Of Phonemes, Fossils and Webs of Meaning: The Interpretation of Language Variation and Change

Kevin Tuite

1. INTRODUCTION*

Historical linguistics is a historical discipline, and the writing up of hypotheses about past states of languages in the form of etymologies and diachronic grammars is a type of historiography. The assertions contained in the preceding sentence seem tautological, yet surprisingly few practitioners of historical linguistics take an interest in current debates among historians, philosophers, and some anthropologists, over the nature of history as a social science, and the appropiate methods for reconstructing elements of the past and expressing them in writing. The focus of this paper will be on etymology, as history and as historiography. Far from being a marginal antiquarian diversion for a handful of philological puzzle-solvers, etymological research operates along the fault-line separating the natural and human sciences, and for this reason alone an examination of etymological methodology and argumentation will be of interest to anthropologists working in this interstitial zone.

   Throughout this paper, I am intentionally employing the word "historiography" in its older sense, as defined in the *OED*: "the writing of history". The choice is motivated by my intention to distinguish "history" (or historical reconstruction) as a type of reasoning, from the process of writing it up for the purpose of publication. The critical study of historical linguistics as a historical discipline is concerned with fundamental issues akin to those Wylie (1985) identified for the neighboring field of archaeology:

> what is it that makes an account explanatory, what evidence constitutes grounds for accepting an hypothesis, what the limits are of empirical knowledge, and what the status is of theoretical claims about unobservable phenomena (Wylie 1985: 483).

As concerns the historiographic component of historical linguistics, the pertinent questions center on issues of the ideological context of writing, intended readership, style of argumentation, choice of genre, gatekeeping and access to publication venues, and so forth. In practice, historical reconstruction and historiography are not so readily separable. The presuppositions underlying a given historical method largely dictate the contours of historiographic genres (non-narrative vs. narrative, etc.; White 1984). In return, the consolidation of historiographic traditions around model practitioners, canonical writings, preferred journals, etc., reinforces certain historical approaches, while disfavoring or excluding others.

It is my view that two distinct tendencies can be discerned in the practice of etymology, the tension — one might say, dialectic — between which informs the work of any given practitioner investigating a given problem. On the one hand, the "Neogrammarian" approach favors a narrow encirclement of the object of study, limiting the explanatory apparatus as much as possible to law-like regularities of language change, the functioning of which can be described without reference to human subjects. Counterbalancing this is the approach I call "Schuchardtian", which favors a broadening of the hermeneutic circle to include not only linguistic, but also cultural, social, historical and other types of information. The investigators themselves, by dint of their specialized knowledge, and more fundamentally, by their nature as culturally, socially, historically situated beings, become an integral part of the process of interpretation. The goal of the Schuchardtian approach is to detect any convergence of implications and patterns recognized in the various data domains upon a single hypothesis concerning the history of the forms under investigation. The emergence of standards for the writing and publication of etymologies has been accompanied by a highly critical and agonistic style of debate. The effects have been salutory for the most part, although one detects occasional slippages toward the politically-motivated deployment of etymology, or the lack of engagement with unorthodox points of view.

The paper begins with a brief history of etymology, followed by a case study of an etymological crux which drew the attention of a number of leading specialists in Romance linguistics. Included in this chapter are some remarks on variationist sociolinguistics, a field of inquiry which is in many ways the offspring of 19th-century historical linguistics, and which is presently confronting similar issues in the modelling and interpretation of language change.

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2. ETYMOLOGY AND COMPARATIVE GRAMMAR

The roots of the discipline of historical linguistics go back to ancient times. This is especially true of etymology, the study of word origins, which has been practiced, after a fashion, since at least Plato's time. In its earliest recorded manifestations, of which the most celebrated is Plato's dialogue *Cratylus*, etymology appears to have been a technique for uncovering the true meanings of words and names, as they were known to the ancients who created them (Lallot 1991; Sedley 1998; Barney 1998). Most of the dozens of word derivations tossed off by Socrates in the *Cratylus* are laughable by modern standards, but those proposed by Western scholars throughout the following two millennia were hardly much better. One especially long-lived, and notoriously inaccurate, technique was the reconstitution of collapsed originary definitions from the syllables of a word. In the *Cratylus*, the Greek word for moon, *selēnē*, also pronounced *selanaia*, was derived by Socrates from the word sequence *sela(s)* "brightness" + *enon* "old" + *neon* "new" + *aei* "always", i.e. the moon has "a light which is always old and always new". This chain of four words, after it has been "hammered into shape" phonetically, gives the name of the moon [*Cratylus* 409]. Over a thousand years later, medieval scholars were still explaining the form of the Latin word "cadaver" as the contraction of the phrase CAro DAta VERmibus "flesh given to worms" (Buridant 1998; Bloch 1983). The discipline as we now know it came about from the combined effect of two major developments: (1) the elaboration of criteria for evaluating the plausability of etymologies; (2) the recognition that shared morphology and basic lexical inventory is evidence that certain languages are descended from a common ancestor.

  The early Greek etymologies were for the most part derivations from synonymous expressions in the contemporary language or one of its dialects. Only a few words — including such common words as *pûr* "fire" and *hudōr* "water", both of which have good Indo-European etymologies within Greek — were traced to a source outside of Greek (they were claimed to have been borrowed from Phrygian) [*Cratylus* 410]. Later Western investigators into linguistic matters operated with a richer diachronic perspective, which included Greek, Hebrew, and then Latin, as languages known to have been spoken in earlier times, and from which the contemporary tongues were believed to have somehow arisen. From the comparison of modern and ancient languages grew an awareness of formal change across time, although

it was conceived in orthographic rather than phonetic terms. The guide to Latin orthography in Isidore's 7th-century *Etymologiarum libri* [I.xxvii], written for readers whose vernaculars had already diverged so far from Latin as to constitute distinct languages, reflected an awareness, at some level, of phonetic subclasses of consonants and vowels. Isidore, drawing on the work of early grammarians, pointed out alternations between voiced and voiceless stops with the same place of articulation (e.g. /c/ [k] and /g/ in *trecentos* '300', but *quadrigentos* '400'), and the substitution of /r/ for /s/ — now recognized as the result of rhotacization in prehistoric Latin — in such words as *honor* (older form *honos*), *arbor* (older form *arbos*). Unfortunately, systematic use of phonetic features was not made by medieval etymologists. The 17th c. philologist Gerhard Vossius invoked phonetically nonsensical, and inconsistently applied, "letter permutations" to account for the derivation of Latin words from their purported Greek ancestors, e.g. /m/ > /s/ in Greek *mimēlos* "imitative" > Latin *similis* "resembling"; /t/ > /v/ in Greek *tillō* "pull, pluck (hair)" > Latin *vello* (same meaning) (Curtius 1866: 8-9). The mid-17th century French lexicographer Gilles Ménage has an unfairly poor reputation in the eyes of many modern readers, having been made a figure of mockery by two of France's most illustrious writers.[1] In fact, Ménage is held in higher esteem than one might expect by specialists in Romance linguistics (Malkiel 1993: 5-6; Leroy-Turcan 1991: 374-5), and a surprising 70% of his etymologies are still accepted today (Baldinger 1995). He introduced an additional degree of control on word histories by searching for antecedents of French words in later, post-classical varieties of Latin, and sought to verify his derivations by comparison with other related languages (in Ménage's case, the Romance languages Spanish and Italian) (Leroy-Turcan 1991: 20-22). A century later, Anne-Robert-Jacques Turgot, one of the more important and original thinkers on language of his time, endeavored to place the "art of etymology" on more solid methodological footing in his entry on the topic for Diderot's *Encyclopédie* of 1756 (Turgot 1756; Droixhe 1989). Turgot began from the premise that etymology has two chief components: that of formulating hypotheses about word origins, and that of criticizing them. Turgot's insistence that proposed etymologies be consistent with the derivations proposed for other words of the language, be phonetically reasonable, and that possible sources of borrowing also be considered, would be deemed sound advice by any historical linguist of the present. He advocated the investigation of all languages that might be historically linked to the

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one under study, and was aware of striking similarities between words in the European languages known to him, which betokened links between them in the prehistoric past. In his encyclopedia entry, Turgot compared Greek *astēr* to Latin *stella*, Swedish *styern*, and English *star*; and Greek *mēnē* to Latin *mensis,* English *moon*, Danish *maan*, and German *Mond* (Turgot 1756: 101). He held in his hand, one could say, the same pieces of the puzzle that Rask and Bopp were to assemble into the Indo-European language family sixty years later. What held him back was the unwillingness to apply the concept of linguistic kinship in prehistory, at a chronological depth intermediate between that of comparatively shallow groupings such as Romance and Germanic, and the origin of language in the human species. Turgot apparently believed that languages could only be grouped into families if one knew their parents, that is, if they could be traced back to an attested ancestral language like Latin. The lexical correspondences among Greek, Latin and the Germanic "languages of the North" were interpreted by Turgot as the result of migration and contact in the remote past, rather than common descent from a long-lost ancestor.

   The writing of word histories in the premodern period served a wide range of purposes, few of which are continued in a serious way in present-day practice. Socrates' exuberant display of etymological prowess in the *Cratylus* has been interpreted by some classicists as a parody of pre-Socratic philosophies of language (Baxter 1992: 94-98). In a recent paper, Rachel Barney has argued that this episode represents an "agonistic display, in which Socrates is seen to beat etymology-mongers at their own game" (1998: 66), the etymology-mongers being those who, like Cratylus himself, believed that the real meanings of words, and thence, knowledge about the true nature of their referents, can be uncovered through etymology. Some centuries later, Jerome and Augustine employed etymological analysis to ascertain the mystic significance of Hebrew proper names in the Bible, a practice consonant with the belief that "Hebrew, the original language, is […] as close as any tongue can be to the thoughts of God at the time of creation" (Bloch 1983: 39). Perhaps the last serious exponent of philosophically-motivated etymology — at least until Heidegger — was the late 18th century English philologist John Horne Tooke, who sought to demonstrate through linguistic analysis that "all the operations of thought reside in language alone" (Aarsleff 1983: 53).[2] Well before his time, however, French etymologists such as Jacques Dubois (Dubois 1531/1998) and Gilles Ménage were

endeavoring to employ a historical and comparative method relatively free from theologically- or philosophically-based presuppositions in the reconstruction of word histories, an approach subsequently made explicit and methodologically more rigorous by Turgot. On the other hand, the rise of etymological dictionaries in 16th-18th century Europe cannot be explained in isolation from the new modes of imagining national identity that followed the dethronement of Latin in favor of vernacular-based written languages, and which were fostered by what Anderson (1991) calls "print-capitalism". The word lineages contained in the dictionaries of Dubois and Ménage furnished proof that the new medium of written and printed communication in France had a pedigree no less illustrious than that of its predecessor, Latin.

In the early years of the 18th century, the philosopher Leibniz was advising researchers and explorers to collect lexical material from as wide a range of languages as possible, with the goal of comparing and grouping them. He offered for this purpose the remote ancestor of Swadesh's core-vocabulary list, enumerating categories of words to collect: kinterms, numerals, names for body parts, animals, climate phenomena and common verbs (Gulya 1974). Throughout the century this plan was put into action, notably in the Russian Empire, where the tsars encouraged the collection of word lists from the indigenous peoples of Siberia, Central Asia and the Caucasus. Comparison of lexical material, and, by the end of the 18th century, morphology as well, induced investigators to sort languages into genealogical groupings. Unlike the classifications of earlier centuries, such as Dante's grouping of Romance languages by their words for 'yes', these new comparative studies revealed unanticipated kinships among noncontiguous languages spoken by speech communities with very different cultures and types of civilization. Samuel Gyarmathi's demonstration of the affinity among Hungarian, Finnish, Saamic and Siberian languages such as Cheremis — along with his argument that Turkish-Hungarian lexical resemblances were due to borrowing — was a crowning achievement of the new science of historical and comparative linguistics. Gyarmathi's insistence that agreement in inflectional systems be considered a privileged criterion for assessing linguistic relationship was a crucial methodological advance (Pedersen 1983: 34). The Danish linguist Rasmus Rask, who had read Gyarmathi, applied the same method of lexical and inflectional comparison to the European languages accessible to him in the early years of the 19th century, and arrived at a "comparative grammar in embryo" (Pedersen 1983: 39) of a portion of what would come to be

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called the Indo-European family (Greek, Italic, Germanic, Baltic and Slavic) (Rask 1992). But it was only when the languages of India and Iran became sufficiently known in the West that Indo-European linguistics in particular, and historical linguistics in general, grew to maturity. The postulation of such a kinship by William Jones in 1786 is commonly cited by linguists as the birthdate of Indo-European Studies. Jones was not the first European to study Sanskrit — some Catholic clergymen had compiled grammatical sketches much earlier — nor even the first to discern parallels with European languages (Pedersen 1983: 40; Sergent 1995: 21). Jones' discourse followed the English conquest of India, which made the study of the history and institutions of the Subcontinent a matter of political and economic relevance. The Schlegel brothers and Franz Bopp inaugurated the study of Sanskrit with the new methodology of comparative grammar. Joining the "purely" scientific motives for the comparative linguistic analysis of Sanskrit and Greek, Latin, Germanic and so forth were impulses of a different sort, a European fascination with India that went back to Antiquity, and the Romantic obsession with deep origins. In Gulya's assessment, "the difference between Bopp's inclusion of Sanskrit, and Gyarmathi's inclusion of Cheremis — both the inclusion of another member of a family — is not just the fuller and clearer state of the information about Sanskrit, but the difference between a desired and a rejected ancestry" (1974: 272).

