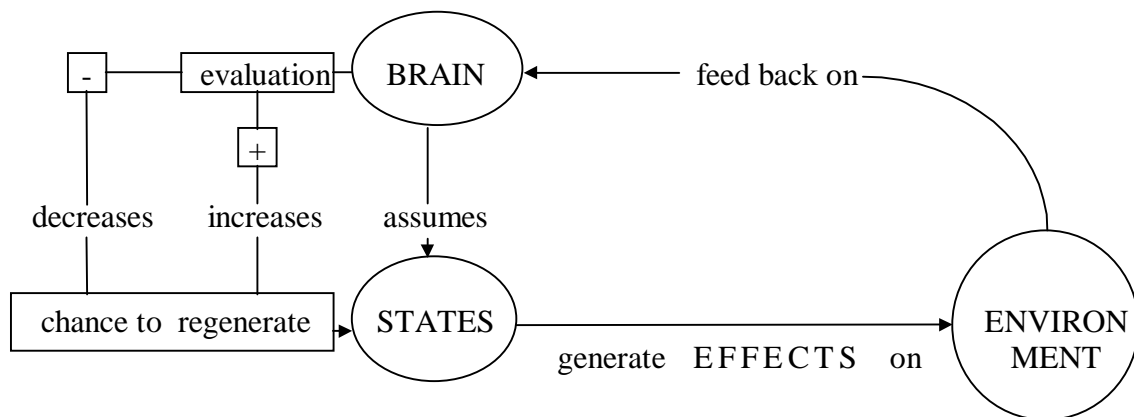
STATES *with a high chance of regeneration count as* STABLE.

Now, as far as the linguistic parts of a brain's organisation are concerned, the environment to which they will have to adapt will comprise

1. most obviously the communicative behaviour of the organisms it meets (effects of other memomes)
2. the (physiological make-up of the) articulatory and auditory organs of its host mechanism or vehicle 3. the genetically determined constraints on the structure of neural networks 4. at later stages of cognitive development: (those) neural configurations in their vicinity (that have already acquired a certain stability), i.e. both non-linguistic memes, and in the case of any particular linguistic meme also other linguistic memes.

Consider the first aspect, the communicative behaviour of the organisms in a brain's environment. Obviously, that behaviour is in turn determined - at least to a relevant degree - by the memes hosted by those organisms, of which it is, after all, just the expression. A brain adapting to the linguistic behaviour produced by memes of a given kind is thus itself acquiring memes resembling those to whose behaviour it adapts. It organises itself, up to a degree, into a good enough copy of the memomes around in the brains it meets. Looking at this process from the other end, one might say that the memes to whose behaviour the newly developing brain adapts, are placing copies of themselves into that newly developing brain through determining the way it self-organises. Memes can therefore be regarded as replicators which are inherently active. There's nobody who does the copying for them. It is they themselves who achieve their own replication, albeit stupidly and mechanically. The speakers
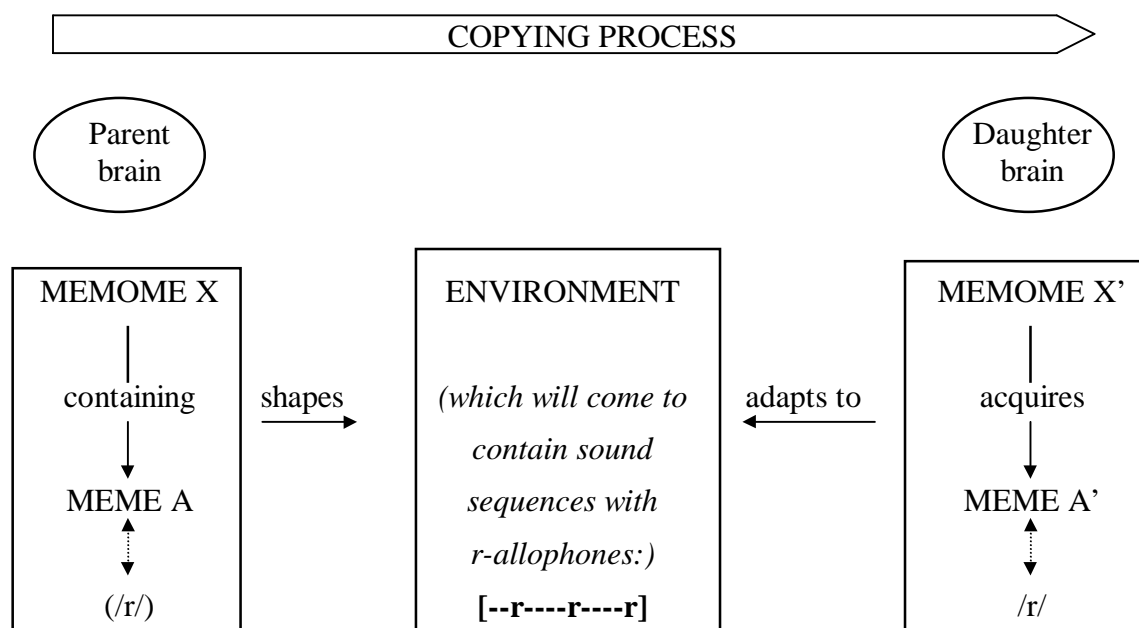
that 'own' them have no active role in the copying process. They can be viewed as mere vehicles, reduced to becoming 'aware of' what words have done with them, have made out of them, and to watching those words using them for planting further copies of themselves into other brains of other help-less speakers.

Time to take stock. Memes, i.e. the 'elements' that make up 'linguistic competences' or 'languages' are replicators. They are realised as neural cell assemblies and derive their essential characteristics not primarily from their material substrate, but rather from the pattern they impose on that substrate. Each meme, each linguistic element, be it a phoneme, a morpheme, a syntactic structure, a word, a semantic feature, a frame or schema, whatever, owes its existence to a replication process by which it has been established as a copy of its ancestor meme(s).

It would therefore be theoretically possible, albeit practically difficult, to draw family trees of memes. Of course, these would not look like the family trees of biological organisms. First, each meme will not have one ancestor, nor two, but may have as many ancestors as there were brains that produced the behaviours from adaptation to which the meme has sprung. Also, each meme may in turn contribute to the shaping of a large number of new copies. Each meme has thus a large number of parents and is co-parent to a large number of memes itself. Finally, and once again in contrast to biological replication, the parent-offspring relationship between memomes (as opposed to individual memes) is not even necessarily unidirectional. After all, linguistic memes both actively shape the environment to which other memes keep adapting AND are constantly checking and updating their own adaptedness to this selfsame environment: while, for example, children might acquire much of their language from adults, adults are not unknown to acquire aspects of the speech of chil-dren either. Since, therefore, a memome can never be regarded as absolutely finished, the roles of parent and offspring are therefore not clearly separated on this level. During a communicative exchange, for example, one memome might 'receive' some memes from another, while the latter might receive others from the former.

The way memes are copied is a very indirect one. It does not involve any direct interaction among brain structures, i.e. the memes themselves. Rather, a meme will influence through its 'phenotypic' effects its 'environment' in such a way that brains adapting to this environment will be motivated to organise themselves so as to establish a copy of the meme in question. The graph below illustrates the way in which a hypothetical phone-meme /r/ might achieve its own replication.

(3)

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┌─────────────────────── COPYING PROCESS ──────────────────────────┐
└───────────────────────────────────────────────────────────────────▷
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   ╭─────────╮                                          ╭──────────╮
   │ Parent  │                                          │ Daughter │
   │ brain   │                                          │ brain    │
   ╰─────────╯                                          ╰──────────╯
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MEMOME X		ENVIRONMENT		MEMOME X'
|				|
containing	shapes →	*(which will come to*	← adapts to	acquires
↓		*contain sound*		↓
MEME A		*sequences with*		MEME A'
↑		*r-allophones:)*		↑
↓				↓
(/r/)		**[--r----r----r]**		/r/

3. Meme replication, self-referentiality, chaos, and the unpredictability of sound change

There is something interesting about meme replication. In a very crucial sense any memome is constantly influencing the very environment to which itself adapts, so that, to a certain extent, meme replication is a circular affair: some meme X exists by virtue of representing a (relatively) successful adaptation to the linguistic behaviour in the speech community that represents its environment. At the same time, the meme will have effects which reproduce the very aspect of its environment to which it is an adaptation in the first place (i.e. it generates a similar type of behaviour). Then, the development of other brains will in turn result in adaptations that are similar to meme X. When these new memes, finally, reproduce once more the type of linguistic behaviour to which meme X is well adapted, they will thereby cement the stability of meme X, and the cycle is complete.

Crucially, what we have to expect in a self-referential configuration like this are 'strange' feed-back and feed-forward phenomena, which in mathematics are well known under the notorious name of chaos. Before elaborating on the implications of all that for the predictability of linguistic change, however, another point needs to be made. Given the indirect way in which memes replicate themselves, it must be rather obvious that the copying fidelity that can be achieved in this manner will not always be perfect. While a meme's strategy for replication might work often enough, there is a definite chance that it might

as well fail, because any particular, even quite well adapted, meme need not be the only conceivable adaptation to its environment at all.

Take a brain developing in a community that is non-rhotic and has linking, but not intrusive /r/. One gets [fəˈrɔːl] [fəˈtuː] but [ˌaɪˈdɪəˌvɪt], as illustrated in figure (4) below.

(4) **Non-rhotic variety of English**

for all	[fəˈrɔːl]
for two	[fəˈtuː]
idea of it	[ˌaɪˈdɪəˌvɪt]
Lexical representations:	/fɔːr/
	/ˌaɪˈdɪə/
Postlexical process:	/r/-deletion:
	/r/ → Ø /__{C|#}

We would assume that somewhere in the memomes of many speakers, there will sit meme complexes representing, phonologically, /fɔːr/ and /ˌaɪˈdɪə/. Furthermore, there will also be links between the meme /r/ and a 'silence' meme, allowing the brain to substitute the command {don't articulate any-thing} for the command {articulate /r/} under certain conditions.[13]

Now, it is quite conceivable that a brain adapting itself to the environment constituted by the speech behaviour of that community should organise itself in such a way as to adopt a meme complex /fɔː/ instead of /fɔːr/ and adopt a link between words of a certain structure and the command to articulate an 'addi-tional' /r/ in certain environments. In conventional terms, a new dialect will thus have emerged, producing intrusive /r/s, as shown in figure (5).

(5) **Alternative variety**

for all	[fəˈrɔːl]
for two	[fəˈtuː]
idea of it	[ˌaɪˈdɪərəˌvɪt]
Lexical representations:	/fɔː/
	/ˌaɪˈdɪə/
Postlexical process:	/r/-insertion:
	Ø → /r/ /{ə,ɔː,ɑː}__V

In memetic terms one would describe such an emergence by saying that a few memes in the parent dialects have 'mis-copied': a mutation has taken place and variation been introduced to the meme-pool under investigation. In the

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[13] Such a 'link' must also be thought of as a meme, of course.

particular case one would say that the mutation did not concern a single meme, but rather a team of memes, constituting what might be called a 'multi-meme':[14] an {underlying-/r/ reps + deletion} multi-meme seems to have mutated into an {r-less reps + insertion} multi-meme. The two different 'meme-teams', or 'multi-memes' will now compete against one another for occupying the same (set of) slot(s) - or fulfilling the same function within the available memomes. Being blind and unconscious, the rival 'meme-teams' neither know of one another, of course, nor do they know that they are in competition with anybody at all, but the competition among them is still real. Since it must be assumed that - for all practical purposes - 'brain space' is as limited as all resources in the universe, a slot occupied by one 'meme-team' won't host its competitor anymore and vice versa.

