The
Collected Works
of
Edward Sapir

V

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American Indian Languages

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Edward Sapir, about 1915
(Courtesy of Sapir family)

Edward Sapir (1884-1939) has been referred to as "one of the most brilliant scholars in linguistics and anthropology in our country" (Franz Boas) and as "one of the greatest figures in American humanistic scholarship" (Franklin Edgerton). His classic book, *Language* (1921), is still in use, and many of his papers in general linguistics, such as "Sound Patterns in Language" and "The Psychological Reality of Phonemes," stand also as classics. The development of the American descriptive school of structural linguistics, including the adoption of phonemic principles in the study of non-literary languages, was primarily due to him.

The large body of work he carried out on Native American languages has been called "ground-breaking" and "monumental" and includes descriptive, historical, and comparative studies. They are of continuing importance and relevance to today's scholars.

Not to be ignored are his studies in Indo-European, Semitic, and African languages, which have been characterized as "masterpieces of brilliant association" (Zellig Harris). Further, he is recognized as a forefather of ethnolinguistic and sociolinguistic studies.

In anthropology Sapir contributed the classic statement on the theory and methodology of the American school of Franz Boas in his monograph, "Time Perspective in Aboriginal American Culture" (1916). His major contribution, however, was as a pioneer and proponent for studies on the interrelation of culture and personality, of society and the individual, providing the theoretical basis for what is known today as symbolic anthropology.

He was, in addition, a poet, and contributed papers on aesthetics, literature, music, and social criticism.

Note to the Reader

Throughout *The Collected Works of Edward Sapir,* those publications whose typographic complexity would have made new typesetting and proofreading difficult have been photographically reproduced. All other material has been newly typeset. When possible, the editors have worked from Sapir's personal copies of his published work, incorporating his corrections and additions into the reset text. Such emendations are acknowledged in the endnotes. Where the editors themselves have corrected an obvious typographical error, this is noted by brackets around the corrected form.

The page numbers of the original publication are retained in the photographically reproduced material; in reset material, the original publication's pagination appears as bracketed numbers within the text at the point where the original page break occurred. To avoid confusion and to conform to the existing literature, the page numbers cited in introductions and editorial notes are those of the original publications.

Footnotes which appeared in the original publications appear here as footnotes. Editorial notes appear as endnotes. Endnote numbers are placed in the margins of photographically reproduced material; in reset material they are inserted in the text as superscript numbers in brackets. The first, unnumbered endnote for each work contains the citation of the original publication and, where appropriate, an acknowledgment of permission to reprint the work here.

All citations of Sapir's works in the editorial matter throughout these volumes conform to the master bibliography that appears in Volume XVI; since not all works will be cited in any given volume, the letters following the dates are discontinuous within a single volume's references. In volumes where unpublished materials by Sapir have been cited, a list of the items cited and the archives holding them is appended to the References.

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APPENDIX

Preface

Volumes V and VI of *The Collected Works of Edward Sapir* are devoted to shorter works on American Indian languages (mainly of North America), including some previously unpublished material. Volume V, edited by William Bright, contains papers of a general nature on typology, classification, and phonetic notation, followed by work on Hokan languages, on the Uto-Aztecan family, and on the relationship of Algonkian, Wiyot, and Yurok. Volume VI, edited by Victor Golla, contains articles on Athabaskan and Na-Dene languages, on Penutian, and on the Wakashan and Salishan families, plus two short papers on languages of other groups. Appendices in both volumes contain papers written by other authors which were discussed in papers by Sapir. A combined index to Volumes V and VI appears in the latter.

The editors of these two volumes have worked together in planning the entire sequence. Two possible ways of organizing the material were considered. One would be purely chronological, without considering topic; the other, adopted here, separates the articles into topical divisions and then arranges them chronologically within each division. This has the advantage, we believe, of making it easier for the reader to consult related papers in close proximity.

In addition to the articles contained in these two volumes, a number of articles which discuss one or more specific American Indian languages appear in Volumes I through IV of *The Collected Works*. These are listed below, organized by language or language group. The volume in which a paper is to be found is indicated by the appropriate roman numeral in brackets.

Athabaskan Languages: 1923c, A Note on Sarcee Pottery [IV]; 1924d, Personal Names among the Sarcee Indians [IV]; 1933c, La réalité psychologique des phonèmes [I]; 1935b, A Navaho Sand Painting Basket [IV]; 1936e, Hupa Tattooing [IV]; 1936h, Kutchin Relationship Terms [IV]; 1930, A Note on Navaho Pottery (with Albert G. Sandoval) [IV].

Comox: 1939e, Songs for a Comox Dance Mask (edited by Leslie Spier) [IV].

Nootka: 1913b, A Girls' Puberty Ceremony among the Nootka Indians [IV]; 1915h, The Social Organization of the West Coast Tribes [IV]; 1919e, A Flood Legend of the Nootka Indians of Vancouver Island [IV]; 1933c, La réalité psychologique des phonèmes [I].

Southern Paiute: 1910d, Song Recitative in Paiute Mythology [IV]; 1933c, La réalité psychologique des phonèmes [I].

Takelma: 1907b, Notes on the Takelma Indians of Southwestern Oregon [IV]; 1907d, Religious Ideas of the Takelma Indians of Southwestern Oregon [IV].

Tsimshian: 1915g, A Sketch of the Social Organization of the Nass River Indians [IV]; 1920c, Nass River Terms of Relationship [IV]; 1921c, A Haida Kinship Term among the Tsimshian [IV].

Yana: 1908a, Luck-Stones among the Yana [IV]; 1916g, Terms of Relationship and the Levirate [IV]; 1918j, Yana Terms of Relationship [IV]; 1922d, The Fundamental Elements of Northern Yana [IX]; 1923m, Text Analyses of Three Yana Dialects [IX]; 1928j, The Unconscious Patterning of Behavior in Society [III].

Volumes VII-XV, which contain Sapir's work of monographic scope on American Indian languages and cultures, also include some shorter, closely related articles containing lexical inventories and textual analyses. Note that Sapir's *Language: An Introduction to the Study of Speech* (Volume II) cites some thirty American Indian languages, and his 1916 monograph, *Time Perspective in Aboriginal American Culture* (Volume IV), one-third of which is devoted to "evidence from linguistics," cites dozens of American Indian languages or language groups. It should also be noted that all references to specific languages in each article are listed in the indices of each individual volume, as well as in the comprehensive index in Volume XVI.

Preparation of this volume was supported in part by grants from the Phillips Fund of the American Philosophical Society, the National Science Foundation (grant no. BNS-8609411), and the Andrew W. Mellon Foundation.

The editor also acknowledges the contributions to the preparation of this volume by Jane McGary and the help of Dr. Marie-Louise Liebe-Harkort, editor-in-chief of Mouton de Gruyter. The black-and-white copy of Sapir's 1920 map of the distribution of his six "super stocks" was drafted by Daniel Cole, research cartographer for the *Handbook of North American Indians,* Smithsonian Institution.

Introduction to Volumes V and VI

It has often been said that Franz Boas is to be considered the father of anthropological linguistics in North America, and in particular the initiator of serious research on American Indian languages. But surely Edward Sapir, who began his career as a student of Boas, became the most influential scholar of the twentieth century in both these fields. Consider the diversity of the Native American languages on which Sapir did original research—Chinook, Takelma, Yana, Southern Paiute, Nootka, Sarcee, Navajo, and others; or the language families in which he did ground-breaking comparative work — Hokan, Uto-Aztecan, Algonkian, Athabaskan, and Penutian; or the types of studies he carried out — descriptive, historical, comparative, ethnolinguistic, and what would now be called sociolinguistic. Even before his untimely death, Sapir's achievements were monumental; after 1939, his stature as an Americanist only grew, as many of the materials he left in manuscript were edited and published by his students. His stature grows yet more in subsequent volumes of these *Collected Works,* with the publication of several major collections of texts (Sarcee, Kutchin, and Hupa) and other important longer manuscripts, now edited by students of his students.

It is possible to attempt some general comments about the overall course of Sapir's work on North American Indian languages as it is reflected in the present pair of volumes. Publications from the period 1906-1910 are primarily descriptive, including the first results of field work on Wishram Chinook, Takelma, and Yana. In 1911, typological interest emerges in "The Problem of Noun Incorporation in American Languages" (1911c) and is pursued most notably in the two reviews (1917k, 1917l) of works by Uhlenbeck. Comparative linguistic research, aimed at establishing relatively remote linguistic relationships on the basis of both lexical and grammatical comparisons, comes to the fore in 1913 with "Southern Paiute and Nahuatl, a Study in Uto-Aztekan" (1913f, 1915i) and "Wiyot and Yurok, Algonkian Languages of California" (1913h). During the following half dozen years, Sapir's enthusiasm for tracing remoter relationships is manifest in such papers as "The Na-Dene Languages" (1915d), "The Hokan and Coahuiltecan Languages" (1920b, written in 1915), and "A Characteristic Penutian Form of Stem" (1921b, written in 1918). This interest reached its culmination in a drastic proposal to reduce 58 North American "stocks" (as formulated by John Wesley Powell in 1891) to just six "great groups." This classification, based on grammatical and typological rather than lexical correspondences, was presented in a lecture at Chicago in 1920 (the notes for which are published here in "Materials Relating to Sapir's Classification of North American Indian Languages"). With little change, this formed the core for Sapir's influential *Encyclopaedia Britannica* article on "Central and North

American Languages" (not published until 1929, 1929a). After the early 1920s, Sapir's interest in these problems seems to have cooled; however, his last major work in this genre, "The Hokan Affinity of Subtiaba in Nicaragua" (1925b), argues for a Central American extension of the far-flung Hokan (-Coahuiltecan) group, and presents what is perhaps Sapir's most detailed argument for the importance of "submerged" structural features in recognizing remote linguistic relationship.

Sapir's sixfold classification and the methodology supporting it constituted, during his lifetime, the most controversial part of his work on North American languages (it was never accepted, for instance, by his onetime teacher Boas). It should be remarked, however, that what Campbell and Mithun (1979: 26) have called the "reductionist zeal" of this classification was not unique to Sapir. Large-scale genetic regrouping of North American languages was initiated by Alfred L. Kroeber and Roland B. Dixon, who, in a series of papers beginning in 1913, proposed assigning most of the Powellian language families of California to one or the other of two new "stocks," Penutian and Hokan (Dixon and Kroeber 1913a, 1913b, 1919). Sapir joined in this work only after the groundwork had been laid, and at Kroeber's urging (Golla 1986: 178). Sapir brought to the task a thorough familiarity with the methods and data of Indo-European comparative philology, and — after a brief period of skepticism — he became convinced that a rigorous application of philological principles to American languages would yield important new insights. He moved from one bold synthesis to another, and his comprehensive classification of 1920 must be regarded as little more than a report on work in progress. It is noteworthy, however, that Sapir did relatively little after 1920 either to support or to revise that classification. His 1925 paper on Subtiaba, while introducing some new structural arguments for Hokan, is based on essentially the same group of cognate sets as in his earlier work, and it refers only briefly to the larger Hokan-Siouan grouping introduced in his 1920 lecture.

In contrast with the wide-ranging comparative work that had absorbed him during the preceding decade, Sapir's research during much of the 1920s focused narrowly and intensively on one group of languages: the "Na-Dene" stock of his 1920 classification (comprising Tlingit, Haida, and the widespread Athabaskan family). As early as 1906 he had worked briefly, during his Takelma field work, with a speaker of Chasta Costa, an Oregon Athabaskan language; in preparing this material for publication (1914c), he saw Athabaskan as a family having the diversity and the relatively good documentation to make it a match for his skills as a comparativist. He was soon embroiled in controversy with older Athabaskan scholars (e.g., Father Morice, 1915c, see Volume VI and Appendix to Volume VI); this was exacerbated by his 1915 proposal (1915d) of a genetic relationship among Athabaskan, Tlingit, and Haida. Sapir concluded that only through extensive field work of his own could he hope to accumulate the evidence necessary to convince his critics. His feeling about the necessity of such work became even stronger when, around 1920, he came to suspect that an

intercontinental genetic connection between Na-Dene and Sino-Tibetan was a distinct possibility.

Sapir's plan for Na-Dene field research was extraordinarily ambitious, and it was never completed. Except for a foray into Haida phonetics (1923d), his field work was entirely devoted to Athabaskan, involving four major investigations: Sarcee, in 1922; Kutchin and Ingalik, in 1923; Hupa, in 1927; and Navajo, principally in 1929. Only the Sarcee work is significantly represented in Sapir's bibliography; even here the major published study was prepared in collaboration with his student Li Fang-Kuei (see Volume XIII). A good deal of the material collected by Sapir has been published posthumously, but the definitive grammar of Navajo which Sapir planned (and was working on even during his last illness) will never be written. Of his comparative insights into Athabaskan, Na-Dene, and Sino-Dene, we have only fragmentary notes.