The new method of historical-comparative linguistics was inspired by the recognition of systematic resemblances not only in vocabulary — which could be due to extensive borrowing — but also in inflectional morphology (declension and conjugation) among noncontiguous languages. Furthermore, as Rask (1818/1992) demonstrated in his pioneering study, these features were *not* shared with all other languages, and thus not attributable to a putative proto-language ancestral to all human tongues (as Hebrew had once been thought to have been). Consider the following partial declensional paradigms of the word for "tooth" in five languages, spoken by communities as far apart as India, Italy and the Baltic coast (based on Szemerényi (1996: 166-167)). Not only are the roots of strongly similar phonetic shape (contrast Abkhaz /χapəts/, Georgian /k'bil-/, Basque /hortz/, Saami /pääni/, all meaning "tooth"), but, what is more significant, the suffixes indicating case and number have numerous shared features.[3] Furthermore, the shift of accent between stem syllable and suffix, noted in Sanskrit, is paralleled by a comparable shift in Lithuanian. (In the orthography of the Lithuanian forms, the

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tilde and grave accent indicate two types of accented syllable; the subscript cedilla on the final vowels of the accusative singular and genitive plural marks a historically nasalized vowel).

Table 1.
Declension of word for "tooth" in five Indo-European languages.

case, number	Sanskrit	Greek	Latin	Gothic	Lith.	PIE
nominative singular	dán	odōn	dēns	tunþus	dantìs	*dōn
accusative singular	dántam	odónta	dentem	tunþu	dañti̜	*dónt-m̥
genitive singular	datás	odóntos	dentis	tunþáus	dantiẽs	*dn̥t-ós
nominative plural	dántas	odóntes	dentēs	tunþius	dañtys	*dónt-es
accusative plural	datás	odóntas	dentēs	tunþuns	dantìs	*d(o)nt-n̥s
genitive plural	datā́m	odóntōn	dent(i)um	tunþiwe	dantũ̜	*dn̥t-óm

The demonstration of relatedness set in motion the exhaustive examination of the lexical and morphological inventories of the Indo-European languages. The comparative grammars of Rask and Bopp were followed less than twenty later by the *Etymologische Forschungen* (Etymological Investigations) of August Friedrich Pott, which began to appear in 1833. By yoking the ancient art of etymology to the project of historical-comparative linguistics, Pott and his colleagues sought to confirm the hypothesis of genetic relatedness by showing not only that formal similarities such as the above ran through the vocabularies of the Indo-Iranian, Greek, Romance, Germanic, Balto-Slavic, Celtic and several other language groups, but also that related forms were associated by regular sound correspondences. This was a highly significant advance beyond the "letter permutations" proposed by pre-modern etymologists such as Vossius on a case-by-case, essentially ad-hoc basis, with little attention paid to more general patterns, or to phonetic plausibility.

The major breakthrough was the recognition of the large-scale shift of consonants in the Germanic languages, detected by Rask and confirmed by Jacob Grimm (Krahe 1960 I: 80-81; Petersen 1992: 28). The shift, now commonly known as "Grimm's First Sound Law",

affected consonants at several places and modes of articulation, as shown in Table 2 (where English represents Common Germanic).

Table 2.
Germanic sound shift (Grimm's First Sound Law)

Greek	*Latin*	*English*	*Proto-Indo-European*
I. VOICED STOP	VOICED STOP	VOICELESS STOP	
duo	duo	**t**wo	*dwō
gen-os	gen-us	**k**in	*gen-
II. VOICELESS ASPIRATE	VOICELESS FRICATIVE	VOICED STOP	
p^{h}rātēr "phratry member"	frāter	**b**rother	*b^{h}rāter
t^{h}ur-a	for-es	**d**oor	*d^{h}wer- / d^{h}wor-
k^{h}ēn	(h)āns-er	**g**oose	*g^{h}ans
III. VOICELESS STOP	VOICELESS STOP	VOICELESS FRICATIVE	
pod-	ped-	**f**oot	*ped- / pod-
tria	tria	**th**ree	*trei
kōp-ē "handle"	cap-ere "seize"	**h**af-t	*kap-

The new etymological method proved its efficacy by uncovering hitherto unsuspected cognates (one of the more startling being Armenian *erku* "two", which can be associated with Latin *duo*, etc. through perfectly regular sound correspondences (Meillet 1954: 31-32)). Equally important, if not more so, was the demonstration on the same grounds that certain formally similar sets of words with near-identical meanings are almost certainly false cognates. It had been thought since Antiquity, for example, that Greek *t^{h}eos* and Latin *deus*, both meaning "god", were related words. (Rask appears to have been the last reputable linguist to have believed this (Rask 1992: 72)). The new comparative approach soon indicated that no regular sound law associated Greek /t^h/ with /d/ in Latin, Sanscrit, Balto-Slavic, etc. Furthermore, Greek already had a good near-cognate for Latin *deus*, Sanskrit *devas* in the theonym *Zeus* (< *dyeu-; cp. the genitive-case form *Dios*) (Pott 1833 I: 99; Curtius 1866: 213, 543). On the other hand, several robust sets of cognates link Greek /t^h/ to Sanscrit /d^h/ and Latin /f/ in initial position (e.g. Gk. *t^{h}ur-a*, Lat. *for-es* "door"). Following the direction indicated by the sound laws and semantic

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features, linguists uncovered another Latin root, *fēs-* (in *fēstus* "festive", *fēriæ*, [Old Latin *fēsiæ*] "holidays"), which pointed to an ancestral root *d^hēs-*, with some sort of religious signification. This supposition is supported by the Armenian plural *di-k'* "gods" (< IE *d^hēs-es*), which goes back to the same Indo-European root. Since intervocalic /s/ was already known to have been lost in prehistoric Greek, the derivation *t^heos* < pre-Greek *t^hes-os* < IE *d^hes-os* made the juxtaposition to Latin root *fēs-* < IE *d^hēs-* yet more attractive (Hofmann 1966: 113).[4]

   The victory of the new historical-comparative linguistics was assured by the founding of university chairs in pertinent subjects, most notably in Germany, accompanied by the emergence of the norms of admission and argumentation, and venues for the exchange of ideas among peers, that mark an academic discipline. Journals and monograph series began to be published, professional societies were organized, and practitioners policed the frontiers of the new field. A. F. Pott, who "laid the cornerstone for modern-day 'pure etymology'" (Malkiel 1993: 12), manifested an almost indefatigable zeal in the defense of the new approach to the historical study of language, as expressed in hundreds of pages of merciless criticism of those he deemed guilty of flawed, scientifically unsound methodology, the "champions of pseudo-etymologies, the comparative-linguistic quacks (*sprachvergleichenden Pfuscher*) […] who let themselves be seduced by the sirens of phonetic similarity (*Sirene des Gleichlauts*)" [cited in Horn 1888: 321].[5] Such polemics reinforced standards for the evaluation of explanations and the use of evidence, and also set the tone for the debating styles of future generations.

3. THE NEOGRAMMARIANS AND THE DOCTRINE OF THE "EXCEPTIONLESS SOUND LAW"

The first generations of linguists to work on Indo-European were aware that even the most regular of sound correspondences had exceptions. Some such exceptions were attributed to the borrowing of words from other languages, especially those used in writing, administration or commerce. As shown in Table 2, the initial /t/ of English *two* is the regular counterpart of Latin initial /d/, as in *duo*; the /d/ of *double* is not (cp. Latin *duplus*). The word "double", as is well known, was borrowed from French well over a millennium after the

Germanic consonant shift had ceased to be operative. Numerous other exceptions could not be so easily accounted for, but linguists felt that a modicum of irregularity was to be expected in a social phenomenon such as human language. A group of linguists centered at the University of Leipzig in the 1870's sought to bring greater rigor to the diachronic investigation of language by introducing a new model of change, comparable to those employed in the natural sciences.[6] The "Neogrammarians" (*Junggrammatiker*), as they came to be called, distinguished two fundamentally distinct classes of phenomena which modified the sound-shape of words. The Germanic sound shift and similar changes characterized by relatively regular sound correspondences were modelled as the output of "sound laws" (*Lautgesetze*), which spread mechanically throughout the effected speech community, being adopted by all members of the community, and affecting all words in which the target sound occurs in the appropriate context, without exception (Osthoff/Brugmann 1878: xiii). The other principal type of change was qualified as "analogical", the outcome of system-internal pressure to associate similar word-shapes to similar meanings.[7] The workings of analogy are invoked by Szemerényi to account for several irregular correspondences in the forms in Table 1. The alternation between ablaut grades of the "tooth" radical (full-grade **dont-* vs. zero-grade **dn̥t-*, where /n̥/ is a syllabic nasal) is continued only by Sanskrit (*dant-* < **dont-* and *dat-* < **dn̥t-*, by regular sound laws). In the other languages shown, one of the alternants has been generalized throughout the paradigm: full-grade in Greek and Lithuanian, zero-grade in Gothic and perhaps Latin. The stem-final /u/ in the Gothic declension, and /i/ in the Lithuanian, have apparently spread to the other case forms from the accusative (Szemerényi 1996: 166-167).

The proponents of the *Lautgesetz* model acknowledged that sound laws were not "laws" in the same sense as the laws of chemistry or physics, and they provided explicitly for all sorts of exceptions, including borrowing and dialect splits as well as analogy. The proposal nonetheless was met with vigorous opposition from several quarters. Older linguists of a humanist, Humboldtian orientation, such as Pott and Georg Curtius, objected to the materialist determinism which they detected in the concept of exceptionless sound laws. Some younger specialists, notably Hugo Schuchardt and Otto Jespersen, believed that no clear, nor useful, demarcation could be made between mechanically regular, physiologically-conditioned *Lautgesetze,* and socially or psychologically conditioned varieties of sound change (see

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Wilbur 1977, and the papers reprinted in that volume). In practice, however, the major impact of the Neogrammarian movement was to make "exceptionless sound laws" into the null hypothesis in etymological investigation, to the extent that exceptions to known sound correspondences were also to be examined from this point of view, before other scenarios could be entertained. The first successful demonstration of the new method was in connection with a sizeable class of exceptions to Grimm's First Law. The direction of the Germanic consonant shift, as reflected in initial consonants, was illustrated in Table 2. In internal position, however, the correspondences appeared less regular. Consider the kinship terms from Germanic (represented by Old English and Old High German), and other Indo-European languages, shown in Table 3.

Table 3.
Apparent exceptions to Grimm's First Law

Greek	_Sanskrit_	_Latin_	_Old English_	_Proto-Indo-European_
patēr	pitár	pater	fæ**D**er	*pǝté**r** "father"
pʰrātēr	bhrátar	frāter	brō**Þ**or	*bʰrá**t**er "brother"
Greek	_Sanskrit_	_Russian_	_Old High German_	_Proto-Indo-European_
hekurā	śvaśrú	svekróvʲ	swi**G**ar	*swekʲrúH- "husband's mother"
hekuro-s	śváśura	svékor	swe**H**ur	*swékʲuro- "husband's father"

The Germanic words for "brother" and "husband's father" contain the expected fricative reflexes of the voiceless stops *t and *kʲ. The words for "father" and "husband's mother", however, contain the voiced stops /d/ and /g/, respectively. This apparent irregularity was unravelled by the Danish linguist Karl Verner in 1875. Verner noticed that the realization of Indo-European voiceless stops and the fricative /s/ in medial position in Germanic was correlated with the stress placement in those languages which preserved the ancient Indo-European mobile accent (such as Sanskrit and Slavic). Where the cognate forms in these languages indicated that the syllable preceding the medial stop was unaccented, the latter appeared in Germanic as a voiced fricative, which in West Germanic languages such as English and German shifted further to the corresponding voiced stop. When preceded by a stressed syllable, the expected reflex (a voiceless

fricative) appeared (Krahe 1960 I: 85-86; Meillet 1964: 141-142). Verner's Law (as it came to be called) had the additional advantage of accounting for apparent irregularities in the conjugation of some Germanic strong verbs, e.g. Old English *(ic) wear**þ*** ("I became", cp. Sanskrit *vavárta*); *(we) wur**d**on* ("we became", cp. Sanskrit *vavrtmá*) (Krahe 1960 I: 86-90). The anomalous shape of the past singular and plural forms of the verb "to be" (*was, were*) is also attributable to Verner's Law.