Now, let me recapitulate and elaborate the observations just made: if meme copying is imperfect, this implies that at any one particular time more than one variants of any meme, or meme configuration are likely to be around in the meme pool that makes up a speech community.[15] In the case of the linking-/r/ dialects vs. the ones with intrusive /r/, the {underlying-/r/ reps + deletion} multi-meme in one memome corresponds to the {r-less reps + insertion} multi-meme in the other memome. Both multi-memes are actively (though stupidly and mechanically) engaged in copying themselves. They will both meet - through their effects - with other developing brains (new ones that are still highly malleable, and old ones that are not so malleable anymore). Clearly, it can hardly be the rule for a brain which is exposed to two variants of a (multi-)meme to acquire both. If that were the case, and given a mono-genetic origin of human language, we should all be competent in all languages and dialects rather than just a few each of us. It seems, therefore, that the typical brain does not adopt all the memes it is exposed to but is 'selective'. Living space for memes is therefore not unlimited. Thus, whenever there are more than one (multi-)memes potentially able to adopt a specific position within the set of memomes available within a speech community, these memes will be in competition for the available brain space. While new meme configurations (i.e. mutations) may often be unable to survive in the long run, some new variants might happen to have qualities that make their chances of reproducing slightly greater than those of their established competitors. Thus, it might be the case that their effects are perceived by the new memes' host-bodies to consume less

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[14] I am painfully aware that the distinction between single memes and 'multi-memes' is problematic, and I have not worked out the issue in full yet. I beg the reader's patience for introducing the distinction in a still rather *ad hoc* manner at this stage.

[15] Be careful not to misread this phrase as 'various tokens' of one 'meme type'. It means 'different memes capable of filling one slot'.

energy while procuring otherwise the same positive feedback as their established competitors. Alternatively, it might be the case that while triggering the consumption of a bit more energy than their established competitors, they generate more positive feedback because their effects manipulate their remote environment (other brains) more effectively, for example. Further scenarios could be imagined, of course, but the essential point is this: if for whatever reason new variants manage to produce more copies of themselves in other brains than the established ones, it can be predicted that they will, in the long run, oust the latter from the dominant position within the meme pool and will themselves become the main variants. Their greater 'fitness' dooms their rivals. Thus, linguistic evolution works on the same principles that Darwin discovered to underlie the evolution of biological species. Superimposed upon the adaptive processes behind cognitive development, and exploiting those processes for the purpose of their own reproduction, languages are thus systems of replicators in their own right, and subject to the same type of random variation and selection as the genetic systems that figure in biological evolution.

But how predictable is the course that linguistic evolution may steer? Let me return to the case of intrusive /r/. As established above, an {r-less reps + insertion} multi-meme can easily be imagined to emerge as a new variant within a meme-pool dominated by an {underlying /r/ + deletion} multi-meme. Now, it is generally recognised that the spontaneous and temporary emergence of a new idiolect may, or may not be, the seed of a sound change spreading through a whole speech community or meme-pool. The crucial question at this point is whether the memetic perspective just outlined allows us to make more meaningful statements about the likeliness and predictability of such an event than the widespread acknowledgement of the essential unpredictability of all things human? What are our chances of predicting if new memomes that may emerge anytime in any community or meme-pool will become stable and spread?

We know that - practically speaking - they seem to equal zero, but why exactly is this so and what are the theoretical limits of all predictive accuracy we may ever hope for? Well, in a way, the answer has been given already: the occurrence of a sound change is as difficult to predict as it is to know if and under what conditions a butterfly flapping its wings in Singapore will cause a blizzard in Chicago, and, crucially, for the same, mathematical reasons, the infinite sensitivity of chaotic functions to initial conditions. It is all due to the inherently circular relationship between meme adaptation and expression. In one sense every meme is an experiment. It produces effects and sees how they feed back to the memome it is part of and thus ultimately to itself. At the same time,

it also influences the feedback that other memes will get from their own ex-
periments with the world. It will thus favour memes like itself and disfavour
memes unlike itself. Whenever a meme gets active this activity resembles a
move on the stock market, and like that, it represents something that other
memes will need to react to, and will in turn need to react to their reactions.
Thus, like a move on the stock market may prompt imitation and thus become
a self-fulfilling prophesy, the activation of a meme may prompt a sufficient
number of copies to be established for critical mass to be reached, a chain re-
action to be started, and the meme pool as a whole to be restructured. Then,
again, it may not, of course. The main difference between a stock market and
communication is that in the meme-pool consumers and share-holders are
identical, apart from that, however, the chaos will be just the same. Change is
thus necessarily unpredictable, and for no mysterious reasons at all, but be-
cause of the complex feed-back and feed-forward effects that create chaos.
There is nothing to be done about that, but nothing magical about it either.

Thus, an evolutionary perspective makes the unpredictability of linguistic
change easy to understand, but the question remains, whether it affords a simi-
larly good explanation for the fact that - in spite of its essential unpredictability
- linguistic change does still often seem to follow plausible patterns. It seems to
me that not only it does, but that it furthermore vindicates exactly those prob-
abilistic types of explanation that functional approaches have come up with,
and because of which they have come to be criticised as vague and impres-
sionistic. If linguistic change is defined as the replacement of one (multi-)meme
by another as the most widespread filler of a particular slot in the typical
meme-system around within a community, it must be assumed that the new
multi-meme was under selection due to an advantage it had in reproduction. If
the factors behind that advantage can be discovered, they can be regarded, al-
beit in a relatively weak sense, as explanations of the change in question. Just
like the success of a company on the stock market will tend to correlate with
the quality of that company's products, the efficiency of its production and the
effectiveness of its marketing (and no serious investor would neglect this rule),
the success of a meme within the pool of a linguistic community will correlate
with such parameters as, to name just two, articulatory efficiency or communi-
cative effectiveness. In both cases, however, the success of individual compa-
nies or memes is not predictable. And this is, it seems to me, why functional
approaches to linguistic change will bring us as close to explaining and under-
standing language change as we possibly can expect to. Parameters like com-
municative efficiency and effectiveness can plausibly be assumed to give me-
mes a reproductive advantage over potential competitors, while the self-
referentiality of meme-reproduction can explain why they need not be suffi-

cient for a new meme to oust its competitors if those happen to be the dominant variant in a meme-pool.

4. Accounting for sound change in evolutionary terms

To illustrate what I mean, let me finally show what a functional account of a sound change might look like, if it is given from an evolutionary perspective. Take Trisyllabic Shortening. Although the status of this change is disputed because it seems to have had fewer unambiguous inputs than long assumed, it is still generally recognised that a few words such as OE *ǣrende* came to show up with a short vowel eventually and that this seems to have had something to do with the weak syllables following the shortened vowel. In this change, lexical representations such as /ˈæːrəndə/ came to be replaced by lexical representations such as /ˈɛrənd(ə)/ as the dominant variants in the English meme pool. The change took place at a time when English was in all probability already stress timed. Feet tended to last equally long in spoken utterances. The memes controlling adaptation to this norm had been established in most English memomes, so to speak. Now, /ˈæːrəndə/, being a trisyllabic word form, with a heavy second syllable on top would run a great chance of being activated in the context of such utterance events that had its realisations occupy the positions of feet that were at least three, possibly four syllables long. No matter by what word it would have been followed, the minimal foot it would have come to figure in would have been $\sigma_s\sigma_w\sigma_w$, as, for instance, in *He his hlafordes ærende secgan sceolde* (*Bede* II. ix, cf. OED sv. *errand*). It can never have figured in smaller feet. Given isochrony and the preference for trochees which can be deduced from that, it follows that due to phonetic foot length adjustment processes, the typical duration of the vowel in realisations of /ˈæːrəndə/ will have been relatively short for being realisations of an /æː/ meme. This will have been brought about by low level phonetic processes, operating after the assignment of prosodic structure. Making the actual realisation of underlying /ˈæːrəndə/ similar to a trochee in terms of weight and syllable structure such phonetic weakening processes may be quite plausibly assumed to have resulted in actual realisations such as [ˈærəndə] [ˈærndə] or [ˈærənd]. Obviously, such processes would have decreased the degree of iconicity in the relationship between the underlying form of the noun and its phonetic realisations. This would have constituted a reproductive 'disadvantage' for the form /ˈæːrəndə/, because it would have become more difficult to recover in perception and consequently more difficult to acquire as well. It is easily conceivable, then, that the balance between prosodic preferences and phonological iconicity might have been re-

stored, occasionally, through reinterpretations of the underlying form as /ˈærəndə/ /ˈɛrndə/ or /ˈɛrənd/, respectively, which would thus have emerged as mutations of /ˈæːrəndə/ in the English meme-pool. These variants would have been more similar to the actual realisations [ˈærəndə] [ˈærndə] or [ˈærənd], and would therefore have been recovered and acquired more easily. In memetic terms, we would say that new brains organising themselves to be adapted to an 'English' environment will have been comparably better off if they had adopted a short voweled meme such as /ˈærəndə/ rather than /ˈæːrəndə/. The new meme will have produced comparable effects, i.e. [ˈærəndə] [ˈærndə] or [ˈærənd] but at a lower cost. At the same time it will have been more efficient in making its host organisms react appropriately to the [ˈærəndə] [ˈærndə] or [ˈærənd]s produced by other memomes in its environment. This fact allows one to understand what must have happened when original /ˈæːrəndə/ existed side by side with new /ˈærəndə/, /ˈærndə/ and /ˈærənd/ in the meme-pool that made up the Late Old English speech community: due to the combined pressure of prosodic preferences for trochee-like feet, and the semiotically grounded preference for maximal iconicity between representations of different phonological levels, forms such as /ˈærəndə/ and ultimately /ˈærənd/ eventually became the dominant variants within the speech community, because their greater iconicity would have made them easier to acquire, and more likely to be maintained because of their greater efficiency than /ˈæːrəndə/. Thus, the latter would eventually have become 'extinct'. In this sense, then, the changes of /ˈæːrəndə/ to /ˈærəndə/ and eventually /ˈærənd/ can be understood as 'adaptations' of phonological forms to their prosodic environments and the forces operating within that.

5. Summary and outlook

As I hope to have made plausible, the assumption that linguistic descriptions have material referents in human brains suggests a view of language acquisition and change that amounts to a genuinely Darwinian one. In other words, such a model and such an approach can be developed on purely linguistic grounds alone, and need not be derived by analogy from evolutionary biology. The evolutionary perspective allows one to make sense of the unpredictability of linguistic change, and highlights the explanatory value of necessarily probabilistic functional explanations.

