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5 | The Death of Owasco

JOHN P. HART AND HETTY JO BRUMBACH

ARCHAEOLOGY IS A HISTORICAL SCIENCE. As a result, its activities are guided by key concepts and words rather than laws or law-like statements (Hart and Terrell 2002; cf. Mayr 1982). These concepts and words guide the kinds of questions asked about the past and characterize the discipline to the outside world. One of the most influential guiding and characterizing words in archaeology is *origin*. In fact, much of what many archaeologists do can be characterized as origins research, whether it be, for example, the search for the origins of agriculture (see Terrell et al. 2003) or the New York northern Iroquoians (e.g., Parker 1922; Snow 1995a [chap. 1]).¹ As a corollary to this interest in origins research, archaeologists and their audiences are fascinated by the earliest evidence for various phenomena. For example, there is a continuing search for the earliest maize in eastern North America, in part because it represents the "origin" of the agricultural systems that dominated the fields of Native American agriculturists at the time of European contact (Hart 1999a). In New York the search is for the earliest evidence of specific clusters of traits associated with historic northern Iroquoian speakers to pinpoint their "origin" as recognizable ethnic groups.

Origins research is fostered by the use of culture-historic taxa as units of analysis under their mistaken identification as ethnic groups (Trigger 1989). Reliance on culture-historic taxa as units of analysis has been a long-standing problem in archaeological research in North America generally (e.g., Binford 1965; J. Brown 1965; Moore 1994) and New York specifically (e.g., Engelbrecht 1999; 2003; Starna and Funk 1994). Culture-historic taxa have been a straightjacket, serving to define research agenda and restrict the questions asked about the past. These taxa are theory bound (Dunnell 1971); using them as units of analysis under varying theoretical

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1. In this article we use the term *Iroquois* to refer to historic speakers of Iroquoian languages in New York. We use the term *Iroquoian* to refer to other historic speakers of Iroquoian languages throughout the Northeast and to prehistoric constructs.

constructs without justification, we argue, has hindered the development of North American archaeology (Taylor 1948).

In this article we review as a case study the historical development of the key culture-historic taxon in New York associated with the origin of northern Iroquois groups from its beginnings with Arthur C. Parker (1922) and its subsequent adoption and refinement by William A. Ritchie (1944; 1969; Ritchie and Funk 1973) over the next half-century. We show that Owasco is a subjectively, extensionally defined culture-historic taxon based primarily on the thoughts of two men, Parker and Ritchie. We then review the current evidence for the various traits that Ritchie (1969; Ritchie and Funk 1973) used in his final statements on Owasco, including the results of a recent program of direct dating of cooking residues adhering to diagnostic pottery sherds (also see Hart et al. 2003; Schulenberg 2002a; 2002b [chap. 4]). The results of this research, using analytical techniques not available to Ritchie and Parker, indicate that the key traits used by Ritchie have very different chronologies than he thought. The definition of Owasco does not hold up under empirical test and we argue that the taxon should be abandoned for that reason alone. Because Owasco was originally extensionally defined, it would be possible to redefine it based on current data. But we argue on theoretical grounds that such a redefinition is unwarranted. The search for the origin of New York Iroquoians within a culture-historic framework can no longer be considered a viable research agenda.

Origin

Origin is one of a legion of vernacular words widely used in archaeology that reflects the broader context of the discipline. According to the *Oxford English Dictionary* (online second edition 1989), *origin* means "The act or fact of arising or springing from something; derivation, rise; beginning of existence in reference to its source or cause." The use of this word in archaeology, then, means that the search for the first evidence of a phenomenon is a search for the point of change from one state or condition to another—the beginning of something new, something different, something important. This definition is consistent with the commonsense notion that things remain the same until something causes them to change, thereby creating something new.

Of particular importance in the definition of *origin* are the notions of "arising or springing from something" and the "beginning of existence in reference to its source." Both of these notions require the existence of a recognizable source of the new phenomenon and by extension the existence of a state different from that of the new phenomenon. So, in the case of the northern Iroquoians, there must have been a specific source or a prior state from which this group sprang or arose.

The idea of origins in archaeology is perpetuated by, or in fact helps to perpetuate, the continued reliance on culture-historic taxa as units of analysis. These are

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The search for historic construction was developed by Parker (1922). For his Late Woodland While he saw a stage through that divided the contemporary Owasco culture. Ritchie (1969; Ritchie and Funk) nucleated village series of pottery "Third Algonkian for the first time 1100, effectively Iroquoians. It is the

2. In this article A.D. are calibrated with used by Ritchie in de-

3. Parker and Funk and its speakers. In otherwise favor the ago.

formally, temporally, and spatially bounded units that are extensionally defined so as to minimize internal variation (Dunnell 1971; Willey and Phillips 1958). These units were more or less successful in controlling spatial and temporal variation under the culture-historic paradigm. In present-day archaeology they are frequently used as units of analysis for purposes that were never intended (Hart 1999b; Starna and Funk 1994). Following from precedents established in the early twentieth century (e.g., Parker 1922), they are frequently conceived of as the equivalent of ethnic groups or ethnographic cultures (Trigger 1989). In other words, they are thought to have had some reality in the past rather than just in the present under specific definitional contexts (Dunnell 1971).