At the level of procedure, one of the principal differences between those historical linguists who identify themselves as (neo) Neogrammarians, and those who situate themselves in the tradition of Pott, Curtius and Schuchardt is their relative degree of discomfort with proposed etymologies that are not completely supported by recognized sound laws, and which invoke the effects of analogy, sound symbolism or frequency-related phonetic erosion (such as the evolution of "God be with you" to "good-bye" to a monosyllabic "bye" or reduplicated "bye-bye"). All of the latter phenomena are well-attested in languages from all parts of the globe, and linguists have identified the contexts which favor them, but they lack the sort of constraint that phonetics imposes upon regular sound laws.[8] In the following section we will examine the debate surrounding one especially controversial etymological problem, which brought representatives of the two traditions into open conflict.

4. THE ETYMOLOGY OF "*TROUVER*"

The standard Latin words meaning "find" — *invenire* and *reperire* — went out of use in the first millennium of the Christian Era. Several different Latin verbs were recruited to fill the gap in the various Romance dialects: Spanish *hallar*, Portuguese *achar,* Rumanian *afla* < *afflare* "breathe upon" (then "detect by scent"); Romansch *kater* < *captare* "seek, try to get". There is no readily identifiable Latin antecedent, however, for French *trouver* and Occitan *trobar* (also Italian *trovare*, probably borrowed from French). Friedrich Diez saw in Latin *turbare* "stir up" the only plausible candidate, although a somewhat far-fetched sequence of meaning changes had to be assumed: "stir up" > "rummage through" > "seek" > "find" (Diez 1861 I: 427-429). In a paper first published in 1878, Gaston Paris challenged Diez's hypothesis on phonetic grounds. The transition from *turbare* to its alleged descendants would require (1) metathesis

of the /r/: *turbare* > **trubare*; (2) lowering of the initial vowel to /o/: **trubare* > **trobare*; (3) retention of the intervocalic /b/ in Occitan: **trobare* > *trobar*. Metathesis of /r/ is sporadic but not rare in the history of the Romance languages, but the lenition of intervocalic /b/ to /v/ or zero appeared to be a highly regular sound change in Occitan (e.g. *probare* > *proar* "prove") (Paris 1909: 615-617). In keeping with Neogrammarian doctrine, Paris believed it a methodologically sound principle to assume regularity of sound change unless there were compelling reasons to think otherwise. If one were to take *trouver* and *trobar* as the starting point and work backwards in accordance with established sound laws, one arrives at the proto-form **tropare*. The vowels in the first syllable (especially the diphthong in the Old French present stem [il] *trueve*) point to a short /o/, and the intervocalic /b/ in Occitan normally comes only from the lenition of voiceless /p/. But could **tropare* have existed in Vulgar Latin, and if so, how could it have evolved to mean "find"? The clue to the answer, in Paris' opinion, was to be found in the name of the celebrated poets of medieval Provence, the troubadours (Occ. *trobaire*, Fr. *trouvère*). The classical Latin word *tropus*, borrowed from Greek, denoted a figure of rhetoric, but in later Latin it came to be used more commonly as a musical term, designating a melodic variation, and then music added to liturgical verses sung in plainchant. This specifically musical sense of the word "trope" was limited to the Latin of ancient Gaul. According to Paris, it was in the Gallo-Romance dialects that a presumed verb based on this root — **tropare*, meaning "compose a melody" — would have gradually acquired a more general sense: "compose" > "invent" > "discover, find" (Paris 1909: 616-617). Although no such verb was actually attested in Latin, and despite the somewhat unusual semantic change required by Paris' etymology (a technical term used by poets and musicians somehow being adopted as the general Gallo-Romance verb for "find" in all its senses), Paris believed that the historical phonology rendered all competing hypotheses less probable or even impossible.

About twenty years after the publication of Paris' revised etymology, Schuchardt reopened the investigation of *trouver*/*trobar*. In response to Paris' objections on phonetic grounds, Schuchardt argued that Diez's initial proposal might not have been so wrong-headed after all, if one admitted less regular types of sound change, and if new evidence were introduced from the ethnography of European material culture. The sound-forms of the French and Occitan verbs for "find" could be derived from *turbare* if allowance

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were made for the deflection of sounds from their ordinary historical trajectories under the influence of other elements. One such irregular change was the lowering of short /u/ to /o/ — the second stage of Diez's derivation (see above) — for which Schuchardt found parallels in other well-accepted etymologies, such as French *mot* "word" < *muttum* "mumbled, inarticulate sound", where the lowering may have been conditioned by a nearby labial consonant. The first and third stages, which require the /r/ of the first syllable to shift position, and the /b/ to resist weakening and eventual loss in the Occitan reflex (cp. Latin *cubare* > Occ. *coar* "brood, incubate [eggs]"), are explained by Schuchardt as due to the influence of the closely-related verb *turbulare* > *trublare* "stir up", whence French *troubler* and Occitan *treblar*. Such "contamination" of one word-form by another that is phonetically and/or semantically similar to it is not at all rare. Malkiel (1954, 1962, 1977) has pointed to numerous instances in Romance etymology where lexical contamination or associative interference is the most likely explanation for phonetically-irregular word histories (e.g. Spanish *calavera* "skull", whose form reflects the combined effects of Latin *calvaria* "skull" and *cadaver* "carcass" (Malkiel 1977: 369; cp. Meyer-Lübke 1992: 142)). In Schuchardt's reconstruction, the expected phonetic evolution of *turbare* was deflected under the influence of the formally and semantically related verb *trublare*. The most impressive aspect of Schuchardt's revision of Diez's etymology, however, is not the phonetic argument so much as the rich and varied documentation which he employed to justify the semantic shift of *turbare* from its Latin meaning of "stir up" to that of its alleged Gallo-Romance offspring. The initial clue was supplied by the words for "find" in the other Romance languages. The Latin source words — *afflare* "detect by smell" and *captare* "seek, try to get" — are associated with the semantic field of hunting. Several Italian and Sardinian descendants of *turbare* have similar meanings, e.g. Emilian *trufar* "flush out wild animals", Logudorian *truva* "hunter who drives animals toward a trap"; the Sardinian verb *truḃare* can denote "hunt game by *battue* (beating the bush to flush them out)", and also "drive fish toward poisoned water (in order to catch them)" (Gamillscheg 1969: 875). In Schuchardt's opinion, *turbare* underwent a meaning shift from "stir up" to the more specialized sense of "stir up [water] in order to drive [fish toward a trap or net]", a meaning continued by the Sardinian verb just mentioned. From there it followed an evolution comparable to those of *afflare* and *captare*: "seek [game]" > "seek (in general)" > "find". Besides collecting linguistic evidence, Schuchardt

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undertook research into traditional European fishing techniques. According to Malkiel (1993: 26), he was said to have "temporarily transformed one of the rooms of his home into a small-scale museum of fishing gear" while investigating the etymology of *trouver/trobar*.

Gaston Paris declared himself impressed by the wide-ranging erudition and brilliance of Schuchardt's contribution to the debate, but refused to change his opinion. The sequence of meaning changes from "stir up [water to catch fish]" to "find" did not strike him as more reasonable than those necessitated by a derivation from **tropare*. In any case, one consideration outweighed all others from his perspective. The phonetic evolution from **tropare* to *trouver/trobar* could be explained on the basis of highly-regular sound changes (or "sound laws", in Neogrammarian parlance), solidly supported by the historical grammars of French and Occitan. The Diez-Schuchardt etymology required at least two "deviations" from those sound laws. While such exceptions were instantiated elsewhere in Gallo-Romance word histories, that was not good enough for Paris when a perfectly *lautgesetzlich* alternative was on the table: phonetic regularity must be accorded priority over semantic plausibility (Paris 1909: 618-626). Paris' fellow-countryman Antoine Thomas was even more emphatic in his refusal to accept Schuchardt's argument: "Je ne crois pas du tout à *turbare*, et pour rien au monde je ne déserterais **tropare*, que la phonétique peut seule avouer" (Thomas 1900). A short time later, he pronounced it dead on arrival, as it were, for the same reason: "Si *turbare* ne peut pas supporter l'examen phonétique, il ne compte plus, il est mort. Il peut avoir beaucoup de qualités par ailleurs […] rien ne pourra compenser ce terrible défaut; on ne peut rien prétendre en étymologie sans l'aveu de la phonétique" (Thomas 1902).

The battlelines were drawn. Over the next several years, Paris and Thomas, publishing in the pages of *Romania*, defended the priority of regular sound change, while Schuchardt, writing in the *Zeitschrift für romanische Philologie*, used the example of *trouver/trobar* both as further ammunition in his long-standing battle against the Neogrammarian doctrine of "exceptionless sound laws", and also as a first step toward putting the study of word meanings, and their likely trajectories of change, on sufficiently solid footing to make it a worthy partner of historical phonetics in etymological practice (see the blow-by-blow summary in Tappolet 1905/1977).[9] To my knowledge, no etymology of *trouver/trobar* has as yet gained the universal acceptance of experts. The discovery of a Latin verb based on the root *trop-* — *contropare* "compare", attested in a work by the 6th-century

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Italian Cassiodorus and the Visigoth laws of the 8th century — gave added weight to Paris' conjecture (Spitzer 1940). This textual support for some form of *tropare, added to the improbable, if not impossible, sequence of irregular phonetic changes neeeded to make Schuchardt's etymology work, has eroded almost all support for *turbare* (Malkiel 1954: 267; Wartburg 1967 s. v. *tropare; Devoto 1968 s. v. *trovare*; Gamillscheg 1969 s. v. *trouver*; Corominas 1980 s. v. *trobar*; Corominas & Pascual 1983 s. v. *trovar*; Guiraud 1982 s. v. *trouver*).[10] Grzega, in a recent paper dedicated to Schuchardt, conceded that "allerdings die meisten Wissenschaftler heutzutage nicht an das Schuchardtsche Etymon *turbare* glauben" (Grzega 1997: 67).

But *turbare* is not the only alternative to *tropare. As early as 1928, the Spanish Arabist Julián Ribera y Tarragó hypothesized an Arabic source for Old Provençal *trobar* and its cognates, at least in their specialized use to denote the composing of verses, singing, etc. (whence, of course, the agent nouns *trobador, troubadour*). Ribera identified Arabic *t ʕaraba* "song" (from the trilateral root TʕR-B "provoke emotion, excitement, agitation; make music, entertain by singing") as the probable source (Menocal 1982). This lexeme would have borrowed into the Romance dialects spoken in Andalusia, thence into Catalan and Occitan, during the period of Arabic occupation of Spain. In 1966, Lemay offered a similar proposal, but with a different Arabic etymon: DʕR-B "strike, touch", by extension "play a musical instrument", alleged to have been borrowed into Old Spanish in or before the 12th century to refer to singer-poets who accompany themselves on an instrument. More recently, the Hispanist María Rosa Menocal (1982, 1984) has revived Ribera's earlier proposal, although she entertains the possibility that the nearly homophonous DʕR-B root may have contributed to the sense of the newly-coined Romance verb *trobar* (1982: 147). If any one of these proposals is true, the implications for the history of medieval literature are considerable. Lemay and Menocal cite their etymologies in support of their theories that the origins of the art of the troubadours can be traced back to the Arabic culture of Al-Andalus (see also Menocal 1987). Neither Lemay nor Menocal, it should be noted, offer their Arabic etymon as the source for the Romance verb meaning "find". In their view, this lexeme was already present in the Romance dialects of Spain and the Provence, with something akin to its modern meaning, when the Arabic root was borrowed. Homophony led to overlapping usage and eventual fusion of the two verbs, one

indigenous (*trobar*$_1$), one borrowed (*trobar*$_2$) (Lemay 1966: 1009). Aside from a handful of negative reviews (e.g. Le Gentil 1969), the Hispano-Arabic hypothesis has been ignored, rather than refuted, by the authors of the standard reference works in Romance historical linguistics. One can easily imagine why such an etymology, in either its Ribera-Menocal or Lemay version, would meet with the disfavor of "mainstream" specialists. The semantic fields associated with /Tʕ-R-B/ and /Dʕ-R-B/ most closely overlap that of *tropare*, in that all three roots could be employed to denote some sort of musical composition or performance, whereas they have no resemblance whatsoever with the meanings reconstructed by either Diez or Schuchardt for *turbare*. Therefore, the postulation of an Arabic source would compel rejection of the Latin etymon with the most impeccable phonetic credentials, and a meaning no more problematic, in favor of a hypothetical borrowing that would require additional phonetic assumptions, relating to the manner of its adoption into Hispano-Romance, to account for its attested forms (Lemay 1966: 1004-1007; Menocal 1982: 146-147).[11] The proposed antecedent *tropare* is not attested in Latin, but neither is there any compelling evidence that any derivative of either Arabic root was borrowed into medieval Hispano-Romance. The proposal has another, equally unfortunate, consequence. Having been pushed aside as the source of *trobar*$_2$, *trobador*, etc., *tropare* would be left to compete with *turbare* as the etymon of *trouver*/*trobar*$_1$ "find" alone. On this reduced playing field *tropare* would be at a distinct disadvantage, indeed, partisans of the Hispano-Arabic hypothesis would be almost forced to acknowledge *turbare* as the sole likely source of the homophonous verb *trobar*$_1$. In other words, it requires overturning the stronger etymology in favor of the weaker one, and abandoning a single source for both senses of "trobar" for the less elegant solution of a split etymology. That being said, there is something disquieting about the silence of the etymologists, all the more so if one recalls the detailed presentation and criticism of Schuchardt's hypothesis by partisans of *tropare* (or *contropare*) in the etymological dictionaries and learned journals.