At the same time, of course, the approach that has been sketched but very briefly, raises even more questions than it answers, and lets old questions appear in a new light. Some that come to mind would include: how big can memes assumed to be, and how does one distinguish single memes from multi-

memes? If meme identity is established with regard to a meme's position within the memome, how can there ever be two different memes competing for the same slot? Are some memes more likely to establish themselves in brains than others on universal grounds (markedness, universal preferences, hardware constraints)? What is the relation between the fitness of individual meme configurations and the overall fitness of the linguistic memome they are parts of (language specific reversal of markedness relations)? What is the status of meme-pools (i.e. languages)? How easy is it for memes to cross meme-pool boundaries (loans, language contact)? Under what conditions do meme-pools diverge or converge (language diversification, language conversion)? Under what conditions does a meme come under selection? When is variation stable? Is linguistic evolution gradual or does it jump? What is it that speeds it up at times, and slows it down at others? The number of interesting questions is endless. If this paper has managed to raise any interest in them and maybe tempted one reader or the other to try and elaborate the model introduced here, I will consider it to have fulfilled its purpose.

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Who does the copying? Some thoughts on N. Ritt's Darwinian historical linguistics

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Niki Ritt's contribution is a highly stimulating attempt to extend the borders of historical linguistics one important step beyond functional or social 'explanations' of language change. The idea that linguistic concepts and systems have a very concrete "material referent" in the human brain may seem outrageous to some, and quite obvious to others, but Ritt is one of the first to provide a very detailed and plausible account of what this could actually look like. While using basic concepts from evolutionary biology and cognitive science, he convincingly argues that an "evolutionary perspective on language can be derived on linguistic grounds alone" (1). If you are a dualist Ritt's paper may not change your basic philosophical outlook and make you a materialist - but within his materialist frame most of the ideas Ritt develops are convincingly argued and have a high degree of attraction. The following remarks will not discuss the - insoluble - conflict between dualists and materialists, but rather critically look - within Ritt's own paradigm - at two specific problems.

(i) A point which still seems unclear is whether the repeatedly mentioned possible differences between memes lie in the very nature of these neural cell assemblies or in differences in the links between them (cf. 8). Though Ritt evidently subscribes to a connectionist approach, in elements are defined "by their positions within larger networks", his memes can evidently be seen as both 'elements' and 'relations' (in traditional terminology).

(ii) The most controversial point in Ritt's framework seems to me his concept of *copy(ing).* I have no difficulty in accepting his - basically static - definition of *copy* n., namely that "memes count as copies of one another by virtue of the mere fact that they are alike" (9, note 10; emphasis added here and in the following quotations). More problematic is Ritt's definition of the (dynamic) process (or activity) of copying as mirrored in the following quotations: Memes are seen as "replicators" which "cop[y] themselves into the language under investigation" (1), they "achieve their own replication, although stupidly and mechanically" (10); "the memes...are placing copies of themselves into that newly developing brain" (10), are "planting further copies of themselves into other brains of other helpless speakers" (11). These formulations clearly

centre around an active 'sender brain' - the 'sender speaker' having "no active role in the copying process" (10f.). The 'mechanical stupidity' of the 'sender brain' as active part ('replicator') stands in marked and amazing contrast to the role of the 'receiving brain', which is evidently passive in this copying process, though it develops in a "complex series of adaptive processes during which the [receiving] brain generates states, tests them, and then either regenerates them or not" (9). It seems to me that it would be more plausible if this copying worked the other way round, namely, that the developing 'receiving brain' makes copies of selected memes. This would evidently presuppose that - due to a genetic predisposition - developing (and mature) brains would have the capacity of making copies of memes which exist in surrounding brains and with which they get into contact indirectly via the sound waves, which - in Ritt's model - in turn are the phonic results of activated memes in the sender brains. (Since Ritt explicitly acknowledges the existence of "certain genetically determined boundaries" (9), such a genetic predisposition in the 'receiving brain' for making copies seems compatible with his model.) From the enormous number of transmitted utterances the receiver brain would make a selection for copying, which in turn establishes material traces ('referents') in the receiver brain, namely the memes. (Ritt himself states at some later point that the 'receiving' brain is "selective", but not in its copying, but in its adoption of memes (14)).

In other words, instead of a (in traditional terms) sender-oriented copying process ('copy *to*') I would propose a receiver-oriented one ('copy *from*'). Such a 'receiver' orientation also seems to be fully compatible with the further steps in Ritt's model, in which competing (similar) memes fight for survival (and one might even find a trace of this view in Ritt's own statement that "a brain organises itself into a good enough copy of the memomes around in the brain it meets" (10) - though he seems to deny this in other places). By reversing the direction of the copying process in such a way that the receiving brain actively does the copying itself, the model would gain in explanatory power (though the bidirectionality and the feed-back and -forward phenomena mentioned by Ritt would remain a possible aspect of such a revised model). A receiver-based view would also facilitate the integration of valuable insights from language acquisition research; it would, furthermore, be fully compatible with another basic claim of Ritt's paper, namely that "[e]ach meme...owes its existence to a replication process by which it has been established as a copy of its ancestor meme" (11), as well as with all or most of his other tenets, including the aspect of the 'survival of the fittest' (15). However, such a receiver-orientation would facilitate the explicit integration of social and other extra-linguistic factors, which would govern the selection process of the incoming

utterances for copying. I can hardly see any need for or proof of an active 'sender brain' (replicator) as postulated by Ritt, unless it is the implicit analogy with biological copying processes - but this analogy is not complete anyway, since - as Ritt himself points out - copying in his model is indirect (via the sound waves) and does not involve contact between the 'original' and the 'copy', as is the case in biological evolution.

There are certainly further points in Ritt's paper which are worth discussing (such as his claim that limited 'brain space' may be responsible for the competition between rival 'meme-teams'), but this would go beyond these short comments. I would agree that many of the 'old questions' which Ritt enumerates in his 'Summary and outlook' can be most profitably discussed in Ritt's model, which provides powerful new arguments for a functionalist approach to linguistic change. Whatever the answers may be, Ritt's paper presents a highly intelligent though controversial way of extending the domain of linguistics into the bio-neurological sphere. Assigning material referents to linguistic concepts (and thus bringing them into Popper's 'World One') makes them in some sense more concretely accessible. The extension of knowledge and of 'explanations' is without doubt the ultimate goal of linguistics as of any other scientific discipline - and Ritt's model is an intriguing step into this direction.

Text types and code-switching in medieval and Early Modern English

Herbert Schendl

0. Introduction

In spite of the long tradition of historical English linguistics, one particular type of older texts, namely mixed language texts, have so far not received the linguistic attention they would deserve. The aim of the present paper is, firstly, to give a short overview of language mixing in various domains, text types, and genres from the middle ages to the Early Modern English period, and secondly, to briefly illustrate the syntactic and pragmatic variety and complexity of switching in such texts. (One particular genre, namely mixed poems, will be analysed in more detail in the next issue of VIEWS.)

A linguistic study of such mixed texts should be of major interest for historical linguistics, in particular as written testimony of early English bilingualism and language contact, and could provide an important ('missing') link for the process of lexical borrowing; however, the analysis of such texts could also add the still lacking diachronic dimension to modern studies of code-switching, a field of research which has seen an enormous expansion in recent years.

1. Historical background

The linguistic situation of medieval and Early Modern Britain was a rather complex one, in which a number of languages and language varieties existed side by side. To the English dialects and Celtic languages, the Norman invasion and subsequent French immigration added at least two different and socially marked, prestigious French vernacular varieties (Anglo-Norman French, Central French), which predominated in certain domains at least in part of the Middle English (ME) period (law, literature, court). Furthermore, there were also pockets of Low German immigrants in the ME and Early Modern English (EModE) periods, especially in parts of the Eastern Midlands. The Old English (OE) bilingual areas of the north east with their mixed North and West Germanic population had adopted - a possibly creolised - English by the 12th century. Finally, as in most European countries, Latin functioned as the High

language in many public domains (religion, law, education, scholarship, literature). The relative status of the different languages and their functional range, especially that of English and French, clearly changed over the centuries, especially in regard to their main functions and domains (cf. Berndt 1965, Short 1980, Kibbee 1991). The coexistence of these different languages and language varieties within Britain certainly did not mean universal bi- or multilingualism, since there were a number of predominantly monolingual territories, such as much of the Celtic areas and the rural English-speaking areas of the greater part of England. Furthermore, monolingualism was most likely also a social phenomenon, with widespread English monolingualism at least among the lower social ranks, and French monolingualism as a feature of the highest nobility in the early ME period. However, with many members of the higher and the educated middle ranks of society, bilingualism - or even trilingualism - must have been no unusual phenomenon (cf. Richter 1979, Short 1980), involving either two vernacular languages (English, French) or Latin as the High variety with one or two vernaculars. While the role of French became increasingly restricted to a small number of functions (e.g. law) in the late ME period, and English extended its functional range, Latin maintained its status as the High variety in most functions throughout the Middle English and well into the EModE periods.

Quite a number of English medieval sources explicitly or implicitly point to bilingualism and the use of different languages according to communicative situation and participants, i.e., to a kind of diglossic or even multiglossic situation (cf. Short 1980: 474, 478f., Richter 1979: 55f., 61ff., 69, 73, 83). Of particular interest is Richter's detailed study of the languages used in the canonisation procedure of Thomas Cantilupe, bishop of Hereford, in 1307 (Richter 1979: Part 4, esp. section 3). He shows that a surprisingly large number of the more than 200 witnesses used a more prestigious language than their L1 on this occasion. These are clear cases of the type of 'situational code-switching' (CS) typical of a diglossic situation.[1] - A different kind of evidence is the fact

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[1] We will follow Gumperz' definition of code-switching (CS) as "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems" (1982: 59). However, only CS between different languages, in particular between Latin, English and French will form the topic of this paper, though, according to this definition, CS may also involve different (regional, social, stylistic) varieties of one language, cf. Romaine (1995: 121); this is well-known and documented for Middle English. - In 'situational' CS, the change of codes coincides with situational changes (e.g., new topics or participants), while in 'metaphorical' (or 'conversational') CS switches fulfil different discourse functions, occur within the "same minimal speech

that medieval manuscripts frequently contain texts in Latin, French and/or English in no apparent order, which also points to the multilingualism of the scribes and of the users of these manuscripts (cf. Hunt 1991: 16, 434f.; Voigts 1984: 316).