Within that conceptual context, because the rules for definition require a temporally bounded, internal homogeneity of traits, change only occurs at the temporal boundaries of taxa. The origin of a taxon must be a preceding one in the same or from another location. Because change can only be sudden or saltational, the notion of "arising or springing from something" fits this conception of the past almost without thought.

The search for the origin of the northern Iroquois is pursued within the culture-historic constructs of the early to mid-twentieth century. In New York, that construct was developed by Ritchie (e.g., 1936; 1944; 1969), building on earlier work by Parker (1922). Following the advent of radiocarbon dating, Ritchie (1969) defined his Late Woodland stage and its Owasco culture both as beginning at ca. A.D. 1000.² While he saw a continuum of development from his preceding Middle Woodland stage through the historic northern Iroquois in his final version of the scheme, he divided the continuum based on limited series of traits that he felt characterized particular periods of time. The key characteristics of the Late Woodland stage and Owasco culture, setting them off from earlier manifestations, were ultimately to Ritchie (1969; Ritchie and Funk 1973) the advent of maize-bean-squash agriculture, nucleated villages, and longhouses with inferred matrilineal residence, along with a series of pottery types (also see Snow 1995a [chap. 1]; compare to Parker's 1922 "Third Algonkian Period").³ Ritchie saw each of these characteristics as occurring for the first time during the Carpenter Brook phase dating from A.D. 1000 to A.D. 1100, effectively originating the recognizable development of the New York Iroquoians. It is the onset of Owasco at A.D. 1000, or as is more widely accepted now

2. In this article dates denoted by B.P. are in radiocarbon years before present. Those denoted with A.D. are calibrated with CALIB 4.3 (Stuiver et al. 1998), except for those with "ca.," which are estimates used by Ritchie in defining his culture history.

3. Parker and Ritchie used spellings of *Algonkian* and/or *Algonkin* to refer to the language family and its speakers. In this article we follow this usage when discussing Parker's and Ritchie's work, but otherwise favor the alternative spelling, *Algonquian*, which came into common usage about 15 years ago.

A.D. 900 (see Funk 1993; Snow 1995a [chap. 1]), that is typically accepted as the origin of northern Iroquoian groups in New York, whether an in situ or migration hypothesis for that origin is postulated. Owasco is the source from which the northern Iroquoians arose or sprang, whether researchers accept the A.D. 1000 date or not (Snow 1995a [chap. 1]; 1996a [chap. 3]). However, the continued use of Ritchie's scheme and its concomitant identification with the search for the origins of New York Iroquois now can be challenged on evidential and theoretical grounds.

A Short History of Owasco

The major focus of William A. Ritchie's career as the foremost archaeologist in New York was the construction of a culture history of the state. The ultimate expression of this effort is *The Archaeology of New York State* (1965; 1969), with some elaboration in his later volume with Robert E. Funk, *Aboriginal Settlement Patterns in the Northeast* (1973). Within these final statements of Ritchie's culture history, the origin of recognizable Iroquoian traits in New York begins with the onset of the Late Woodland stage (or period) and the Owasco culture at ca. A.D. 1000. This culture history continues to dominate archaeological research in New York, framing and defining research issues (e.g., Gates St-Pierre 2001; Snow 1995a [chap. 1]; 1996a [chap. 3]; 2001) and regional summaries (e.g., Funk 1993; Prezzano and Rieth 2001). In order to understand what Owasco represents, it is necessary to briefly summarize the history of the taxon.

Culture-historic units in North American archaeology are extensionally defined (Dunnell 1971; Lyman and O'Brien 2002; Lyman et al. 1997). According to Dunnell (1971, 15) extensional definitions are "accomplished by listing all objects to which the term is applicable, or doing this within some specified and restricted set of boundaries." Extensional definitions "cannot convey why a thing is that thing, but only that it is" (Dunnell 1971, 16). The extensional definition of units is subjective, being based on the person doing the defining, and historically contingent because the definitions are based on objects available for enumeration. "The procedure is murky because what one analyst chooses to perceive may be different from the choices of another analyst" (Lyman and O'Brien 2002, 81). As we will show in the following brief history of the Owasco culture, it has always been extensionally defined; Ritchie accepted a previously defined taxon (Parker 1922) and spent the remainder of his career extensionally defining the unit's content and adjusting its boundaries (see Ritchie 1969, xxxii).