5. ETYMOLOGIES, FOSSILS AND NARRATIVES

It is not my purpose here to defend any one of the above-discussed word histories; in any case, I lack the requisite knowledge of

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European fishing lore, early medieval Latin writing and Sardinian dialect geography to express an informed opinion on the matter. I had a couple of purposes in mind when I selected the example of the *trouver/trobar* debate for this paper. One of my goals was to illustrate some aspects of the practice of etymology. What the participants in the debate brought to bear on the problem under discussion was not only a thorough knowledge of the various stages of Latin, the medieval and modern Romance literary languages and numerous non-literary dialects, but also a familiarity with the diachronic trajectories of each phoneme in different contexts, as represented in the inventories of sound laws contained in the standard historical grammars. In addition, experienced practitioners will have a wide-ranging and rather eclectic acquaintance with the literature, art, history, archaeology, folklore and ethnography of the speech communities whose languages they study, and those of their principal neighbors. Even in the days when students routinely learned Greek in secondary school and defended their dissertations in Latin, specialists with the requisite knowledge base were not common. What distinguishes the masters of the etymological art is not so much the sheer quantity of the information they carry around in their heads, as their skill at bringing just the right bits of data to bear on a hitherto recalcitrant problem. Many elite etymologists prefer to heed the traditional injunction against letting the dinner guests into the kitchen. Others attempt to boil down their procedures into a few general maxims (Szemerényi 1977; Hamp 1998). We are fortunate that Yakov Malkiel, one of the most respected etymologists of recent decades, reflected on the methodology of his discipline on several occasions, most notably in the history of etymology he wrote shortly before his death (Malkiel 1993). While he, like Szemerényi and Hamp in the papers just cited, insisted on mastery of the necessary data-base, and on the rigorous testing of hypotheses for consistency with sound laws and semantic plausibility, he devoted particular attention to the "artistic" qualities of successful etymologists. Among those he mentioned are inventiveness, finesse, curiosity, and a special flair for digging out the pertinent facts from a mountain of raw data (Malkiel 1977: 353-354). Etymological studies of even a single word may run to hundreds of pages, but some of the most brilliant are only a few paragraphs long. Eric Hamp, for example, few of whose published etymologies exceed a half-dozen pages, has an uncommon gift for ferreting out the handful of well-hidden but crucially diagnostic cognate sets to support his reconstructions (for two among hundreds of examples, see Hamp 1983, 2002).

The summary of the *trouver* debate is also intended as an illustration of etymology as history. Historians and philosophers have carried on a lively discussion over the nature of historical explanation, the distinction between nomothetic, natural-scientific accounts and the hermeneutical or interpretive method characteristic of the human sciences, and of narrative, as the favored genre of the latter (Ricoeur 1978; Taylor 1971/1979, 1991; White 1980, 1984). The philosophical pragmatist Richard Rorty (1982, 1983) has criticized the sharp ontological (or at least, methodological) differentiation maintained by most of his colleagues between those sciences which constitute their objects through natural laws, and those which situate their objects within a "web of meaning", and interpret them on that basis. Rorty discusses two types of historical inquiry: the study of fossils, as an example of an investigation undertaken according to the norms of the natural sciences, and the interpretation of a chronologically or culturally remote text, as an instance where the hermeneutic method is called for, that is, the application of interpretive techniques which attempt to bridge the gap between the reader's cultural-linguistic-historical "horizon", and that surrounding the production of the text (cp. Gadamer 1982). He argues that the study of fossils, like that of texts and other cultural artifacts, necessarily begins with their being situated in a web of meaning, in the sense that a fossil — as fossil (and not as a simple lump of rock) — is constituted as an object of inquiry through its placement in relation to other fossils. For Rorty, there is no fundamental distinction between the mode of inquiry appropriate to non-human objects such as fossils, and that appropriate to the reading of texts. At the level of practice, however, the construction by investigators of "interpretive" historical narratives is resorted to when no normalized, reductionist vocabulary has as yet been agreed upon which helps to reveal deeper connections among phenomena.

> If we think of the fossil record as a text, then we can say that paleontology, in its early stages, followed "interpretive" methods. That is, it cast around for some way of making sense of what had happened by looking for a vocabulary in which a puzzling object could be related to other, more familiar, objects, so as to become intelligible. Before the discipline became "normalized", nobody had any clear idea of what sort of thing might be relevant to predicting where similar fossils might be found (Rorty 1982: 199).

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It is regrettable that historical linguists, and especially the etymologists among them, have not been party to this discussion. The debate between Schuchardt and his French colleagues Paris and Thomas (and more generally, that between orthodox Neogrammarians and those linguists who, like Schuchardt, consider all linguistic change, whether phonetic, morphosyntactic or semantic, as a fundamentally social phenomenon) can be usefully examined from the standpoint of Rorty's philosophical parable. To what extent can etymology, as a type of historical inquiry, be likened to the study of fossils, or to the interpretation of texts? How fundamental is the difference between the two approaches? Should they be considered as complementary rather than opposed methods, at least at the level of etymological practice?

Let us begin with fossils. Rorty maintains that each fossil (or type of fossil) is constituted as an object of study through its positioning in a web of relations to other fossils. The system of relations thus formulated can be conceived as a "web of meaning" only if one adopts a very restricted, simplified Saussurean concept of meaning as determined contrastively within a stable, bounded semantic universe. After a sufficient number of fossils have been examined, parameters are recognized according to which each new specimen can be classified, and in terms of which investigators express regularities of morphological variation and change. In this way a new vocabulary, in Rorty's sense, is formulated. To the extent that this vocabulary accounts for the characteristics of newly-discovered specimens, it will be adopted by other practitioners, bringing about the progressive normalization of the discipline. The developments in historical linguistic methodology sketched above contributed to a comparable process, with phonetics — synchronic and diachronic — supplying much of the new vocabulary. Also contributing to the normalization of etymological practice were the recognition of analogically-driven change, and the factors favoring it (nominal and verbal paradigms, sequential cardinal numbers, etc.); and also the study of such recurrent phenomena as sound symbolism and taboo effects, and the semantic fields in which these are more likely to occur.

In the relatively normalized context of orthodox Neogrammarian-type historical linguistics, an etymology such as that proposed by Gaston Paris for *trouver/trobar* is expressed in the reductionist vocabulary of sound laws. The words under study are broken up into their component parts (phonemes), and the relations among them (phonological context). The web constructed around French *trouver*

[tʀuve] is a bounded phonological system, defined in terms of contrastive features (voice, degree of occlusion, place of articulation, etc.), which is mapped via transformational rules onto the systems of anterior stages of the language. In this manner, French /v/ is mapped via /b/ onto Vulgar Latin /p/, /u/ via the Old French diphthong /ue/ onto Vulgar Latin short /o/, and so forth, with specification of the phonetic contexts in which the change occurs (the lenition of /p/ > /b/ > /v/ occurs between vowels; the fate of short /o/ is linked to the position of the accent). The above sequence of changes is presented in the form of a depersonalized history, with no plot-like narrative organization. Changes in form are recorded, or reconstructed, which are held to be consistent with observed regularities of the evolution of the species that left the fossils, or with the principles of diachronic phonetics or grammar. There is "no identifiable narrative voice" (White 1980: 11). The reader of a Neogrammarian-type etymology is guided, against the backdrop of mechanical, exceptionless sound laws, from Old French *trover* and Old Provençal *trobar* to the reconstructed antecedent **tropare*. The lenition of Latin intervocalic /p/ to /b/ in Occitan, and the evolution of short /o/ to the alternating simple vowel (2 pl. *trovez*) and diphthong (3 sg. *trueve*) of the Old French present indicative paradigm of *trover*, are situated in an explanatory space inhabited by linguistic forms decontextualized from their circumstances of use and any link to their users. Changes are recorded, but no claim is made, however, concerning **why** the changes occurred **when** they occurred. They simply happened. This historiographic frame, in which the evolution of word forms is treated like that of animal morphology, as read in the fossil record, is not seen as problematic by historical linguists, who share certain methodological assumptions. Consider the following example: One cannot prove that Parisian French [tyb] and Québec French [tsYb], both meaning "tube", have a common ancestor, any more than (as Bertrand Russell once pointed out), one cannot prove that the universe has been in existence for more than five minutes. Linguists do, nonetheless, accept the common origin of [tyb] and [tsYb], because doing so enables them to formulate sound laws (the lowering of high vowels in closed syllables, and the affricatization of the dental stops before high front vowels), which account in an elegant way for thousands of similar cases: [dis] and [dzɪs] "ten", [dyp] and [dzYp] "dupe", etc. (on the phonetics of Québec French, see Picard 1987). Such hypotheses become more convincing to the extent that they account for other word histories, elegantly explain otherwise puzzling

cases, and accommodate newly-discovered facts. It is the acceptance, by a community of practitioners, of ground rules concerning the role of economy and elegance as constraints on explanation, which makes historical reconstructions such as the above possible.[12]

Schuchardt's arguments in support of his competing etymology show the workings of a very different strategy. Rather than limiting the explanatory apparatus to law-like regularities of sound change, as Paris had done, Schuchardt widened the explanatory circle within which the word history was to be reconstructed. His goal was to demonstrate that data from a number of distinct domains converged upon a single hypothesis. These included the verbs for "find" in other Romance languages, which originated in verbs associated with the semantic domain of hunting, and the evidence he collected on hunting and fishing techniques in medieval Europe. Schuchardt drew a wider circle around the phonetic trajectories as well, to include not only the sound laws of Gallo-Romance, but also fields of lexemes with similar forms, and similar meanings, which can "deflect" the speech sounds from their expected paths of development. (Schuchardt did not use such an image, but one can, if one likes, compare the deflection of phonemes to the deflection of a charged particle beam by a magnetic field). Within this wider circle, he believed, the historical-phonetic, comparative-lexical and ethnographic facts independently converged on *turbare* as the most attractive antecedent for *trouver/trobar*. The plausibility of the historical account reconstructed by Schuchardt certainly owes a great deal to its author's erudition and investigative zeal. But in the final analysis, such an etymology is successful to the degree that it draws the readers themselves into the project of interpretation. This endeavor requires them to apply their imaginations, and instincts as social beings, to the task of bridging the gap from French *trouver* to a verb meaning "stir up".

Gaston Paris, to be sure, found himself obliged to make the same sorts of demands upon his readers, despite his insistence that sound laws trumped all other types of explanation in etymological reasoning. He examined the documentation of Latin *tropus*, and, drawing upon his knowledge of ancient rhetoric, poetics, music and Catholic liturgy, traced the contexts of its use from the classical Latin of Rome to the medieval Latin of Gaul. The rest of the reconstructed semantic trajectory that led from "compose a melody" to "find" was a work of the imagination, but one that could only be convincing to the extent that other modern readers could trace out a similar path in their own minds, and deem it plausible. Paris and his readers were summoned to

engage in the imaginative bridging of their contemporary cultural and linguistic "horizons" to the chronologically, culturally and linguistically distant horizons within which are situated *tropare*, and the unattested intermediate forms preceding Old Provençal *trobar*. This, of course, is the sort of philologically-informed sympathetic reading traditionally known as hermeneutics, although with the important difference that what is presented to the reader is not a textual artifact, but rather a historian's reconstruction of a word-form and its contexts of use. The success of the demonstration depends on the reader's powers of imagination, aided by knowledge of different languages, cultures, societies and historical periods.[13]

Opening up the web of meaning in this manner, and the hermeneutic bridging of cultural-historic horizons that it entails, is a fundamental component of the etymological method. It is for this reason, as Meillet (1954: 104), Malkiel (1977) and Anttila (1988: 76-77) have acknowledged, that etymology is an art, or craft, as much as it is a science, and that recognition as a master practitioner depends as much on the intangible factors which Meillet lumped under the rubric "coefficient personnel", and Malkiel called "flair", as it does on the acquisition of a specific set of skills. As in ethnography, the etymologist him- or herself is the primary instrument of observation, of situating the object of study in the web of meaning that most elegantly accounts for its properties, and if possible, offers new insights into other puzzling questions. In the hands of acknowledged masters such as Schuchardt, Meillet, Benveniste, Malkiel, Szemerényi, Hamp and Watkins, the hybrid technique illustrated here, conjoining the Neogrammarian doctrine of sound laws to the reconstruction, aided by a multidisciplinary tool-kit, of the social contexts of language use, has proven highly successful, although numerous knotty problems remain, even in such extensively-worked language families as Indo-European.