The co-existence of and contact between these different languages and varieties has evidently left its traces in the structure of modern English, even more so in the regional varieties of English. English historical linguistics has extensively studied the <u>results</u> of language contact on the English linguistic system, such as the morphological and syntactic influences from Scandinavian, French and Latin. Lexical borrowing especially, which led to a partial relexification of English from French and Latin sources, has been studied in detail. But this is not the case with more performance related aspects, such as language mixing ('code-switching') in specific texts or the syntactic types and possible constraints, as well as the communicative functions of such switching. These aspects have so far not been studied systematically by historical linguists.[2]

This neglect may be partly due to a general negative attitude towards language mixing, which was widespread even in modern sociolinguistics till about 20 to 35 years ago; it is less due to the lack of relevant data, since - as mentioned in the introduction - there is a considerable number of older written texts which show language-mixing, often in mid-sentence. Their existence has sometimes been acknowledged in passing, but their linguistic significance has been largely ignored,[3] though the phenomenon is attested for more than 500 years, and occurs across genres and text types, both literary and non-literary, verse and prose. As for the languages involved in these mixed texts, they mirror the linguistic situation of medieval and Early Modern England: In most cases Latin as the 'high' language is one of the languages involved, with one or both of the vernaculars English and French as the second partner. (Latin - Irish mixed texts will not be discussed here.)

Now, one basic view underlying the present paper is that this mixing of languages in older written texts represents a specific discourse strategy, similar

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act" and stand in a complex relation with social variables; see Gumperz (1982: 60f.), Romaine (1995: 161-165).

[2] The terms '(code-)switching' and '(code-)mixing' will not be differentiated in this paper; for a discussion of these terms see Pfaff (1979: 295); Romaine (1995: 124).

[3] However, literary scholars and medievalists have long been aware of the existence of these 'macaronic' texts and have studied various non-linguistic aspects, including the literary and textual functions of language mixing - though this has never been a 'mainstream' concern; cf., e.g., Archibald (1992), Nolan (1985), Pöckl (1992), Sullivan (1932), Zumthor (1960), etc.; of particular interest is Wenzel (1994), who has edited a number of mixed sermons and has also discussed syntactic and pragmatic aspects of his text corpus.

to the one found in modern code-switching. Thus these texts constitute an important category of texts, which deserve to be studied in their own right. They should certainly not be taken as the results of imperfect language competence or as some random idiosyncrasies of use.

2. Domains - genres - text types

Unfortunately, there is still no inventory of mixed-language texts and text types available, and it is not always an easy task to find them. So far I am aware of the following mixed text types and genres:

(a) Among the non-literary mixed texts - and I will disregard the OE period - we find: (i) sermons (ME, EModE); (ii) other religious prose texts (ME); (iii) legal texts (ME, EModE); (iv) medical texts (ME, EModE); (v) business accounts (ME , EModE); (vi) 'private' prose such as letters and diaries (EModE);

(b) the main literary sources are (i) mixed or 'macaronic' poems (ME, EModE); (ii) longer verse pieces (ME, EModE); (iii) drama (ME); (iv) various prose texts (ME).

The following overview will provide samples of mixed-language texts in a number of different domains, genres and text types, without explicitly differentiating between these groups any further. It will furthermore briefly illustrate different types of syntactic switching and some functional aspects. The present material seems to indicate that some of the syntactic and functional differences in the switching strategies of these texts may be typical of certain genres or text types, though this hypothesis will have to be substantiated by further research on a much larger corpus.

2.1 Non-literary texts

2.1.1 The **religious prose** text from the early ME *Ancrenne Wisse* illustrates a simple and very common pattern, which is also widespread in other domains and text types: a Latin (in this case biblical) quotation is followed by a more or less close English translation, a free paraphrase, an explanation, etc.[4] Syntactically, the Latin switches in this type of mixed texts tend to be 'intersentential',

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[4] The Latin and French switched material will be printed in italics. Translations of the non-English material and of difficult ME passages will be provided in square brackets, with the non-English material being underlined.

i.e., they occur between sentences or independent clauses (cf. Myers-Scotton 1993: 4; Romaine 1995: 122f.).

(1)   *Ancrenne Wisse* (early 13th c.)

Schirnesse of heorte is Godes luue ane. I þis is al þe strengðe of alle religiuns, þe ende of alle ordres. *Plenitudo legis est dilectio*. "Luue fulleð þe lahe," seið seinte Pawel. *Quicquid precipitur, in sola caritate solidatur.* "Alle Godes heastes," as sein Gregoire seið, "beoð i luue irotet."

['Cleanness of heart is the love of God alone. In this lies all the strength of all religious life, the purpose of all orders. <u>Love is the fulfilling of the law</u>. "Love fulfils the law," says St. Paul. <u>Whatever is commanded is completed only with love</u>. "All God's commandments," as St. Gregory says, "are rooted in love." ']

2.1.2 The same pattern of intersentential switching is typically found in medieval English **sermons**, such as the one under (2) from the early 12th century. The Latin quotations provide the general structure of the sermon and thus have a clear discourse function (cf. also Wenzel 1994: 74f.).

(2)   *In diebus dominicis* (12th c.)

[...] þe mare to haligen and to wurðien þenne dei, þe is icleped sunnedei; for of þam deie ure lauerd seolf seið: '*dies dominicus est dies leticie et requiei* sunnedei is dei of blisse and of alle ireste. *non facietur in ea aliquid, nisi deum orare, manducare et bibere cum pace et leticia* ne beo in hire naþing iwrat bute chirche bisocnie and beode to Criste and eoten and drinken mid griðe and mid gledscipe.' *sicut dicitur: 'pax in terra, pax in celo, pax inter homines'* for swa is iset: 'grið on eorðe and grið on hefene and grið bitwenen uwilc cristene monne.'

['[...] the more to sanctify and to worship this day which is called Sunday; for of this day our Lord himself says: '<u>the day of the Lord is the day of joy and rest</u>', Sunday is the day of joy and of all rest. <u>Nothing is done on this day, except praying to god, eating and drinking with peace and happiness</u>, nothing is done on this day but church attendance and praying to Christ and eat and drink with peace and happiness.' <u>as it is said: 'peace on earth, peace in heaven, peace between men</u>' for thus it is put down: 'peace on earth and peace in heaven and peace between all Christian men.']

While (2) is an English sermon with some Latin insertions, the late 15th century piece under (3) is clearly a Latin sermon with numerous English insertions of varying length, which do not serve any obvious function. This type of mixed sermons is rather widespread in the late ME period, from about 1350 to 1450 (cf. Wenzel 1994: 31ff.).[5] Syntactically, most of these switches are 'intrasentential', i.e., they occur <u>within</u> the sentence, and involve all kinds of major and minor sentence constituents. Such patterns are very similar to code-

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5   The classification of a text as Latin or English will be based on purely quantitative criteria, and not on linguistic ones, as in some models differentiating between a 'matrix (or base) language' and an 'embedded (or donor) language' (cf. Myers-Scotton 1993).

switching in modern speech and deserve detailed syntactic analysis in regard to switching points, switched constituents and possible constraints (for a discussion of syntactic constraints on intrasentential switching in modern languages cf. Timm 1975, Pfaff 1979, Poplack 1980, Berk-Seligson 1986, Clyne 1987, Mahootian 1996; for a survey cf. Romaine 1995: 125-130).

(3)   *De celo querebant* (early 15th c.; source: Wenzel 1994: 274ff.)

> Set quia secundum doctores crudelis punicio sine misericordia cicius dicetur rigor quam iusticia, ideo necessario ramus misericordie debet eciam crescere super vitem. Domini *gouernouris most* eciam *be merciful in punchyng*. Oportet ipsos attendere quod *of stakis and stodis* qui deberent stare in ista vinea quedam sunt *smope and lightlich wul boo*, quedam sunt *so stif and so ful of warris* quod homo *schal to-cleue hom* cicius quam planare. Quidam subditi sunt humiles *and buxum*, et de facili volunt corigi; quidam sunt *as stiburne* et duri cordis quod mallent frangi quam flecti [...] Prima res intellecta in celo Ecclesie est corpus perfectum, *þe nurchinge* sol curatorum *with his bemis al brennyng*. Ex quo magnus philosophus Eraclitus vocat solem fontem celestis luminis, [...] racionabiliter possum huic comparare prelatos, curatos, et *men* Ecclesie, qui pre omnibus aliis statibus *most schyne* in firmamento Ecclesie *in holy lyuynge*,...

> ['But since according to the doctors harsh punishment without mercy will be called rigor rather than justice, it is therefore necessary that the branch of mercy, too, should grow on the vine. The lord's <u>governors must</u> also <u>be merciful in punishing</u>. They should take notice that <u>of the stakes and supports</u> that should stand in this vineyard, some are <u>smooth and will easily bend</u>, others are <u>so stiff and so full of obstinacy</u> that a man <u>will split them</u> sooner than straighten them out. Some subjects are humble <u>and obedient</u> and will be easily corrected; others are <u>so stubborn</u> and hard-hearted that they would rather break than bend [...] The first thing that is understood in the heaven of the Church is a perfect body, <u>the nourishing</u> sun of parish priests, <u>all afire with its beams</u>. Because the great philosopher Heraclitus calls the sun the fountain of heavenly light, [...] I can reasonably compare to it the prelates, curates, and <u>men</u> of the Church, who <u>must shine</u> in the firmament of the Church before all other estates <u>in holy living</u>,...]

2.1.3 A domain where Latin and French clearly dominated in the ME period is **law**. The EModE mixed **legal text** under (4), a deposition, uses Latin mainly in formulae and fixed expressions in an otherwise English text. It starts with the formulaic Latin *Ad primam excepcionem*, then continues in English; the switch to a Latin relative clause in mid-text is possibly due to euphemistic reasons (*vbi eam carnalliter cognouerit*; cf., however the preceding equivalent English expression *that he had carnall act with her*!). Towards the end, Latin starts again in a passage of typical legal character, with another final switch to English in mid-sentence. The two Latin phrases *ad priman excepcionem* and *ad reliquos articulos* structure the text by introducing new pleas or topics, and thus again clearly fulfil a discourse function.

(4)   Deposition in trial: Affiliation (Bishop's Court, Chester, 1562/63)

Ad primam excepcionem / This deponent saies, for any thinge that this deponent knowes, Mary Haselwall is an honest damoysell. and forther, this Deponent saies, That he, this deponent, and George Garrat, were sent by Henry Monelay, brother vnto Margaret Monelay, to John Cotgreve, to knowe the certenty and truth of hym, whether that he wold deny or confesse the Act. and at the first, he did stoutly deny it; but afterward he confessid that he had carnall act with her ons; and shewid them the place *vbi eam carnalliter cognouerit* / And forther he saies, the said Cotgreve said he neuer had to do with her but ons carnally /

Ad reliquos articulos, Dicit se nihill scire, nec potest excipere contra testes; sed de fama, ait, that she is taken for an honest wenche, but for that one Dede. and forther, this Deponent hearith it comenly reportid that the said Cotgreve is father of the Child.

['In regard to the first plea / This witness says, for anything that this witness knows, Mary Haselwall is an honest maiden. and furthermore, this witness says, that he, this witness, and George Garrat, were sent by Henry Monelay, brother of Margaret Monelay, to John Cotgreve, to learn the certainty and truth of him, whether he would deny or confess the act. and at first, he firmly denied it; but afterwards he confessed that he had once carnal knowledge of her; and showed them the place where he had carnal knowledge of her / And furthermore he says, the said Cotgreve said he never had to do carnally with her but once /

In regard to the remaining points, He says the he knows nothing, and cannot contradict the witnesses; but he has it from hearsay, that she is taken for an honest wench, except for that one deed. and furthermore, this deponent hears it commonly reported that the said Cotgreve is father of the Child.']