Sapir's active research career extended from 1905 to 1938, or 33 years. During the first two decades of this period—until his move from Ottawa to a teaching post at the University of Chicago—he was engaged almost exclusively in American Indian research, the bulk of it descriptive linguistics. After 1925 his interests began to turn toward other types of study, particularly the psychology of culture; and his linguistic field research virtually came to an end when he moved from Chicago to Yale in 1931. He remained, nonetheless, a central figure in American Indian linguistics, second only to Boas in status and pre-eminent in intellectual influence. Nearly all his important students took up the study of American Indian languages. It was left to them, and to their scholarly progeny in turn, to continue the many facets of his research. We will do no more here than mention the names of Harry Hoijer, Morris Swadesh, George Trager, Stanley Newman, Li Fang-Kuei, Benjamin L. Whorf, Charles F. Voegelin, and our own teacher, Mary Haas. All these scholars have transmitted to their own students not only an enthusiasm for American Indian linguistics, but, even more important, Sapir's commitment to the study of language within the broadest context of human understanding.

WILLIAM BRIGHT
VICTOR GOLLA

Section One:
Typology and Classification

Introduction

The papers in Section One are concerned with general considerations, applying to North American Indian languages across all family boundaries. Chronologically ordered, they testify to Sapir's interest in typology from the earliest period. Around 1920, his attention turned to genetic classification, as reflecting linguistic prehistory; but this waned in subsequent years. The section ends with two posthumously published papers, reflecting once more Sapir's ongoing typological concerns.

"The Problem of Noun Incorporation in American Languages" (1911c) refers to the process by which noun stems are compounded with verb stems, the result functioning as a verb; a classical example is Nahuatl *ni-naca-qua* "I-meat-eat." Sapir's survey of the phenomenon constitutes his first major typological statement on Native American languages and continues to be cited as a primary reference on the topic. Extensive data are cited here from his field notes on Southern Paiute, Takelma, and Yana—material which, in 1911, had just begun to be published in monographic form (*Takelma Texts,* 1909c, Volume VIII; *Yana Texts,* 1910h, Volume IX).

The paper was written in response to A. L. Kroeber's "Noun Incorporation in American Languages" (1910; reprinted in the Appendix to the present volume). Kroeber noted a looseness of usage in the term "incorporation," such that it could be misleadingly applied to pronominal inflection for direct object in verb forms; and he questioned the status of the concept in general. Sapir clarifies matters by showing that incorporation indeed has well-defined formal and functional characteristics in a large number of Native American languages. In reply, Kroeber's "Incorporation as a Linguistic Process" (1911; also reprinted in the Appendix to this volume) accepts the criticisms and expresses appreciation for Sapir's "masterly interpretation" (p. 577). Kroeber goes on to suggest that the term "incorporation" is itself misleading; one could simply speak of "noun-verb compounding" (p. 582).

"Linguistic Publications of the Bureau of American Ethnology: A General Review" (1917d) was Sapir's first paper to appear in the *International Journal of American Linguistics,* then newly founded by Franz Boas. It is a survey of work published by the Bureau of American Ethnology, an office of the Smithsonian Institution, starting from Powell (1877) and continuing through the first two volumes of the *Handbook of American Indian Languages,* edited by Boas (1911a, 1922). Sapir finds that the most valuable Bureau of American Ethnology publications have been the morphological descriptions in the *Handbook,* and he expresses his enthusiasm in characteristic fashion. Referring to the grammatical sketches of Goddard (1911) and Boas (1911), he says (p. 81): "To the linguistic psychologist and to the comparative philologist alike it is

certainly something very like an aesthetic delight to have clearly revealed to him . . . two such unique organisms . . . ."

In the area of historical and comparative linguistics, Sapir sees the Bureau of American Ethnology publications as having only limited significance. The most influential is John Wesley Powell's *Indian Linguistic Families of America North of Mexico* (1891), which, although "the corner-stone of the linguistic edifice in aboriginal North America" (p. 79), is nonetheless a study "in linguistic geography and classification rather than in comparative philology" (p. 81). Reference is made here to the possibility that the 58 distinct stocks derived from Powell's classification "may be expected to re-arrange themselves into perhaps not more than 16, or even less" (p. 80); this of course foreshadows the radical reduction of linguistic families which Sapir was to propose in subsequent publications.

The next two articles, published in 1917, are reviews by Sapir of two publications by C. C. Uhlenbeck. Otherwise known as a Sanskritist, this Dutch scholar also did extensive research on Blackfoot, an Algonkian language, and in 1916 published two articles in which he attempted some typological generalizations on North American Indian languages. Such discussion was, of course, precisely Sapir's cup of tea; and Boas, as editor of the *International Journal of American Linguistics,* took the unusual step of publishing Sapir's comments in the format of book reviews, in the first issue of the journal.

Uhlenbeck's first article, "The Passive Character of the Transitive Verb . . . ," points to a phenomenon which is found in a number of American Indian languages, and is now usually called "ergativity." In this pattern, objects of transitive verbs are treated grammatically like the subjects of intransitives, as "patients," whereas the subjects of transitive verbs are given separate status as "agents." Sapir shows, *contra* Uhlenbeck, that such a construction is not simply a passive—thus, in Takelma, it is specifically contrasted with the passive—and he concludes with a table in which he neatly distinguishes five ways in which pronominal elements correspond to categories of subject and object in American languages. A. L. Kroeber, in a letter to Sapir of November 1917, expresses his admiration—and perhaps his envy: "I've been trying for 15 years . . . to draw up that table of pronominal elements. If I had succeeded, I would have invested it better than in a review" (Golla 1984: 259-60).

Uhlenbeck's second article, "The Identifying Character of the Possessive Inflection . . . ," focuses on the morphological distinction made in many languages between nouns which are "inseparably" or "inalienably" possessed—typically, body-part and kinship terms—and those which are "separable" from their possessors. As with the first of these papers, Sapir adduces important new data, criticizes Uhlenbeck for his tendency toward "speculatively psychological" explanations, and shows the importance of more detailed grammatical analysis—in the present case, distinguishing separable possession from a pattern which, in languages like Takelma, treats kinship terms differently from other nouns.

"Materials Relating to Sapir's Classification of North American Indian Languages" includes four items. First is an excerpt from a letter from Sapir to

Kroeber on October 4, 1920, which represents the culmination of an exchange between the two scholars on the genetic classification of North American languages. It is the first written outline we have of Sapir's drastic proposal to assign the languages of the continent to just six "great groups," later often called "phyla." (The process which led to this has been described by Golla (1986); the letter itself appears in Golla 1984: 347-51.) Sapir had earlier expressed his dissatisfaction (1917d, above) with the 58 "stocks" of North American languages as formulated in John Wesley Powell's classification for the Bureau of American Ethnology. The new classification proposed here is the one which he presented at the American Association for the Advancement of Science's Chicago meeting in December 1920.

Early in this letter, Sapir writes: "I am planning to make a really exhaustive questionnaire on morphological and phonetic features . . . .I want to see what are the distributions of such features as use of syntactic cases . . . then correlate as far as possible, and see what happens. Finally, apply lexical tests to resulting groups." The classification which Sapir goes on to propose is evidently the result of a preliminary application of this procedure. The focus is on structural evidence; in fact, Sapir never published lexical evidence for his sixfold grouping.

Two further hypotheses mentioned in this letter were also given relatively little attention in Sapir's subsequent publications. First, he notes that, although he wishes to maintain his six-part classification for the time being, he recognizes "certain promising 'proto-American' features (such as negative **ka, *ku;* diminutive **-tsi;* 1st per. sing. *n-;* plural and frequentative **l*)." Such continent-wide similarities were discussed by Radin (1919); but Sapir had evaluated Radin's manuscript in 1918 as "a fearful amount of evident rot mixed up higgledy-piggledy with some really good stuff" (Golla 1984: 278). The possible significance of "proto-American" correspondences went largely undiscussed in subsequent years.

Second, the latter part of Sapir's letter refers to "another big linguistic possibility": that the Na-Dene group (comprising Athabaskan, Haida, and Tlingit) may be related to the "Indo-Chinese" family of Asia (now generally called "Sino-Tibetan"). Sapir laid out considerable evidence for this hypothesis in a 1921 letter to Kroeber (Golla 1984: 374-82) and apparently dealt with the topic in a long manuscript which has been lost (see Golla's note 2, p. 383). The only published reference to this topic is a report of an interview with Sapir which appeared in *Science* in 1925, "The Similarity of Chinese and Indian Languages" (1925o, reprinted in Volume VI).

The second item included here is an abstract of Sapir's lecture, enclosed in a letter to Kroeber dated November 30, 1920 (Golla 1984: 354-356). In another letter dated January 20, 1921 (Golla 1984: 364-365), he sent Kroeber a copy of his lecture notes as well as a copy of a map of North America showing the distribution of the six "super-stocks," which he had used in his talk. These lecture notes have fortunately been found among Sapir's papers, together with the original hand-colored map. The notes (previously published

in Golla 1984: 449-452) are included here, as well as a black-and-white copy of the map.

The lecture notes begin with procedural considerations. The historical method to be used is based primarily on morphology; "too much reliance on secondary factors of descriptive order (incorporation, instrumental prefixes, polysynthesis)" is to be avoided. An attempt must be made "to get perspective as to age of different features," to identify "subtler features of dynamic order," and to focus on "vestigial" patterns which may be revealing of history. These criteria were to be discussed in more detail in Sapir's Subtiaba paper (1925b, below).

Each of the main groups is then discussed in terms of its typical grammatical features; the account here is rather longer than in the revised version later published in the *Encyclopaedia Britannica* (1929a, below), and in fact constitutes the most detailed version we have of the basis for Sapir's sixfold classification. The notes close with a reference to the "proto-American" possibilities mentioned in correspondence with Kroeber (adding *m-* "thou") and with some speculations about possible regrouping and revision of his classification.

"A Bird's-eye View of American Languages North of Mexico" (1921a) summarizes Sapir's paper presented to the American Association for the Advancement of Science: his reduction of the Powell classification, "on the basis of both morphological and, in part, lexical evidence," to "six great groups, presumably genetic." He admits that such an "exceedingly rough approximation . . . is certain to require the most serious revision as our study progresses"; but he defends it as "a stimulus to more profound investigations." However, Sapir's groupings were in fact not significantly revised by him before his untimely death, nor were substantial data presented to confirm his six-way division.

"Central and North American Languages" (1929a), published in the *Encyclopaedia Britannica,* constitutes the major published version of the six-way classification proposed by Sapir for the languages of North America, earlier versions of which are included in the preceding articles. As revised by Harry Hoijer in 1961, it continued to be reprinted in the *Encyclopaedia* until 1974 and exercised a strong influence. Sapir added a section on "Mexican and Central American languages" at the end of this article. Here he points out that some North American stocks, specifically Uto-Aztecan and Hokan-Coahuiltecan, are represented in the more southerly area; he then lists 15 stocks of "Middle American languages proper," but he makes no serious attempt to merge these into larger groupings like those which he recognizes for North America.

"Glottalized Continuants in Navaho, Nootka, and Kwakiutl (with a Note on Indo-European)" (1938b), published in *Language,* represents a return of Sapir's interest to structural and typological research. A common phonological feature of Native American languages is the occurrence of contrastive glottalization with stops and affricates, giving rise to "ejectives." (Sapir's list of languages which contain such sounds mistakenly includes Karok.) A smaller number of languages also contain glottalized sonorants—i.e., nasals, liquids,

and glides which begin with glottal closure. The language families characterized by this unusual class of sounds include two in which Sapir had extensive first-hand experience: Athabaskan and Wakashan. The former group is represented in the present discussion primarily by Navajo, the latter by Nootka from Sapir's own field work and by Kwakiutl from that of Boas.

The major part of the paper is a detailed demonstration that the glottalized sonorants of the languages in question are overwhelmingly of secondary origin: in Navajo, they are derivable from *d* plus sonorants (where *d*, following Athabaskanist practice, stands for unaspirated [t]); in the Wakashan languages, they arise from a coalescence of resonants with a preceding or following ʔ or *h*. Sapir's methodology moves easily from morphophonemic analysis, of a purely synchronic sort, to internal reconstruction of etymological relationships—still within individual languages—to comparative phonology on the level of proto-languages.

A general conclusion (p. 268) is that, where a language has two sets of phonemes A and B, identical except for the presence of an added distinctive feature, it is at least a plausible hypothesis that set B has developed from a two-phoneme sequence: thus French /ã/ from *an*, Navajo /n̓/ from *dn*, and Nootka /w̓/ from ʔ*w*. Finally, Sapir adds a note suggesting that Indo-European correspondences between laryngeal and semivowel—e.g., Greek *helk-*, Lithuanian *velk-* "plow"—may reflect a prehistoric stage in which laryngealized sonorants occurred. (Because of its interest for Indo-European studies, the appended note is also being reprinted in Volume II.)

"American Indian Grammatical Categories" (Sapir and Swadesh 1946) was begun by Sapir around 1919 but was completed only after his death by his student Morris Swadesh, and finally published in 1946. The article is clearly intended for readers who have considerable sophistication in linguistics, but little in American Indian languages.

Sapir states (p. 104) that "we have no right to speak of American Indian grammatical categories" in the sense of morphological patterns shared by all or most languages. Nevertheless, it is possible to illustrate the diversity of patterns found in North America; and Sapir proceeds to do this, using expressions meaning "he will give it to you" in six of the languages on which he had done field work.

The paper ends with "jottings" by Sapir (left undeveloped by Swadesh) which suggest more extensive typological discussion—e.g., "importance of aspect in America: Nootka, Paiute." It must be regretted that Sapir did not live to write detailed cross-linguistic studies of such features, as he did for noun incorporation in 1911c, or for ergativity and related phenomena in 1917k.