The first time Ritchie used the term *Owasco* as a culture-historic taxon was in his 1936 monograph *A Prehistoric Fortified Village Site at Canandaigua, Ontario County, New York*. In the foreword to that volume, Ritchie (1936, 3) stated that the Owasco aspect was a replacement for Parker's (1922) Third Algonkian period. The change from the Third Algonkian period to the Owasco aspect followed the adop-

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tion of the Midwest Taxonomic Method. As clearly stated in his later publications, for Ritchie it was a simple replacement of terms:

The Owasco culture takes its name from the first reported site, located in Lakeside (now Emerson) Park on the outlet of Owasco Lake, at Auburn, Cayuga County. . . . The distinctiveness of the assemblage from other cultures known at that time was recognized by Parker, who attributed the site to his "Third Algonkian Period" (Parker 1922, 49). . . . following the writer's exploration in 1934 of the Sackett site . . . and the formulation and adoption of the Midwestern Taxonomic Method of classification in 1935, the cultural designation was changed to the "Owasco Aspect." (Ritchie 1969, 272-73)

As related by Ritchie and Funk (1973, 165), "At that time (1936) the earlier designation of 'Third Algonkian Period' (Parker 1922, 49) was changed to 'Owasco Aspect,' in line with the general adoption by American archaeologists of the Midwestern Taxonomic System."

Parker's definition of the Third Algonkian period is as follows:

The later [third] Algonkian occupation is more definite in character and covers almost the entire area of the State. It is characterized by numerous flints, by steatite pottery, clay pottery, notched choppers, grooved axes, celts, adzes, hoes, some copper implements, gouges, gorgets, birdstones, banner stones, cord-marked and pattern-stamped clay pottery, mediocre clay pipes, roller pestles, numerous net sinkers, and a considerable amount of bone implements, as awls, harpoons, needles and beads. The sites are generally on lowlands near streams and lakes, none of importance being on hilltops. The later Algonkian peoples were agricultural as is proved by the numerous instances in which maize and beans have been found in refuse pits. The later Algonkian tribes were more sedentary than their predecessors and their settlements presumably larger. This seems to be indicated by the presence of deposits of refuse, by refuse pits and heaps and large areas of ground filled with carbonized matter, fire-burned stone and calcined bone. (Parker 1922, 48-49)

Parker, of course, had no idea of the time depth of human occupation of the Western Hemisphere. He conceived the precontact history of New York in terms of its historic Native occupants and contact with outside groups such as the Eskimo. As a result his nomenclature was based on historic language groups and ethnographic analogies. He envisioned the Algonquian occupations as "wave after wave of these peoples, coming in band after band to hunt over the territory or make settlements" before the arrival of "the Iroquoian tribes" (Parker 1922, 46). Following the adoption of the Midwest Taxonomic Method, Ritchie worked with Parker to place Parker's 1922 taxonomy within the new nomenclature (Ritchie 1936, 3), resulting in the terminology switch to Owasco aspect (fig. 5.1). Per the Midwest Taxonomic Method (McKern 1939), one goal was to eliminate reference to historic language and ethnic groups and base taxonomies purely on archaeological data,

Ritchie's 1936 "Classification of Aboriginal Cultures of New York State"					
BASE	PATTERN	PHASE	ASPECT (Period)	FOCUS (Phase)	COMPONENT (Site)
Mississippi		Upper	Iroquois (Iroquois)	Huron Neutral Erie Seneca Cayuga Onondaga Oneida Mohawk Tuscarora Andaste	
		Hopewellian	Elemental (Mound Intrusion)		New York
Woodland		Northeastern	Owasco (Third Algonkian)	Castle Creek	Castle Creek
					Bainbridge
			Vine Valley (Second Algonkian)	Canandaigua (Owasco)	Owasco Lake
					Levanna
Pt. Peninsula	Middlesex (Vine Valley)	Canandaigua			
		Hilltop			
Coastal	Orient	Wilber Lake			
		White's Pond			
Ground Slate	(Eskimo-like)				Pt. Peninsula
					Long Point
Archaic	(Archaic Algonkian)				Northrop
					Dundee
					Wray
					Vine Valley
					Palatine Bridge
					Hoffmans
					Sites on Long Island, etc.
					Sites on Eastern Long Island, etc.
					Lamoka Lake
					Geneva
					Scottsville

Fig. 5.1. Ritchie's (1936) culture-historic scheme for New York (after Ritchie 1936, 4). Terms in parentheses are Parker's (1922) corresponding taxa.

but Ritchie (1936, 3) stated that "[i]t must not consequently be concluded that the ultimate recognition of the Vine Valley or Owasco aspects as products of an Algonkin people has been abandoned. The line of evidence now being followed seems to be tending toward the coincidence of the latter with a well known Algonkin group." Thus the foundations of Owasco are in Parker's initial attempt to define taxa related to historically recorded language groups in New York. Parker provided the boundaries, while Ritchie's later work revised the content.