The method has its weaknesses, nonetheless, which must not be overlooked. Presuppositions governing the range of explanations to be given explicit consideration, the sorts of information admitted as pertinent data, and the manner of its interpretation, typically go unchallenged if they are shared by the readership of historical reconstructions (or at least that segment of the readership whose opinions count). Menocal (1982, 1984) expressed dismay that the "third solution" to the *trobar* etymology — the Hispano-Arabic hypotheses of Ribera, Lemay and herself — had not received the kind of airing in Romance linguistic circles as had Schuchardt's

turbare proposal. In her opinion, the problem was not the relative plausibility of either Arabic etymon compared to the Latin ones under consideration;

> the real problem is the intellectual framework and set of scholarly assumptions and procedures which led to the complete ignoring of this possible Arabic etymon (Menocal 1984: 504).

One might question the extent to which the study of the Arabic influence on Hispano-Romance has been tainted by "the overtly anti-Semitic tendencies in Spanish history" (Menocal 1984: 504-505), or whether Romance etymologists have shown bad faith in refusing to discuss, in print at least, the merits of /Tʕ-R-B/ or /Dʕ-R-B/ as an antecedent of Old Provençal *trobar*. Earlier in this chapter, I attempted to work out some of the weaknesses of the Hispano-Arabic hypothesis that might have motivated its rejection out of hand. Whether those are grounds for carrying on as though the etymon had never been seriously proposed is another question, one that I am in no position to answer. The silence of the etymologists might simply stem from their reluctance to reconfigure the imaginary scenarios they had postulated to accommodate the case of *trobar* in the absence of what they deem to be compelling justification for the shifting of the setting of the innovation from France to Spain, and the splitting of the etymology. It could, at least partially, be a consequence of the limitations on the hermeneutic reach of the tools they bring to bear on this type of problem. Menocal suspects that a disinclination on the part of Hispanists to learn Arabic (1984: 506-507), itself a reflection of bias, would leave them less able to detect any Arabic borrowings that might have been passed over by earlier scholars, which in turn, closing the vicious circle, would confirm their initial prejudices.

A more serious risk is inherent in the hermeneutic approach itself. The bridge linking the interpreter's horizon and that enclosing the culturally, geographically and/or historically remote object of study permits movement in both directions. Sympathetic interpreters in the present can open themselves to distant webs of meaning, but there is an ever-present risk that the scholar's prejudices or ideological agenda could be projected back into the remote horizon, thereby distorting the interpretation of the past.[14] The effect is magnified if the readers of these reconstructions, or the leadership of the institutions sponsoring

the scholar's research, share the author's prejudices. Politically-motivated amateur etymologies are depressingly common — especially on the Internet[15] — but well-trained professional linguists have by no means been exempt from bias in the reconstruction of word histories, especially when political circumstances encouraged them to do so. One of the more notorious cases is that of Walther Wüst, specialist of Indo-Iranian linguistics at the University of Munich in the 1930's and 40's, who served under Heinrich Himmler as curator of the *Stiftung Ahnenerbe*, the branch of the SS responsible for the ideological deployment of the social sciences. Wüst espoused not only a racist reading of history, but a racist hermeneutics as well: in his view, only those of the same racial stock can correctly understand the ancient culture of the "Nordic" Indo-Europeans.[16] In a series of lectures published under the title "Indo-European confession" (*Indogermanisches Bekenntnis*), Wüst employed word histories to support his vision of ancient Indo-European-speaking civilizations, from Vedic India to Classical Greece, animated by the same heroic will to conquer, yeoman peasant values, sense of order and purity, and talent for intellectual achievement that, in his view, marked Hitler's Germany — and which were conspicuously lacking in the cultures of other populations, such as Jews and Africans (Wüst 1943: 96). A case in point is Wüst's etymology of the Indo-Iranian stem *ario-* (whence the much-abused ethnic designation "Aryan"). Wüst argued that this stem was ultimately derived from the Indo-European root meaning "plough" (*arə-*; cp. Greek *aróō*, Latin *arō*), which he took to be confirmation that the "Blut und Boden" attachment to soil, homeland and folk preached by Nazi ideologues could be traced back to prehistoric times (Wüst 1943: 34-35). Wüst's etymology was rejected by Specht as early as 1944, and, to my knowledge, has not been accepted by any reputable specialist since.[17]

Acting to reduce the risks of overlooking promising hypotheses, or of letting the ideological concerns of the present contaminate the reading of the past, is the argumentative, indeed agonistic, style favored by etymologists. The animated, impassioned (and at times, hot-headed) back-and-forth between Schuchardt and his French colleagues was nothing new in the field. It echoed the strident polemics of the *Lautgesetz* controversy of the 1870's and 80's (Wilbur 1977), which were themselves informed by the uncompromising and sharp-tongued debating style effectively used by Pott and his colleagues in the first generation of historical-comparative linguists in the early 19th century. Echoes of Pott's combative defense of scholarly

standards could be detected even in the darkest days of National Socialism, for example in Hans Krahe's critiques, in the book review section of the journal *Indogermanische Forschungen*, of the then-popular belief that the Indo-European *Urheimat* was situated in or near Germany (Krahe 1938, 1942; Krahe and Debrunner 1938).

The etymological approach, as historical method, can be summarized as a type of diachronic hermeneutics, the reconstruction of word histories through the projection of ancestral forms (usually unattested), situated in postulated webs of meaning which motivate their phonetic and semantic characteristics. Historical accounts are, of necessity, hypotheses. From this standpoint, the historical reasoning of linguists can be compared to that of archaeologists, who are likewise engaged in the reconstruction of past states of affairs from fragmentary evidence. The methodological issues singled out by Wylie (1985: 483), in the passage cited at the beginning of this chapter, provide a useful starting point for a summarizing of the degree of consensus among etymologists, and historical linguists in general, concerning the formation and constraining of hypotheses. I will add two further issues relating to historical methodology to Wylie's list:

1. *What it is that makes an account explanatory, and what evidence constitutes grounds for accepting an hypothesis.* Historical phonetics has been remarkably successful in accounting for formal correspondences between cognate forms in related languages, and, on this basis, establishing likely trajectories of sound change. Although acoustics and articulatory physiology do not play a comparable constraining role in other domains of language structure, the diachronic study of morphological and syntactic typology has revealed favored directions of change, and the long-term stability of certain configurations of features (Nichols 1992; Harris/Campbell 1995). These regularities of language change impose limits of acceptability on historical reconstructions, although, as has been already shown, practitioners do not agree on the relative weighting of highly-regular changes (sound laws) and the less regular, but well-documented, effects of analogy, sound symbolism and the like. Constraints on semantic reconstruction are less well worked out. Schuchardt sought to refine the onomasiological approach, by ascertaining regularities in the naming of particular classes of objects, animals, etc. As evidence in support of proposed etymologies in the Romance languages, he cited the practice of naming cereal varieties after the place where they

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were believed to have originated (hence French dial. *baillarc* "summer barley" < *balearicum* "Balearic"), and the frequent examples of species of fish named after birds they resemble in some manner (e.g. Occitan *siejo* "dace" < *acceia* "snipe") (Schuchardt 1902: 402-406; cp. Meyer-Lübke 1992: 6, 73). Etymologists have also made use of feature analysis, and the mutually-defining relations among terms within semantic fields, as guides in the reconstruction of certain types of lexical sets, such as kinship terminology (Friedrich 1966; Benveniste 1969; Tuite 2000). In addition to the above factors, hypotheses are evaluated for the range of cases they cover, the number of unsupported, or thinly-supported assumptions they entail, and their success in accommodating newly-revealed facts.

2. *The limits of empirical knowledge, and the status of theoretical claims about unobservable phenomena.* Since Turgot's time, the historical-comparative method has reached beyond attested ancestral languages, such as Latin, or alleged living fossils such as Vedic Sanskrit (once considered the language which had changed the least from the common ancestor of the Indo-European family), to the reconstruction of linguistic elements which are not supported by documentary evidence, and extremely unlikely to ever be. Schleicher's formulation of more rigorous procedures of linguistic reconstruction, accompanied by his adoption of the asterisk to mark unattested ancestral forms, was an important advance in this direction (Schleicher 1871/1967; Koerner 1982). Since then, hundreds of linguists, working in dozens of countries, have been occupied with reconstructing the phonology, morphology, syntax and lexicon of a language which was presumably extinct for at least two millennia before the earliest trace of any of its daughter tongues. What these scholars label "Proto-Indo-European" is not so much a language in the usual sense as it is an OPERATING MODEL, continually subject to revision (or even abandonment), which represents regularities of sound correspondences, and elements of lexicon, affixation and morphological paradigms common — to greater or lesser degrees — to a large number of living and dead Eurasiatic languages. Specialists differ somewhat in the degree of realism they accord their reconstructions of the ancestral language. For some, the "phonemes" of Proto-IE are little more than markers of regular sound correspondences; on this view, an asterisked form such as *$k^w ek^w los$* "wheel" is essentially a conventional shorthand to specify the regular correspondences among Old English *hweol*, Greek *kuklos*, Sanskrit

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cakrá-, Tocharian *kukäl*, etc., and little interest is taken in how it might have been pronounced (Pulgram 1959). Others credit reconstructed forms with at least some measure of phonetic precision, and even go so far as to account for distributional features of the PIE sound system on phonetic grounds (Gamkrelidze & Ivanov 1984; Vennemann 1989).[18]

The debate over limits to linguistic reconstruction is particularly heated with respect to the question of 'long-range comparison', by which is meant the search for evidence of genetic links between languages at time depths significantly beyond that proposed for the ancestor of the Indo-European family (six to eight millennia before the present). Comparative work at these depths requires such substantial changes in methodology, that many linguists simply declare that the historical-comparative method cannot provide useful hypotheses that go back more than about 10,000 years before the present. To understand why long-range comparison arouses skepticism — to the extent that one linguist urged that an unusually ambitious proposal of this kind be "shouted down" by the scholarly community (Campbell 1986) — it should be juxtaposed to comparison at shallow and middle-range time depths, which correspond to the genetic groupings Nichols (1992) calls "families" and "stocks", respectively.[19] The first of these is exemplified by Romance historical linguistics, where the number of well-studied languages and dialects, rich documentary evidence, and recent origin of the genetic grouping (less than 2000 years), present optimal conditions for historical study. One is not far from Malkiel's ideal of being able to explore "the undiluted medieval dossier of each word viewed through a powerful dialectological lens" (1993: 78-79). The basic sound correspondences are for the most part unproblematic, but the abundance of documentary, dialectological and historical data affords ample material for etymologists to do detailed, even book-length, word histories. Middle-range comparison, at the level of the Indo-European, Uralic, Austronesian and Northeast Caucasian language groups, relies more heavily on the evidence of shared morphology and the establishment of sound correspondences, many of them non-obvious, on the basis of smaller numbers of identifiable lexical cognates. As Hamp (1998) demonstrates, even very small sets of related forms can play a crucial role in reconstruction if they show sufficiently robust parallelism in form (according to the expected sound correspondences), meaning and grammatical categorization, to rule out coincidence as an acceptable explanation. At the range of what Matisoff (1990) calls

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"megalocomparison", large phyletic groupings ancestral to recognized stocks are postulated, at estimated time depths well beyond ten millennia. The more far-fetched of these include Greenberg's (1987) "Amerind", Bengtson's (1992) "Dene-Caucasian", and even Bengtson & Ruhlen's (1994) "Proto-World" (!). It seems at first glance paradoxical that the hypothesized sound correspondences linking the far-flung members of these mega-families are characteristically much more straightforward than those detected in Indo-European; one never encounters anything comparable to the complex, but regular, sound correspondences that link Armenian *erku* "two" to Latin *duo*. The reason behind this is the small number of possible cognates which can be identified in languages which separated from their common ancestor — if in fact they had one — in the Mesolithic or earlier. Megalocomparativists exhibit sets of phonetically-similar words with similar meanings, but have difficulty convincing their colleagues that they have eliminated chance resemblances from their data base, or even that the proposed cognates have been correctly glossed and analyzed.[20] In the absence of sufficient robust cognate sets, strong parallels in morphological paradigms, and supporting data from written texts, archeology, etc., the regular etymological approach cannot be used, or, to be more precise, does not yield the sort of results that would encourage traditionally-trained linguists to continue their inquiry.[21]

3. The enforcing of high standards of erudition and familiarity with neighboring disciplines considered relevant for etymological inquiry: history, archaeology, ethnology, sociology, etc. Experienced practitioners can undertake broad-based examinations of the social, cultural and historical context of the phenomena being investigated in search of facts that converge upon a particular hypothesis (cp. Williams 2002: 256-257). This means of constraining hypotheses is familiar to those archaeologists, who, in response to criticism of archaeology's cooptation in the service of imperialism and nationalism, have sought to reconcile a realist view of history with the necessarily contingent and socio-historically conditioned nature of historical reconstruction (Kohl 1998: 233). Anthony (1995: 87), for example, has argued in favor of "convergent realism" as a methodological control on the distorting effects of bias and interpretive inaccuracy in reconstructing the past:

> When the 'facts' that are consistent with a particular explanation derive from many different sources […] it becomes increasingly unlikely that all the evidence is tainted the same way.