"The Relation of American Indian Linguistics to General Linguistics" is another posthumous publication. It may have originally been written around the same time as Sapir's *Time Perspective* (1916h), since it expresses similar views about the diffusion of grammatical traits and adduces some of the same facts. (This is pointed out by Sherzer 1973: 753.) Sapir's last sentence, to be sure, refers not only to his own book *Language* (1921d) but also to Leonard

Bloomfield's *Language* of 1933; however, it sounds like an afterthought, probably postdating the other contents of the paper by several years.

The opening paragraphs, in fact, express a view characteristic of Boas, noting first that "the phonetic systems of the languages spoken along the [Northwest] Pacific coast . . . have many characteristics in common in spite of the fact that they are far from being members of the same genetic group" (p. 1), and then that "important morphological characteristics . . . seem to have diffused over a continuous territory occupied by languages of alien stocks" (p. 2). Sapir concludes that "the intercrossing influence of [structural] diffusion must be taken into account very much more seriously than is done by students of comparative and historical grammar in the Old World" (pp. 2-3).

The importance given here to the areal phenomenon of structural borrowing, so frequently emphasized by Boas, is reflected in a number of Sapir's earlier works. As time passed, however, Sapir came increasingly to believe that it is possible for comparative linguistics to identify cross-linguistic grammatical similarities which can be recognized as in some sense "submerged," but which reflect distant genetic relationships, unaffected by more superficial processes of areal diffusion. This is of course the viewpoint which led him, from 1920 onward, to propose six "great groups" of North American languages (the previously unpublished materials and 1921a, above).

The second part of this article points to the importance of descriptive work on American languages as a means of appreciating the diversity which is possible in human language, independently of all possible racial or cultural associations. Sapir's words remain fully relevant to current discussion of linguistic universals: "A linguist who is familiar with the forms of only one circumscribed group of languages, such as Indo-European or Semitic, necessarily runs the risk of universalizing formal features which are after all local in their distribution, or of rejecting as unlikely conceptual peculiarities which are abundantly attested outside of his special group of languages. American Indian languages give abundant opportunity to correct both of these possible misconceptions" (pp. 3-4). (Because of its interest to the general linguist, this paper is also included in Volume I.)

THE PROBLEM OF NOUN INCORPORATION IN AMERICAN LANGUAGES

By EDWARD SAPIR

THE term "incorporation" has been much used in discussion devoted to the structure of American languages. Despite the steadily growing mass of American linguistic material, a good share of the data presented in the last few decades being distinctly superior from the point of view of critical analysis to much that served as illustrative material in earlier days, it can not be asserted that the term is always clearly understood or satisfactorily defined. This paper is not at all concerned with whether the linguistic stocks of America are or are not as a whole characterized by a process that may be called "noun incorporation," but aims merely to give a usable definition of the term and to show that several of these stocks actually make use of the process. This may not seem a very revolutionary attempt, nor is it intended to be. As, however, Dr Kroeber has undertaken in a recently published paper[1] to demonstrate the mythical or, at any rate, theoretically unlikely character of noun incorporation, it seems in order to accept his implied challenge and to present some new data by way of rebuttal.

On two or three negative points all must be in hearty agreement with Dr Kroeber. In the first place so-called pronominal incorporation and noun incorporation stand in no necessary relation to each other. A very large number of American, as of non-American, languages make use in the verb of affixed elements of pronominal signification; they are, as regards their syntactical use, very commonly subjective, less frequently, though by no means rarely, also objective, and still less commonly they indicate also dative, ablative, or other case relations (thus, in Wasco, "him" and "me" in "I give it to him" and "he takes it from me" are as thoroughly "incorporated" into the verb-complex as are the

[1] A. L. Kroeber, "Noun Incorporation in American Languages," *XVI. Internationaler Amerikanisten-Kongress*, 1909, pp. 569–76.

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subjective "I" and "he" and objective "it"). As Dr Kroeber points out, it is incorrect to consider these pronominal elements as truly "incorporated" forms of independent personal pronouns; being either simpler in form than the latter or, often enough, etymologically unrelated to them, they are best considered as formal or inflectional in character. Whether or not they may, in particular cases, be thought to have been originally independent elements that have, through an intermediate proclitic or enclitic stage, coalesced with the verb stem into a morphologic unit, matters not at all; historical considerations should not interfere with a descriptive analysis, otherwise morphologic change in language ceases to have a meaning. In the case of the Wasco[1] sentences referred to before, the "incorporated" elements *-n-* "I, me," *-ɬ-* "it," and *-i-* "him," are evidently not actually incorporated forms or secondary developments of the corresponding independent personal pronouns *náika*, *ɬáxka*, and *yáxka*, while *-tc-* "he" (as subject of transitive verb) is quite unrelated to the independent pronoun. Few more striking cases can be found than that of Takelma. Here we have no less than eight distinct affixes to indicate the first person singular ("my, I, me") in the noun and verb (*wi-*, *-t'ek'*, *-t'k'*, *-t'e^{e}*, *-t'e^{e}*, *-^{e}n*, *-n*, *-xi*), yet not one of these is etymologically related to the independent pronoun *gi'*. Clearly, then, the incorporation of a noun or noun stem into the verb is not in most cases analogous to pronominal "incorporation." It may even be argued on general grounds that nominal and pronominal incorporation tend to be mutually exclusive processes. The main purpose of a pronominal affix is to refer to or replace a substantive, in the former case often determining also its syntactic relation; hence a pronominally incorporating language should find noun incorporation unnecessary, and *vice versa*. The fact that this theoretical conclusion is by no means entirely borne out by the facts shows how little reliance is to be placed in *a priori* considerations. We shall find, however, that noun incorporation can indeed exist without true pronominal incorporation or rather inflection.

In the second place it is clear that verbal affixes that refer to nouns, in other words, convey a substantival idea, are not instances

[1] Of Chinookan stock.

of noun incorporation if they are etymologically unrelated to the independent nouns or noun stems with which they seem logically connected. Such affixes are generally either instrumental (Siouan, Shoshonean) or local (Kwakiutl, Salish) in character, but may also be employed to represent the logical object or even, in the case of intransitive verbs, subject (this use is characteristic of Kwakiutl, Chemakum, and Salish). As long, however, as they are lexically distinct from noun stems proper, they must be looked upon as grammatical elements pure and simple, however concrete their signification may seem. They are logically related to independent nouns of the same or allied meaning as are tense affixes to independent adverbs of time. This working over of substantival concepts into the verb-unit as derivational rather than compositional elements is decidedly characteristic of several American linguistic stocks; it belongs rather to the sphere of "polysynthesis" than noun incorporation. It is true, as Dr Kroeber points out, that body-part ideas are particularly apt to receive such grammatical treatment, yet it is decidedly misleading to imply, as he does, that body-part affixes generally form a closed class entirely apart from all others. In Siouan the idea of instrumental *activity* is far more strongly developed in these elements, here prefixes, than that of reference to distinct body-parts. Thus Ponka *pa-* means not so much "with the hand" as "by pressing with the hand," while Ponka *ma-* and *mu-*, Dakota *ba-* and *bo-*, refer to no parts of the body at all but to instrumentality apart from the body, being respectively translatable by "by cutting, with a knife" and "by shooting"; similarly, Ponka *na-* is rendered "by heat, by fire."[1] It is very doubtful whether, to use Dr Kroeber's own example, Dakota *ya-* contains a more specific reference to "mouth" than does Ponka *na-* to "fire." In southern Paiute, a Shoshonean dialect, we have, as in Siouan, a set of instrumental prefixes referring to parts of the body, though such reference is rather clearer in the case of Paiute than in that of Dakota or Ponka. As in these latter, so also in Paiute the instrumental prefixes are etymologically unrelated

[1] See Boas, "Notes on the Ponka Grammar," *15^me^ Session du Congrès International des Américanistes*, 2, p. 328; Boas and Swanton, Siouan, §13 (*Handbook of American Indian Languages*, 1, pp. 902–905).

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to the noun stems that express the corresponding body-part concepts. Examples are *ta-* "with the foot" (noun stem *nampa-*), *qï-*[1] "with the teeth" (noun stem *taŋwa-*), *ma-* "with the hand" (perhaps ultimately related to noun stem *mo$^{\varepsilon}$o-*), *tco-* "with the head" (noun stem *t'^{o}'tsi-*). It is important, however, to observe that with these body-part prefixes are necessarily to be grouped a number of other instrumental prefixes in which the reference is to a noun other than one defining a part of the body or to mode of action not very definitely connected with a particular object. Such are *ta-* "with a missile, by throwing," *tsi* "with the point of a long object, with the end of a stick," *wu-*[2] "with the edge or body of a long object, with any part of a stick but the point," *qu-* "with fire, by burning." The "substantivals," furthermore, of Salish and Kwakiutl include not only body-part elements but also such as have reference to other important noun concepts, such as "fire," "house," "round object."

It becomes evident, therefore, that Dr Kroeber's attempt to set off body-part elements as such from all other substantive affixes is not well justified by the facts. There is, it is true, a tendency in America to emphasize body-part relations and activities, yet this tendency is fundamentally of psychological, not morphological, interest. There is, then, no reason why noun stems denoting parts of the body should not be accepted as evidence of noun incorporation under the same circumstances as those under which other noun stems are so accepted. The main point to be determined in any particular case, as far as noun incorporation is concerned, is not whether instrumental, local, objective, or other substantival affixes do or do not refer to parts of the body, but whether or not they are identical with or closely related to independent nouns. According to Dr Kroeber, "an acquaintance with any number of American languages and with the parts which ele-

[1] ï is used to represent a high back unrounded vowel, practically unrounded close u; it has by other students been heard as an obscure or imperfectly articulated front rounded vowel and accordingly written ü or ö. There is in Ute a true ö, corresponding to southern Paiute o, as well as this ï. ŋ is ng of English sing.

[2] U is a phonetic variant of ï and is found particularly after labial consonants. It is not quite so high as ï and seems to have a slight amount of inner rounding; it is sometimes difficult to distinguish from A (English u in but).

ments of this class play in at least some of them, brings so strong a conviction of their peculiar qualities, that even the apparent *direct objective use of independent noun-stems denoting parts of the body in single-word verb-complexes*[1] seems dependent on the unique character of these stems, rather than as being true noun-incorporation."[2] This conviction is not shared by the present writer, to whom noun incorporation seems of fundamental interest rather as a formal or morphological than lexical or psychologic process. The importance of bearing clearly in mind the great formal difference between body-part elements etymologically distinct from noun stems and incorporated body-part noun stems will become evident when the body-part prefixes of Takelma are discussed.

On a third point one can not but unqualifiedly agree with Dr Kroeber. Many American languages form denominative verbs from noun stems by means of various derivative affixes of verbal, generally transitive, meaning. Thus, from Paiute *qani-* "house" are formed *qanintcu-* "to build a house" and *qanix^{y}ai-*[3] "to have a house," from Yana *hauyauba-* "deer fat" is formed *hauyauba^{s}-inigui^{s}a-* "to contain nothing but deer fat." In these derivative verbs the nouns "house" and "deer fat" can not be considered as incorporated, for the verbal elements *-ntcu-*, *-x^{y}ai-*, and *-^{s}inigui^{s}a-* are not verb stems but verb-forming affixes morphologically comparable to English *-ize* in verbs of the type *materialize*, *pauperize*. It can hardly be maintained, however, that verbs of this type have had much to do with a belief in the existence of noun incorporation, the process that they illustrate being a familiar one in Indo-Germanic. Eskimo, a language particularly rich in suffixes that verbify nouns, has been termed polysynthetic, but has not been employed by serious students as a source of examples of noun incorporation.

What, then, is noun incorporation? Dr Kroeber defines it as follows:— "Noun incorporation is the combination into one word of the noun object and the verb functioning as the predicate of a sentence."[4] This definition seems acceptable enough at first

[1] Italics mine. These italicized words practically define objective noun incorporation for a limited class of nouns.

[2] Kroeber, loc. cit., p. 572.

[3] x^{y} is palatalized x, approximately as ch in German ich.

[4] Kroeber, loc. cit., p. 569.