In his first major synthesis of New York prehistory, *The Pre-Iroquoian Occupations of New York State*, Ritchie (1944) elaborated the list of attributes defining the

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Owasco aspect, and defined two Owasco foci. At this early time, like Parker, Ritchie had no conception of the time depth of human occupations in New York, projecting the entire sequence back only 1,600 years (Ritchie 1944, 10; also see Ritchie 1969, xxviii), with the Owasco aspect originating at approximately A.D. 1200, extending to A.D. 1650, and overlapping with and being influenced by the Iroquois aspect for some 300 years after the latter's origination from elsewhere at approximately A.D. 1350. Along with an extensive description and illustration of Owasco pottery, and a brief discussion of settlement traits, Ritchie (1944, 46) identified 288 traits for the Owasco aspect, based on excavations at 30 sites. The enumerated traits expanded with the number of sites excavated as part of the continuing extensional definition of the taxon. Ritchie summarized the aspect as follows: "Clearly the Owasco culture was the product of a rather numerous agricultural people, having a well-developed ceramic complex in which Woodland pipes and pottery attained their apogee" (Ritchie 1944, 52). Reflecting the fact that extensional definitions change as additional sites are excavated, Ritchie (1944, 29) contra Parker (1922) indicated that Owasco sites are "often situated on hilltops a mile or more from navigable water."

The fact that Ritchie accepted this taxon as viable and only in need of refinement is clear in his 1949 publication with Richard S. MacNeish on "The Pre-Iroquoian Pottery of New York State." The stated goal of that paper was to refine an already accepted taxon and cultural sequence:

The establishment of ceramic type categories for the pre-Iroquoian horizons of New York state . . . was undertaken for a number of reasons. Primarily, it was believed that such an analysis, breaking down the existing ware divisions into finer type inventories, would prove useful in obtaining a more minute chronological differentiation of the Owasco and Point Peninsula cultures than would be possible on any other basis, and in so doing, would aid in clarifying their possible relationships as well as their conceivable affinities with other major ceramic manifestations in the New York area. It was also hoped that our survey might reveal significant areal subdivisions which eventually might be referred to historic tribal units. Finally, the achievement of a pottery typology for New York would elucidate problems of pre-historic culture diffusion and development over the Northeastern area and might, indeed, contribute to broader interpretations of cultural dynamics and processes of acculturation involved in the complex interconnections of sequential archaeological components. (Ritchie and MacNeish 1949, 97-98)

Following his work with Ritchie on pre-Iroquoian pottery, MacNeish (1952) undertook a study of Iroquoian pottery, which led him to conclude that Iroquois pottery developed from Owasco. He observed that while there are significant differences in decorative motif, surface finish, and location of decoration, these changes occurred gradually and there was significant overlap in attributes. MacNeish also observed that Owasco ceramic types appear on early Iroquois sites, and that there are "transitional" types with features distinctive of both Owasco and Iro-

Component (Site)
Quawkie Hill
Castle Creek Bainbridge
Owasco Lake Levanna Candaigua Hilltop Wilber Lake White's Pond Willow Point
Point Peninsula Long Point Northrop Dundee Wray
Vine Valley Latine Bridge Hoffmans
Sites on Long Island, etc.
Sites on Eastern Long Island, etc.
Seneca Lake Geneva Scottsville

York
(1922)

He concluded that the products of an Algonquian culture now being followed by a well known Algonquian culture's initial attempt to settle in New York. Parker's content.

Pre-Iroquoian Occupations - attributes defining the

quois (MacNeish 1952, 82). MacNeish (1952, 82–83) also pointed out that Iroquois is in many cases stratigraphically later than Owasco, “and that no culture of the same time period as Owasco, and with as many connections with the Iroquois has been found in the areas which surround the Iroquois.” MacNeish’s work convinced the majority of New York archaeologists that Iroquois developed from Owasco.

By the mid to late 1960s Ritchie had had two decades to further compile traits for the Owasco taxon. As with the earlier change from Third Algonkian period to Owasco aspect with the adoption of the Midwest Taxonomic Method, Ritchie (1969, xxvii–xxviii) now adopted the terminology of Willey and Phillips’ (1958) systematics, trading the terms *aspect* and *focus* for *culture* and *phase*. Although he claimed to have adopted Taylor’s (1948) conjunctive approach, Ritchie’s primary focus remained on defining boundaries and enumerating the traits of the Owasco culture, as is demonstrated by the list of subheadings for his section on the taxon: Geographic Range, Site Locations, Chronology, The Owasco People, Subsistence Bases, Hunting and Fishing Equipment, Vegetable Foods and Their Storage, Food Preparation, Settlement Pattern, Clothing and Personal Decoration, Tools, Textiles and Basketry, Pottery, Travel and Trade, Warfare, Games, Smoking Pipes, Burial Customs, Social and Political Organization, Religious Concepts, and Linguistic Affiliations.

While no longer using an exhaustive list of traits, expanded with each excavated site, what is more than clear here is that Ritchie accepted Owasco as a taxon without formal definition or justification other than that it ultimately derived from Parker’s Third Algonkian period. What Ritchie did was place the traditional discussion and listing of traits into a descriptive narrative, reflecting his interpretation of Taylor’s approach: “The emphasis has thus been shifted from a primary concern with taxonomy, chronology, culture content and relationships, to the examination of whole cultures, within the relatively narrow limits afforded by their archaeological survivals” (Ritchie 1969, xxvii).