4. *The agonistic style of scholarly exchange favored by etymologists for almost two centuries.*[22] In a disciplinary setting prone to criticism, and even hypercriticism, it is natural that practitioners train themselves to resist "die Sirene des Gleichlauts", unless strong supporting arguments are adduced. Chartraine's refusal to endorse the etymological relation of Greek t^heos to the Latin root *fēs-*, for no other reason than the difference in vowel length, might strike outsiders as an exaggerated case of finickiness. No doubt some philologists felt the same way when Pott and his colleagues called into question the erstwhile undisputed kinship of t^heos and Latin *deus*. Such cases should serve as a reminder that not yielding too quickly to the sirens' call can leave the investigator open to explore hypotheses that are less obvious at first glance, but more fruitful in the long run.

6. RESEARCH ON VARIATION AND CHANGE SINCE SAUSSURE

The career of Ferdinand de Saussure serves to mark, both chronologically and intellectually, the transition from the 19th to the 20th century in historical linguistics. The young Saussure trained at Leipzig under the leading linguists of the Neogrammarian movement: Karl Brugmann, Hermann Osthoff, August Leskien and others. Although Saussure was doing original linguistic research in his adolescence, it was at Leipzig that he learned of the "*fait étonnant*" of the sound law, as the core doctrine of the Neogrammarian approach to the historical study of language (Saussure 1960). One of the more brilliant successes of this approach was Saussure's *Mémoire*, although its most daring proposals were not generally accepted until after the discovery of the long-lost Indo-European language Hittite a decade after Saussure's death. Later in his career, he undertook the exploration of a new approach to the study of language, one based upon a rigorous methodological distinction between language seen as the constantly-changing speech habits of a community and language as a *system,* a virtual structure extracted from time and from the minds
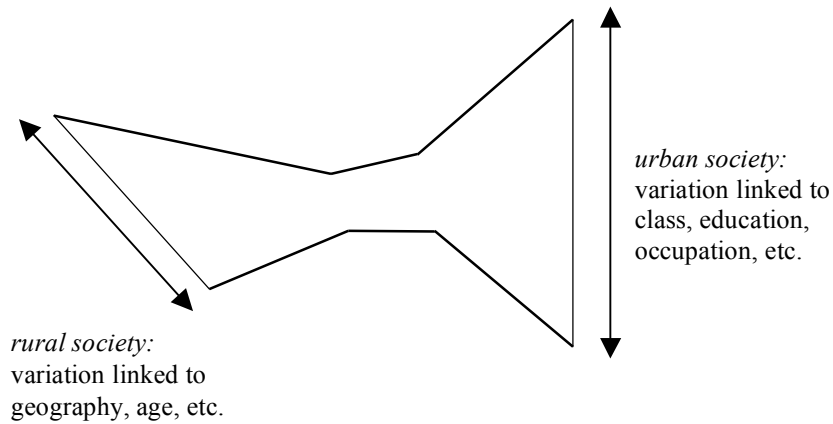
of its speakers. He imagined a corresponding split in the discipline of linguistics, between a *synchronic linguistics,* which "will concern itself with the logical and psychological relations among the coexisting terms which form a system, as perceived by the same collective conscience", and a *diachronic linguistics* which "will study the relations among successive terms not perceived by the same collective conscience, each of which substitutes [for the one before it] without forming a system among themselves".[23]

   It has become a commonplace of academic jargon to apply the adjective "Saussurian" to idealized synchronic structural descriptions, such as Lévi-Strauss's analysis of myth, or Chomsky's generative grammar. In fact, Saussure's most celebrated disciples were historical linguists who faithfully practiced — as their master himself did — the Neogrammarian craft. Despite the criticism it has received since its proclamation in the 1870's, the Neogrammarian model of sound laws, conjoined to the hermeneutic approach to reconstructing word histories, dominates historical linguistic research on both sides of the Atlantic up to the present. (As recently as 1977, T. Wilbur observed that "as far as historical linguistics is concerned, we are, to a very great degree, still in the 19th century" (Wilbur 1977: ix)). This may indeed be so, but significant advances in the technology of speech recording and analysis, accompanied by the development of new research techniques, has opened a new chapter in the discipline of historical linguistics. Linguists have been able not only to demonstrate the fundamental correctness of Schuchardt's postulate concerning the ubiquity of synchronic variation, but have also undertaken extensive studies of the factors correlated with that variation.

   "As far as can be ascertained by direct observation of ourselves or others", Schuchardt wrote, "the speech production of the individual is never free from variation" (Schuchardt 1928: 60). The new sociolinguistic methodology has confirmed that the speech repertory of each society, and even of each individual in each society, consists in a range of 'lects' or 'registers', distinguished by phonetic, lexical and other linguistic markers. William Labov and others working within his paradigm have for the most part conducted their research in Western urban settings such as New York (Labov 1972), Montréal (Thibault/Daveluy 1989), Belfast (Milroy[s]) and Norwich (Trudgill); this research has revealed in each case at least some linguistic markers which vary — often to a surprising degree — within what one would otherwise consider the same community of speakers (e.g. the pronunciation — even in the repertoire of a single speaker from New

York City — of the vowel in 'bad' ranging from a low [æ] right up to a high, diphthongized [Iə]). Of particular interest is the discovery by anthropological linguists that the phenomenon of variation is by no means limited to such settings. A random inspection of grammars of Pacific-region languages published in the *Pacific Linguistics* series revealed detailed descriptions of variation in societies comprising only a few hundreds or thousands of speakers in New Guinea (Seiler 1985; Phillips 1976; Thurston 1987) and the Philippines (Brainard 1994). Consider, for example, the Imonda language of Papua-New-Guinea, spoken by 274 speakers who inhabited, until 1962, a single village. Seiler (1985: 20) noted how a phonetic feature — the centralization of high vowels — varied regularly with age. As speakers grow older, they modify certain markers in their speech to signal their position in the community (Seiler 1985: 11). Recent research has also revealed the correlation of linguistic variation with social categories even in speech communities of very recent origin. The case of Honiara, the capital of the Solomon Islands, is instructive. This town was founded after World War II, and its first indigenous inhabitants spoke a rich variety of rural forms of Solomon Islands Pijin, which they had acquired while working on plantations and in similar contexts. In the new urban environment, where Pijin was installed as the principal means of communication of a population comprising speakers from sixty or more ethnic groups, it underwent a number of modifications: phonetic changes linked to a more rapid speech tempo, increased vocabulary, and so forth. Interestingly, the structural homogenization of Solomons Pijin was accompanied by a new diversification of the urban varieties, leading to "the stabilization of levels of speech and markers of social class" in the varieties studied by Christine Jourdan in the late 80's and 90's (Jourdan and Keesing 1997: 415; cp. Jourdan 1994). She speaks of an "hourglass-shaped" process of the replacement of variation along one dimension in the rural context by another sort of variation in the urban setting (Jourdan, personal communication):

Figure 1. C. Jourdan's hourglass.

urban society:
variation linked to
class, education,
occupation, etc.

rural society:
variation linked to
geography, age, etc.

A similar phenomenon has been described by Clarke (1988) in the recently founded Montagnais community of Sheshatshiu in Labrador (Montagnais is a language of the Algonquian family). In the 1950's several hundred Montagnais speakers from various parts of eastern Canada were encouraged by the federal government to abandon their traditional nomadic way of life and set up permanent residence at Sheshatshiu. The founding community of four decades ago spoke numerous varieties of Montagnais, representing three regional dialects. Among the youngest group of speakers surveyed, those aged 14-19 years at the time of the study, and whose social formation therefore took place in the context of the village rather than the 'bush', the investigators noted the progressive loss of certain dialect features, whereas other markers, of regional origin, came to take on a new socially-sensitive valuation.

Labov insists that the minute observation of sound changes in progress has only confirmed the hypothesis of the Neogrammarians concerning the distinction between regular, gradual phonetic change and other types of change, which are less regular and frequently conditioned in complex ways (Labov 1981, 1994). The shift of the vowel in 'bad', mentioned above, is an example of the first type of change in the speech communities of those North American cities where the radical restructuration of the vowel system known as the 'Northern Cities Shift' is underway (Labov 1991). The use of sophisticated techniques of sound recording and analysis has enabled

Labov and his colleagues to pinpoint extremely subtle factors conditioning the pronunciation of certain vowels, but the correlation is said to be regular and predictable. On the other hand, a superficially similar sound shift in Philadelphia represents the second class of phonetic changes: the raising of [æ] is discrete, sensitive to the grammatical context, and limited to certain words. More exactly, the raising of [æ] in Philadelphia represents a *phonological*, rather than a phonetic, change: the mental representation of the word 'bad', which undergoes the shift, contains a different vowel phoneme from that of 'sad', which does not. After a change of the first (phonetic) type has run its course and ceased to be active, it is typically the case that all, or nearly all, words with the target sound in the appropriate context have been affected. A linguist, comparing the 'before' and 'after' stages of the language sometime in the future, would likely have the impression that an exceptionless and seemingly instantaneous "sound law" had swept through the speech community. The Neogrammarian model of the *Lautgesetz* is an illusory simplification, like the Ideal Gas Law in chemistry, but one that has descriptive adequacy under most circumstances.

Variationist research has provoked numerous commentaries, criticisms and field studies, most of which address themselves to one or the other of these questions: (i) How are Neogrammarian-style phonetic changes to be explained in the context of the sociolinguistic framework? (ii) How are sociolinguistic correlations to be explained in terms of the social life of speakers? With regard to the first question, linguists have come to the somewhat paradoxical conclusion that the most 'natural' sound changes — assimilation and weakening ('lenition') — are particularly susceptible to social evaluation despite their gradualness and relative imperceptibility, whereas more complex and abstract linguistic changes are less likely to be sociolinguistically marked. Regular sound changes tend to follow an "S"-shaped trajectory, from an initial phase of slow, incremental change through a middle period of rapid shift, to a final phase where the pace of change once again slows, and may not even go all the way to completion (Labov 1994: 65-67). According to Hock "in the crucial first stage of selecting for sociolinguistic marking (and subsequent generalization) one out the many deviations from the norm which are found in actual speech, selection is favored by relative imperceptibility and the absence of non-phonetic (or non-phonological) marking. The less perceptibly a given variable differs from the norm, the less it is considered already marked as a speech error" (1991: 653-654). Abrupt

and complex changes are either filtered out of the listener's conscience as speech errors, or on the contrary adopted by conscious imitation, and therefore diffused throughout the community in a less regular fashion.

As for the link between sociolinguistic phenomena and the social lives of speakers, recent studies have sought to shed light on the narratives behind the statistical regularities detected by variationist studies. This is comparable to the historiographic genre shift noted above in connection with the practice of etymology: The social context of the sound change is described in greater detail, and the members of the speech community appear as social actors, even agents, rather than abstract clusters of demographic and socio-economic parameters. For example, the Milroys and others have pointed to the importance of social networks in accounting for the social and regional distribution of linguistic variables (L. Milroy 1987; Lippi-Green 1989; J. Milroy 1993). Other researchers have investigated the deployment of differently valorized forms of speech in the context of competition for prestige — 'symbolic capital' — in what Bourdieu has termed the 'linguistic marketplace' (Bourdieu 1983; Sankoff et al 1989). Highly interesting studies have been conducted on attitudes of identification, or resistance, on the part of more or less marginalized communities with respect to those groups holding higher prestige and/or power (Labov 1972 on the inhabitants of Martha's Vineyard; Eckert 1991 on the 'jocks' and 'burnouts' at an American high school). The phenomenon of linguistic distantiation, or boundary maintenance, is by no means uniquely urban. In some small-scale speech communities of Oceania, William Thurston (1987, 1989) observed instances of what he terms 'esoterogeny', or the modification of language in order to make it more distinct, in terms of vocabulary or grammar, from the languages of neighboring communities (and by the same token less easily learned by outsiders; cf. Ross and Durie 1996: 21-22). The complexification of the phonetic form of words by the addition of 'parasitic consonants', observed in many peripheral dialects of European languages, appears to be a phenomenon of the same type (e.g. in the French patois of the Swiss canton of Valais, where such consonants appear to have evolved from the devoiced terminations of high front vowels heard in other varieties of French: *l è venduk* "*il est vendu*", *rigr* "*rire*"; Andersen 1988). Another type of linguistic differentiation has been attributed by Kroch (1978) and Chambers (1995: 250-253) to an ideology of resistance, although in this instance it is the privileged group which resists the

adoption of sound changes originating in more popular varieties of speech. "Dominant social groups tend to mark themselves off symbolically as distinct from the groups they dominate, and to interpret their symbols of distinctiveness as evidence of superior moral and intellectual properties" (Kroch 1978: 18); on the linguistic level, "the standard dialect typically differs from other dialects in the community by being more restricted or more tightly constrained in its grammar and phonology […] There exists a cluster of linguistic variables, both phonological and grammatical, with certain privileges of occurrence in child language, creoles, traditional and mainstream vernaculars. They are visible partly by their suppression in the standard dialect" (Chambers 1995: 246, 250).[24]

For all of its successes in bringing fascinating and extremely useful language data to light, sociolinguistics has been accused of having an unsure epistemological footing. Generative linguistics, including that branch which applies Chomskyan principle-and-parameter models of grammar to the investigation of language change (e.g. Lightfoot 1997), draws on a confident, almost naive, empiricism and a fundamental methodological consensus among its diverse schools (their principal points of divergence relating to the sort of data privileged by their analyses, and how these are interpreted in the construction of grammatical models). Sociolinguistics, on the other hand, seems to meander between structural and generative linguistics and sociology in search of tools of analysis — from the one side come 'variable rules', from the other, network theory and notions of identification and resistance — or, more fundamentally, between a positivist epistemology and a hermeneutics appropriate to the human and historical sciences. Chomsky once haughtily proclaimed that "the existence of a discipline called 'sociolinguistics' remains for me an obscure matter" (1979: 56). To the extent that it adopts the methodology of sociology, it can do little more than generate "observations, intuitions, impressions, some valid generalizations perhaps. All very valuable, no doubt, but not at the level of explanatory principles" — this being of course the proper goal of science as Chomsky understands it.