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sight, and there would be no great difficulty, on the basis of it, in proving the existence of noun incorporation in America. Examining the definition, we find that two things are required—a noun must combine with the verb-predicate into a word-unit, and the noun so combined must function as the object of the verb. The first requirement is morphologic in character, the second purely syntactic; in other words, the first calls for a certain type of word formation, while the second demands that a particular logical relation subsist between the two independent elements that enter into this word formation. Without denying the abstract right to set up such a definition, it would seem that the combining of a morphologic requirement with an independent syntactic one yields, on general principles, a definition of too narrow a scope for the discussion of as fundamental a problem as noun incorporation is felt to be. Noun incorporation is primarily either a morphologic or syntactic process; the attempt to put it under two rubrics at the same time necessarily leads to a certain amount of artificiality of treatment. A parallel case will make clearer the point here raised. Noun composition may be defined as the combining into a word of two independent words or stems, the resulting word being treated as a noun. There is no limitation put here on the syntactic relation between the two elements of the compound. "Steam-engine," "concert-singer," and "song-writer" are morphologically of one class, all three examples consisting of two nouns united into one, the first serving in some way or other to qualify the second. Yet the syntactic or logical relation that obtains between the two members of these compound nouns is different in each case. In the case of "steam-engine" the word "steam" may be looked upon as connected instrumentally with "engine," "steam-engine" being thus logically equivalent to or the substitute of the more definitely syntactic "engine that runs *by means of* steam"; "concert," on the other hand, defines "singer" locatively, in other words, "concert-singer" is the logical equivalent of "singer *in* concerts"; "song," finally, is logically the object of "writer," the last compound noun given being the equivalent of "one who writes songs." In short, we have in these nouns examples of one type of word morphologically, of three types (instrumental, loca-

tive, and objective) syntactically or logically. At this point it may be objected that it is artificial, from a grammatical point of view, to assign to the first members of the three compounds selected a definite syntactic value, the ideas of instrumentality, location, and the objective relation being given no grammatical expression but being implied on purely logical grounds. No doubt there is reason for such an objection, but precisely the same argument may be employed in dealing with verbs in which the verb stem is modified in some way by a noun stem coalescing with it. If we form three verbs parallel to the compound nouns we have selected, "to steam-run," "to concert-sing," and "to song-write," it is evident that "steam," "concert," and "song" are respectively related to the verbs "run," "sing," and "write" as noun of instrument, locative noun, and direct object. These relations are, however, just as purely logical, non-grammatical, in the case of the verbs as in that of the nouns. As far as *grammar* is concerned there is not the slightest reason why "to song-write" or "steam-engine" should not be understood to mean "to write by means of a song" or "engine built of steam"; the absurdity of interpretation in these cases is only a logical one. It so happens in English, as in most or all Indo-Germanic languages, that verbs of the type "song-write" or "steam-run," that is, compound verbs in which the first member of the compound is a noun, are not readily formed or are not formed at all.[1] There is, however, not the slightest theoretical reason why such compound verbs should not exist; that they do exist will have become clear before the end of this paper is reached.

[1] Verbs like "to typewrite" are of course only apparent exceptions; they are only secondarily verbal in character, being denominative derivatives from already existing compound nouns. Similarly, in Greek, *σαρκοφαγέω* "I eat flesh" is not a derivative of a non-existing verb *φαγέω*, but a denominative verb derived from the substantive compound *σαρκοφάγος* "flesh-eating"; so also Latin *aedificō* "I build" is not directly compounded of *aedi-* "house" and non-existing *facō*, but is either derived from a noun stem *aedifec-* "house-builder" or formed on the analogy of verbs like *pontificō* that are themselves derived from noun stems (e. g. *pontifec-*). On the other hand, while nouns like "man-eater" can not be considered as conclusive evidence of noun incorporation, serious exception must be taken to Dr Kroeber's statement that it may not illustrate noun incorporation "because 'eater' is functionally a noun" (Kroeber, loc. cit., p. 570). This may or may not be true, according to the genius of the particular linguistic stock discussed. "Man-eater" is not necessarily compounded, as in English, of "man" and "eater," but may be a noun of agency directly formed from a compound verb "man-eat." "Man" + "eater" is not morphologically equal to "man-eat" + -er.

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It is this process of compounding a noun stem with a verb that it is here proposed to call noun incorporation, no matter what the syntactic function of the noun logically is. The type of verb, "to song-write," that Dr Kroeber alone regards as illustrative of noun incorporation, is best considered a particular class of the more general type of noun-verb compound verb. As a matter of fact, it is often just as difficult, at least in some American languages, to draw the line between the objective and non-objective use of an incorporated noun as it is to determine the precise syntactic value of the qualifying member of a compound noun. Thus "I hit his face" may often be interpreted locatively as "I hit him in the face," while even so transparent an example as "I eat meat" may at times be understood instrumentally as "I feed on or with meat." It is not claimed that in all American linguistic stocks that are concerned in this problem of noun incorporation the syntactic value of the incorporated noun is variable, but the fact that it is variable in several languages (Takelma, Yana, Shoshonean) that illustrate objective noun incorporation justifies the setting up of as broad a definition as possible for the process. This definition is of a purely morphologic, not syntactic, character. The main point of psychologic interest here involved is that logical relations that are in many, probably most, languages expressed by syntactic means are in several American languages expressed, to at least some extent, by morphologic, or, if preferred, compositional processes. "I song-write" is such a replacement of the syntactic "I write songs," but the replacement is logically and psychologically parallel to that of "as white as snow" by "snow-white." In both cases the grammatical expression of a logical relation, in other words a syntactic process, is sacrificed to a compositional process in which the logical relation is only implied. The sacrifice of syntax to morphology or word-building is indeed a general tendency in more than one American language.

The broader or more inclusive a concept, the more urgently it requires classification to make it practically usable. It is clear that in the concept "noun incorporation" as defined above several fairly distinct processes and usages have been combined, and it

will be found that in the actual details of the use of noun incorporation those American languages that come under the general category "noun incorporating" often differ materially among themselves, each traveling more or less its own way. It is of little use to classify noun incorporation into various types on purely logical grounds; all *a priori* schemes of linguistic processes based on logical considerations are apt to be found encumbered with artificialities when tested by application to particular languages. Only such varieties of noun incorporation will be here suggested as a certain amount of familiarity with some American languages has shown to actually occur. The *instrumental*, *locative*, and *objective* types of noun incorporation have been already referred to. Corresponding to the objective use of incorporated nouns in transitive verbs we should expect to find a *subjective* use of such nouns in intransitive verbs; this process, despite Dr Kroeber's scepticism,[1] can be illustrated in Iroquois and Pawnee. Examples occur in which the incorporated noun does not directly function as the subject of the verb but stands logically in a predicative relation to the subject or object. That is, such sentences as "he travels as spy" and "I call him an enemy" may be converted into the noun-incorporating verbs "he spy-travels" or "spy-travels" (not equivalent in this case to "the spy travels") and "I-enemy-call -him" or "I-enemy-call" (not equivalent to "I call the enemy"). Such uses of an incorporated noun may be termed *predicate subjective* and *predicate objective*. A further type of verb with incorporated noun is logically parallel to the so-called *bahuvrīhi*[2] type of compound noun. In such verbs (generally adjectival in meaning) the incorporated noun is not the logical subject of the verb but is possessed by another, sometimes grammatically unexpressed, noun. Just as "red-head" means not "a red-head" but "one who has a red-head," so a bahuvrīhi verb with incorporated subject like "head-is-red" would mean not "the head is red" but "he has a red head." Such verbs sometimes look super-

[1] Kroeber, loc. cit., p. 573.

[2] A Sanskrit word borrowed from native Hindu grammatical terminology. The word means "much-rice," that is, "having much rice," and is itself an example of the class of compound nouns for which it serves as label.

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ficially like noun compounds with a verb or adjective as the qualifying member; this deceptive resemblance is also often shared by intransitive, particularly adjectival, verbs with incorporated noun subject.

Of fundamental importance is the distinction between verbs denoting permanent or general activity and those predicating a single act. Thus "I meat-eat" may be understood to mean either "I eat meat, I am a meat-eater" or "I eat the meat (at one point of time)"; in its former sense it may be termed a verb of *general* application, in its latter sense one of *particular* application. The various syntactic types of verbs with incorporated noun enumerated above may be used in either a general or particular sense. Thus the verb "I concert sing" with locative incorporated noun may either mean "I sing at concerts, my business is that of singing at concerts," or "I am singing at the concert." Bahuvrīhi verbs, however, hardly occur except as verbs of general application. This distinction between a general and particular type of verb is of significance in so far as in some American languages verbs with incorporated noun always belong or tend to belong to the former type, single activities being expressed by the syntactic method that we are familiar with in Indo-Germanic or by one more nearly resembling it. On the whole, "general" verbs with incorporated object are more often met with, or, at any rate, met with in more languages, than those of the "particular" class, and this fact is in striking and significant analogy with the prevailingly "general" character of compound.nouns.

A third and obvious method of classifying verbs with incorporated noun is to set off those languages that, like Iroquois, Pawnee, Shoshonean, and Takelma, prefix the incorporated noun to the verb stem from those that, like Yana and Tsimshian, suffix it. This distinction, as such, is not one of fundamental importance, being bound up to some extent with the more general one of the prevailingly suffixing or prefixing character of the particular language. It is significant, however, for languages that make use of both prefixes and suffixes, to note with what group of affixes the incorporated noun is affiliated, for infer-

ences may sometimes be drawn in this way as to the essential nature of the incorporative process. When in Paiute, for instance, the incorporated noun is prefixed to the verb stem, and it is further noted that practically all relational elements, including the pronominal affixes, are suffixed, while adverbial stems and instrumental elements are prefixed, it becomes fairly evident that the incorporated noun is, from its morphologic treatment, not so much of syntactic as of compositional value; "to rabbit-kill" is not morphologically comparable to "to kill-him," but rather to "to quickly-kill."

Let us now turn to a brief review of the facts in regard to noun incorporation in a number of American languages that can be shown to make use, in greater or less degree, of the process. To illustrate noun incorporation, Nahuatl has been often cited. The noun object of a transitive verb may in Nahuatl be either incorporated into the verb-complex by being inserted between the verb stem and the prefixed pronominal subject, in which case it loses its nominal suffix (*-tl*, *-tli*, *-in*), or it may be expressed independently of the verb, its syntactic value being given by an objective pronominal element that immediately precedes the verb stem; this latter process is plentifully illustrated elsewhere in America and has often been te.med objective pronominal incorporation. Thus, in Nahuatl, one may either say *ni-c-qua in nacatl* "I-it-eat the flesh" or *ni-nica-qua* "I-flesh-eat." According to Dr W. Lehmann,[1] however, there is an important difference in meaning between these sentences. The former means "I eat the flesh" (a particular act), the latter "I eat flesh, I am a flesh-eater." In other words, noun-incorporation of the object seems to occur in Nahuatl, at any rate according to Lehmann, only in verbs of what was above termed the general type. The incorporated noun of Nahuatl does not always appear, however, with the syntactic value of an object, and this point, though not often urged, is naturally of primary importance. In the sentence *ni-k-tle-watsa in nakatl*[2] "I-it-fire-roast the

[1] W. Lehmann, "Ergebnisse und Aufgaben der mexikanistischen Forschung," *Archiv für Anthropologie*, VI, 1907, pp. 113–168. See English translation by Seymour de Ricci, *Methods and Results in Mexican Research*, 1909, pp. 65, 66. Dr Kroeber is not literally correct when he implies (Kroeber, loc. cit., p. 574) that no explanation has ever been given of the difference in treatment of the Nahuatl noun object.

[2] This and the following examples are taken from F. Misteli, *Charakteristik der hauptsächlichsten Typen des Sprachbaues*, pp. 120, 115. Misteli's more phonetic un-Spanish orthography is here preserved.

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meat" the incorporated noun *tle-* (absolute *tletl*) "fire" is instrumental in value; in *ō-ki-ketš-kotōn-kè in itštekki* "(they) had-him-neck-cut the robber" (*ō . . . kè* denotes plural perfect) the incorporated noun *ketš-* (absolute *ketštli*) "neck" is equivalent to a locative; in *šōtši-kwepōni in no-kwik* "flower-blossoms the my-song, my song blossoms like a flower" the incorporated noun *šōtši* (absolute *šōtšitl*) is predicative to the subject, this sentence illustrating the predicate subjective type of noun incorporation already spoken of. These last three examples, it may be incidentally observed, seem rather particular than general in their application. For the existence, then, of noun incorporation in Nahuatl there seems good evidence, assuming, of course, that examples of the types cited are in genuine use. It is clear, furthermore, that noun incorporation of the object is in Nahuatl only a special syntactic use of a more general process of noun incorporation, and that this process is more or less analogous to noun composition (in noun compounds the first member loses the suffix found in the absolute form).

Dr Kroeber states that "serious doubt is cast on all noun-incorporation in Nahuatl by the indication of complete lack of incorporation in all related languages. The Shoshonean dialects are but little known, yet enough to make it certain that incorporation of the noun is at least not a typical process and probably does not occur in them at all."[1] But noun incorporation does undoubtedly occur in at least some Shoshonean dialects, as a recent study of Ute and southern Paiute has convinced the writer.[2] Before giving examples of Shoshonean noun incorporation, it will be well to point

[1] Kroeber, loc. cit., pp. 574, 575. The genetic relationship of Shoshonean and Nahuatl is not so definitely established or, in any event, not so close as to justify one in drawing inferences as to Nahuatl noun incorporation from corresponding facts in Shoshonean, the more so as "the Shoshonean dialects are but little known."