Two important changes in the conceptualization of Owasco were the refinement of chronology based on radiocarbon dating and the association of Owasco with the origin of Iroquoian groups in New York state. Ritchie noted there were 12 radiocarbon dates from 8 Owasco sites. These dates were used by Ritchie to formulate a 300-year time span for Owasco, from A.D. 1000 to 1300, with each of the three phases (Carpenter Brook, Canandaigua, and Castle Creek) accounting for 100 years, respectively. This formulation established the chronology for Owasco that remains largely accepted today (e.g., Funk 1993; Prezzano and Rieth 2001; Snow 1995a [chap. 1]). As a major departure from earlier conceptualizations, while still accepting Owasco as ancestral to some historic Algonquian groups, following MacNeish (1952), Ritchie (1969, 273, 300–301) now saw Owasco as ancestral to the historic northern Iroquois of New York. He summarized the key developments defining Owasco as follows:

A principal distinction setting off Late from Middle Woodland cultures is the now obvious fact of the importance of cultigens—corn, beans and squash demonstra-

bly—in the settlement patterning a sessile longhouses.

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In the end, originated subject the contents of ally refined by In his publications with expectation based on (2) establishment based on additional and/or list of excavated; and certain traits.

An interesting Owasco Rieth 2002a; Stiffened by Parker Branch of the Single archaeological on New York I

bly—in the economy. This change accompanied, *pari passu*, a major alteration in settlement pattern, with large villages, the later ones protected by palisades, containing a sessile or semisedentary, augmenting population, dwelling communally in longhouses. (Ritchie 1969, 180)

In his last major summary of New York archaeology, focused on settlement pattern data and interpretations (Ritchie and Funk 1973), Ritchie continued the extensional definition of Owasco with narrative discussions of traits in two sections (Ritchie and Funk 1973, 165–67, 359–61). The volume's focus on settlement patterns resulted in this final summary statement on Owasco:

Throughout the Owasco period, there was a continuing trend toward larger settlements—now describable as villages—with correspondingly greater sessility. Agricultural products were the prime subsistence basis, as shown by consistent recoveries of charred corn and other cultigens and indirectly by a steady decline in the frequency of hunting and fishing gear and associated tools. In eastern and south-central New York, Late Woodland groups made use of increasingly larger and more numerous pits for storing plant foods. The average size of houses, now obviously prototypical longhouses, also tended to increase. Evidence for internecine warfare, in the form of palisaded villages, arrow-riddled corpses, evidence for cannibalism, etc., first appeared in Middle Owasco times. All of these trends, accompanied by gradual modifications in ceramics and projectile point styles, persisted through the period occupied by archaeological entities which, by A.D. 1400, were distinctly Iroquoian. (Ritchie and Funk 1973, 369)

In the end, Owasco is simply an extensionally defined culture-historic taxon. It originated subjectively under a different name with Parker (1922) based initially on the contents of a single site. It was firmly established in the literature and continually refined by Parker's protégé Ritchie (1936; 1944; 1969; Ritchie and Funk 1973). In his publications, Ritchie followed a set pattern in defining Owasco, consistent with expectations for extensional definitions (Dunnell 1971): (1) assertion of existence based on authority—on its long-standing recognition by Parker and himself; (2) establishment of time and space boundaries, refined with each publication based on additional site finds and advances in chronological control; (3) a narrative and/or list of traits, dominated by pottery descriptions, refined with each site excavated; and (4) narrative descriptions of representative sites that illustrated certain traits.

An interesting thought experiment, given all of the effort expended on distinguishing Owasco and Clemson Island pottery (see Hart 1999b; Hay et al. 1987; Rieth 2002a; Stewart 1990), is whether these taxa would have been separately identified by Parker and Ritchie had New York extended south to encompass the West Branch of the Susquehanna River basin. Would they have been recognized as a single archaeological culture, and how would that have affected the history of thought on New York Iroquoian origins?

Owasco is the creation of two men, Ritchie and Parker. There has never been an explicit justification of this taxon other than authoritative recognition of its existence by Parker and Ritchie. Ritchie never questioned Parker's identification of the taxon; he simply recast it in new terms as suited to contemporary trends in the literature, and refined its temporal, spatial, and formal properties. It has now been three decades since Ritchie's final statement on Owasco (Ritchie and Funk 1973). It remains firmly established in the literature. With the exception of temporal position, the taxon has been largely unquestionably accepted as a valid construct, an appropriate unit of analysis, and the origination of recognizable Iroquoian traits in New York State (see Snow 1995a [chap. 1]). As a result of recent empirical and theoretical research (e.g., Hart 1999c; 2000a; 2001; Hart and Scarry 1999; Hart et al. 2002; 2003; Schulenberg 2002a; 2002b [chap. 4]), the major traits identified as defining the taxon and its Iroquoian connections in Ritchie's final formulations (Ritchie 1969; Ritchie and Funk 1973) have been shown to have histories that are very different from those stated by Ritchie. These findings demonstrate that the taxon's definition can no longer stand.

