Introduction

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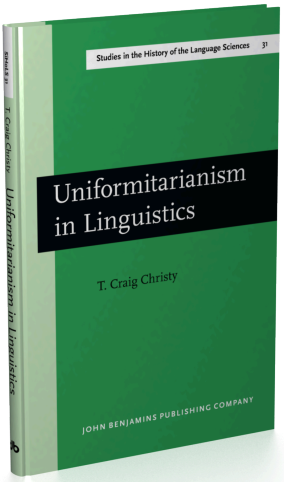

Pages ix–xiv of
Uniformitarianism in Linguistics
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INTRODUCTION

The purpose of this study is to examine specific implications of the considerable overlap in methodology and theory of nineteenth-century geology and philology. This overlap results primarily from the common status of geology and philology as historical sciences concerned chiefly with clarifying problems of origin and development. Recognition of this overlap is indispensable to a complete understanding of philology's development into the more empirical science of linguistics, especially as this empiricism culminates in the neogrammarian doctrine of exceptionless sound laws.

The basic assumption underlying the uniformitarian principle is that knowledge of processes operative in the past can be inferred by observing ongoing processes in the present. The Scottish geologist, James Hutton (1726-1797), first formulated this principle in 1785. Yet Hutton's ideas did not figure prominently in geological method and theory till nearly a half century later when the English geologist, Sir Charles Lyell (1797-1875), made Hutton's uniformitarian principle the theoretical foundation of his *Principles of Geology* (1830-1833).

This delayed reception of Hutton's principle was due chiefly to the revised earth chronology it entailed. After all, Hutton acknowledged only those gradual and slow geological processes yet observable as ever active in earth history. Thus, only the continuous operation of these processes over countless centuries could account for the earth's present state. Since the earth was only about six thousand years old according to Scriptural chronology, Hutton's theory amounted to outright heresy. Furthermore, it directly conflicted with the prevailing 'catastrophist' theory in geology. The chief characteristic of catastrophist geology was its recourse to sudden catastrophes in earth history resulting either from no

longer observable geological processes or from divine intervention.

Philology's Lyell was William Dwight Whitney (1827-1894), who made uniformitarianism the guiding principle of his book *Language and the Study of Language* (1867). Historians of linguistics have traditionally credited this accomplishment to Wilhelm Scherer (1841-1886). Identification of the uniformitarian principle in linguistics with Scherer is due largely to the neogrammarians.

The neogrammarians were concerned with uncovering the underlying psychological processes at work now, as in the past, in language change. This amounted to the establishment of linguistic analogues to so-called 'laws of nature'. In language these laws were manifest physically as sound laws whose regular operation could be suspended only by equally lawful psychological processes such as analogy. This was the real basis of the neogrammarian doctrine of exceptionless sound laws, for any apparent exceptions to the phonetic regularity of sound change were governed by equally regular psychological laws.

In their search for psychological processes underlying language, the neogrammarians at once dismissed the traditional view of modern-day languages and dialects as mere 'decayed' skeletons of the more 'perfect' classical languages. Grammatical errors, for example, were viewed as a potential means of disclosing the workings of the human mind. Whitney, too, had touched on this area of investigation, but his pedantic view of 'blunders' as primarily the result of grammatical ignorance and inattentiveness or ease was opposed to the neogrammarians' emphasis on the folk language as the best representative of ongoing tendencies in language unchecked by the leveling effects of education and culture.

Uniformitarianism also figures prominently in nineteenth-century ethnology. The notion of the psychic unity of all mankind and the problem of how to interpret contemporary 'savages' led to the oversimplified view of human development as manifesting a unilinear sequence from savagery to barbarism to civilization. This bears a striking resemblance to the contemporary linguistic typology, which assumed that natural languages had similarly progressed from an earlier root and inflecting stage to the more advanced and abstract analytic stage. In short, by following the uniformitarian procedure of invoking no unknown causes in their explanations of the origin and

development of the earth, mankind, and natural languages, geologists, linguists, and ethnologists alike were able to construct theories which were both more plausible, and more scientific.