[2] A month's work was done by the writer in the latter part of the summer of 1909 among the Northern Ute of Utah. During four months of the winter and spring of 1910 a considerable body of Kaibab Paiute material, including a set of texts, was obtained from a Paiute student of the Indian school at Carlisle, Pa. Kaibab Paiute is spoken in S. W. Utah and N. W. Arizona; it differs more phonetically than grammatically from Ute, both southern Paiute (as distinguished from northern Paiute or Paviotso) and Ute belonging to Dr Kroeber's "Ute-Chemehuevi" group. Both sets of material were obtained for the Museum of the University of Pennsylvania.

out in how little relation noun incorporation here stands to the treatment of the pronominal elements. It was stated before that incorporated nouns are, in Paiute, prefixed, pronominal elements suffixed to the verb stem. But this is not the whole story. Properly speaking, pronominal elements are not affixed at all to the verb stem, but are merely added on enclitically. So many apparently clear examples of pronominal incorporation can be adduced in Paiute, that at first blush this statement will appear paradoxical, yet it is not difficult to demonstrate. In a verb form like *ton·ávān·iāŋan'ⁱ*[1] "I shall strike him" (verb stem *ton·a-*; future suffix *-vān·ia-*; 3d animate visible singular *-aŋa-*; 1st singular *-ni*) *-aŋa-* "him" and *-ni* "I" seem thoroughly welded into the verb-complex, the more so as the final *a* of *-vān·ia-* contracts with the initial *a* of *-aŋa-* into a long *ā*. Yet if we begin the sentence with the word *qan·ívaŋ'ʷⁱ* "house-in" we can say *qan·ívaŋwiaŋan'ⁱ ton·ávān·i'*[2] "house-in-him-I strike-shall, I shall strike him in the house." This usage can hardly be explained otherwise than by regarding the unindependent pronouns as enclitic elements which may attach themselves to any word in the sentence, very frequently, of course, the verb. It is clear, then, that if genuine examples of noun incorporation can be given in Paiute, it follows that nominal and pronominal incorporation do not necessitate each other.

A number of examples of noun incorporation have been selected from the Paiute manuscript material at the writer's disposal; it should be borne in mind that all the forms about to be given actually occur in texts. Examples of noun incorporation of the object are first given:—

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[1] ' denotes aspiration; · length of preceding consonant; ˀ glottal stop superior vowels and ʷ, ʲ, ⁿ are whispered, but are grammatically equivalent to fully voiced vowels and w, y, n, being reduced forms of these; o is open; û, ô, î, are long open vowels; long vowels ollowed by superior of same vowel represent long vowels with parasitic rearticulation of vowel; ʲ after k denotes palatalization of preceding back consonant; ˣ is weak x developed from ' before moderately velar q; 'ʏ is palatalized aspiration, weak German ch in ich; ɣ is voiced velar spirant (North German g in Tage); v is bilabial, yet apt to be dento-labial, particularly before i; vʷ is bilabial with inner sounding, acoustically midway between bilabial v and w; v and ʀ are voiceless v and r (weakly trilled tongue-tip r); ṗ, ṫ, and q̇ are stopped consonants with simultaneous closure of glottis. ɪ, ʊ, and ᴀ have been already explained (p. 253, notes 1, 2); ɪ is a ; alatalized form of ī, heard as obscure i.

[2] Final *a* of *-vān·ia* has to be elided.

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qām·Úyaainʊmpʊγa' "(he) used to hunt jack-rabbits" (*qām·ʊ-* "jack-rabbit"; *yaai-* "to hunt"; *-nʊm-* usitative; *-pʊγai* remote past).
cû'q·uc·ᵘ qām·Úvᵃᶻqaq·a' "having killed one jack-rabbit" (*cû'q·uc·ᵘ* objective form of *cû'yuc·ᵘ* "one"; *p'ᵃᶻqa-* "to kill one person or animal," *p* between vowels becomes *v* and *-uv-* generally becomes *-uvʷ-*; *vʷ* becomes voiceless *fʷ* before *ᵃᶻ*; *-q·ai* subordinating suffix indicating identity of subject of main and subordinate clauses).
qām·Úxwᵋoin·āη'ᵃ "jack-rabbits that he had killed" (*qoᵋoi-* "to kill several persons or animals," *q* between vowels becomes *γ* or *x* and *-ʊx-* generally becomes *-ʊxw-*; *-n·a-* verbal-noun suffix; *-aηa* "his").[1]
'ᵘᶻqwán·ôᵒxwᵋail·uip·ʊγaiyaη'ᵃ "(he) caused her to go for wood" (*'ᵘᶻqwa-* "wood," absolute *'ᵘᶻqwáp·'ⁱ*; *nôᵒ-* "to carry on one's back"; *-xwᵋai-* derivative suffix "to go to do"; *-ł·ui-* causative suffix; *-aηa* "her").
'ᵘᶻqwáiyāᵃvaiyɪx·ᵘ "while bringing back wood" (*yāᵃvaiyɪ-* compound verb consisting of *yāᵃ-* "to fetch" and *paiyɪ-* "to return"; *-x·ᵘ* final form of *-γu-*, subordinating suffix indicating that subjects of main and subordinate clauses are not identical).
naηqávaη'ʷⁱpantuxwixᵛᵉum'ⁱ "while you shake your ears" (*naηqava-* "ear," absolute *naηqávaVⁱ*; *'ʷⁱ'pantuxwi-* "to shake," *w* becomes *ηw* between vowels; *-xʸu-* is palatalized form of *-xu-*, *-γu-*, subordinating suffix; *-ᵋ. . . mi* "you").
wan·áηwantcɪxwᵋaip·ʊγa' "he went to set his rabbit-net" (*wan·a-* "rabbit-net"; *watcɪ-* "to put, set").
wiî'p·'ᵘ'caγai'ʸᵘ "while looking for a knife" (*wiî-* "knife," absolute *wiit·si-*; *p'ᵘ'caγai-* "to look for"; *-yu* subordinating suffix used instead of *-γu-* after *-γai-*).
t'ᵃ'síp·uVᵘ'caγaik·'ʸᵃ "do ye look for flint!" (*t'ᵃ'sip·ʊ-* "flint"; *-k·ʸa* is palatalized form of *-q·a* denoting plurality of subject).
qātsinᵋnoróp·ʊγa' "(he) poked for rats with a stick" (*qā-* "rat," absolute *qātsi-*; *tsinᵋnoro-* "to poke with a stick").

It is interesting to note that certain noun stems seem to lose the final vowel when incorporated with certain verbs, sometimes even the final consonant and vowel. Thus *naηwa-* "track" (absolute *naηwávⁱ*) appears sometimes as *nam-*, *nan-*, *naη-* (according to place of articulation of following stopped consonant), also as *na-* and,

[1] This form is nominal and means literally "his jack-rabbits-killing" or "his jack-rabbits-killed ones." It implies a verb *qām·Úxwᵋoi-*, however.

with entire loss of voice, $^{na'}$-. Similarly, *nïŋwU-* "person" appears as *nïm-*, *nïn-*, *nïŋ-*,[1] *nï-*, and $^{nï'}$-. An example or two may be given:—

nampúc·aγa^{i}'kup·Uγa' "(he) started to look for a track" (*nam-* "track"; *-ku-* inceptive).

nïcït·caŋw^{ɛ}aix^{ɣ}a' "while teasing a person" (*nï-* "person"; *cït·caŋ-w^{ɛ}ai-* "to tease"; *-x^{ɣ}ai* is palatalized from *-xai-*, *-γai*, subordinating suffix).

While one or two of these examples of verbs with incorporated noun object seem capable of being interpreted as general in application, most of them evidently refer to particular acts. Inasmuch as Paiute can express, and generally does express, the object of the verb by providing the unincorporated noun with the accusative ending *-a* or *-ya*, the problem presents itself of when noun incorporation and when the syntactic method is used to express the object. This cannot be satisfactorily answered at the present time; it can only be suggested that what may be called typical or characteristic activities, that is, those in which activity and object are found regularly conjoined in experience (*e. g.* rabbit-killing, looking for a trail, setting a net), tend to be expressed by verbs with incorporated objects, whereas "accidental" or indifferent activities (*e. g.* seeing a house, finding a stone) are rendered by verbs with independent, syntactically determined nouns. It must be admitted, however, that a hard and fast line between "characteristic" and "accidental" activities would be difficult to draw.

Other types of noun incorporation than the objective occur in Paiute. A few examples will suffice:—

wiít·on·op·Uγa' "(he) stabbed with a knife."

q'^{wa}'síx^{wi}'pap·Uγaiyaq·'^{a}; "with (his) tail (he) hit it" (*q'^{wa}'si-* "tail," absolute *q'^{wa}'síV^{i}*; *k'^{wi}'pa-* "to hit"; *-aq·a* "it" visible).

axórov^{w}ik·^{ɣ}axu^{ɛ}q·wa^{ɛ}m'^{U} "while they were licking it" (*axo-* "tongue," absolute *axómp'^{i}*; *tov^{w}i-* verb stem not separately found: *-k·^{ɣ}a* = *-q·a-* plural subject; *-xu-* subordinating suffix; *-^{ɛ}q·wa-* "it" invisible; *-^{ɛ}mU* "they" invisible).

qwiït·ïŋwʌp·Uγaiyaŋ'^{a} "he smoked him, locked him up in smoke" (*qwiï-*, cf. *qwiḯ-k·^{ɣ}a-R^{ï}* "smoke"; *ïŋwa-* "to lock up"; *-aŋa* "him").

nïŋwÚm·aŋ^{ɛ}wUp·Uγaiyam^{ɛ}Um'^{U} "they caused them to be persons

[1] *w* does not really disappear in these words, as *ŋw* goes back to original *m*.

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again" (*nïηwU-* "person"; *maη^{ɛ}wU-*[1] "to render, cause to be"; *-amU-* "them" visible; *-^{ɛ} . . . mU* dual animate subject).

The first three of these examples show a clear use of the incorporated noun as instrument, in the fourth we are perhaps dealing with a locative use, while the last verb illustrates the predicate objective type of noun incorporation.

Compound verbs, that is, verbs compounded of two or even three verb stems, are common in Paiute. Ordinarily the actions expressed by these compounded verb stems are coördinated in thought, thus "to sing-stand" is logically equivalent to "sing and stand"; yet there is a number of verb stems that treat a prefixed verb stem as the syntactic equivalent of an object. As the latter type of compound verb seems to have some bearing on the problem of objective noun incorporation, a few examples are given:—

paγáin^{ɛ}nit'ïv^{w}it'cu^{ɛ}Ap'Uγa' "(he) learned how to walk" (*paγain^{ɛ}ni* = "to be walking," composed of verb stem *paγai-* and continuative suffix *-n^{ɛ}ni-*; *t'ïv^{w}it'cu^{ɛ}a-* "to learn how").

yaáit'ïγāηqïq'aη'^{wa} "do ye make him hunt (game)!" (*yaai-* "to hunt"; *tïγā-* "to bring about"; *-ηqï-* indirective; *-q·a-* plural subject; *-^{ɛ} . . . ηwa* "him" invisible).

tïxwî'n'at'ïv^{w}it'c'^{u}pUγaí^{ɛ}η'^{wa} "(he) asked him to tell a story" (*tïxwî-n'a-* "to tell a story"; *tïv^{w}it'cu-* "to ask for, request"; *-^{ɛ}ηwa* "him" invisible).

nïv^{w}áR^{a}ton^{ɛni}'tïηwava'pUγa' "(he) made a noise of shaking off snow from (his) feet" (*nïv^{w}a-* "snow," absolute *nïv^{w}áv^{i}*; *t'^{a}'ton^{ɛ}ni-* "to shake off from one's feet"; *tïηwavā-* "to make a noise").

As far as syntax is concerned, these compound verbs are comparable to verbs with incorporated noun objects. It seems fairly evident that there is a general tendency in Paiute to modify the meaning or limit the range of a verb by compounding it with a prefixed stem; this second stem may be nominal or verbal, or, it may be added, adjectival (thus *^{aɛ}át'ïnt'^{ï}'qa-* "to eat well, eat good things" from *^{aɛ}at·ï-* "good" regularly followed by nasal consonant, and *t'^{ï}'qa-* "to eat"). Hence noun incorporation is but a particular case of verb composition, using that term in its widest sense, and objective noun incorporation but a particular syntactic use of a larger process. It is important to notice that incorporated

[1] Not a causative suffix, but a verb stem.

noun stems, whether of body parts or not, are not affiliated with the group of non-radical instrumental prefixes already spoken of. In the examples of noun incorporation given above several of these instrumental elements occur (*pu-*, *p'ᵘ'-* "with the eyes"; *tsi-* "with the point of a stick"; *t'ᵃ'-* "with the feet"); in every case it will be observed that the incorporated noun object (*e. g.* "knife," "rat," "snow") precedes the verb stem with its instrumental prefix. The instrumental use of the incorporated noun (*e. g.* "tail") should not mislead us into confusing two distinct classes of prefixed elements; the resemblance in such a case is merely syntactic, not morphologic.

Finally, there exists in Paiute a number of intransitive verbs with incorporated noun subject; such verbs seem to have reference particularly to natural phenomena and states. Examples are:—

nïvʷáγarïi'ᵛ̈ⁱ "snow-sits, the mountain peak is covered with snow" (*nïvʷa-* "snow"; *qarï-* "to sit"; *-yï* present tense.

nïvʷāví'ᵛ̈ⁱ "snow-lies, there is a field of snow on the mountain slope" (*āvi-* "to lie").

pā́γarïi'ᵛ̈ⁱ "water-sits, there is a lake" (*pā-* "water").

pāγín·ax·qaRᵛ̈pUγa' "fog appeared," lit. "fog began to sit" (*pāγɪn·a-* "fog, cloud," absolute *pāγín·aVⁱ*; *-x·qaRᵛ̈-* = *q'ᵃᵃqarï-* "to begin to sit," reduplicated with inceptive meaning from *qarï-* "to sit").