Current Evidence for Key Owasco Traits

The archaeological origin of the northern Iroquoians in New York is recognized with the onset of the Owasco tradition under Ritchie's final refinement of his culture-history scheme. Specifically, the origin of Owasco is recognized by the appearance of four traits: (1) specific ceramic types, (2) longhouses and inferred matrilineal residence, (3) nucleated villages, and (4) maize-bean-squash agriculture. Recent empirical research has demonstrated that these traits have histories divergent from those accepted by archaeologists using Ritchie's taxonomy (Hart 1999c; 2000a; Hart and Scarry 1999; Hart et al. 2002; 2003; Schulenberg 2002a; 2002b [chap. 4]). In the following pages we present additional evidence that contradicts the widely accepted ceramic chronology relative to the origin of Owasco and complements data recently published by Schulenberg (2002a; 2002b [chap. 4]), and summarize the results of previously published research on the timing of subsistence and settlement traits.

Pottery Type Chronology

An important component of the extensional definition of Owasco and that of its three phases is a series of pottery types initially defined by Ritchie and MacNeish (1949). These types were used in seriations to help establish the relative chronology of Owasco's subtaxa (see, e.g., Ritchie 1969; Ritchie and MacNeish 1949; Ritchie et al. 1953). Ritchie and MacNeish (1949) ascribed relative chronological positions to the various types (table 5.1); following the advent of radiocarbon dating those same types later came to be associated with specific time ranges (see

Type

Point Peninsula I
Kipp Island Cris
Jack's Reef Dent
Jack's Reef Cord
Jack's Reef Cord
Jack's Reef Cord
Wickham Cord
Carpenter Brook
Levanna Corded
Levanna Cord-o
Owasco Herring
Owasco Platted
Owasco Corded
Owasco Corded

Source: After Ritch

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Table 5.1
Late Point Peninsula and Early Owasco Types

Type	Relative Age
Point Peninsula Rocker-Stamped	Early to Late Point Peninsula
Kipp Island Crisscross	Late Point Peninsula
Jack's Reef Dentate Collar	Late Point Peninsula
Jack's Reef Corded	Late Point Peninsula
Jack's Reef Corded Collar	Late Point Peninsula
Jack's Reef Corded Punctate	Late Point Peninsula
Wickham Corded Punctate	Early Owasco
Carpenter Brook Cord-on-Cord	Early Owasco
Levanna Corded Collar	Early Owasco
Levanna Cord-on-Cord	Early to Late Owasco
Owasco Herringbone	Late Point Peninsula to Late Owasco
Owasco Platted	Early to Late Owasco
Owasco Corded Horizontal	Early to Late Owasco
Owasco Corded Oblique	Early to Late Owasco

Source: After Ritchie and MacNeish 1949.

especially Prezzano 1992; Schulenberg 2002a). Like Owasco itself, the pottery types are extensionally defined, and, therefore, historically contingent.

Ritchie (1969) subsequently defined the Hunter's Home phase dating to ca. A.D. 900–1000, which formed a transition between the end of the Point Peninsula culture and the beginning of the Owasco culture:

[I]t must be emphasized that as the culture [Owasco] represents a developmental continuum through time and space, it becomes exceedingly difficult, if not impossible, narrowly and specifically to define and characterize separable and distinctive phases. One might more readily and validly discern earlier, intermediate and later stages, based mainly upon ceramic criteria, the first having closest affinities with the Hunter's Home phase, which we regard as terminal Point Peninsula, the last hardly distinguishable from the Oak Hill phase, arbitrarily assumed to represent inchoate Iroquoian culture in the New York area. (Ritchie 1969, 273)

Accordingly to this formulation, some early Owasco types occurred in late Point Peninsula times. Snow (1995a [chap. 1]) has argued that the presence of these types represents mixed Point Peninsula and Owasco deposits, that Hunter's Home is not a valid taxon, and that Owasco extends to ca. A.D. 900 (compare to Gates St-Pierre 2001).

In order to understand the Owasco types on sites assigned by Ritchie to this transitional phase, we AMS-dated charred food residues adhering to the interior

surface of 13 late Point Peninsula-type and early Owasco-type pottery sherds from the Hunter's Home, Kipp Island, and Wickham sites in the New York State Museum's collections (see Gates St-Pierre 2001 for a detailed description of pottery in the Hunter's Home and Kipp Island collections). This work adds to the dates obtained by Schulenberg (2002a; 2002b [chap. 4]) on 11 sherds in different collections from the Hunter's Home and Kipp Island sites.

