CHARLES F. HOCKETT

Charles F. Hockett, known to friends, students, and colleagues as 'Chas', died on November 3, 2000, at the age of 84. He was born in Columbus, Ohio, on January 17, 1916, the fourth child of Homer Carey Hockett, who taught American history at the Ohio State University, and Amy Francisco Hockett. He entered Ohio State in 1932 at the age of 16, and in the spring of 1933 he took George M. Bolling's linguistics course in which the textbook was Leonard Bloomfield's *Language*, published that same year. Subsequently he took the only course in anthropology OSU offered at the time, and those experiences set him on the path to his future academic career. He received his B.A. (summa cum laude) and M.A. simultaneously in Ancient History at the age of 20, with a dissertation on the use of the Greek word *logos* in philosophy through Plato. Years later, he described the introductory section of that work as showing 'despite some weird use of terms . . . the Bloomfieldian impact' (Hockett 1977:1). He continued at Yale University, where he studied anthropology and linguistics with Edward Sapir, Franklin Edgerton, George P. Murdock, and Leslie Spier, having as well Morris Swadesh, George L. Trager, and Benjamin Whorf as teachers and associates. He received his Ph.D. in anthropology in 1939, with a dissertation based on his fieldwork in Potawatomi. His paper on Potawatomi syntax was published in *Language* in that year (Hockett 1939), and the dissertation, in streamlined form, was published as a series in *IJAL* in 1948 (Hockett 1948a). After a summer of fieldwork in Kickapoo and an autumn in Michocoan, Mexico, he went on to two years of postdoctoral study, including two quarters with Bloomfield at Chicago, followed by a stay at Michigan.

Hockett was drafted into the US Army in February 1942. After basic training in antiaircraft artillery and a few months helping to prepare other recruits for Officer Candidate School, he was transferred to Army Service Forces, where his linguistic capabilities were put to work on Chinese. In late 1942 he accompanied General Stillwell's officers to their headquarters in Bengal, India, supervising their learning of Chinese while en route. Afterward Hockett was stationed in Washington and then in New York City, where he worked under Major Henry Lee Smith in the dedicated and productive group preparing language-training materials, language guides, and dictionaries for military personnel. This unit included or consulted with a number of the leading linguists of the time, and the effort allowed the application of a Bloomfieldian structural linguistic approach to language teaching on an unprecedented scale. It thus served as a testing ground and laboratory for the effectiveness of that approach. Its materials were later used in many postwar civilian programs, particularly in the less commonly taught languages, and became the model for many subsequent texts. In the course of this work, Hockett, with C. Fang, produced a basic course in spoken Chinese (Hockett 1944) and a guide's manual for it (Hockett 1945a), as well as a Chinese dictionary (Hockett 1945b) that included an introductory sketch of Chinese notable for its concision and clarity. He was commissioned as a second lieutenant in 1943, and after the Japanese surrender in 1945 was dispatched to Tokyo as a first lieutenant to help train American troops in Japanese. In February 1946 he was separated from the army with a terminal leave promotion to captain.

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After a short association with the *American college dictionary*, he began his university teaching career in 1946, as an assistant professor of linguistics in charge of Chinese in the newly formed Division of Modern Languages at Cornell, created under the dynamic and enterprising leadership of J. Milton Cowan, who headed it for many years after. This pioneering unit was designed specifically to unite linguistics and language teaching on the university level following the model of the successful wartime effort. The Division, renamed the Department of Modern Languages and Linguistics after Cowan's retirement, was responsible for basic language teaching for virtually all languages at Cornell, a function that it maintained in a widening number of languages until recently. It also served as the home for the graduate program in linguistics, subsequently widened to include an undergraduate linguistics degree. In the beginning and in the years to follow, the Division included in its professorial ranks along with Hockett some of the leading names in structural linguistics at the time, both descriptive and historical, such as William Moulton, Robert Hall, Frederick Agard, and Gordon Fairbanks, all of whom directed and taught in language programs and also taught and carried out productive research in linguistics. Hockett continued to run the Chinese program for fifteen years, while teaching a range of linguistics courses and directing students. His Cornell obituary describes him as having been 'the soul of the linguistics program from his first years until his retirement in 1982, serving on the committee of almost all students enrolled in linguistics during his time and serving as director of twenty-five PhD dissertations', and he also played a major role in the training of many more. In 1957, he was invited to become a member of Cornell's Department of Anthropology, and he was later named the Goldwin Smith Professor of Linguistics and Anthropology at Cornell, where he remained until he retired to emeritus status in 1982.