From such verbs as these are derived present participles in *-Rᵛ̈* or *-nt'ᵛ̈* (after *i*-vowels *-Rᵛ̈* becomes *-tc'ᵛ̈* or *-ntc'ᵛ̈*) that are employed as nouns. Examples are *paγárïRᵛ̈* "water-sitting, lake"; *pā́nᵘᵃ-qwint'ᵛ̈* "water-running, stream"; *qáivaγarïRᵛ̈* "mountain-sitting, peak"; *qáivāvitc'ᵛ̈* "mountain-lying, plateau."[1] So perfectly clear is the essentially verbal force of such nouns, that in the plural the verb stem must change to the plural stem of corresponding meaning. Thus the plural verb corresponding to *qarï-* is *yuxwi-*, and *paγárïRⁱ* "lake" becomes *páiyuxwitc'ᵛ̈* "waters-sitting." That we are here really dealing with verbs with incorporated subjects and not with noun compounds in which the qualifying verb or adjective follows the noun stem, is further shown by such forms as *p'ⁱ'ᵛkᵛáxwit'ᵘ*

[1] Thus is disposed of a class of apparent noun compounds in which what seems to be the qualifying member follows instead of preceding, as it normally should. See Kroeber, "Noun Composition in American Languages," *Anthropos*, vol. v, 1910, p. 213. There is in Ute and Paiute no special class of nouns in *pā-*, as he suggests.

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(*p'i'ᵛkᵛa-* "sore, to be sore"; *qwit·u-* "anus," absolute *k'ʷi'túmp'i*), a *bahuvrīhi* noun meaning "one who has a sore anus" (proper name), and *p'i'ᵛkᵛáoāγaip·υγa'* "(he) had a sore back" (*oā-* "back," absolute *oā́vi*; *-γai-* derivative suffix "to have"), a derivative of the noun "sore back." In these true noun compounds the qualifying adjective or verb precedes.

On comparing Nahuatl noun incorporation with that of Shoshonean, as represented by Paiute, we find a number of striking resemblances. In both Nahuatl and Paiute the incorporated noun is prefixed to the verb stem; in both it often loses a suffix found in the absolute form of the noun; in both the incorporated noun is used not only objectively, but also instrumentally, locatively, and as predicate of subject or object; noun incorporation is in both languages but a particular form of modifying the primary meaning of the verb by prefixing another stem to that of the verb;[1] and in both languages the objective relation is more often expressed by syntactic means than by noun incorporation, the latter method being employed, it would seem, in expressing "general" or "characteristic" acts as contrasted with "particular" or "accidental" acts. In both Nahuatl and Paiute, moreover, the process of noun incorporation is best considered one essentially of composition of independent stems, and this point of view is further justified by the fact that in both languages compound nouns can be formed with the greatest ease and are actually found in great number. Whether these resemblances are due to the often urged genetic relationship of Nahuatl and Shoshonean and are thus common Uto-Aztekan property, it is as yet too early to say. At any rate, it is fair to say that the evidence here presented does not militate against the Uto-Aztekan hypothesis but, on the contrary, tends to support it.

Yana has been put by Drs Kroeber and Dixon[2] in a morphological class by itself as contrasted with the "central Californian" type. We need not then be surprised to find that it makes use of the "un-Californian" process of noun incorporation. The incorporated noun of Yana is, like all affixes, suffixed to the verb stem; certain

[1] For examples of Nahuatl verbs compounded with prefixed adjective and verb stems see Misteli, op. cit., p. 115.

[2] See maps in their article on "The Native Languages of California," *American Anthropologist*, N. S., V, pp. 1–26.

derivative suffixes, for instance *-wilmi-*[1] "on one side" and indirective *-ma-*, may precede an incorporated noun, others, such as *-gu-* "a little" and causative *-ˢa-*, regularly follow it. Following the derivative suffixes of the second class are the temporal and modal suffixes, these, in turn, being followed by the personal endings. The incorporated noun is thus very firmly knit into the verb-complex, never standing at its absolute beginning or end. All nouns in Yana end in their absolute form either in a radical short vowel or, if the stem is monosyllabic or the stem final is a long vowel, diphthong, or consonant, in a suffixed *-na*. When incorporated, the noun loses this *-na* and, if the stem ends in a short vowel other than *-i*, adds an *-i*; noun stems beginning with *b* and *d* sometimes change these consonants to *w* and *r*. The incorporated form *-wai-* of the noun *bána* "deer" (stem *ba-*) illustrates several of these rules.

An incorporated noun is often objective in meaning, while its use with locative, predicate subjective, or bahuvrīhi force is also quite common. As the incorporated noun is treated in exactly the same way, as regards both position and phonetic change, no matter what its syntactic value may be, it is obvious how highly artificial it would be, from the Yana point of view, to treat objective noun incorporation as an isolated process. Some examples of Yana noun incorporation follow, and first such as illustrate the objective type:—

k!utxáisindja "I am thirsty" (*k!ut-*[2] "to want, desire"; *-xai-*, incorporated form of *xána, hána* "water"; *-si-* present tense; *-ndja* "I").

k!unmiyáusindja "I am hungry" (*-miyau-*, reduced form of *mô'yauna* "eating, food").

k!uˢáusindja "I want fire" (ˢ is inorganic; *au-*, incorporated form of *áuna* "fire").

k!úruwawisindja "I wish to have a home" (*k!uru-* developed from *k!ut-* before *w*; *wáwi* "house").

k!uruwáisindja "I want deer meat" (*-wai-*, incorporated form of *bána* "deer, deer meat").

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[1] For phonetic key to Yana see E. Sapir, "Yana Texts." *University of California Publications in American Archaeology and Ethnology*, vol. 9, pp. 4, 5.

[2] N. Yana dialect. C. Yana has more archaic *k!un-*; this form of stem is preserved in N. Yana before nasal consonants.

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mitc!áugummanᵉt' (23, 1)[1] "they had fire indeed" (*mitc!-*, *mits!-* "to have"; *-gumma-* "truly, indeed"; *-nᵉt'*, reduced from *-ᵉni-t'i-* remote past and quotative).

mits!áuhaᵉnigi (164, 4) "let us have fire!" (*-ha-* hortatory; ᵉ is inorganic; *-nigi* "we").

mits!áuwilmisindja "I hold fire in one hand" (*-wilmi-* "on one side").

mits!wawīᵉ (181, 9) "have house, settle down!" (*-wawī-* "house"; ᵉ imperative).

mits!amáits!its!gisinu (181, 9) "you will have children" (*'amáits!i-* "child" not used without *-ts!gi-* diminutive plural suffix; *-si-* present or future in second person; *-nu* "you").

mits!djuk!uts!īᵉi (177, 1) "to have (one's) heart, have courage" (*-djuk!uts!ī-*, absolute *djúk!uts!i* "heart"; *-ᵉi* infinitive).

'áiᵉyausindja (28, 2) "I have carried fire" (*'ai-*" to carry"; *-ᵉy-* is inorganic).

auwiᵉáurusk'inigi "we have gone for fire" (*auwi-* "to take"; ᵉ is inorganic; *-ru-* "to go to do"; *-sk'i-* present in 1st person plural).

Some of these examples seem capable of being regarded as of the "particular" type, while others bear interpretation as verbs of "general" application. The normal method of expressing the objective relation is to have the object noun in its absolute form follow the verb, a syntactic particle *gi*, which is employed to indicate the non-subjective character of the following noun, standing between the two. Sometimes a noun object is not only incorporated but also repeated as syntactic object with preceding *gi*. Thus the form *'áiᵉyausindja* quoted above is in the text followed by *giᵉáuna* "(obj.) fire." In parallel fashion we have *auwiᵉáusanᵉt'iw ai ᵉáu'* (167, 3) "the fire had been taken away" (*-sa-* "away"; *-w-*, elided from *-wa-* passive suffix;[2] *ai* "it"; *au'* "fire," female form); literally translated this sentence would read "(it)-had-been-fire-taken-away it fire." It would seem that in Yana, as in Paiute, noun incorporation of the object is found chiefly in verbs of "characteristic" activity, a category in which verbs of desiring and possessing might very well be reckoned. That there is no sharp line of demarcation, however, between the incorporating

[1] References are to page and line of "Yana Texts."

[2] The incorporated subject of a passive is morphologically identical with the incorporated object of a transitive verb. This is true also in Nahuatl.

and syntactic methods of rendering the object is indicated by the sentence *mits!k!álp!asinig ai ᵉáuna* (164, 6) "we shall have fire" (*-k!al-p!a-* "to keep"; *-si-* future in 1st person plural; *-nig* elided from *-nigi*), in which the verb and object do not coalesce into a single word; yet logically this sentence is quite analogous to the form *mits!áuhaᵉnigi* "let us have fire!" already quoted. As incorporated noun objects occur with particular frequency with *k!ut-* "to desire," and *mits!-* "to have," it may be objected that these elements are not really verb stems but prefixes forming denominative verbs. In the first place, there are no prefixes in Yana. In the second place, *k!ut-* and *mits!-* occur without incorporated nouns; thus we have *k!utdjuᵉa-* "to like, desire" and *mitc!k'iᵉ* (120, 13) "to come to (him)," lit., "to have hither" (*-k'i* "hither"; ᵉ infinitive).

Examples of the locative and predicate subjective use in Yana of incorporated nouns are:

buīdjalilᵉai'gadúisiwandja "he kicks my calf" (*buī-* "to kick"; *djalilᵉái'gadu* "calf of leg"; *-wandja* "he me").

s'ê'mawalᵉasindja "I give him to drink" (*s'ê-* causative form of *s'ī-* "to drink"; *-ma-* indirective suffix; *-wal-*, incorporated form of *bálla*[1] "mouth"; *-ᵉa-* causative suffix).

djīyádjas (131, 3) "it tastes like human flesh" (*djī-* "to taste"; *-yā-* incorporated form of *yána* "person"; *-dja-* "off, away," of uncertain application here; *-s* present tense, female form).

djīwáiᵉ (131, 3) "to taste like deer meat."

úldja'dumalᵉguisasi "it smells like dog meat" (*ul- . . . -sa-* "to smell"; *dja'dumálᵉgu* "dog").

gak!úwiᵉ (175, 9) "talk as medicine-man, call upon your protecting spirit!" (*ga-* "to talk, utter"; *k!úwi* "medicine-man"; ᵉ imperative).

The first two of these examples illustrate the locative, the last four the predicate subjective use of the incorporated noun.

Well developed in Yana is the bahuvrīhi type of verb. Examples are:

'áik!udalsindja "I am sick-handed" (*'aik!u-* "to be sick"; *-dal-*, incorporated form of *dálla* "hand").

[1] *-ln-* assimilates to *-ll-*.

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da$^{r}t^{s}wáihandja* "I had much deer meat, was much-deered" (*da$^{r}t^{s}$- "to be much"; *-ha-* past tense).

tl!inī^{s}auguhandja "I had little fire, was little-fired" (*tl!inī-* "to be little"; ^{s} is inorganic; *-gu-* "a little").

tc!up^{s}tc'úisi "it has a good seed, is good-seeded" (*tc!up^{s}-* "to be good"; *-tc'ui-*, incorporated form of *tc'úna* "eye, seed").

ú'waisi "he has two deer, is two-deered" (*u'-* "to be two").

báiwilmidalsi "he is one-handed" (*bai-* "to be one"; *wilmi-* "on one side").

k'ú̄wawisindja "I have no house, am no-housed" (*k'ū-* "to be not").

k'ūwáisk'inigi "we have no deer meat, are no-meated."

These verbs can not possibly be considered as secondary derivatives of compound nouns, for in compound nouns the qualifying member must always be nominal in form. Hence, if the first element of a compound noun is to be verbal in force, the verb stem must first be converted into a participle by the suffix *-mau-*; thus "one person" is *báigumauyāna* (24, 12) "one-just-being person." That "much," "not," and numerals are rendered in Yana by true verb stems is proved by such verb forms as *dá't^{s}si* "there is much"; *djimángun$^{s}t'$* (25, 9) "they were just five" (*djiman-* "to be five"); and *k'ú̄k'in$^{s}t'$* 169, 5) "she did not come" (*-k'i-* "hither"). Bahuvrīhi compound nouns are in Yana simply substantivized derivatives of bahuvrīhi verbs, not direct combinations of a verb and noun stem. Thus *dja'dumál^{s}gu* "hang-ears, dog" (*dja'-* "to hang"; *-du-* "down"; *mál^{s}gu* "ear") is a derivative of the verb *dja'dumál'guisi* "his ears hang" as truly as is *p'ubílla* "swim-about, duck" (*p'u-* "to swim"; *-bil-* "about, hither and thither"; *-la*, assimilated from *-na*, noun ending) of *p'ubílsi* "he swims about."

Morphologically the incorporated noun of Yana is to be considered as on a par with the numerous derivative suffixes of the verb, as is shown, among other things, by the fact that it may be immersed, as it were, in these, some of the prefixes preceding, others following the incorporated noun. The noun, then, when incorporated, is adverbial in character as regards its relation to the verb stem, that is, in so far as the derivative suffix is looked upon as adverbial in force rather than itself verbal with secondary position.[1]

[1] See abstract of Yana structure in *American Anthropologist*, N. S., XI, p. 110.