2.1.4 William Harvey's famous anatomical lectures, *Prelectiones Anatomie Universalis*, provide an example of a mixed **medical text**, cf. (5). This predominantly Latin piece shows quite a number of short intrasentential switches into English, quite similar to the switches in the sermon under (3) and those in modern speech. In some instances, the graphemic (and phonemic) similarity or identity of a lexeme in English and Latin blurs the switch site (cf. *cley color contracti*), i.e., there is a transition zone between the two languages (cf. Romaine 1995: 149f.). Such formal similarity or identity of L1 and L2 items has been frequently found to trigger switches in living languages, i.e., such switches seem to be internally conditioned (cf. Clyne 1987).

(5)   William Harvey, *Prelectiones Anatomie Universalis* (1616)

Observatio: 1. in prima conformatione albi ut nix; 2. embrione ante aeris haustum eodem quo iecur colore ut pueris ante partum *and in two whelpes the one borne ded*, unde Avicenna albificat ipsos aer, ex accidente ideo color; 3. morbosis *swarty purple blewish* ut peripneumonia, sanguine refertissimi; *a duskey ash color, a durty greye, ledish* in apostemate absque et cum venis livescentibus; *more white and yellow, cley* **color** contracti. Hecticis ut tam homine tam simea mea *seacol* absque potu.

['Observations: 1. in the first fashioning of the embryo they are white as snow; 2. in the foetus before the first in-taking of air they are the same colour as the liver, as can be seen in children before they are born, <u>and in two whelps, the one born dead</u>. For this reason Avicenna said that the air turns them white, and therefore their colour is merely contingent; 3. in those who are diseased the lungs are <u>swarthy, purple, bluish</u>, as in pneumonia when the lungs are filled full of blood; <u>a dusky ash colour, a dirty grey, leadish</u>, in cases of abscess with and without veins turning lead coloured; <u>more white and yellow</u>, <u>clay</u> **colour(ed)?** and contracted. In those who suffer from hectic fever, as well in man as in my monkey, the lungs are like <u>sea-coal</u> without any moisture.']

2.1.5 A rather different type of mixed texts occurs in the **business accounts** studied by Laura Wright (cf. Wright 1992, 1994). The ME sample under (6.a) has only isolated English noun phrases, normally single nouns, in an otherwise Latin text. A feature of such texts is their extensive use of abbreviations, and thus lack of morphological information (cf. Wright 1994: 455f.), which neutralises the two languages and thus blurs the switch sites. The generally problematic distinction between switching and loan words (cf. Romaine 1995: 142-161 for a critical survey) is almost impossible to make in such cases. - The EModE text under (6.b) illustrates the diachronic changes which took place in this text type within less than a century: English language material is no longer restricted to single nouns, while Latin in turn has become restricted to function words such as numbers, prepositions, conjunctions, etc. (cf. Wright 1994: 452).

(6) a.   <u>Middle English</u>: London Bridge Archive, 1464/65 (source: Wright 1994: 450)

('And for 6 <u>pails</u> bought for the mason's work 15d. And for 3 <u>baskets</u> bought 4d. And for 4 shevers bought 4d. And for 1 <u>pulley</u> 2d, and 2 <u>barrels</u> 8d, bought and placed in a tenement on the bridge for the drawing of water 10d. And to Nicholas Walter for 8 oars bought from him 5s. And for 3 shovels 6d, and <u>brooms</u> 1d, bought for the use of the bridge 7d.')

b.   Early Modern English: London Public Record Office, 1553 (source:
          Wright 1994: 451f.)

('one sewing press; 13 boards called shelves; four printing presses; two pairs of cases with
letters to print with pictures and histories; fourteen pairs of wood [ ]; ten boards to lay upon
paper; two deal forms, one long, another short; three pots for printing ink')

2.1.6 As an example of **private prose** writing, a few lines from John
Leland's description of Bath in his travel diary will be quoted. In this text, the
overall number of the - mainly intrasentential - Latin switches is rather small,
and their specific function often not obvious.

(7)   J. Leland, *The Itinerary of John Leland in or about the Years 1535-
           1543*.

           The toune waulle within the toune is of no great highth to theyes: but without it
           is *a` fundamentis* ['from the foundation'] of a reasonable highth. and it stondith
           almost alle, lakking but a peace about Gascoyn's-tower.[...] One Gascoyne an
           inhabitante of the toune *in hominum memoria* ['within the memory of people']
           made a litle peace of the walle that was in decay, as for a fine for a faught that
           he had committid in the cite: [...] Then I saw the image of a foote man *vibrato
           gladio & praetenso clypeo* ['with brandished sword and a shield held in front']
           [...] Then I saw ij. nakid imagis lying a long, the one imbracing the other. [...]
           Then I saw the image of a nakid man. Then I saw a stone having *cupidines &
           labruscas intercurrentes* ['tendrils and intertwined vines']. Then I saw a table
           having at eche ende an image vivid and florishid above and beneth. In this table
           was an inscription of a tumbe or burial wher in I saw playnly these wordes: *vixit
           annos xxx* ['(he) lived for xxx years'].

2.2 Literary texts

Language mixing in literary texts has been commented upon by literary schol-
ars for a long time. Purely literary aspects of mixing will not be discussed here,
though there is often no clear border between a literary and a prag-
matic/functional analysis of mixing.

2.2.1 In **medieval drama**, switching involves mainly English and Latin,
less frequently, French and Hebrew.[6] Since dramatic texts are addressed both
to an audience and to one or more dramatis personae, the functional range of

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[6] This paragraph on medieval drama is much indebted to an unpublished paper given by
     H.-J. Diller in 1995, which provides excellent information on language mixing in medie-
     val drama, particularly from a functional point of view.

switching is considerable. In general, Latin is used as the 'divine' language in the religious sphere, though exceptions do occur (cf. Diller 1995). For example, in the exchange between Mary and Elizabeth under (8) from the *Mary Play* of the N-Town cycle, Mary switches from her normal use of English to Latin when she quotes the texts of the *Magnificat* and the *Gloria;* after every second line spoken in Latin by Mary, Elizabeth provides an English version of the Latin text. According to Diller (1995) this dialogue-like presentation both shows the harmony between Mary and Elizabeth, but also underlines the different spiritual status of the two women. - Syntactically, intersentential switches involving quotation of full sentences predominate in medieval drama, though intrasentential switching does occur.

(8)   *Mary Play* (ll. 1492-1539)

Maria: For þis holy psalme I begynne here þis day:
              Magnificat: anima mea dominum
              Et exultauit spiritus meus: in deo salutari meo

Elizabeth: Be þe Holy Gost with joye Goddys son is in þe cum,
              þat þi spyryte so injouyid þe helth of þi God so.

Maria: Quia respexit humilitatem ancille sue
              Ecce enim ex hoc beatam me dicent omnes generaciones

Elizabeth: For he beheld þe lownes of hese hand-maydeȝe,
              So ferforthe for þat all generacyonys blysse ȝou in pes. [...]

Maria: This psalme of prophesye seyd betwen vs tweyn,
              In hefne it is wretyn with aungellys hond;

2.2.2 The next sample is from *Piers Plowman*, a long alliterative ME **religious verse** piece, with a great number of Latin passages, mainly biblical quotations; many of these are fully integrated in the text and often switch in mid-sentence (for a detailed discussion of Latin elements in *Piers Plowman* see Sullivan 1932). Apart from the great number of verbatim quotations, the author sometimes changes and adapts the quotes to the particular context, as in the passage under (9). Here the Vulgate reading of Matthew 4.4 *Non in solo pane vivit homo* ('Not in bread alone doth man live') is changed by adding *et in pabulo* ('and in food') and by reinterpreting *solo* as an ablative form of *solum* 'soil' (in another context, however, the original, verbatim quotation is given). Another change occurs in the quote from the *Pater Noster* (*voluntas tua* 'your will' into *voluntas dei* 'God's will'). (For a discussion of the passage cf. Burrow & Turville-Petre1992: 145. note.)

(9)   *Piers Plowman* (c. 1394)

'For in my consience y knowe what Crist wolde y wrouhte:
Preyeres of a parfit man and penaunce discret
Is the levest labour þat oure lord pleseth.
Non de solo' y sayde, 'for sothe *vivit homo*,
Nec in pane et in pabulo; the *pater-noster* witnesseth,
Fiat voluntas dei þat fynt us alle thynges.'

['For in my conscience I know what (work) Christ would wish (me) to do:
Prayers of a perfect man and judicious penance
Is the most precious work which pleaseth our Lord.
<u>Not from the soil'</u> I said, 'in truth <u>doth man live,</u>
<u>nor in bread and in food</u>; the <u>Lord's Prayer</u> witnesses,
<u>Let God's will be done</u>, who provides us with everything'.]

2.2.3. Mixed (or 'macaronic') **poems** will form the data of a more detailed syntactic and functional analysis in the second part of this paper. However, the short passage from a trilingual Latin - French - English poem under (10) should illustrate the sometimes highly artistic mixing of the languages: In each of the first two lines, the first half line is in French, the second in Latin. In the next two lines, Latin comes first, followed by English. In lines 5 and 6, the three languages alternate in every half line (F - L - E - L). Every single half line is connected by rhyme, with both the internal and the end rhymes showing the rhyme scheme aa bb cc. These poetic means establish a harmonious integration of the three disparate languages.

(10)   *On the times* (London, BM Royal 12 C xii ('R'), [1]14th c.)

Quant houme deit parleir, videat que verba loquatur;
Sen covent aver, ne stulcior inveniatur.
Quando quis loquitur, bote resoun reste þerynne,
Derisum patitur, and lutel so shall he wynne.
En seynt' eglise sunt multi sepe priores;
Summe beoþ wyse, *multi sunt inferiores.*

['<u>When a man has to speak, let him take heed what words he utters;</u>
<u>It is necessary to have understanding, lest one be considered more foolish.</u>
<u>When anyone speaks,</u> unless there be reason in it,
<u>He meets with scorn,</u> and so he shall gain little.
<u>In holy church many are often superior in position;</u>
Some are wise, <u>many are inferior</u>.']

3. Conclusion

Even this incomplete survey of mixed-language texts covering about 400 years should have illustrated a number of points: (i) switching is evidently a common phenomenon in the history of English written texts and occurs in a variety of domains, text types and/or genres; (ii) there are different switching patterns and strategies in different texts (possibly even genres and/or text types); on the

syntactic level both inter- and intrasentential switching are widely used; (iii) switching may fulfil a number of different functions in different texts, such as structuring a text, i.e., serving as a discourse marker, or providing quotations, reiteration (translation, paraphrase), etc.; in other cases, however, no obvious functional explanation of particular switches seems possible; (iv) switching strategies may change in the course of time (cf. the business texts under 2.1.5) - a change which may be connected with the changing functions of the languages involved.