Hockett was elected to the American Academy of Arts and Sciences and the National Academy of Science and served as president of the Linguistic Society of America in 1964.[1] In 1982 he was president of the Linguistic Association of Canada and the United States, and in 1986 he was the Distinguished Lecturer of the American Anthropological Association. He held visiting positions at a number of institutions, including LSA institutes at Indiana and Michigan; the Canadian Summer School of Linguistics in Edmonton, Alberta in 1960; the University of Hawaii as Carnegie Visiting Professor in 1960–61; and the Beijing Foreign Studies University in fall 1986. Throughout his career he gave invited lectures at a number of institutions in the US and abroad. Starting in 1986, he was first visiting professor and then adjunct professor of linguistics at Rice University in Houston, Texas, an appointment still in effect at the time of his death.

Hockett is survived by a loving family. He had a long and happy marriage to the former Shirley Orlinoff, whom he met on furlough in 1942. She became a professor of mathematics at Ithaca College and the author of a half-dozen textbooks, typed by him, and their collaboration reinforced his own considerable gift for mathematics. They had four girls—Alpha Hockett Walker, Amy Robin Rose, Rachel Hockett Youngman, and Carey Beth Hockett—and a son, Asher Orlinoff Hockett, as well as five grandchildren.

Though Hockett studied and associated with several leading figures in American structural linguistics, the major influence on him was unquestionably Bloomfield. He was widely regarded as Bloomfield's chief disciple and the most prominent explicator and elaborator of Bloomfield's work, and he continued to express his indebtedness to

[1] A striking number of scholars whom Hockett either studied with or served with at Cornell also served, like him, as presidents of the LSA: thus Bloomfield, Bolling, Sapir, Edgerton, Trager, Moulton, and Cowan.

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the man and his work even when he came to disagree respectfully with some of its specifics. He was also the direct heir to Bloomfield's unfinished work in that he collected, edited, reworked, and published much of it, including the *Eastern Ojibwa grammar, texts and word lists* (Hockett 1958a) and *The Menomini language* (Bloomfield 1962). In 1970, he produced *A Leonard Bloomfield anthology,* which included a slightly revised version of his own 'Implications of Bloomfield's Algonquian studies' (Hockett 1970:495–511) which had originally appeared in *Language* two decades earlier (Hockett 1948b). In addition, he considered his own works on Algonquian languages, which extended throughout his career, to be a tribute to the master.

Like Bloomfield, Hockett was himself a master of linguistic description, producing numerous principled, meticulous, and perspicacious descriptions of an array of languages, including not only the Algonquian studies for which he was best known, but also Chinese, Fijian, and English. In keeping with the practice of other American structural linguists, his descriptive works often served as vehicles for theoretical proposals, as in his 'Peiping phonology' (Hockett 1947a), 'Componential analysis of Sierra Popoluca' (Hockett 1947b), 'Peiping morphophonemics' (Hockett 1950), and many others.

Hockett had a long and productive career. His Festschrift (Agard et al. 1983) contains the last available full bibliography, listing 133 published items. He also produced many privately reproduced items presented to students and colleagues. He continued after his retirement, though at a much reduced pace as he turned his attention increasingly to other interests, especially music.

His strictly theoretical productions were legion, and many of them were legendary, working their way into much of the work of structuralist linguists and becoming part of the armament of several generations of students. The neo-Bloomfieldian structuralist linguistics of the 1940s and 1950s was developed by a number of productive linguists, including Bernard Bloch, George Trager, Henry Lee Smith, and Zellig Harris, but Hockett was arguably the single most productive and wide-ranging figure in establishing the parameters and the agenda of the enterprise. Seven of his fundamental papers appeared in *Readings in linguistics* (Joos 1957), a work intended to represent the current status of the field; it is telling that Hockett contributed more papers to the collection than any other scholar (runners-up were Bernard Bloch and Zellig Harris, each with four). One paper in particular, 'Two models of grammatical description' (Hockett 1954), was the topic of intense discussion in linguistics courses for many years. Although that paper was commonly taken as advocating the item-and-arrangement approach that did indeed become dominant, Hockett was at pains later to deny that that had indeed been his intent (Hockett 1968a:29ff., 1968b).

Hockett's *Manual of phonology* (Hockett 1955a), a solidly structuralist work, was also somewhat revolutionary, characteristically original, and rich in content. It attempted a principled typology of phonological systems in the spirit of Nikolai Trubetzkoy and the Prague school, argued for immediate constituents in phonology in a framework that included the syllable, and developed a system of phonology based on distinctive features and the recognition of long components. Though many of its elements were admittedly already present in the field in some form, Hockett's combination and development of them were innovative and ran counter to much of the prevailing structuralist practice and doctrine. In characterizing phonological constituents and the syllable, Hockett used the terms ONSET, PEAK, INTERLUDE, and CODA, the last two most likely derived from his abiding interest in music and introduced to structuralist phonology in this work.