But is it necessarily a bad thing if sociolinguistics brings both natural-scientific and hermeneutic approaches to bear on the study of language variation and change? Seen in historical perspective, against the backdrop of the debates over sound laws or the etymology of *trouver,* the hybrid methodology of sociolinguistics is a source of vitality, not weakness. As summarized in the first two volumes of

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Labov's *Principles of linguistic change* (1994, 2001), the discipline is confronting the same issues as their predecessors of a century ago:

(1). Variation and change is a ubiquitous characteristic of language. Change inheres in its triple nature as system, activity and social institution.[25]

(2). Physiological and cognitive factors act as constraints upon certain types of change. Consonant lenitions are far more frequent than fortitions (Trask 1996: 55-60). Shifts in vowel features, such as height and anteriority, tend to follow predictable trajectories, as argued by Martinet (1964) and Labov (1994).

(3). Although the constraints in (2) assure a degree of regularity, even predictability, of linguistic change, the phenomenon is nonetheless fundamentally social in nature. Change is enacted and diffused in the intersubjective context of communication. Language use has an inherent indexical component, in that it continually signals, constructs, maintains and problematizes the multifaceted cluster of representations subsumed under the notion of "identity" (Silverstein 1996, 1998). Variation — different ways of saying "the same thing" — is the primary resource exploited in this process.

(4). For the above reason, among others, natural-science-like, desubjectivized models of variation and change must be complemented by hermeneutic approaches, which draw upon knowledge of various elements of the context of the phenomenon under study, as well as the investigators' own instincts and imaginative capabilities as socially, historically and culturally situated actors.

Not surprisingly, therefore, divergent points of view comparable to those that enlivened etymological debates have surfaced in the sociolinguistic community. Some researchers have emphasized the role of universal or near-universal constraints on the direction of sound change. Gordon and Heath (1998) point to the evidence, from a large number of studies, that women generally lead men in changes marked by the raising and fronting of vowels, whereas men tend to lead in the lowering and backing of vowels, and also favor uvular and pharyngealized consonants. They argue that sexual differences in the adoption of phonetic changes can be explained to a considerable

extent by differential preferences for acute and grave sounds, which are rooted in sexual dimorphism. As in the Schuchardt-Paris debate, Gordon and Heath's proposal has been met with discussion over the relative priority of regular phonetic trajectories compared to social and semantic factors in explaining language change (see the commentaries on Gordon and Heath 1998; and Labov 2001: 291-292, 307-308). A more interpretive approach informs the research of Penelope Eckert (2000) on the distribution of phonetic variables among high-school students near Detroit. Eckert's analysis makes extensive use of interviews, social-network maps, and two years of ethnographic observation. Rather than look for general constraints on sound change, she seeks to understand how individuals deploy linguistic features in the construction of their social personae, as markers of group affiliation and stance vis-à-vis the school as institution, and its associated values. Labov himself has contributed to both directions of inquiry. His comparative investigations of the directions of vowel-feature changes has introduced significant refinements to Martinet's theory of chain shifts (Labov 1994). The more "Schuchardtian" and interpretive aspect of Labov's research methodology is evident in his pioneering study of the social significance of particular phonetic features among the permanent residents of the island of Martha's Vineyard (1972: 1-42), and, more recently, in the collecting of life histories from the upper-working-class women who produce the most advanced forms of certain sociolinguistic variables in Philadelphia (Labov 2001: 385-411).

7. LANGUAGE, HISTORY… AND CULTURE?

Keller has made the assertion that "language change is a special case of sociocultural change" (1994: 154). How useful is this relation, if it is indeed true? Can the synthesis of Neogrammarian and Schuchardtian approaches just described be applied to the cultural variation and change?

  It is becoming increasingly evident that variation, and with it the potential for change, is as ubiquitous in the cultural domain as it is in the linguistic. This is true even in the case of those societies Lévi-Strauss classified as 'cold' societies, which "seem to have developed or retained a particular wisdom which impels them to resist desperately any modification in their structure that would enable history to burst into their midst" (1977: 28). In a society that considers

itself — or which its elite considers — 'cold', those symbols and practices which are of importance in social life are represented as eternal, or as unchanged since their instauration in the mythic past, regardless of the occurrence of actual change (see also Lévi-Strauss 1962: 309-310). Researchers who have had the opportunity and the documentation needed for longitudinal studies of 'tribal' societies have noted considerable change in the parameters of key rituals and practices from one generation to the next, even though these same rituals are claimed by informants to have been performed just as they were in ages past (on the relationship between changeability of rituals and the ideology of 'tradition' cf. Kratz 1993, Vayda 1994, Lincoln 1989; on change in general, see Colson 1984). Along with change, there is variation. In an important review of the ethnographic evidence, Pelto & Pelto (1975) conclude that "one does indeed find intra-community heterogeneity if one looks for it … In every community the totality of individuals' expectations and conscious or unconscious ideas for behavior make up a general, diverse 'cultural pool'". Employing a Darwinian analogy, they see in this diversity an adaptive advantage, endowing the community (or at least some of its members) with the flexibility to respond to new contingencies (cf. Goodenough 1994).

What constraints, if any, influence the trajectory of cultural change? In general, theories of sociocultural change fall into two indistinctly-bounded categories: (i) extensions and modifications of the evolutionary models of Spencer, Morgan, Tylor, Marx, Engels and their successors, in which the motor of change is located in the environment or ecosystem, the technology (means of production), etc. (Sanderson 1990); and (ii) models employing some variant or another of 'cultural drift', reflecting the cumulative effects of individual and group actions and choices, and of negotiations concerning the behavior of individuals in their social context (Keesing 1975: 140; Ensminger & Knight 1997). The first approach emphasizes the role of changes that are unidirectional, or conceived as such: the impact of new technologies, the complexification of the social structure. The cultural-drift model shows a strong homology to the Neogrammarian conception of 'mechanical' phonetic changes, insofar as it attributes the inception of change to individual innovation (perhaps unconscious), which can thereupon spread throughout the community, leading to a group-wide shift in practice which is subsequently institutionalized in one form or another. The drift model lacks, however, any homologue to the theory of preferred trajectories of

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change based on acoustic and articulatory phonetics.

While it remains open to debate whether any external factors constrain the direction of cultural change, as physiological and acoustic factors impose regularity on phonetic change, it may well be the case that certain cultural elements resist change better than others. Ohnuki-Tierney (1990), for example, is seeking to understand both the "built-in mechanisms for change" in cultural systems ("contradictions and incongruity at the cultural level; anomaly and marginality at the symbolic level; paradoxes in the minds of individuals") as well as the deep-seated structural characteristics that may remain stable in the culture of a given society for centuries or even millennia. Such investigations might well profit from an inquiry into the role of innate cognitive infrastructure — either specialized 'mental modules' (Fodor 1983) or more generalized capacities — in the acquisition and deployment of cultural 'grammars' (Keesing 1972, 1987, 1994). One of the better-known hypotheses of the long-term stability of abstract ideological structures is that of Georges Dumézil. In a long series of publications, Dumézil reconstructed the social thought of the ancient Indo-Europeans, centered on a three-way classification into "functions" — the sacred, warfare, and fertility. Indo-European trifunctionalism finds such highly varied reflections as the Indian caste system, the Roman college of *flamines*, and the rewards offered to Paris by the three Greek goddess who vied for the golden apple, but the abstract structure itself appears to be extremely stable (Dumézil 1992; cp. Puhvel 1987; Littleton 1982).

In a recent book, the historian of religions Bruce Lincoln has called into serious question the scholarly pretensions of the project of reconstructing ancient belief systems. After a careful examination of the ideological contexts within which Dumézil, Eliade and others — including himself — composed their narratives of the deep past, Lincoln convinces himself that these scholarly narratives are as "mythic" as the ancient texts they purport to analyze. "If myth is ideology in narrative form", he concludes, "then scholarship is myth with footnotes" (1999: 209). Lincoln expresses confidence that non-narrative explanatory genres can serve to counteract, if only partially, the ideological susceptibility of narrative. Even the desubjectivized, natural-science-like models of exceptionless sound laws, though, for all of their explanatory power, are informed by simplifying assumptions, and a tacit consensus among linguists to make use of a convenient fiction.[26] Fiction or not, the concept of sound law has made ample demonstration of its utility as a constraint on hypothesis

formation, even though scholars, such as Schuchardt and Paris, may disagree over the strictness with which it is to be applied. In the footnotes Lincoln referred to are two other critical procedures for limiting the degree of bias in historiography. One of them is the search for convergence among independent sources of information. The other is the agonistic, argumentative, critical spirit of scholarly inquiry at its best.

Notes

*This paper was supposed to have been the English translation of my *Anthropologie et sociétés* article, but after only a few lines, it began to take on a life of its own, or so it seemed, and it ended up as something very different. Much thanks to those who commented on earlier editions, answered questions on various matters or responded to my query on the HISTLING list about the etymology of "trouver": Konrad Koerner, Eric Hamp, Charles Taylor, Wolfgang Settekorn, Birte Lönneker, Marc Picard, Miguel Carrasquer, Mark Southern, Paul Lloyd, Maria Rosa Menocal, Robert Ratcliffe, Laurent Sagart, Britt Mize, Carol Justus, Roger Wright, Russon Wooldridge, John Leavitt and Christine Jourdan.

1- The pedantic Hellenist and poetaster Vadius in Molière's *Femmes savantes* was based on Ménage, and it has been alleged on numerous occasions — indeed, become part of linguistic folklore — that Ménage's word derivations provoked Voltaire to describe etymology as "une science où les voyelles ne font rien et les consonnes fort peu de chose" [quote attributed by Max Müller 1864/1994: 238]. Müller gave no more precise indication of the source of the quote, and since then numerous linguists have searched in vain for the original remark in Voltaire's writings. The attribution to Voltaire may well be apocryphal. It might be pertinent to note that the alleged quotation bears a close resemblance to the following observation on etymological procedure by Charles de Brosses, from his *Traité de la formation mécanique des langues et des principes physiques de l'étymologie* (Paris 1765; vol II, 158-159): "En étymologie dans la comparaison des mots, il ne faut avoir aucun égard aux voyelles, & n'en avoir aux consonnes qu'autant qu'elles seroient de différens organes" (cited by Aarsleff 1983: 35)

2- Unfortunately, Horne Tooke allowed his theory of mental operations to run roughshod over his historical phonology. Some of his more outlandish etymologies were inspired by his belief that many function

words originated as Old English verbs in the imperative mood, e.g. "unless" < *onles* (imperative of *onlesan* "unloose, dismiss"); and the article "the" < *∂e[g]an* "take" (Aarsleff 1983: 57-61).

3- The initial vowel in the Greek word for "tooth" (cp. also Armenian *atamn*), and the final /nt/ of the root, have led some linguists to propose that the Indo-European word was an agentive noun *(*e*)*d-ont*- derived from the root **ed*- "eat". On this account, the teeth would have once been referred to as "eaters" or "biters" (Pokorny 1959: 289; Gamkrelidze & Ivanov 1984: 302, 698). Szemerényi (1996: 129-130, 167) offers a very different account of the Greek and Armenian "prothetic vowels". Throughout this paper, I follow the Indo-Europeanist convention of marking unattested reconstructed forms with an asterisk.

4- The only remaining difficulty, already noted by Curtius (1866: 230-231), is the difference in vowel length. The Latin and Armenian forms point to a proto-form with a long vowel, while Greek *t*ʰ*eos* can only derive from a form with a short vowel. Frisk (1960: 662-663) and Chantraine (1990: 429-430) are sufficiently uncomfortable with this one flaw in an otherwise impeccable etymology to declare the origins of *t*ʰ*eos* still unknown or uncertain. Some linguists have linked this lexeme, via a postulated pre-Greek **t*ʰ*wes-os*, to Lithuanian *dvasià* "spirit" (Pokorny 1959: 268-271; Gamkrelidze & Ivanov 1984: 237, 466), an etymology contested by Frisk (loc. cit.).