The morphologic parallelism of such verbs as *k!utxáisindja* "I want water" and *k!útsasindja* "I want to go away" (*-sa-* "away") is obvious. In Uto-Aztekan, where composition of independent verb stems takes place freely, there was no difficulty in interpreting noun incorporation as a kind of composition; in Yana, however, where the verb is regularly followed only by elements that, however concrete in meaning, never occur independently, it seems more appropriate to regard noun incorporation as a form of derivation or, at best, as something between composition and derivation.

Of syntactically greater importance than in Yana, yet morphologically less clearly developed, is the noun incorporation of Takelma. As the writer has already discussed this problem in some detail in his forthcoming "Takelma Language of Southwestern Oregon," [1] it is not necessary to go into the matter fully in this place. All incorporated nouns are in Takelma prefixed to the verb stem, in contrast to the pronominal elements which, whether subjective or objective, are invariably suffixed. Here again, then, we see that noun and pronominal incorporation are unrelated morphologic processes. There is a further difference between the two sets of elements. The pronominal suffixes are as thoroughly welded with the verb stem (or verb stem plus its derivative suffixes) as one can desire, fully as much so, for instance, as in Indo-Germanic; on the other hand, incorporated nouns, and prefixed elements generally, are only loosely attached to the verb stem. Incorporation of nouns is in Takelma something more than mere juxtaposition and yet something less than composition or derivation; it may be best described as proclisis of stems, the stem, however, often coinciding with the absolute form of the noun.

The body-part stems occupy a somewhat special place in Takelma. As they hardly ever occur absolutely without possessive suffixes that, as a rule, are preceded by one or more formal suffixes serving to connect these with the stem, the prefixing of the bare stems of body-part nouns to the verb stem gives such noun stems more decidedly the appearance of being incorporated than other

[1] To be published as part of *Bulletin 40*, pt. 2, Bureau of American Ethnology ("Handbook of American Indian Languages," edited by Dr F. Boas). See §§ 34–36 of Takelma section.

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nouns. Thus the incorporated form of the noun *sal-x-dèk'* [1] "my foot" (*-dèk'* "my") is *sal-*, that of *dan-à-t'k'* "my rock" (*-t'k'* "my") is *dan-*, a form coinciding with the absolute *dàn*. Moreover, a number of body-part stems have developed a general locative meaning in which all trace of the original concrete signification is lost: thus *dak'-* (cf. *dág-ax-dek'* "my head") means not only "head (obj.), with one's head, in one's head" but also "above, over." Nevertheless, there are several frequently used body-part prefixes, such as *ī-* "hand," that have no secondary local sense. One should beware of exaggerating the difference between body-part stems and other noun stems. It is true that certain body-part stems are more often incorporated and have a wider range of usage than other stems, but the fact that the relation of stem to absolute form with possessive suffix is identical in both classes of nouns and that, furthermore, noun stems not referring to parts of the body are at least quite clearly incorporated in an instrumental sense, makes it evident that the incorporative employment of body-part stems is more intense, as it were, than that of others, but not different in kind. Noun stems used with instrumental force always follow a locative prefix (not necessarily a noun stem), noun stems used as direct objects precede a locative prefix. Hence it is clear that the incorporation of any noun stem, if only it is used instrumentally and preceded by an unindependent element, is easily proved. If, however, the noun is used objectively, it is only in the case of body-part stems, as a rule, that incorporation can be demonstrated beyond cavil. Other noun stems in such a position can be considered as independent of the verb. It is important to note, however, that a noun stem employed objectively regularly precedes the verb and that there is no pronominal suffix for the object of the third person.[2] These two points, taken together with the analogy of body-part stems, make something of a case for loose objective incorporation of noun stems other than those having reference to body parts.

Examples of incorporated instrumental and objective nouns, both body-part and other, may now be given:

[1] For phonetic key of Takelma see E. Sapir, "Takelma Texts," *Anthropological Publications University of Pennsylvania Museum*, Vol. II, pp. 8–11.

[2] Except sometimes when the object is personal, in which case a suffix *-k'wa* may be employed. This suffix, significantly enough, allows no objective noun to precede the verb.

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wa$^{\varepsilon}$it!oxóxi (114, 4)[1] "he gathered them together" (*wa-* local prefix "together"; *-$^{\varepsilon}$ī-* "hand" incorporated with instrumental meaning, cf. *ī-ūx-dèk'* "my hand"; *-t!oxox-* aorist stem "to gather"; *-i* instrumental suffix).

da^{a}sgek!eīha (102, 3) "he kept listening" (*da^{a}-* "ear" incorporated with instrumental meaning, cf. *da^{a}-nx-dèk'* "my ear"; *-sgek!eīha*, continuative of *-sgek!i^{i}-* aorist stem "to listen").

xāp!i^{i}nó^{u}k'wa (188, 20) "he was warming his back" (*xā-* "back" incorporated with objective meaning, cf. *xā-hàm-t'k'* "my back"; *p!i^{i}* "fire" incorporated with instrumental meaning, cf. *p!iy-à-t'k'* "my fire"; *-nó^{u}g-* aorist stem "to warm"; *-k'wa* "one's own").

gwenwayasgut!úsgathi (144, 3) "with (his) knife he cut their necks" (*gwen-* "neck" incorporated with objective meaning, cf. *gwen-hau-x-dèk'* "my nape"; *waya* "knife" incorporated with instrumental meaning, cf. *wayà-t'k'* "my knife"; *sgut!usgat-*, distributive of *sgó^{u}d-* aorist stem "to cut"; *-hi* instrumental suffix).

wili-wa$^{\varepsilon}$it!ánida$^{\varepsilon}$ (28, 13) "you will keep house" (*wili* "house" loosely incorporated as object; *wa-* "together"; *-$^{\varepsilon}$i-* "with hand"; *-t!an-* verb stem "to hold"; *-i-* instrumental suffix; *-da$^{\varepsilon}$* 2nd singular future subject).

wai-s'ügüs'axgwa$^{\varepsilon}$n "I am sleepy" (*wai-* "sleep, sleepiness" incorporated noun, not occurring otherwise, used as object, cf. verb stem *wai-* "to sleep"; *s'ügüs'ax-* reduplicated aorist stem "to be confused (?)"; *-gwa-* comitative suffix "having"; *-$^{\varepsilon}$n* first person singular aorist subject transitive).

An incorporated noun is also, though rarely, found used subjectively or predicate subjectively in intransitive verbs. An example of each usage is here given:

ba^{a}be^{e}k!iyi^{i}k'da$^{\varepsilon}$ "forenoon" (*ba^{a}-* local prefix "up"; *be^{e}* "sun" incorporated as subject; *k!iyi^{i}k'-* aorist stem "to go, proceed"; *-da$^{\varepsilon}$* aorist subordinating suffix).

mot'wòk' (17, 13) "he visited his wife's parents, lit., he son-in-law arrived" (*mot'-* "son-in-law," not ordinarily used as absolute noun; *wòk'* aorist verb form "he arrived").

Before leaving Takelma it may be noted that all the verb forms here given are particular in application. On the whole it seems that this language has a decided tendency towards noun incorporation,

[1] References are to page and line of "Takelma Texts."

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but has not carried the process of coalescence far enough to give the incorporated noun that is not a body-part stem a characteristically incorporative appearance. Another way of putting it is to say that Takelma stands midway between two such typical extremes as Athabascan and Iroquois.

No more thorough-going instance of a noun-incorporating language can be required than Iroquois. It is significant of the frequency with which noun incorporation occurs in Iroquois that in an Oneida text of barely twenty lines published by Dr Boas at the end of his recent study of Iroquois[1] no less than nineteen examples of this process are found, five passive and reflexive verbs[2] being included in the number. As in this study Dr Boas has discussed and illustrated the main facts in regard to Iroquois noun incorporation, we can content ourselves here with merely reviewing some of these facts and selecting from his illustrative material.

Inanimate nouns are regularly incorporated into the verb-complex when used as subject or object, apparently also at times when predicate subjective (or objective) in force. The animate noun does not seem to be as often incorporated as the inanimate noun; the animate subject, according to Dr Boas, is in fact never incorporated.[3] Three points are of importance as indicating to what a degree the incorporated noun coalesces with the verb stem into a firm unit. In the first place the incorporated noun stem, if in its absolute form provided with one of the noun-forming prefixes *ga-* or *o-*, loses this prefix; in the second place it is always placed between the preceding subjective or objective pronominal element and the following verb stem, the verb stem, however, being immediately preceded by one of the five vowels *a*, *e*, *i*, *ē*, *o*, according to the formal class of the verb; in the third place many incorporated nouns take a suffix (generally *-sla-* or *zla-*,[4] *-gwa-*, or inserted ')

[1] F. Boas, "Notes on the Iroquois Language," *Putnam Anniversary Volume*, pp. 427–460.

[2] Passives and reflexives are formed in Iroquois by incorporating what might be called "empty" nouns, to borrow a convenient Chinese term. They are respectively *-d-* and *-dad-*, both *a*-stems. See Boas, loc. cit., p. 457, notes 6, 11.

[3] Incorporated *-dA^{n}lō* "friend" (Boas, loc. cit., p. 458, note 46) is perhaps rather predicate subjective than truly subjective: "they were not good as friends, *i. e.*, they were not friendly," not "the friends were not good."

[4] In Oneida. Equivalent to Mohawk *-sera-*.

originally, it would seem, of verbal abstractive force, before the characteristic vowel of the verb stem. The form of the pronominal element preceding the incorporated noun depends on the inherent vocalic class of the noun, there being five paradigms of pronominal prefixes corresponding to the five vowels enumerated.[1] This vocalic class of the incorporated noun is in no way connected with that of the following verb stem or with the prefix of the noun in its absolute form.

A few selected examples of Oneida noun incorporation are taken from Dr Boas' text; the analysis of the forms is taken chiefly from the notes to the text.

yot'a'ízu^{m} (455, 4)[2] "the trail was finished" (*yo-* third person non-masculine singular objective[3] of *a-* paradigm; *-t'a'-* = *-d-* + *-'a'-*; *-d-* passive of *a*-class; *-'a'-* incorporated form, without suffix, of absolute *o-'a'a* "trail," object of verb stem; *-izu*^{m} consists of prefix *-i-* of uncertain meaning and perfect verb stem *-zu*^{m} "to finish" of *e*-class but lost *-e-*, Boas, loc. cit., p. 452).

yelA^{n}*nodádi* (455, 6) "someone carried song along, sang as he went along" (*ye-* third person indefinite subjective of *e*-paradigm; *-lA*^{n}*n-* incorporated form, without suffix, of absolute *ga-lA*^{n}*ná* "song" of *e*-class; *-o-dadi* consists of class vowel *-o-* and present verb stem *-dadi* "to carry along," regularly employed with incorporated object).

lundnagla'slezáksgwe^{s} (456, 5) "they searched for villages" *lun-* = *lu*^{m}- third person masculine plural subjective of *a*-paradigm; *-d-* passive;[4] *-nagla'sl-* incorporated form of absolute *naglá'sla* "village," derivative in *-sla* of aorist verb stem *naglat-* "to live"; *-e-zaks* consists of class-vowel *-e-* and present verb stem *-zaks* "to search"; *-gwe*^{s} imperfect tense).

du^{m}*wadesA*^{n}*náwi*^{s} (456, 9) "there they name were given" (*du*^{m}- seems to represent a combination of three distinct prefixes: *de-* duality concept, relation of name to name bearer, practically equivalent

[1] For these paradigms see Boas, loc. cit., pp. 442, 3. Cf. J. A. Cuoq, *Études philologiques sur quelques langues sauvages de l'Amérique*, p. 99.

[2] References are to page and line of Boas, loc. cit. For phonetic key see Boas, loc. cit., pp. 427–430.

[3] Subjects of verbs that are perfect in tense are objective in form. See Boas, loc. cit., p. 438.

[4] It is difficult to see what office this "passive" serves here. Is it to be understood as incorporated with *nagla'-* "to live," *-d-nagla'sl(a)-* meaning "wherein it is lived"?

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to indirect object, *-d-* demonstrative "there," and *wa-* aorist prefix;[1] *-wa-* third person non-masculine singular of *a-* paradigm; *-d-* passive: *-e-sA^{n}n-* consists of class-vowel *-e-* and incorporated form of absolute *o-'sA^{n}ná* "name"; *-ā-wi^ɛ* consists of class-vowel *-a-* and aorist verb stem *-wi^ɛ* "to give").

sasagoyádagō ne yekzá^ɛ (456, 1) "he again body-took up the child, rescued the child" (*sa-*, *za-* contracted from *z-* "again" and *wa-* aorist prefix; *sago-* "he . . . somebody" combined form of third person masculine singular subject and third person indefinite object; *-yáda* incorporated form of absolute *o-yáda* "body"; *-gō*, *-'gō* aorist verb stem "to pick up, gather" of *e-* class but lost *-e-*; *ne* article "the"; *yekzá^ɛ* "child").

yonA^{n}yóde (456, 6) "stone stood" (*yo-* third person non-masculine singular objective[2] of *e*-paradigm; *-nA^{n}y-* incorporated form of absolute *o-nA^{n}yá^ɛ* "stone" of *e*-class; *-ō-de* consists of class-vowel *-o-* and verb stem *-de* "to stand").