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Hockett had a remarkable gift for mathematics and mathematical and formal systems. In 1953, he produced a review of Shannon and Weaver's work on communication theory (Hockett 1953), and the information-theoretical approach became, as he put it, part of his standard intellectual equipment (Hockett 1977:19). One result was the inclusion in the *Manual of phonology* of an introductory section presenting a finite state, Markovian view of speech communication and grammar, essentially of the kind that Chomsky famously critiqued in *Syntactic structures* (Chomsky 1957). Hockett himself quite soon rejected that approach as not fitting the nature of human language, while retaining the view that information science had important contributions to make to linguistics.

In 1966, he produced an extensive paper, 'Language, mathematics and linguistics', developed from his 1964 LSA Summer Linguistics Institute lectures in which he attempted to explore the formal properties of natural language that were susceptible to mathematical treatment. Ultimately, he came to reject that endeavor, too, as futile, except for some implications for sound change (Hockett 1977:19).

Hockett's best-known work was undoubtedly the 1958 textbook *A course in modern linguistics* (Hockett 1958b), which was widely used for many years. He considered this work to be essentially a commentary on and updating of Bloomfield's *Language* (1933), which it resembled in its wide range of topics. He considered the work 'conservative' in tenor, and thus as presenting 'the generally accepted facts and principles of the field' (1958b:vii). Nevertheless, when compared to the most widely used introductory text of that time, Gleason's *Introduction to descriptive linguistics* (1955), which was a straightforward presentation of the generally accepted principles and procedures of structuralist description, Hockett's book appears highly personal, original, and sometimes challenging. As one reviewer concluded, it was 'in short . . . the kind of book we expect from Charles Hockett' (Householder 1959:527). It incorporated much of his own interests and work, such as an analysis of Old English that was later expanded in a 1959 paper in *Language* (Hockett 1959a); his own version of Smith-Trager English phonology; and the phonological typology, syllabic analysis, and other material stemming from the *Manual of phonology*, as well as his view of language change, particularly sound change and analogy. In keeping with his anthropological orientation, he also included a chapter, 'Man's place in nature', in which he first published seven of his DESIGN FEATURES OF COMMUNICATIVE SYSTEMS.

Hockett's treatment of grammatical analysis, especially syntax, in the *Course* is especially interesting, and hindsight endows it with an element of dramatic irony, since generative grammar was looming on the horizon:

> Some linguists like to believe that grammatical analysis has become a completely objective operation, but this is not true. Phonemic analysis has been brought much nearer such a state. . . . But grammatical analysis is still, to a surprising extent, an art: the best and clearest descriptions of languages are achieved not by investigators who follow some rigid set of rules, but by those who through some accident of life-history have developed a flair for it. (Hockett 1958b:147)

'Grammar' in these terms meant, in accordance with the post-Bloomfieldian canons of the time, an autonomous subsystem between semantics and phonology, and a 'completely objective operation' would necessarily include an operational procedure for dealing with units of form without reference to meaning. As he had said some years earlier in contrasting American with European linguistics, 'American theory is cast in the form ''how do you find out whether such-and-such or so-and-so is the case'' or ''under what operational conditions do we state our conclusions thus and so'' ' (Hockett 1952:90). That goal naturally required the possibility of statement also in a form admit-

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ting of empirical verification through observation, and of disconfirmation by an independent investigator. Though he later came to reject the exclusion of meaning from both analysis and statement as contrary to the true Bloomfieldian view (Hockett 1968a: 31ff.), he always insisted on precise statement and empirical verifiability if linguistics was to remain the kind of science envisioned in the true Bloomfieldian approach. At the same time, he was never one to neglect any kind of evidence or insight. Thus even in the *Course*, he remarked (emphasis in the original):

> The linguistic use of the term *formal* needs to be made clear, particularly among those who are familiar with the use of the same word among philosophers and logicians. Among the latter, a 'formal' system is one developed without reference to any specific area of application, and thus contrasts with an 'empirical' system. In linguistic usage, 'formal' criteria contrast with 'semantic' criteria: both are equally empirical. When the linguist proceeds formally, he is not ignoring empirical evidence, but paying attention to one *kind* of empirical evidence rather than another. (Hockett 1958b:189–90)

It was in that book that Hockett introduced his concept of SURFACE and DEEP GRAMMAR. This concept testified to his ability to discern phenomena that had to be included in any full account of language, but that at the time still fell outside the canons of scientific linguistics to which he subscribed. In this particular case, the stimulus was largely the result of his not failing to notice the pervasiveness and undeniable importance of syntactic relations between noncontiguous elements. As he recalled years later,

> . . . at that period in American linguistic theory, the notion of immediate constituents had cast a spell over us. Whenever our attention turned to syntax the IC frame came to mind. If two forms stood in a construction, then we expected them to be adjacent and to be parts of a larger form that we called the constituent. Apparent connections at a distance were therefore embarrassing. (Hockett 1997:160)

Such connections were of course admirably amenable to transformational treatment, and thus, given later developments in generative grammar, Hockett's use of terms was to a degree prophetic.