An important goal of future research will be to detect possible differences in the switching strategies and functions between different genres and text types as well as in different sub-periods of English. For this, separate analyses of groups of texts (according to domains, genres, text types, periods) have to be carried out; in a second step, comparative analyses of these groups should follow to provide insights into the diachronic development and historical functions and patterns of switching.[7] The comparison of such historical and diachronic data with data from modern studies of CS may cast some light on possible universal tendencies of switching and thus contribute to a deeper understanding of this wide-spread contact phenomenon.

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[7]   A more detailed analysis of one particular genre, namely of a corpus of mixed poems, will follow in a sequence to this paper in VIEWS, vol. 6,1, especially in regard to syntactic and functional switching strategies.

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"It is an undulating feeling..." The importance of being a non-native teacher of English

Barbara Seidlhofer

0. Introduction

Especially in the public sector, the vast majority of EFL[1] teachers in Austria, and indeed worldwide, are non-native speakers of English. Although this state of affairs is well-known, teacher education courses often fail to address it explicitly, let alone exploit it constructively as a resource in foreign language teaching. On the contrary, EFL teaching methods and materials are still largely based on approaches and techniques developed by native speaker teachers, and often for quite different circumstances, such as English being taught not as a foreign but as a second language, or in an English-speaking country to classes of foreign students from a variety of first language backgrounds. Obviously I would not wish to deny that a great deal of valuable expertise has evolved in this way. Rather, my argument here is that it needs to be recognized that EFL being taught by teachers who learnt English as a foreign language themselves, and who teach it to classes whose culture and first language they often share to a considerable extent, is quite a different matter. It would seem to me, then, that there is an urgent need to reconsider EFL teacher education in a way that gives this difference its due.

   As a first step, I wanted to investigate how practitioners see their role as foreign language teachers, and how their self-perceptions square with my own observations and reflections as a teacher educator in this country. In a questionnaire I recently sent out to teachers of English throughout Austria (and which I shall discuss in more detail below), the first question was whether being a non-native teacher of English tends to be a source of confidence or a

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[1] The following widely-used abbreviations are employed here: ELT: English language teaching; (T)EFL: (Teaching of) English as a foreign language; EAP: English for academic purposes; ESP: English for specific purposes; EIL: English as an international language; FLT: Foreign language teaching.

source of insecurity, and one respondent's answer provided me with the title for this paper:

> It was never a source of confidence and at different times a question of ability. It is an undulating feeling - insecurity "My English is not good enough- I have improved it- I feel able, capable ... I must do something about my fluency and range of vocab ..." But it is not so much a question of insecurity than it is my own expectations.

It was precisely these feelings of confidence and insecurity, and teachers' thoughts about their own abilities and expectations that I wanted to explore with my questionnaire. The concern for these issues arose from many years of observation (and self-observation) during which it struck me that many non-native teachers of English (and, presumably, of other foreign languages) are highly insecure and self-critical in comparison with teachers of other subjects such as, say, physics or geography. Countless times have I heard remarks expressing dissatisfaction with their own knowledge of English. Countless EFL teachers tend to think, at least at times, that they are somehow deficient in comparison with native speakers, who are often regarded as role models, aspired to but never reached. Peter Medgyes, the director of the Centre of English Teacher Training in Budapest, conducted surveys on the native/non-native teacher question in ten countries and concluded that

> we suffer from an inferiority complex caused by glaring defects in our knowledge of English. We are in constant distress as we realize how little we know about the language we are supposed to teach.   (Medgyes 1994:40)

In this paper, then, I shall explore what it means to be a non-native teacher of a foreign language, a learner of the language one teaches, and consider some implications for teacher education for English as a foreign (as opposed to second) language. I want to do so by giving a thumbnail sketch of the situation as I see it at present, highlighting some crucial issues and suggesting a way forward.

1. Conflicting messages

Although the most hotly debated socio-political issues to do with World Englishes are generally perceived to be of somewhat less direct relevance in the Expanding Circle[2] than they are in the Outer Circle, recent developments in the study of institutionalised varieties of English and English across cultures (e.g. Kachru 1992), English as an international language (e.g. Pennycook 1994, Tollefson 1995) and 'linguistic imperialism' (e.g. Phillipson 1992) have had

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[2]   The terms used throughout this paper for the roles of English in different countries are those frequently discussed by Kachru (e.g. 1992): *Inner Circle* (as a first language), *Outer Circle* (as an additional language), and *Expanding Circle* (as a foreign language).

considerable impact on the discourse of English language teaching in general. This is easily observed, for instance, by comparing conference programmes and proceedings (such as those of the annual conferences of the International Association for the Teaching of English as a Foreign Language, IATEFL) of the nineties with those of the eighties: whereas presentations and papers used to be mainly devoted to issues in the description and instruction of the language as such, we now find a much wider variety of topics, with cultural, political, social, ecological, psychological, technological, and managerial issues successfully competing for space with contributions focusing on the language proper. In short, there is a sense of breaking the professional mould, with a broader conception of what it means to teach languages going hand in hand with a more comprehensive view of the languages to be taught. Thus monoculturalism seems to have been replaced by multiculturalism, monolingualism with multilingualism, and targets seem to be criterion-referenced rather than (native speaker) norm-referenced.

But are these wider visions shared by the majority of practitioners themselves? What are teachers concerned with in their daily practice? Obviously it would be ludicrous to try and give accurate and comprehensive answers to these questions, as these do not exist any more than does a universally valid description of these contexts. But what can be observed generally is a striking discrepancy: the 'idealistic' visions of global 'real world/ whole person' concerns mentioned above are contradicted by other (equally global) influences of a decidedly materialistic nature rooted in free market economy: most practical matters which impinge directly on teachers' daily practice, such as textbooks, reference works, supplementary materials, examinations and qualifications still make almost exclusive reference to notions of the native speaker culture as the (uncontaminated?) source providing the language to be taught. To mention just a few examples, learners and teachers are enjoined to 'get into the Head of the Native Speaker' (advertisement for the *Longman Dictionary of English Language and Culture*)[3]; to go for Cambridge examinations, certificates and diplomas: 'make no mistakes, there are no equivalents'[4]; being a native speaker is still the trump card when competing for teaching jobs (cf. Illés 1991); teachers are bombarded with materials on rival national language initiatives such as those of the British Council and the United States Information Service, and textbooks produced in the UK and the US are a huge industry. Qualifying institutions offering diplomas for TEFL run different schemes for native and non-

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[3] Back cover of the programme of the Annual IATEFL Conference 1992

[4] Advertisement in the programme of the Joint British Council/IATEFL SIG Symposium 'ELT *Links*', Vienna 1996.

native teachers[5]. 'Authentic materials' are traded as the genuine articles reflecting native-speaker language use, and empirical studies find that future (non-native) EFL teachers in the Expanding Circle tend to prefer, identify with, and aspire to native English accents while looking down on their own local varieties[6] (Dalton-Puffer, Kaltenböck & Smit (in press)). And so it is not surprising, either, that native speaker experts get the lion's share of audiences at international conferences as well as references to their work (cf. Van Essen 1989), and we might note in passing the paradox that, globally speaking, the best-known authors arguing for the importance of listening to authentic local voices are not themselves local voices but tend to be white male Anglos from the 'Centre'.

Teachers are thus faced with fiercely competing discourses: that of inclusive claims made at a fairly abstract level, and that of native-speaker centred, exclusive forces prevailing in reality. This means that teachers have to cope with the contradictory powers of educational ideologies and market forces and negotiate the gaps between global claims and local conditions. This can be a demanding and even daunting task, for which they need to be prepared. In order to explore ways of meeting this challenge, I shall take a closer look at the unique contributions that non-native teachers in the Expanding Circle can make, and point to implications for priorities in teacher education.

2. Versatility

Non-native EFL teachers are versatile. They are at home with the language(s) and culture(s) they share with their students, but they also know the relevant terrain inhabited by the target language, be that a certain use of ESP/EAP, EIL (see footnote 1) or maybe English as spoken by native speakers in their com-

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[5] Apparently there are plans to change this state of affairs: at the time of writing, the CILTS (Cambridge Integrated Language Teaching Schemes) web site (http://www.edunet.com/ciltsrsa) reports on a pilot course for the revised Diploma in ELT to Adults: "the involvement of a group of teachers from Brazil in this first pilot ... is a symbolic indication of the coming together of the schemes for native and non-native speakers under the new framework". (See Bulletin no. 44, the TEFL Unit, UCLES.)

[6] I am refraining from my usual habit of putting the terms *native* and *non-native* between inverted commas here, because for the purposes of this paper I wish to retain the 'flavour' of the word *non-native* with the appropriately negative, exclusive ring it carries. For everyday usage, however, the proposal made by Jenkins (1996) seems to be the most helpful one to date: MSE (Monolingual Speaker of English) for those speakers of L1 English who speak no other language fluently; BSE (Bilingual Speaker of English) for both L1 speakers of English who speak (an)other language(s) fluently AND for fluent L2 speakers of English; NBSE for L2 speakers of English as a second or foreign language who are not fluent (and indeed may have no desire to be).

munities. This makes non-native teachers uniquely suited to be agents facilitating learning by mediating between the different languages and cultures through appropriate pedagogy. But in order to do this, teachers need to be able to draw on a solid education: they need to be familiar with current issues in methodology as they are discussed by the profession world-wide, they need to be well informed about their own students' specific requirements and the local educational framework they are operating in, and proficient enough in the target language so as to be comfortable themselves about the task at hand. Above all, they need to have an understanding of the principles underlying various (and sometimes conflicting) methodologies in order to make informed choices that benefit their learners. This may often require resolving potential conflicts and reconciling seeming contradictions.