The results of our dating program are presented in table 5.2 along with the type ascriptions for the sherds based on Ritchie and MacNeish (1949). As described in Hart et al. (2003), these and Schulenberg's dates define several components at Kipp Island and Hunter's Home: two at Kipp Island with mean, pooled 2σ ranges and intercepts of A.D. 601 (642) 659 and A.D. 693 (778) 880 and one at Hunter's Home A.D. 774 (781, 793, 801) 888. The four dates at Wickham were widely dispersed, although two have a mean pooled 2σ range and intercept of A.D. 683 (778) 936. The Owasco and Point Peninsula types associated with each component at the three sites are listed in table 5.3. What is apparent is that sherds assigned to Early Owasco types, with a putative origination no earlier than A.D. 900–1000, date much earlier. Early Owasco and Late Point Peninsula types are unquestionably contemporaneous at and among these three sites.

Longhouses

Ritchie (1969) used the longhouses he defined at Roundtop to argue that this northern Iroquoian trait (and inferred matrilineal residence patterns) was present in New York by the eleventh century A.D. (also see Ritchie and Funk 1973). A recent series of radiocarbon dates has resulted in a reinterpretation of the ages of the two longhouses Ritchie defined at this site (Hart 2000a). The earliest longhouse dates to approximately A.D. 1350 while the second house dates to approximately A.D. 1600. New radiocarbon dates from other key New York sites (Maxon-Derby, Sackett, Bates, and Kelso; see Ritchie and Funk 1973), and a review of the literature, indicate that on present evidence large longhouses such as those at Roundtop were not present in New York until the thirteenth century A.D. and were not common until the fourteenth century A.D. (Hart 2000a). There is also no basis on which to infer a sudden appearance of matrilineality with the arrival of agriculture in the region as explained in Hart (2001; compare to Snow 1995a [chap. 1]).

Nucleated Villages

When defined as settlements having more than two households (see Hart and Means 2002), the evidence for early villages in New York is questionable. The eleventh-century Port Dickinson and White sites have only one documented structure each (Prezzano 1992) and may represent temporary camps or hamlets (Funk

Table 5.2
AMS Dates on Charred Cooking Residue from Three New York Sites

Site	Cat. No.	ISGS No.	RCY B.P.	A.D. 2σ (intercept)	Pottery Type
Wickham	40525-1	A0190	1425 ± 45	542 (642) 677	Wickham Corded Punctate
Wickham	40525-8	A0191	1228 ± 42	683 (778) 936	Wickham Corded Punctate
Wickham	40170	A0194	1648 ± 47	259 (413) 536	Point Peninsula Corded
Wickham	40194	A0195	1450 ± 43	538 (620, 634, 636) 662	Point Peninsula Corded
Hunter's Home	48580-110	A0192	1231 ± 44	678 (778) 936	Wickham Corded Punctate
Hunter's Home	48580-115	A0193	1286 ± 40	659 (692, 702, 711, 752, 760) 855	Wickham Corded Punctate
Hunter's Home	41797	A0196	1138 ± 40	779 (895, 924, 937) 996	Owasco Platted
Hunter's Home	41356-6	A0197	1247 ± 48	664 (775) 893	Carp. Brook Cord-on-Cord
Hunter's Home	48584-1	A0198	1211 ± 46	687 (781, 793, 801) 960	Owasco Corded Horizontal
Kipp Island	41119-2	A0226	1461 ± 43	535 (604, 612, 615) 660	Kipp Island Crisscross
Kipp Island	41119-5	A0225	1470 ± 43	553 (604, 612, 615) 660	Carp. Brook Cord-on-Cord
Kipp Island	41119-8	A0227	1428 ± 41	543 (641) 668	Jack's Reef Corded
Kipp Island	42729-5	A0228	1260 ± 39	664 (723, 740, 771) 886	Wickham Corded Punctate

pottery sherds from the New York State description of pottery adds to the dates of different collections

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holds (see Hart and is questionable. The e documented struc- ps or hamlets (Funk

1993; Prezzano and Rieth 2001). At Roundtop, only one house can be identified each for the fourteenth- and sixteenth-century occupations. Maxon-Derby's eleventh-century A.D. occupation has only one associated structure, while at most two contemporaneous structures are evident for the early thirteenth-century-A.D. occupation (Hart 2000a). At the Boland site, only two structures are identified with the twelfth-century A.D. occupation (Prezzano 1992). These sites have been identified as early villages in the literature (see Prezzano and Rieth 2001). The two best documented early villages are Sackett and Kelso, which date to the thirteenth century A.D. (Hart 2000a). Thus, on current data, there is no evidence for villages appearing suddenly in New York around A.D. 1000.

Maize-Bean-Squash Agriculture

Until a few years ago it was widely accepted that maize (*Zea mays*), the common bean (*Phaseolus vulgaris*), and squash (*Cucurbita pepo*) entered northern Iroquoia around A.D. 900–1000, helping to define the origin of Owasco and New York Iroquoian subsistence economy (e.g., Snow 1995a [chap. 1]). The known history of these crops now suggests a very different scenario.