The *Course* in fact turned out to be the last major textbook summary of American post-Bloomfieldian structuralism, since its appearance essentially coincided with that of Chomsky's *Syntactic structures* (Chomsky 1957) and Lees's laudatory review in *Language* (Lees 1957), which foreshadowed the ultimate dominance of generative grammar. Though neither Chomsky nor Lees appear in the index of the work or are treated in the text itself, they are listed in the bibliography, and one chapter concludes with a note that the transformational approach of Chomsky, Harris, and Lees came too late to be incorporated in the treatment (Hockett 1958b:208).

Hockett's 1961 paper 'Linguistic elements and their relations' was an elegantly conceived attempt to solve a fundamental problem faced by structuralist descriptive linguistics: the fact that the elements it recognized as basic, such as phones, phonemes, and morphemes, did not occur in a linearly parallel and compositional hierarchy. The solution was to propose grammatical and phonological strata, with the 'composed of' relation holding only between elements within each stratum, and the strata linked by a mapping relation between them. For a time he considered Lamb's STRATIFICATIONAL GRAMMAR as a possible theoretical alternative consistent with his view in that paper, but ultimately rejected that as well, concluding that 'Hockett-Lamb stratificational theory . . . is approximately correct in its placement and handling of phonology, . . . but is otherwise almost entirely misguided' (Hockett 1968a:32).

In fact, that 1961 paper concluded with a characteristically Hockettian passage already raising the possibility that the kind of linguistics that led to the problem in the first place, and hence the very paper in which it appeared, might be misdirected and inadequate to deal with natural language:

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> In closing this paper, I must for the sake of honesty mention a suspicion that cannot be followed through in detail here, but that if verified, is due to undermine the logic of most of our accomplishments in descriptive linguistics since Saussure, Sapir, and Bloomfield, or even an earlier period. The only tenet that might survive the holocaust is the duality hypothesis. (Hockett 1961:52)

What he was casting doubt on here was the underlying assumption that every occurring utterance in any given context had a specific 'determinate grammatical structure involving an integral number of grammatical elements in specifiable structural relations with each other' (ibid.). He viewed this assumption as making linguistics as it stood inadequate to deal with such inescapable and natural phenomena of language in action as blends, which 'are not rare, but extremely common', and 'occur not only as ''slips of the tongue'' (whatever that means), but also as planned puns, double entendres, plays on words, and variously in poetry and advertising' (ibid.). In dealing with these, he saw a few possibilities: linguistics as it was then practiced could ignore them or it could regard them as deviations to be explained with ad hoc special machinery. But there was also a third possibility: such phenomena could be used as evidence for 'some new and very different theory of the generation of speech, that would provide at once for such ''deviant'' utterances and for all ''regular'' utterances' (ibid., 53). He concluded with a passage that was consistent with the conviction that he held throughout his career concerning the proper nature and function of the science: 'If we are really concerned, in linguistics, with the discovery and description of the place of language in the universe, I believe that we must seriously consider the third alternative, no matter how radical may be the revisions that are required in our ways of thinking' (ibid.).

At the time, he was already coming to insist on a more dynamic approach that necessarily focused on the hearer's competence and behavior in real time. There were a number of factors that entered into this shift. In part it was stimulated by work he had done in the 1950s on a project with the psychiatrists Robert Pittenger and Jack Danehy that involved a number of other anthropologists, linguists, and kinesicists as well and produced a fine-grained analysis of the first five minutes of a psychiatric interview (Pittenger et al. 1960). As he remarked in his 1977 preface to the reprinting of his 1960 paper 'Ethnolinguistic implications of [recent] studies in linguistics and psychiatry' (Hockett 1960a),

> It was Birdwhistell's kinesics, Smith and Trager's paralinguistics, and the psychiatric-interview context that gradually rendered me uncomfortable with post-Bloomfieldian 'marble slab' grammar with its atomic morphemes and that forced me to try to look at language in action. (Hockett 1977:107)

The metaphor in 'marble slab grammar' of course invokes anatomy and the dissection of a cadaver. His discomfort with that approach to grammar led to an increasing conviction that any adequate linguistic theory had to be hearer-centered and dynamic.