ǰeyadódA^n (455, 8) "again her body was, again she seemed" (*je-* = *z-ye-*; *z-* "again"; *-ye-* third person indefinite subjective[3] of *e*-paradigm; *-yad-* incorporated form of absolute *o-yáda* "body"; *-o-dA^n* consists of class-vowel *-o-* and present verb stem *-dA^n* "to be thus").

ni'onadlasódA^n (456, 7) "their fate would be thus" (*ni-* adverbial prefix "thus"; *-'ona-* third person masculine plural objective of *a*-paradigm, changed from *-lona-* because of preceding prefix; *-dlas-* = *dlasw-* before following *o-*, incorporated form of absolute *a-dláswa* "fate" of *a*-class; *-o-dA^n* as in preceding verb form).

The first five of these forms illustrate noun incorporation of the object, the last three of the subject. Two of the former are passives, but the incorporated noun is doubtless to be considered as the object of the transitive verb stem, not the subject of the secondarily passive verb form; in these cases the non-masculine pronominal subject refers not to the nominal subject, from our English point of view, but to the incorporated passive stem *-d-* replacing a logical subject. This morphologic affiliation of passives with transitives rather than with intransitives is characteristic of more than one

[1] See Boas, loc. cit., p. 451, no. 6, second paragraph.

[2] Verbs expressing a state have as pronominal logical subjects objective forms. See Boas, loc. cit., p. 438.

[3] Why subjective? Cf. preceding and following verb forms.

American linguistic stock; in Iroquois "the trail is finished" is not to be analyzed as "the-trail is-finished," but "it is trail-finish-ed."

At first sight such a form as *yel$_A$"nodádi* with its pronominal subject (*ye-*) and nominal object (*-l$_A$"n*) seems to indicate that the incorporated noun object is the equivalent of a pronominal objective prefix, or rather that the combined pronominal subjective (or objective) prefix and objectively incorporated noun are the morphologic, as well as syntactic, equivalent of the composite subject-object pronominal prefix; thus *ye-l$_A$"n* = "somebody-song" might be directly compared with *gu"ye-* "somebody . . . it (non-masculine singular)." Here, then, we would at last have an instance in which noun incorporation is similar in spirit as well as in name to pronominal incorporation, and such a view would be further confirmed by the fact that both pronominal elements and incorporated nouns are prefixed to the verb stem and follow certain adverbial prefixes (such as *z-* "again," demonstrative *d-*, future *$_A$"-*). Comparison with other verb forms, however, soon shows this view to be untenable. Were it correct, we should expect to find that intransitive verbs with incorporated noun subject would do without a pronominal subject (or object) prefix as being unnecessary, yet reference to a form like *yon$_A$"yǫ́de* "it stone-stood" shows that such finite verb forms are impossible. Moreover, in forms like *sasagoyą́dagō* "he again somebody body-gathered" we see that the incorporation of a noun object (*e.g. -yada-* "body") does not preclude the possibility of a pronominal subject-object prefix (*e. g. -sago-* "he . . . somebody"). It is clear that in no case is the incorporated noun the equivalent of a pronominal prefix. In other words, noun incorporation in Iroquois, as elsewhere in America, is not pronominal replacement, which might be considered a syntactic process, but a kind of derivational or compositional,[1] at any rate a purely non-syntactic or etymologic process, the morphologic equivalent of a logically syntactic one.

[1] The fact that two noun stems are never compounded in Iroquois and that all apparent compound nouns consisting of noun stem and verb (or adjective) stem are really derivatives of verbs with incorporated nouns, makes this type of "composition" a highly specialized one. If, as in Yana, incorporated nouns could be morphologically grouped with adverbial affixes, there need be no hesitation in calling the process "derivational." As it is, Iroquois noun incorporation is something more or less *sui generis*, difficult to assign to any recognized morphologic category.

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The distinction between subjective and objective noun incorporation[1] is thus merely of logical or syntactic value; morphologically it has no significance. A more important one is illustrated in the examples given. In the first four and in the sixth examples the incorporated object or subject is logically unmodified by a possessive pronoun or genitive; the incorporation is of an unqualified noun. In the fifth and last examples, however, the incorporated object or subject is logically qualified by a possessive pronoun or genitive, or, to put it more accurately, if these sentences are translated into an Indo-Germanic language, the nominal object or subject, now freed from the verb, will be found to be thus qualified. The three sentences referred to ("he again took up *the child's* body," "again *her* body was," "*their* fate would be thus") illustrate what might be called "possessed" noun incorporation. The Iroquois rule covering such cases may be thus stated:—if a noun capable of incorporation is qualified by a possessive pronoun or genitive, the noun stem is incorporated into the verb (forms a quasi-compound with the verb), while its modifier is expressed as the pronominal subject[2] or object of the verb according to whether the noun when incorporated is the syntactical equivalent of a subject or object; if the modifier is a genitive, it follows the verb as in apposition to its pronominal representative in the verb. The three sentences just given in English form thus become in Iroquois: "again he-somebody-gathered the child," "again she-body-was," "thus they-fate-are." This construction has considerable resemblance to the bahuvrīhi type of verb ("she was again so-bodied," "thus they are so-fated," *waga-dlasw-íyo* "I-fate-good am, I am good -fated"),[3] differing from it in that it is not confined to neuter verbs and does not necessarily imply general or permanent activity. In a neuter verb with unpossessed incorporated noun like *yonᴀⁿyóde* "a stone stood" there is only one object (or person) referred to

[1] The Iroquois distinction of active and neuter verbs obtains in all verbs, whether with or without incorporated noun. Transitive and intransitive are terms of little meaning in Iroquois, unless we choose to call such verbs "transitive" as have combined subject and object pronominal prefixes; all other verb forms, even such as have incorporated noun objects, would then be "intransitive."

[2] Objective in form if the verb is neuter.

[3] I. e. "I have good luck, my luck is good." See Boas, loc. cit., p. 459, note 52.

("stone"); in a neuter verb with possessed incorporated noun like *ni'onadlsód$_A^n$* "thus is their fate" two objects (or persons) are referred to ("they" and "fate"),[1] while in an active verb with unpossessed or possessed incorporated noun (object) there are respectively two and three objects (or persons) referred to.

Typically noun-incorporating is also Pawnee. The following examples are due to the courtesy of Dr Boas:

tatî'tkāhwīt[2] "I dig the ground" (*ta-* indicative prefix; *-t-* "I"; *-ît-kāhwīt* = *-îtkār-pīt*; *-îtkār-* incorporated form of absolute noun *ítkār^u* "dirt"; *-pīt* verb stem "to dig").

táhīkst$^{u\varepsilon n}$ "I make an arrow" (*tah-* = *tatr-*; *tat-* as above: *-rīks* incorporated form of *līks* "arrow"; *-st-* = *-sr-*; *-ru* verb stem "to make"; *-$^{\varepsilon n}$* temporal suffix).

tatkítuh^{un} "I make a mortar" (*tat-* as above; *-kituh-* = *-kitutr-*; *kítut* "mortar"; *-ru* and *-^{n}* as above).

tikaríhihu$^{\varepsilon}$ "the stone is large" (*ti-* third person indicative; *-karih-* = *-karitr-*; *karít* "stone"; *-rih^u* verb stem "to be large").

tirahurárihu$^{\varepsilon}$ "the deer is large" (*ti-* as above; *-rahurā-* incorporated form of absolute noun *nahurák·* "deer," *-i* + *n-* becoming *-ir-*; *-rihu$^{\varepsilon}$* as above).

The first three examples show noun incorporation of the object, the last two of the subject. It is evident at first glance that Pawnee noun incorporation is very similar to that of Iroquois. In both linguistic stocks the incorporated noun stem is inserted between the preceding pronominal element and the following verb stem, the pronominal prefix being itself preceded, if necessary, by a tense-modal

[1] This implies that *yo-* "it" of *yonA^{n}yō'de* refers to *-nA^{n}y-* "stone." It seems decidedly possible, however, that the third person non-masculine objective pronominal prefix of neuter and passive verbs (*yo-* of first and sixth examples, *wa-* of fourth example) does not refer to the incorporated noun "subject" or passive *-d-*, but is impersonal in character, like our English "it" in "it rains," so that even in such verbs there are two distinct "objects" referred to. Should this interpretation of the non-masculine singular prefix of neuter verbs be correct, it follows that the distinction made above between unpossessed and possessed noun incorporation resolves itself into the difference between impersonal and personal for neuter verbs and intransitive and transitive for active verbs (using the terms "transitive" and "intransitive" in the specifically Iroquois sense defined above).

[2] ˜ denotes long vowel with rising accent, as in Takelma; *î* = *i* in English *it*; *^{u}* = whispered *u*; *k·* = palatal *k*; *^{n}* = "nasal breath with decided closure of the posterior nares and presumably *t* [or perhaps *k*] position of the tongue" (letter from Dr Boas); *ˀ* = glottal catch.

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element (with Pawnee *ta-* compare Iroquois aoristic *wa-* and future A^n-). Because of the peculiar phonetic laws of Pawnee the coalescence of incorporated noun with pronoun and verb stem into a word unit is even carried further, if anything, than in Iroquois. In both Pawnee and Iroquois, it should be remarked, verbs with incorporated nouns are freely used to refer to particular activities.

It will probably be found that a fair number of other American linguistic stocks, that do not regularly use noun incorporation to express particular acts, nevertheless make use of the process in verbs of the general type, including bahuvrīhi verbs. Algonkin seems to be a case in point.

Cree *nandawawamiskwew* "he hunts beavers, is a beaver-hunter" (*amisk* "beaver"; *nandonawew* "he seeks him").

Ojibwa *pāginindži* "he has a swollen hand" (*o-nindž* "his hand"; *pāgiši* "it is swollen").[1]

Another language making use of noun incorporation in this limited sense is Tsimshian. Examples[2] are:

g'êl'Érla "to be a harpooner of seals" (*g'êl-g-* "to harpoon"; *Érla* "seal").

sEyêlwáyînu "I am a paddle-polisher" (*sE-* causative prefix "to make"; *yeł-g-* "smooth"; *wái* "paddle"; *-nu* "I" indicative).

Enough evidence has been presented to make it clear that noun incorporation, even if the term be limited in its application to incorporation of subject or object, is by no means rare in America. Lest it be thought, however, that noun incorporation is indeed the characteristic of American languages generally, it is well to point out that it is entirely absent in a large, perhaps the larger, number

[1] These examples are taken from C. C. Uhlenbeck, "Ontwerp van eene vergelijkende Vormleer van eenige Algonkintalen," *Verhandelingen der koninklijke Akademie van Wetenschapen te Amsterdam*, Afdeeling Letter-kunde, N. R., XI, no. 3, p. 65. In his Fox grammar Dr Jones makes no explicit reference to noun incorporation as a regular process (Algonquian, *Handbook of American Indian Languages*, I, pp. 735–873). Perhaps incorporated nouns are in Algonkin best looked upon as secondary stems with substantival force, cf. Fox *-winä-* "horn" and *-'kwä-* "woman" (pp. 796, 797).

[2] Due to the courtesy of Dr Boas. *ê* is *e* of English *met*; *E* is obscure vowel of undefined quality; *g'* is palatal *g*; *ł* is voiceless palatal *l*; *r* is uvular; ' represents weak glottal catch. The dialect is that of Tsimshian proper. See now Boas, Tsimshian, § 34 (*Handbook of American Indian Languages*, I, 365).

of them. Such are Athabascan, Salish,[1] Chinookan, Yokuts, Siouan, and Eskimo; and yet Athabascan and Eskimo might well be considered types of "polysynthetic" languages.

We have seen that noun incorporation as ordinarily understood, that is, objective noun incorporation, can not be treated without reference to other syntactic uses of the incorporated noun. Objective noun incorporation may be a justifiable theme to treat from a logical or psychological point of view, but as regards morphology there is every reason to consider this particular process a special case, syntactically speaking, of the more general process of coalescence of noun stem and verb stem into a single verb form. Besides objective and subjective incorporation of noun stems, examples have been given of their use predicate objectively and subjectively, instrumentally, locatively, and in what have been termed bahuvrīhi constructions. The manner of incorporation has been found to differ considerably in different linguistic stocks; this applies to position, degree of coalescence with verb stem, and morphological treatment of the incorporated noun. Despite all differences of detail one fact stands out prominently. In no case, not even in Iroquois, where the process is probably of greater syntactic importance than elsewhere, can the incorporated noun be considered as morphologically the equivalent of a pronominal affix. This does not mean that noun incorporation has no syntactic *value*. The characteristic fact about the process is that certain syntactic relations are expressed by what in varying degree may be called composition or derivation.[2]

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[1] The "substantivals" of Salish and Kwakiutl, as already pointed out, are not instances of true noun incorporation.

[2] Since this article was written (June, 1910) Mr J. P. Harrington has published sketches of two Tanoan dialects, Tiwa and Tewa. In Tiwa both direct and indirect noun objects may be incorporated in the verb complex, coming between the pronominal prefix and verb stem; such incorporation is obligatory for singular direct objects (*American Anthropologist*, N. S., 12, 1910, p. 28). In Tewa singular direct objects may or may not be incorporated (ibid., p. 501). Tanoan verbs with incorporated noun object are, as in Nahuatl and Shoshonean, noun-verb compounds.