Throughout this investigation of uniformitarianism in linguistics, I make use of two terms introduced into the history of science by Thomas S. Kuhn in his well-known work *The Structure of Scientific Revolutions* (1962; ^{2}1970). I refer here to the concepts he terms 'revolutions' and 'paradigms' in science. According to Kuhn, a revolution takes place in a science in consequence of a fundamental innovation made by an individual genius — an innovation which marks the abandonment of a specific scientific tradition. Once such an innovation enjoys the consensus of a given community of scientists, it is recognized — together with the set of methodological and theoretical implications it entails — as a guiding framework, or 'paradigm'. In Kuhn's words, paradigms amount to "universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners" (1970:viii).

Since the applicability to the history of linguistics of Kuhn's concept of paradigms has — unlike the related concept of revolutions — been seriously questioned, it will be necessary to indicate those considerations which make this concept appropriate to the discussion of this particular episode in the history of linguistics.

As Keith Percival notes in his article "The Applicability of Kuhn's Paradigms to the History of Linguistics,"

> each scientific revolution corresponds to a paradigm, and vice versa. Thus a revolution uniquely determines the character of the paradigm which is adopted in its aftermath. (1976: 287)

As I shall show in this study, Sir Charles Lyell's uniformitarian geology is based on a revolution in chronology. This new chronology challenged and supplanted not only the limited chronology set out in Scriptures, but the Genesis and Babel accounts of language origin and development as well.

The uniformitarian revolution clearly determined, then, the character of the methodological-theoretical framework, or paradigm, it brought about. Thus, Lyell's uniformitarianism does in fact exhibit the characteristics attributed to scientific revolutions, which Kuhn defines as

"those non-cumulative developmental episodes in which an older paradigm is replaced in whole or in part by an incompatible new one" (1970:92).

After noting that Kuhn's own position "is that revolutions are shared by both scientific and non-scientific fields, but that paradigms are peculiar to the sciences" (1976:288), Percival furthermore emphasizes that "we constantly face a problem ... namely how to distinguish a new paradigm from a variant articulation of an old one" (1976: 290-91), and concludes that the "investigation of the past of linguistics will only benefit if the search for paradigms is abandoned" (1976:292). Since the uniformitarian paradigm was, in fact, developed in the science of geology, and only later adopted into linguistics, Kuhn's claim that paradigms are peculiar to the sciences — whether valid or not — in no way undermines my use of the term paradigm to refer to uniformitarianism in linguistics.[1] Moreover, the radically revised chronology of the uniformitarian paradigm clearly marks it as being a new paradigm, not a revised version of the previous one. In sum, though Percival seems correct in concluding that "linguists who have tried to portray generative grammar as a Kuhnian paradigm have not understood the theory well enough to realize that it does not apply to contemporary linguistics" (1976:290), the concept of paradigms nevertheless appears appropriate to the discussion of this part of the history of linguistics.

Since the role of Lyell's uniformitarian geology in this chapter of the history of linguistics which I refer to as being marked by the shift from the earlier paradigm of comparative philology to the new uniformitarian paradigm which culminates in the work of the neogrammarian school has hitherto been accorded but passing recognition — with the single exception of Rulon Wells's 1973 article "Uniformitarianism in Linguistics" — this investigation necessarily relies chiefly on the evidence of primary sources. Thus, to provide the necessary qualification and clarification of the views expressed in primary source materials — a perspective more often constructed through the correlation and synthesis of interpretations registered in the secondary literature — I correlate, instead, the views articulated and advocated by linguists in their works with their practice of those ideas as illustrated by the way in which they attempt to solve specific linguistic problems.

In this way, my investigation of uniformitarianism in linguistics is accorded an internal, as well as an external

perspective; I examine not only the relation of uniformitarianism to the socio-intellectual context in which it was espoused and developed, but also the relation between the theory and practice of uniformitarianism. In a word, by reconstructing and parsing the various parameters surrounding the importation of uniformitarianism from geology into linguistics in the nineteenth century, I hope to underscore the importance of Lyell's principle to the history of linguistics.

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[1]Kuhn in fact refers, in a footnote, to the shift from catastrophist to uniformitarian explanations which characterized the debates of early nineteenth-century geology (1970:48).