This line of thought ultimately led him to the complete rejection of what he saw as the three pillars of post-Bloomfieldian linguistics, which he himself had done much to develop and defend. These were: 'the characterization of language as a ''rigid'' system; the adoption of an item-and-arrangement model; and the consensus that grammar and semantics were separable and should be separated' (Hockett 1968a:31–32). His proposals leading toward the new kind of linguistics that he suggested might be imminent in the conclusion of his 1961 paper were already present in the 1960 paper cited above (Hockett 1960a) and in the paper 'Grammar for the hearer' (Hockett 1960b), as well as in subsequent works. The developing stance that he expressed there remained a dominant theme in his work from then on. Thus, in his last book he stated (emphasis as in the original):

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> Our fundamental question can be phrased as follows: WHEN WE HEAR SOMEONE SAY SOMETHING IN A LANGUAGE WE KNOW, HOW DO WE KNOW WHAT IS SAID. (Hockett 1987:2)

He repeated this in one of his last published works, the 1997 paper on syntax, adding, 'What is the nature of the collusion between what is in our heads and what is heard, by virtue of which we can understand?' (Hockett 1997:164). The thread that ran through all of Hockett's work through the sixties and beyond was his rejection of the concept of language as a well-defined system, a concept that he saw as central to generative linguistics and at least in part as an outgrowth of the kind of structuralist theory he had come to reject. He summed this up at the end of his paper 'Where the tongue slips, there slip I' (Hockett 1967a). There he took three basic mechanisms to be the fundamental elements in the generation of speech: 'analogy; blending (= unresolved conflicts of analogies); and editing' (Hockett 1977 [1967a]:255). He concluded:

> Beyond the design implied by the factors and mechanisms that we have discussed, a language has no design. The search for an exact determinate formal system by which a language can be precisely characterized is a wild goose chase, because a language neither is nor reflects any such system. A language is not, as Saussure thought, a system 'où tout se tient'. Rather, the apt phrase is Sapir's 'all grammars leak'. (ibid., 256)

Hockett's last full-length book was the 1987 monograph *Refurbishing our foundations*. Its title reflected his intention to work further toward the formulation of a theory of hearing and speaking and redirect linguistic science toward a reexamination of the nature of language in terms of how it operated in, and in fact was created within, the speaking-hearing-understanding situation (Hockett 1987:2). The book presented his developing views on many basic properties of language in action; characteristically, it not only included new proposals and insights, but also proposed some unresolved questions. Many of these questions were original, unorthodox, and provocative, but they never coalesced into a coherent research program that others could pursue. For this and other reasons, the book never attracted the attention that it would have amply rewarded, not least by stimulating new thought about the nature of language and raising questions that the science of language would one way or the other ultimately have to address. As he saw it, this development of a 'theory of hearing and speaking' would require operating in a region between linguistics and psychology as both were currently conceived and constrained (Hockett 1987:2), that is, by a kind of psycholinguistics, though he did not use that term.

Especially with the appearance of his *State of the art* (Hockett 1968a), Hockett became known as the most vocal and prominent critic of Chomsky and generative grammar, a role in which he was cast, for example, in Mehta 1971 and elsewhere, as in the subheading of his obituary in the *New York Times* (Fox 2000). Actually, when transformational grammar emerged, in both the Harris and Chomsky variants, Hockett, like many other structuralists, welcomed it as an important and innovative development in syntactic theory holding great promise for dealing with problems such as non-adjacent relations that had proved intractable in immediate-constituent syntactic analysis. In his 1964 presidential address to the LSA (Hockett 1965), he went so far as to characterize Chomsky's *Syntactic structures* as 'one of only four major breakthroughs in the history of modern linguistics', the others being Sir William Jones's 1786 address, Karl Verner's 1875 paper on exceptions to the first sound shift, and Ferdinand de Saussure's *Cours*. In his 1964 Linguistic Institute lectures on mathematics and linguistics, he made a number of approving references to Chomsky's work, but by the time the work was published in 1966 he had added a footnote to the preface that those 'conciliatory remarks' were the result of his 'misunderstanding'. While not passing 'detailed judgment on Chomsky's frame of reference', he wrote, 'let the record show that I reject that

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frame of reference in almost every detail'. He added that the rejection 'affects in no way my sense of indebtedness to the transformationalists for the many specific points and procedures I have found it profitable to incorporate into my own thinking' (Hockett 1966:156).

Finally, when the 1966 essay was later issued as a monograph (Hockett 1967b), it bore what he later described as a 'crucially important new preface' (Hockett 1977: 328).

It is not the place here to enter into a detailed account of the shift in Hockett's theoretical positions, but the footnote itself noted that the turnaround arose from a reading of Chomsky's *Aspects of the theory of syntax* (Chomsky 1965), which had appeared in the interim. *The state of the art* gives as a major reason for his rejection of the generative framework that it viewed language as a well-defined system in the computational sense, as opposed to Hockett's own view that it was ill-defined, 'though characterized by various stabilities' (Hockett 1968a:88). He thus saw the Chomsky paradigm as mistakenly continuing the first post-Bloomfieldian pillar of language as a rigid structure that he had rejected, and the generativist separation of grammar from meaning as continuing the third pillar, which denied the 'traditional (and Bloomfieldian) direct correlation of meanings on the one hand [and] formal features on the other' (Hockett 1968a:31). In his own changed perspective, of course, he had come by then to accept and incorporate as crucial what he saw as the 'true' Bloomfieldian notion that grammar—though not phonology—was inextricably entwined with meaning and could not be analyzed apart from it. *Aspects* also made clear, in a way that *Syntactic structures* had not, that Chomsky's orientation was thoroughly rationalist. As a true Bloomfieldian, Hockett found that mentalistic stance thoroughly unpalatable and unscientific by his own canons of science.