To look at an example, the consensus about priorities in curriculum design and methodology as seen from the Inner Circle seems fairly unproblematic. For instance, in his survey article 'TESOL at Twenty-Five: What are the Issues?', Brown (1993) says the following about these two areas: "efforts are being made to make curricula more content-centred and task-based, with an emphasis on pressing global issues", and "our methods are, in turn, increasingly oriented towards cooperative, learner-centered teaching in which learner strategy training plays a significant role" (Brown 1993:16). There is an implication of generality here, but who are 'we'? And where are these efforts made, and by whom? What can be stated with such confidence in one setting, the one that usually calls the tune, is not so straightforward in another, to which it is transferred: what do the terms 'task-based', 'co-operative' and 'learner-centred' mean to an EFL teacher in Indonesia, or Romania, or Austria for that matter? And what is perceived as 'pressing global issues' there? We may be faced here with what Widdowson (1990) calls 'problems with solutions':

> One is tempted to suppose that if a particular role-relationship between teacher and learners is transactionally effective in one set of circumstances then it will transfer (and should be transferred) to others. But the effectiveness may depend on a particular interactional role-relationship between teacher and pupil which is simply not sanctioned as educationally desirable in a different social situation. A humanistic, group therapy approach to pedagogy may be highly effective ... in places which favour person-oriented education, but impossible to implement in places where different educational ideology calls for a very different kind of interactional engagement in class, one based on clear positional definition established by tradition.
>
> (Widdowson 1990: 187)

It is precisely with respect to such different traditions that non-native teachers can be versatile mediators: as insiders of the culture in which they teach, they are in a position to exploit materials and methods in a way which is meaningful in their setting and enhances their students' learning. This may in

some cases involve an interpretation of concepts and a use of materials which is a far cry from the original intentions of Inner Circle authors. Kramsch & Sullivan (1996) give a beautiful illustration of such a transformation in a Vietnamese EFL classroom. They show how the teacher brings his role as mediator to bear on the British-made textbook in such a way that it becomes consistent with Vietnamese educational tradition, and recast in methodological procedures that are appropriate and meaningful in this totally different context. Thus activities which, in line with current Western ideas of education, are intended to get students to truthfully answer questions about themselves, individually or in small groups, are instead used for inviting the whole class to respond together, with students calling out answers simultaneously - the singular 'you' of the textbook questions is reinterpreted as the plural 'you' of the classroom as family. Also, the strength of Vietnam's rich oral tradition and love of poetry makes language learning an occasion for verbal creativity and 'poetic licence'. The students

> do not bare their souls to each other with personal opinions. They do not 'negotiate group consensus' on issues, or brainstorm ideas. They listen to each other, carefully challenging each others' wording, completing each others' stories.
>
> (Kramsch & Sullivan 1996:209)

In this classroom, the teacher is both facilitator, through whom his students encounter the foreign language and culture, and respected mentor in the Confucian tradition, to whom his students look for moral guidance. And it is this skilful negotiation of his dual role, his 'pedagogic licence', that makes him a successful mediator.

3. Informant and instructor roles

EFL teachers need to be able to handle different roles. On the one hand, they are under pressure to teach their students 'authentic', or 'real' English, that is to say English that has not been 'doctored' for pedagogic purposes. For this, they need to be competent speakers of the language (informants). On the other hand, they are under pressure to make the learning process real for their students, to help learners authenticate language so that they can make it their own in various contexts of use, including those of the classroom specifically designed to induce such learning. For this, they need to be competent pedagogues (instructors).

Difficulties may arise when teachers have to balance these two requirements in their heads while making choices as to what is relevant and helpful for their students: what do their learners have to do now, in the classroom, to get to where they are eventually going? With the advent of communicative language teaching , this second question receded somewhat into the background

and over the years has become increasingly difficult to address. Taking into account the disciplines which have been particularly influential in the development of communicative language teaching, namely discourse studies, the ethnography of speaking, pragmatics and work in related disciplines, there are two perspectives on the subject EFL: in terms of the target communicative competence, and in terms of creating appropriate contexts for learning (Seidlhofer & Widdowson (forthcoming)).

Communicative target behaviour refers to the target language of the native speaker community in contexts of language use. This is for instance what the needs analysis of the Council of Europe is all about (e.g. Van Ek & Trim 1990). The definition of communication in target contexts of use is based on observations of **native** speaker discourse in specific contexts. For the purposes of FLT, these observations were then formulated in supposedly generally applicable ideas such as notions and functions, which constitute the groundwork of a communicative approach. In some extreme cases, over-zealous communicative teachers have interpreted their task (and have sometimes been encouraged to do so by the ELT industry) as that of getting their students to ape native speakers as faithfully as possible, of rehearsing them in patterns of native-speaker behaviour, with all the cultural baggage that comes with this going unquestioned, even unnoticed (see e.g. Prodromou 1988, 1996; Widdowson 1994a).

Correspondingly, great importance has been attached to authentic texts, that is naturally-occurring texts that have not been meddled with for pedagogic purposes. Clearly, in such a view of the subject EFL, native-speaker teachers reign supreme: as naturally occurring speakers of the target language, as it were, whose access to their language has not been meddled with for pedagogic purposes, they have a huge advantage over the non-native teacher because they can be admirable, infallible informants.

In communicative language teaching, the emphasis has tended to be on the target competence of the learner, but not on the pedagogic competence the teacher needs to have in order to facilitate learning. This is why language proficiency, that is the ability to model the target communicative behaviour, has achieved such paramount importance in the language teaching profession. There has often been the danger of an automatic extrapolation from **competent speaker** to **competent teacher** based on linguistic grounds alone, without taking into considerations the criteria of cultural, social and pedagogic appropriacy (Seidlhofer 1994).

As to the second perspective on the subject EFL, this is in terms of the context of the classroom in the actual process of learning, where the emphasis

is on communication not in contexts of language use in the native-speaker community, but in the **transitional** language which activates learning in the learner community. Here native speakers lose their initial advantages over non-native teachers, since being an effective communicator in the target language does not automatically make for the ability to identify language which is pedagogically effective.

The familiar arguments in this context are that the non-native teacher in many cases shares the same background as the students, she knows the cultural context which the context of the classroom has to be constructed **from**, rather than just modelling it on the target community. Most importantly perhaps, the non-native teacher has been through the process of learning the same language, often through the same L1 'filter', and she knows what it is like to have made the foreign language, in some sense, her own, to have appropriated it for particular purposes. This is an experience which is shared only between non-native teachers and their students. One could say that native speakers know the destination, but not the terrain that has to be crossed to get there: they themselves have not travelled the same route. Non-native teachers, on the other hand, know the target language as a foreign language. Paradoxically, it is precisely this which is often perceived as a weakness, although it can be understood, and drawn upon, as an important resource. This shared language learning experience should thus constitute the basis for non-native teachers' confidence, not for their insecurity.

4. Double think

I have argued, then, that English as a foreign language is a quite different phenomenon from English as a first language. They are distinct experiences, which the teacher has somehow to reconcile - and this can be an overwhelmingly complex undertaking. While the balancing act required of EFL teachers between linguistic/pragmatic and pedagogic competences has always been difficult enough, the situation has been aggravated over recent years by rapid developments in the disciplinary areas which ultimately feed into teacher education and teaching methodology. Pushed along by drastic sociopolitical changes in the 'real' world and technological revolutions in the 'virtual' one, many issues seem to have gathered critical mass all at the same time which are in urgent need of analysis, reflection and synthesis in order to make a positive contribution to TEFL. For instance, there are at present two major developments which seem to pull teachers in two directions.

Computerised text analysis has made available vast and detailed profiles of actual language use, and has made it possible to devise dictionaries and gram-

mars based on corpus research. In Britain, the pioneer in this field, John Sinclair, has argued for some time that only corpus-based research provides valid descriptions of English which can then be the basis of teaching materials (e.g. Sinclair 1991). While the most famous outcome of the Sinclair team's Birmingham research are the COBUILD Dictionary and the COBUILD Grammar[7] (based on British and American spoken and written texts), the Nottingham-Cambridge CANCODE project aims at providing a corpus-based description of spoken grammar, in particular of informal, naturally occurring conversations conducted by native speakers throughout Britain (cf. Carter & McCarthy 1995). An important finding of these descriptions of actually occurring language use is that much of what we find in conventional grammars and textbooks (which was at least partly based on native speaker intuition) does not accord with the newly-found reality uncovered by corpus research. Existing textbooks are being examined with reference to certain features of real, i.e. attested language, and invariably found wanting (e.g. Boxer & Pickering 1995); the verdict is that practically all studies based on naturally-occurring data show that "at least some of what existing textbooks contain is wrong, or at best, misleading" (Channell 1996). Consequently, materials writers and teachers world-wide are exhorted not to withhold the newly available facts of native speaker language use from their students, to forsake EFLese and to teach them English as it is really written in Chicago, and really spoken in Cardiff. This claim might be summed up as "aspire to real native-speaker English!".

But there is another, and as I see it, conflicting claim. This derives from the fact that we now know a good deal more than, say, 20 years ago about non-native varieties of English and the use of English as an International Language. There is an ever-growing recognition of the importance of institutionalised varieties of English in the Outer Circle (Greenbaum & Nelson 1996), of the sheer volume of non-native - non-native communication in English as a lingua franca (e.g. Meierkord 1996), and a recognition of bi- and multilingualism rather than monolingualism constituting the socio-linguistic norm. The notion of native speakers' 'ownership of English' is radically called into question (Widdowson 1994a), and a lively interest is arising in describing non-native varieties of English and in drawing on these descriptions for a more realistic methodology of EIL (e.g. Baxter 1980, Brown 1995, Gill 1993, Granger (forthcoming), Jenkins 1996).

These insights pertaining to linguistic factors are complemented by developments in methodology. The prevailing orthodoxy of learner-centred teaching

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[7] *Collins COBUILD English Dictionary*, 5th edition (1995). *Collins COBUILD English Grammar*, (1990).

combines with an emerging respect for local cultures in lending strength to calls for an appropriate methodology (Holliday 1994) and alternative research agendas for classroom teachers (Holmes 1996). These changes go hand in hand with an increased confidence of, and in, non-native teachers (Medgyes 1994, Van Essen 1995-). This state of play might be summed up as an exhortation to EFL teachers "assert non-native norms and local values!" And to reconcile this request with the above one to "aspire to real native-speaker English!" would seem to require a considerable capacity to engage in double think. Seen in a positive light, however, EFL teachers can practise double think constructively by weighing up these conflicting demands and taking responsibility for resolving incompatibilities from the vantage point of their learners' needs and interests.

5. Teacher education

This, of course, requires first of all that teachers should be well informed about developments which are potentially relevant for the profession. By definition, they are concerned with both language and teaching, and the trick is to get the balance right between the two. As people interested in and knowledgeable about their subject matter, language, they can reasonably be expected to keep up to date with developments in linguistic description, such as the fascinating findings about patterns of use revealed by the corpus-based scrutiny of English. It would indeed be unprofessional to dismiss these new insights out of hand and simply to stick to comfortable, tried-and-tested routines, "to avoid facing new information on the subject being taught" and "to take for granted what it is that is to be taught" (Sinclair 1991:490). But the subject is not 'English' but 'English as a foreign language'. So as people concerned with, and paid for, inducing learning in their students, it would be equally unprofessional to get carried away by whatever findings the community of linguists makes available, and to assume that there is an immediate transferability of relevance from the domain of research to that of pedagogy: "We are concerned here not primarily with what language users know but with what language learners *need* to know" (Widdowson 1991:20).

And what learners need to know can only be determined (or at least guessed at) through a careful process of appraisal and mediation. To what extent different and competing claims are reconcilable will depend on specific circumstances, and only the teacher concerned will be in a position to take local decisions. The crucial criterion for how informed these local decisions can be will be the quality of teacher education. EFL teachers who have a good idea as to what options are in principle available to them, and who have learnt to

evaluate these critically, sceptically and confidently are unlikely to be taken in by the absolute claims and exaggerated promises often made by any one educational philosophy, linguistic theory, teaching method, or textbook.

This seems an obvious enough statement to make, but many teacher training courses do **not** actually encourage trainees to stand back and think hard about not only the choices that **have** to be made, but also about the choices that **can** be made, especially when those are far removed from current concerns and fashions in the Inner Circle.