5- One of Pott's lengthiest polemical works (1856) was directed against J. A. de Gobineau's *Essai sur l'inégalité des races humaines* (1853-1855), the earliest attempt to found a racial-deterministic history of humanity upon the new discoveries in linguistics, archaeology, ethnography and physical anthropology. The liberal Protestant linguist made no attempt to disguise his profound antipathy for the arch-Catholic feudal-aristocratic worldview of his French adversary, but managed to channel most of his fury into a devastating and detailed attack on Gobineau's circular reasoning, use of unreliable sources, and farfetched interpretations of historical facts.

6- Despite oft-repeated claims that the Neogrammarians initiated a revolution or paradigm-shift in historical linguistics, many of the key concepts and methodological doctrines had been laid out by their predecessors, especially Schleicher. The latter had already introduced the term 'sound law', and made crucial innovations in the reconstruction of unattested ancestral forms (Koerner 1982).

7- For a sophisticated development of the concept of "analogical" change, see Kuryłowicz (1964, 1966).

8- For example, one might predict that the theonym "Jesus Christ" would be subject to taboo-deformation in a nominally Christian society, without

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being able to foresee that it would result in such highly divergent euphemisms as "jeepers creepers" and "jiminy cricket".

9- Schuchardt regarded his linguistic research as "a branch of ethnology (*einen Zweig der Völkerkunde*), and indeed the most important" (1928: 119). In this spirit he sought to refine the "onomasiological" approach to historical semantics. Rather than beginning with words (lexemes) and determining how they were used to designate different types of objects, actions, etc., the goal of onomasiology was to begin with the objects of reference, and through crosslinguistic comparison, ascertain those features shared by the names for these objects (Malkiel 1993: 26). Schuchardt's desire to integrate linguistics with ethnography had a strong influence on his younger colleague Rudolph Meringer, founder of the journal *Wörter und Sachen* ("Words and Things"; Lönneker 1998; Settekorn 2001). Most of the contributions published in *Wörter und Sachen* focused on the referential and denotational use of language to the exclusion of pragmatics or poetics, and favored concrete nouns and verbs over other parts of speech or bound morphemes. Typical *Wörter und Sachen* articles dealt with the fast-disappearing realia of European rural material culture (agricultural implements, the layout of peasant dwellings, etc.), as the starting point for etymological investigations into archaic words, or the earlier meanings of words still in common use (such as "trouver"). Schuchardt's exhaustive study of ancient fishing gear and techniques set the tone for the heavy use of illustrations, drawings, and ethnographic descriptions by Meringer and other contributors to the journal. The search for semantically-linked regularities of word-shape or lexical replacement still interests some etymologists. Malkiel (1977: 356-357), to name one, noted that certain semantic classes of lexemes had far more than their fair ahare of etymological puzzles, due to high rates of replacement or susceptibility to phonetic modification due to sound symbolism and expressivity (for example, the words for "girl" and "boy" and the names of male domestic animals in the languages of Europe).

10- Meyer-Lübke (*REW* 6th ed. 1992, reprinted from 1935 version) offered what he thought could be a Solomonic compromise between the two positions, deferring to Schuchardt's authority in his etymology of *trouver/trobar* "find" (s. v. *turbare*), while treating Occitan *trobar* "compose verse" as a homophonous verb going back to **tropare*. Spitzer (1940) deemed split etymologies of this sort inadmissible unless compelling justification for homonymy is offered; Corominas agreed, finding Meyer-Lübke's proposal "d'una inversemblança manifesta" (1980: 858). Malkiel (1982), on the other hand, is not so sure that splitting the etymology should be ruled out of court so hastily.

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11- Menocal goes into more detail than Lemay does, and draws upon research into the varieties of Arabic likely to have been in use in medieval Andalusia. She also accounts for the rounded vowel in the root *trob-* as the result of the velarization of /a/ in the vicinity of a pharyngealized ("emphatic") consonant. Her proposed phonetic evolution strikes me as no less implausible than Schuchardt's for *turbare*, but it nonetheless lacks the straightforward sound-law-driven regularity of the *tropare etymology.

12- Raimo Anttila astutely described the type of inference behind linguistic reconstruction as "abduction" in Peirce's sense, even when nothing other than exceptionless sound laws are invoked (Anttila 1988: 76-77). Abductive inferences may come in a flash, through an act of insight as one contemplates the data to be explained, rather than through the classical processes of deduction or induction. Furthermore, the evaluation of competing hypotheses relies not only on compatibility with the data, but also on such para-logical factors as simplicity, elegance and instinct: "it is the simpler Hypothesis in the sense of the more facile and natural, the one that instinct suggests, that must be preferred" (Peirce 1955: 156).

13- To help his readers connect the dots, Paris even reconstructed the sort of medieval Latin usage of *tropare "that one might find some day in a Carolingian text": *optime inveniebat et tropabat melodias* "he was very good at inventing and 'troping' (= composing) melodies" (Paris 1909: 624). Spitzer (1940) and Guiraud (1982: 515-516) both support the *tropare hypothesis, but reconstruct quite distinct historical pathways between it and the attested daughter forms. These etymological scenarios are consistent with the policy, questioned by Schuchardt, of according unquestioned priority to regular sound change, and then stretching the semantics to fit, if at all possible, the trajectory from protoform to daughter lexemes.

14- For recent discussions of this troubling question as regards Indo-European studies, see Sergent 1982; Anthony 1995; Lincoln 1999; Aerts 2000.

15- For example, some Ukrainian and Russian ultranationalists have buttressed their reconstruction of an illustrious past for the Slavic peoples by the claim that the root "Rus" is preserved in *Rasenna*, the self-designation of the Etruscans, and in the name of the holy city Jerusalem (Dymerskaya-Tsigelman and Finberg 1999).

16- "Verstehen kann nur der rassisch Verwandte den oder das rassisch Verwandte" (Wüst 1943: 76).

17- Most recent investigators of *ario- express doubts that it can be linked to any Indo-European reflexes outside of Indo-Iranian, Anatolian and perhaps Celtic (Benveniste 1969: 367-373; Gamkrelidze & Ivanov 1984:

755; Mayrhofer 1986: 174-175). A particularly bitter pill for someone sharing Wüst's beliefs to swallow would be Szemerényi's well-argued hypothesis that *ario- may not have originated in Indo-European at all, but rather represent an ancient borrowing into Indo-Iranian and Hittite from a Hamito-Semitic source (cp. Ugarit *àry* "kinsman, comrade") (Szemerényi 1977: 146-149).

18- Most linguists appear to be receptive to the extension of the operating model to include non-linguistic traits, relating to the culture, economy, social organization or geographical situation of the presumed speakers of Proto-IE, on the condition that such features receive strong support from the linguistic data (Benveniste 1969; Zimmer 1990). The reconstructed lexeme *k^wek^wlos, for example, when placed in the context of other lexemes with comparably strong IE pedigrees which denote different parts of the wagon (e.g. *akəs- "axle", *y(e)ug- "yoke", *H(o)is- "yoke pole"), and a verb meaning something like "drive, convey in a vehicle" (*weǵh-), has licensed the attribution of wheeled transport to Proto-IE society, even in the absence of direct historical, documentary or archaeological evidence (Meid 1994; Mallory 1989: 121, 163, 275-276; Anthony 1991: 199; Gamkrelidze & Ivanov 1984: 717-724; criticism by Renfrew 1987: 83-87).

19- In a *family* (time depth c. 2500-4000 years), "cognates are numerous […] correspondences are regular and often transparent, and relatedness is obvious without deep analysis once the cognate forms and paradigms are displayed". A *stock,* such as Indo-European or Hamito-Semitic (time depth c. 5000-8000 years), has "correspondences which are regular (though often not transparent to non-specialists), substantial cognate vocabulary, and significant cognate paradigmaticity in grammar" (Nichols 1992: 24-25).

20- See, for a particularly extreme example, the criticisms of Greenberg's Amerind hypothesis by W. Chafe and I. Goddard (in *Current Anthropology* 28 (1987): 652-664). According to Goddard, fully two-thirds (93 of 142) of the Algonquian comparisons adduced by Greenberg (1987) are faulty in some way: incorrectly analyzed, incorrectly glossed, or not cognates within Algonquian.

21- A more promising method for deep-time linguistic exploration has been proposed by Johanna Nichols (1992). She argues, quite reasonably in my view, that, rather than searching for cognates that would be difficult, if not impossible, to distinguish from purely coincidental resemblances, linguists should examine the global distribution of particularly stable structural features (morphosyntactic typology, gender systems, inalienable possession marking) for evidence pointing to ancient contact zones and population movements.

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22- The value of academic agonism, the "ideological assumption that intellectual inquiry is a metaphorical battle … [and that] the best way to demonstrate intellectual prowess is to criticize, find fault, and attack" has been called into question by Tannen (2000). I agree that many instances of gratuitous, and often unjustified, criticism have hindered, rather than fostered, the exchange of ideas. I also accept the well-foundedness of the assertion made by Tannen in other publications that men show a greater fondness for verbal combativeness than do women, at least in mainstream Anglophone North America. That being said, the performance of linguists, and their colleagues in archaeology, folklore and the other human sciences, under National Socialism should give us pause (Kater 1974; Hutton 1999). In 1936, Stegmann von Pritzwald (1936: 24) exhorted the researchers of his generation to repudiate the argumentative intellectual culture of Paul, Curtius and the Neogrammarians in favor of scholarship oriented toward consensus, rooted in "the deep experience of like-minded collectivities". Veiled by this appeal for a less agonistic scholarship was a call to collaboration with Nazism.

23- "La *linguistique synchronique* s'occupera des rapports logiques et psychologiques reliant les termes coexistants et formant système, tels qu'ils sont aperçus par la même conscience collective. La *linguistique diachronique* étudiera au contraire les rapports reliant des termes successifs non aperçus par une même conscience collective, et qui se substituent les uns aux autres sans former système entre eux" (Saussure 1974).

24- Mention should be made at this juncture of attempts to correlate the rate or type of language change to the sociocultural milieu. Specialists in Australian and Papuan languages, for example, have observed that the usual assumptions concerning the resistance of 'core vocabulary' (pronouns, names for basic body parts, kin terms, natural phenomena, etc.) to replacement through borrowing are less applicable to the languages of societies making extensive use of speech taboo practices, such as banning the use of words sounding like the name of a recently deceased person (Dixon 1980; Foley 1986: 42; Comrie 1988). Recently, Dixon has revived a hypothesis concerning the rate and nature of language change that draws upon the "punctuated-equilibrium" model of evolutionary biology (Dixon 1997). This notion has surfaced, in one form or another, several times before in the literature. As early as 1920, Franz Boas wrote that "it would seem that there is a close parallelism between the history of language and the history of general cultural development. Periods of stability are followed by periods of rapid change" (Boas 1920; for a sceptical assessment of the utility of the punctuated-equilibrium model in the study of cultural change, see

Sanderson (1990: 207-8)). More recently, Thurston (1987: 39-40) noted that, if correctly adapted, "the model of punctuated equilibrium would be a better model of language change than the gradualist models which presently dominate the discipline". One important consequence of long periods of equilibrium, such as Dixon believes was the case in pre-conquest Australia, would be a blurring of the evidence linguists use to construct *Stammbäume,* or family trees. Neat cleavages among dialects splitting off from a common ancestor are far more characteristic of periods of 'punctuation', set off by a large-scale disruption of the socioeconomic equilibrium (such as a sudden change in the ecosystem, or a technological or military innovation leading to conquest and expansion).

25- As Saussure wrote in one of his unpublished notes, "[n]ous posons donc le principe de la transformation incessante des langues comme absolu. Le cas d'un idiome qui se trouverait en état d'immobilité et de repos ne se présente pas" (Saussure 1974: 8b). This doctrine has been explored in an interesting way by a group of linguists working in Germany, most notably Coseriu (1988), Mattheier (1984), Keller (1994) and Lüdtke (1986). Keller has emphasized that "linguistic change … is the necessary consequence of our way of using language" (1994: 153), in that every communicative interaction is in an important sense 'a small social experiment', in which the interactants continually monitor — and perhaps retrospectively evaluate — the efficacy of their exchange, their stance vis-à-vis their interlocutor, and so forth. It is this continual, and interactive, actualization of language competence that leaves it always susceptible to slight deviations from the previous norm, some of which may be picked up by interlocutors and gradually spread through the speech community. Drawing on the terminology of the natural sciences, Lüdtke (1986) appropriated the term *homeorhesis* to describe this fundamental characteristic of human language. A 'homeorhetic' system is one for which change is not only not inconsistent with its continued functioning, but indeed a regular by-product of its functioning (cp. Tuite 1999).

26- In other words it is, as Blust (1996: 136) said with regard to another popular model in historical linguistics, the family-tree representation of language divergence over time, "a heuristically useful device which serves to simplify man's picture of nature and so accelerate the rate of scientific progress even while misrepresenting the reality it attempts to order and explain".

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