There were also personal and stylistic factors. In his 1964 LSA address (Hockett 1965), Hockett had deplored the aggressive, confrontational style that marked even some of the earlier transformational work he cited, and he compared it to that of the *Jungrammatiker*, noting that in both cases the style and the attitude it reflected did not vitiate the real value of the work. In any event, despite the heated, and not infrequently personal, rhetoric on both sides of the argument and his sometimes intemperately expressed feelings (Mehta 1971:217–21, Hockett 1977:61), he nevertheless strove consciously, as his view of science demanded, to remain open to the possibility that his opponent's view just might be right. Even as late as 1997 he allowed that 'indeed, Chomsky's paradigm may turn out to afford the best path toward the ultimate solution to our collective scientific problem; namely, the determination of the place of language in the universe. Some people are convinced that that is so, but no one can know for sure. My own impression is quite otherwise' (Hockett 1997:162).

The state of the art did not, of course, slow the march toward dominance of the generative paradigm in its successive forms, and it would be unfortunate if Hockett were to be remembered primarily as one who, as the *New York Times* obituary stated, 'did not buy Chomsky's revolution' (Fox 2000) but fought a futile rear-guard action against it. Such a view suggests easy dismissal and fails to appreciate Hockett's real, original, and extensive contributions to the field of linguistics and beyond.

His work in linguistics was by no means limited to synchronic theory and description. Throughout his career, he maintained the belief—one he shared with Bloomfield, Sapir, Saussure, and their nineteenth century forbears—that the investigation of language change is an integral and necessary part of the science of language. Accordingly, his output included important historical analyses, notably in Algonquian, but in other languages as well, including Central Pacific languages and Old English.

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Hockett maintained that diachronic investigation had laid the essential foundation for synchronic study, and that the latter had returned the favor. The two enterprises thus informed each other, and at the very least, any synchronic theory and description had to be consistent with what we knew and discovered about language change. In his later work, the interaction between the diachronic and the synchronic was even more intimate, to the point that the distinction essentially disappeared. In the tradition of historical linguistics in which he worked, the three central mechanisms of change were SOUND CHANGE, ANALOGY, and BORROWING; and as we have seen, analogy, accompanied by editing, had become the central and fundamental mechanism in his dynamic theory of language generation. Thus the 1967 passage rejecting the Saussurian systemic view continued:

> The mechanisms of the generation of speech are also the mechanisms of linguistic change, just as our predecessors of a century ago suspected, except that there are two factors in the latter which play only indirect parts in the former. What one person says aloud, another may imitate; hence we have borrowing, including noisy borrowing . . . . And sound change, as a mass statistical phenomenon, plays no immediate role in controlling what one says, overtly or covertly, at a given moment. (Hockett 1977 [1967b]:256)

Hockett's talents, scholarly interests, and productivity extended well beyond linguistics proper. He cast a wide net in his consideration of topics for investigation related to language, including among other things the Whorfian theory, slips of the tongue, the scheduling of linguistic and non-linguistic events, animal communication, jokes, and the nature of writing systems and their relation to speech. He collected a number of his papers on those topics in the 1977 book *The view from language*. Its title was emblematic of his firmly held belief that the study of language constituted a unique locus for gaining insights and knowledge in other fields of inquiry. The range of the papers included in it gives an idea of the great range of his interests as well as the power of his intellect in pursuing them.

His Ph.D. was in anthropology, and he always regarded linguistics as a component of that field, that is, as 'linguistics wrapped in anthropology' and as that branch of science devoted to discovering the place of human language in the universe. Though much of his reputation in linguistics was based on his technical productions in that field, he never lost his fundamental concern for exploring the place of language in culture and the place of man, as the possessor of language, in nature:

> We are what we are because of tools and language, and without the latter our use of the former would be feeble. The development of language in our ancestry—and as far as we know, nowhere else in the universe—sowed the seeds of a revolution in the history of the Earth whose consequences cannot yet be known; they may in time prove as far-reaching as those of the emergence of life itself.
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> An understanding of language is therefore essential for any understanding of man's place in nature. (Hockett 1973:98)

Hockett himself considered his most important work to be his 1973 anthropology text *Man's place in nature*. That book, with a bow to Thomas Huxley's work of the same title, addressed those very basic and challenging questions and brought to bear on them an impressive scholarly command of several fields and numerous original insights. In the chapter on language entitled 'Man as chatterer: The tongue is a fire', he set forth his conviction that the wherewithal for acquiring language is 'locked into' the genes, and that its 'appearance is as inevitable as menarche or the sprouting of axillary hair', but that it also required 'nurture in the bosom of an ongoing social group' so that 'neither of these suffices without the other' (Hockett 1973:101). Here and in a later chapter, 'The emergence of man: Fire and talking', he presented his views on the architecture of language, productivity and change, differences among languages and universals, and the origin of language. The scope was daring, the issues and challenges

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remain, and the work remains well worth reading, if for no other reason than to set some more recent works by others in perspective.