For instance, when contexts of instruction are designed in reference to primary cultures and a shared primary language, this will create an opportunity to re-assess certain activities which have been disfavoured and frowned upon in native speaker contexts, such as overt contrastive analysis and translation. Translation has hardly figured in Inner Circle discussions of language pedagogy, and this is not surprising since a great deal of the currently fashionable repertoire of EFL teaching techniques has developed in native speaker contexts like Britain, often in private language schools teaching heterogeneous classes without linguistic and cultural common ground. But there are quite a number of good reasons for using translation in different contexts. One of them is that it would be consistent with the general educational precept that learning is the extension of what is new from what is familiar. Translation relates the language to be learnt to the linguistic experience that people have already had, and this of course can reduce a good deal of the threat of the new subject, and help the learner to appropriate the new language. It is entirely natural to seek to make new experience meaningful by referring it to conceptual categories drawn from previous experience, and so translation is, in this respect, the reflex of natural learning. One might try to put a stop to it, as generations of English teachers were enjoined to do, but it has always been carried out covertly; students translate constantly, whether teachers acknowledge it or not. Further 'unfashionable techniques' which might be amenable to the same kind of reconsideration include copying (as used by Holmes (1996) with his students in Eritrea), and repetition and learning by heart. Cook (1994) argues that these two 'currently outlawed' activities are, partly due to Western cultural bias, neglected and undervalued aspects of 'intimate discourse' which should again form a substantial part of the language learning process.

6. Double lives

What all these considerations have in common is that they require a firm assertion on the part of the teacher that what she is concerned with is not primarily

the phenomenon English as a native language, but the subject English, with its situation-specific requirements. Widdowson goes straight to the heart of the matter when he says:

> It has generally been the case, I think, that teachers of EFL have been considered (or consider themselves) as teachers of **English which happens incidentally to be a foreign language**. In this definition of the subject, English is paramount and its speakers privileged. But we can also conceive of EFL as the teaching of a **foreign language which happens to be English**. Now the focus of attention is on the foreignness and not the nativeness of the language, on what makes it foreign, and how, as a foreign language, it might be most effectively taught.
>
> (Widdowson 1994b:1.11, emphasis added)

So we are concerned here not primarily with E(FL): 'E' as a 'FL' (foreign language), but with FL(E), or LF(E): a 'FL' - and a 'LF' (lingua franca)! – making use of English. It seems to me that the notion of foreignness is absolutely crucial for FL(E) teachers' self-image, and it is a pity that this important element of their professional identity has tended to be played down, swept under the carpet for so long.[8]

The significance of teacher self image is suggested by a small-scale empirical study which I conducted this year with teachers of English in Austria (and which I referred to at the beginning of this paper). A questionnaire was devised to gain insights into how teachers evaluated their preparation for the profession with hindsight, from the vantage point of their daily practice. This questionnaire was sent out to about 700 (mostly secondary) teachers throughout Austria, and exactly 100 were returned.[9] Among the nine questions asked there were two which are of particular relevance here. One elicited whether respondents felt that during their studies the main emphasis was more on becoming an effective communicator in the language, i.e. as near-native as possible, or more on becoming an effective foreign language teacher, with a conscious recognition and discussion of the problems and advantages of being a non-native speaker teacher in their particular local conditions. Only just over one third (37 %) went for the second option, i.e. that the main emphasis had been on be-

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8 Jenkins (1996) suggests replacing 'EFL' by 'ELF'(English as a lingua franca) and lists five very good reasons for doing this, among them that ELF 'suggests the idea of community as opposed to alienness' (p. 11). In this juxtaposition with 'community', 'alienness' is clearly intended to have negative connotations here, and is thus different from my word 'foreignness', with which I am trying to assert a positive perspective on the subject 'FL' rather on the target behaviour in 'E'.

9 I should like to cordially thank all the teachers who filled in and returned the questionnaire, especially those who went to the trouble of writing longer responses to some of the questions. Thanks are also due to TEA (the association Teachers of English in Austria) for enabling me to conduct this study by including the questionnaire in a mass mailing.

coming an effective teacher, while 60% said that language proficiency had been in the foreground.[10] The other question elicited whether being a non-native teacher of English tended to be a source of confidence or insecurity for respondents. A clear majority (57 %) indicated that being a non-native speaker made them feel insecure rather than confident, and only 27 % said the reverse was true. Some respondents did not tick either option, but gave a verbal response such as 'neither-nor', 'neither and both' or 'it depends', giving various reasons and explanations.

Given the fact that the vast majority of teachers of English in Austrian schools are non-native speakers, rather than lament this state of affairs it might be eminently more useful to have a closer look at those respondents who draw confidence from their non-native status. Here are some comments from teachers who feel that their being Austrians rather than Americans, Britons, Australians, etc. can (also) be a source of confidence for them: Most see as the main advantage that they share their students' L1. They gain confidence from 'the knowledge that I can help pupils with problems because I know them' [3][11], 'I can understand why students make mistakes' [23]. Some respondents describe in what respects the shared L1 is a strength: 'specific problems to German speaking learners can be pointed out more easily' [33], and several make reference to grammar and translation: 'I can explain grammar better and understand typical Germanisms!' [51]; 'It [i.e. being a German native speaker] has advantages too (e.g. when teaching grammar, false friends, etc.)' [20].

What is striking, however, is how often this confidence based on the shared language and culture is coupled with an insecurity teachers have about themselves as speakers of English. Many respondents express this feeling of ambivalence quite directly: 'it depends; on the one hand confidence, because I know a German/Austrian learner's problems from first-hand experience; on the other hand, a native speaker will be more competent in certain situations' [1]; 'confidence, in the knowledge that I can help pupils with problems because I know them; insecurity, in language competence' [3]; 'confidence: I can (?)track problems of German-speaking learners of English better; insecurity: what is definitely not acceptable in English? (structure)' [47]; 'Both: confidence → to understand my students better; insecurity → fluency, range of vocabulary' [88]; 'Confidence - when I explain grammar, do translations: English → German; insecurity: speaking, vocabulary' [91]. In the answer expressing the 'undulating feeling' quoted in the title of this paper, confidence is only

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[10] Multiple answers were possible, as indeed were 'blank' ones, and respondents were encouraged to not just tick their choice but also to add comments.

[11] The numbers in square brackets identify respondents.

mentioned indirectly, and the main question for this teacher seems to be how to come to terms with her own expectations [94]. One response that puts this ambivalence into a nutshell is: 'confidence: as a teacher - insecurity: as a speaker' [41]. But there are more assertive voices, too: 'I don't aspire to native speaker's proficiency' [77], even to the point of sarcasm about the attempt to gauge teachers' feelings of confidence and/or insecurity: 'This is a very inappropriate question. Why do you teach English? Ha ha, to feel insecure?' [17]

Other factors in gaining self-assurance are experience ('The more language teaching practice -> the more confidence has developed' [60]) and what I would describe as the ability to capitalise on the fact that non-native teachers are distanced from the language they teach because they had to learn it themselves, which gives them 'confidence in explaining certain aspects and explaining concepts' [29]. Concepts is the operative word here, which I shall return to below.

7. Significant distance

These few selected responses underline an important strength of non-native teachers, which is that because of their own language learning experience, they have usually developed a high degree of conscious, or declarative, knowledge of the internal organisation of the code itself – unlike native-speaker teachers, whose access to the code is usually firmly anchored in context and who may therefore find it more difficult to abstract from specific instances. This distancing from the context can be an important advantage since all learning involves abstracting from context, via a conceptual rather than a contextual apprehension of meaning. Non-native teachers of a foreign language are already at a remove from the language, quite naturally **distanced**. And this vantage point is an advantage.

It is particularly appropriate, in the context of a greater awareness of the ethnographic reality of actual classrooms, to relate this notion of distancing to more general concepts developed in psychoanalysis and cultural anthropology. Clifford Geertz quotes the psychoanalyst Heinz Kohut's distinction between 'experience-near' and 'experience-distant' concepts and explains it thus:

> An experience-near concept is, roughly, one that someone - a patient, a subject, in our case an informant [or a native speaker!] - might himself naturally and effortlessly use to define what he or his fellows see, feel, think, imagine, and so on, and which he would readily understand when similarly applied by others. An experience-distant concept is one that specialists of one sort or another - an analyst, an experimenter, an ethnographer, even a priest or an ideologist [or a teacher!] employ to forward their scientific, philosophical, or practical [or pedagogical!] aims.
>
> (Geertz 1983:57) [remarks in square brackets added]

This distinction is one of degree, not either-or, but the main point is that one is not intrinsically better, or more helpful, than the other, or, as Geertz says,

> Confinement to experience-near concepts leaves an ethnographer awash in immediacies, as well as entangled in vernacular. Confinement to experience-distant ones leaves him stranded in abstractions and smothered in jargon.   (p. 57)

The parallel I see between anthropological analysis and foreign language teaching is that, in the case of studying 'natives', you don't have to be one to know one, and in the case of teaching a language, you don't have to be a native speaker to know how best to do it - or rather, it is likely to be an advantage: non-native teachers have, in general, learnt the language they teach via the same concepts (grammatical, semantic, pragmatic, cultural, etc.) that they employ to induce learning in their students, and this seems to be what respondent [29] in the above extract from the questionnaire study is getting at. Geertz elaborates on this idea:

> To grasp concepts that, for another people, are experience-near, and to do so well enough to place them in illuminating connection with experience-distant concepts theorists have fashioned to capture the general features of social life, is clearly a task at least as delicate, if a bit less magical, as putting oneself into someone else's skin. The trick is not to get yourself into some kind of inner correspondence of spirit with your informants. ... The trick is to figure out what the devil they think they are up to. ... People use experience-near concepts spontaneously, un-self-consciously, as it were colloquially; they do not, except fleetingly and on occasion, recognize that there are any 'concepts' involved at all. (Geertz 1983: 58)

In terms of language teaching, or the teaching of anything else for that matter, the lack of distance from experience can create problems because teaching and learning are dependent precisely on the extension of familiar concepts, and for this the mere experience of being a native speaker is neither necessary nor sufficient. As Geertz puts it,

> ...accounts of other peoples' subjectivities can be built up without recourse to pretensions to more-than-normal capacities for ego-effacement and fellow feeling ... Whatever accurate or half-accurate sense one gets of what one's informants are, as the phrase goes, really like does not come from experience ... as such. It comes from the ability to construe their modes of expression, what I would call their symbol systems... (Geertz 1983:70)

More important, therefore, than the ability to 'get into the skin of the native speaker' is the ability to 'get into the skin of the foreign learner' - and, seen from the perspective of the learners' primary culture, non-native FL(E) teachers may well be better equipped to do this than native ones. The double capacity to be at the same time familiar with the target language and distanced from it enables these teachers to lead a double life in the best sense of the word. It

also allows us to reinterpret the notion of *double think* and *double life* in a way in which the word *double* has entirely positive connotations not of duplicity, but of value and strength, namely 'something that is twice the size, quantity, value, or strength of something else' or, if you like to see it poetically, '(of a flower) having more than the usual number of petals'[12]. And the process of cultivating these petals is serious teacher education.

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