In this connection, one of Hockett's most salient contributions was his origination and development of the design-feature approach to the comparative study of animal communication, which included the human. This began with seven features that appeared in the 1958 textbook and in the paper 'Animal ''languages'' and human language' (Hockett 1959b). Those seven were subsequently expanded and modified into the thirteen-feature system that appeared in his paper 'Logical considerations in the study of animal communication' (Hockett 1960c) and the popularized version in *Scientific American* entitled 'The origin of speech' (Hockett 1960d). These were in fact part of a wider and more daring effort to determine the origin of human language, a subject of inquiry that was far from popular when he undertook it, and which led to the much-reprinted paper that he co-wrote with Robert Ascher, 'The human revolution' (Hockett & Ascher 1964a,b).

Hockett's design features have found their way not only into linguistics texts, but also into work on animal communication. A Google web search for his name will immediately show by the sheer number of citations how widely those features have been called upon in several fields. For Hockett, the most significant of the features that marked human language was DUALITY OF PATTERN, by which all of the meaningful elements of language were expressed in terms of meaningless elements—in the case of human language, phonology. Though his concept of the architecture of grammar changed radically, his belief in the vital importance of this basic feature of language remained throughout his career.

Hockett did not limit himself to dry academic presentations. In 1955, he contributed a clear popularized account of structural phonemics field methods to *Astounding Science Fiction* under the guise of 'How to learn Martian' (Hockett 1955b). Among his conclusions in *Man's place in nature* was that 'the most important special factor in primate learning and behavior is play' (Hockett 1973:74). He not only recognized the presence of 'play' in language but also utilized it. His writings, even the most serious, reflect to an unusual degree his valuing of the aesthetic capabilities of language and the delight he took in hitting upon the right turn of phrase. Metaphors abound in his work and are used to good effect. His output is also studded with apt quotations and examples from literature ranging from the Bible and Shakespeare through T. S. Eliot, Nero Wolfe, Winnie the Pooh, and Dr. Seuss, as well as numerous allusions as in the title 'Where the tongue slips, there slip I'. He included OPENNESS—also known as creativity—as one of the basic design features of human language, and took real delight in the creative and witty use of language. In short, he had fun with it.

In a somewhat less serious vein, he indulged in such conceits as giving birth (in his head, à la Athena (Hockett 1977:210)) to one Casimir Cauchemar, adjunct professor of Etruscan rhetoric at the University of Psonch. Hockett's alter ego Cauchemar then supposedly presented him with a tattered offprint from *The Harvard Journal of Teleology and Cornucopia*, 'Innovation and creativity', which the recipient duly edited and published (ibid., 210–25). This tongue-in-cheek effort afforded him a delicious opportunity to comment on himself. Cauchemar also published a volume of verse, *Rugged nuggets* (Cauchemar 1968), which included several poems from *The red boat*, a version of the *Rubaiyat* in limericks, which Hockett had earlier distributed to friends. The Cauchemar volume bore an introduction by one Charles F. Hockett and a dedication to several poets—'in the hope that they will never lose sight of the humor intrinsic in all seriousity'—which reveals much about the editor/author himself.

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Hockett contributed eight poems to the volume *The linguistic muse* (Napoli & Rando 1979) and composed numerous others as well, especially lyrics for his own musical compositions.

Music always played a vital part in his life. He was possessed of a deep love for music and a keen ear, and he engaged in a lifelong practice of musical performance and composition. He and his wife Shirley were early members of the Ithaca Concert Band, which closed every concert with 'Stars and Stripes Forever' featuring him on the piccolo. The group often played his Ithaca-inspired composition 'The Small Plum' (contra 'The Big Apple'). His musical compositions ranged from the witty and light to serious and sophisticated, from short pieces to chamber works, to a serious full-length opera, 'The Love of Doña Rosita', based on a play by F. García Lorca, *Los Títeres de Cachiporra*, which was premiered by the Ithaca Opera at Ithaca College. Music was also a vital center of his home life. Everyone in the family played an instrument, and they regularly conducted home musical performances, often of Hockett's own compositions. Two of his children became professional musicians, and a son-in-law is principal oboist with the Los Angeles Philharmonic. Throughout the last decades, as Hockett turned his attention and efforts increasingly to music, he and Shirley were unstinting in their organizational efforts and financial support for music in the Ithaca community. Their leadership and hard work were vital in establishing the Cayuga Chamber Orchestra, which after more than a quarter of a century continues enriching Ithaca's musical life. The fruits of their dedication and generosity are lasting and tangible in the Charles F. Hockett Music Scholarship, the Shirley and Chas Hockett Chamber Music Concert Series, and the Hockett Family Recital Hall at Ithaca College. Fittingly, Hockett's memorial service was in great measure a concert at that institution that included several of his own compositions, some of them played by members of his family.

Roman Jakobson once said, 'It is very difficult for me to know what Hockett's position on any question is. . . . He changes his mind every day' (Mehta 1971:235). There is a kernel of truth in this, since throughout his career he often changed his theoretical views and did not hesitate to reject positions that he himself had once championed. This characteristic of his was the inevitable result of an active, questioning, and restless mind that was incapable of accepting any theory, even its own creation, as infallible when faced with evidence to the contrary. It was also the product of a questing temperament, given to ranging into areas whose relevance for the field or subfield at hand was not immediately obvious. At times, these qualities resulted in his apparently espousing two views at the same time in a kind of segue, with the demise of one preceded by the sprouting seeds of the other. This was reflected in the final passage from the 1961 'linquistic elements' paper quoted above. Similarly revealing is his remark from the 1977 preface to the reprinting of his paper 'Ethnolinguistic implications of [recent] studies in linguistics and psychiatry' (Hockett 1960a), that 'The results were slow in working out; they are only anticipated in the present essay and in ''Grammar for the Hearer'' (Hockett 1977:107).

Hockett was in his very essence a 'god's truth' linguist in Householder's terminology (Householder 1952:260), dedicated throughout to discovering the nature of human language and its place in humanity and the universe, and willing to pursue any clues toward that end. However he changed his views, not least on his own work, he never wavered from his commitment to the Bloomfieldian idea that the only valid generalizations about language were empirical generalizations, or from the conviction that whatever hypotheses or theoretical leaps one might make, it was an absolute requirement

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to be responsible to the observable data. In short: 'Linguistics is either an empirical science or it is nonsense' (Chevillet 1996:183).

Coupled with that commitment to an empirical science, however, was his love for language and his marvelous capacity for intuition into its structure, such that a colleague once remarked that in Hockett's Bloomfieldianism there was always a Sapir struggling to get out. That remark is insightful and essentially correct, but at the risk of overpsychologizing (which he would have abhorred), the truth was clearly more complex than that. Those of us who knew and worked with him often had the impression of the interplay of a first-rate intelligence, a lively intuition, and a conscious commitment to rigor and precision—not infrequently challenged by an honest inability to exclude interesting observations or ideas that did not necessarily support the analysis he was pursuing. This could lead to a kind of internal tension that one could sense in much of his work, and even at times in personal interactions with him. That tension often made his work more interesting and sometimes more prophetic than that of many of his colleagues.

Hockett may well have been prone to change his mind, but he was never intellectually dishonest, unoriginal, or uninteresting. This carried over into his classes. Attending his lectures, one always sensed a first-class mind directly engaging some problem that it found new and compelling. He would not infrequently pursue some line of investigation, and then reject, sometimes abruptly, the analysis he had been developing as inadequate to the facts. This could be disconcerting to students who wanted to fill their notebooks with accepted truth, but to others it was an exciting demonstration of how a vigorous scientific investigator proceeds and of the difficulty of arriving at whatever truth exists to be found.

In 1993, he captured the fundamental approach that had remained constant throughout his long career as follows. Fittingly, the context was a paper on Algonquian, and the formulation invoked Bloomfield:

> Time and again, what at first appears to be a knotty problem of linguistic analysis smooths out if, approaching a language with patience and reverence, we relax and let it show us how it works—instead of trying to force matters into some conceptual frame of reference we have imported, perhaps without realizing it, from elsewhere. This is how Bloomfield dealt with the languages he studied. (Hockett 1993: 4)

Finally, Hockett always had a sense of the science of linguistics as an ever-developing, social enterprise with a historical trajectory that demanded an attitude and behavior that he held up as a model for himself as well as others. In his presidential address to the LSA he said:

> The scholar earns immortality only of the sort that he bestows on those that have gone before him. As we extend the power and flexibility of our new tools, let us always temper passion with humor; let us never favor, nor disfavor, the new simply because of its novelty; let us dedicate our talents to building our heritage, not to tearing it down, praising our predecessors for their wisdom and ignoring their folly—replacing a nail here or a plank there when we must, but always with humility rather than Schadenfreude when a bright old idea must give way to a bright new one. (Hockett 1965:204)

For those of us who were fortunate enough to have learned from him, there can be no better model and rememberance. [James W. Gair, *Cornell University*.]

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