The earliest evidence for squash in northern Iroquoia had been A.D. 1000–1100 at the Roundtop site in New York (Ritchie 1969; Ritchie and Funk 1973). While squash rind from the Memorial Park site in the West Branch of the Susquehanna River valley in Pennsylvania had been directly dated to 1635 ± 45 B.P. (Hart and Asch Sidell 1997), no pre-A.D. 1000 evidence for this crop has been found to the north. In fact, new dates on Roundtop indicate that the squash seeds recovered there date to around A.D. 1350 (Hart 1999c; 2000a). However, squash phytoliths, probably representing *Cucurbita pepo*, were recovered from the directly dated cooking residues adhering to pottery rim sherds from the seventh- and eighth-century A.D. Kipp Island, Hunter's Home, and Wickham sites (Hart et al. 2003).

The history of maize in northern Iroquoia underwent major revision in the 1990s with substantiation of this crop's presence in southern Ontario by the sixth century A.D. (Crawford et al. 1997). Despite intensive flotation and identification efforts at numerous sites in New York (e.g., Asch Sidell 2002; Cassedy and Webb 1999; Knapp 2002), the earliest direct date on maize was A.D. 1000 (Cassedy and Webb 1999). However, maize phytoliths were recovered from the seventh-century-A.D. cooking residues from the Kipp Island and Wickham sites, as well as from residues from the later Kipp Island and Hunter's Home components (Hart et al. 2003). These results substantiate a much longer history for this crop in New York and thus throughout northern Iroquoia than previous evidence suggested.

Direct AMS dating of common bean remains from Roundtop indicated that contra Ritchie (1969; Ritchie and Funk 1973), this crop was not archaeologically visible at the site before A.D. 1300 (Hart 1999c). Subsequent dates on bean remains

from the Connecticut River valley to the Illinois River valley indicate that the results at Roundtop reflect an overall pattern in the greater Northeast (Hart et al. 2002; Hart and Scarry 1999). Common bean, and by extension maize-bean-squash, agriculture is not evident across the region until approximately A.D. 1300.

Summary

What is evident from the new data on the timing of traits Ritchie used to define the origin of Owasco and thus New York northern Iroquoians is that those traits do not appear together at ca. A.D. 900–1000. Pottery types assigned to Early Owasco by Ritchie and MacNeish (1949) are present several centuries earlier. Maize and squash are similarly early, while beans, maize-bean-squash agriculture, long-houses and associated matrilocality, and villages are later.

On evidential grounds, then, Ritchie's culture-historic scheme does not hold up. The clustering of traits that he used to define the onset of the Late Woodland stage and the Owasco culture, and thus the origin of recognizable northern Iroquoian antecedents, does not come together until much later than he thought and others have accepted. Individual traits are present at least several centuries earlier than Ritchie thought or was able to identify given the methods and techniques available at the time. As a result, it is no longer possible to search for the origin of New York northern Iroquois within that construct. Because the taxonomic units are extensionally defined (Dunnell 1971), it would be possible to redefine Owasco formally and temporally to take into account the revised ages of the key traits. But that would be a questionable practice given current theoretical orientations.

Discussion

Classification systems are theory bound, whether that theory is discipline specific or drawn from common sense (Dunnell 1971). The taxonomic system used by Ritchie, while specifically originating with Parker, was developed using methods devised under the culture-historic paradigm, a primary goal of which was simply temporal and spatial control of artifact diversity (Lyman et al. 1997). Following the lead of Parker, Ritchie conflated the resulting subjectively defined units with ethnic groups. He initially believed, like Parker, that Owasco represented prehistoric Algonquian groups that were influenced and later replaced by Iroquoian groups that migrated into New York. Following the work of MacNeish (1952), Ritchie revised his opinion and saw Owasco as directly ancestral to Iroquois, part of a long continuum leading to the northern Iroquoian groups that were present in New York during historic times (fig. 5.2). Following Parker with his Third Algonkian period, Ritchie saw Owasco as covering much of New York state.

The cultural sequence followed a set pattern across the area: *Point Peninsula*

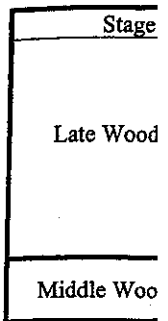


Fig. 5.2. Ritchie

(Kipp Island : Castle Creek) 1978 for a part on this sequer denoted by m. marily on the l as the steady p der, leading t (Ritchie 1969, :

We have d Point Peninsu down. In keep could redefine early as A.D. 60 sitional, step-b culture history. sistent packag would need to marking shifts reality of the ta ethnic groups a to forces as a ur responded. The only under this Snow 1995a [ch the influx of ne transitions occu historic taxa as tions asked anc change. The sea

Stage	Culture	Phase	Beginning Date (A.D.)
Late Woodland	Iroquois	Five Nations	
		Garoga	1500
		Chance	1400
		Oak Hill	1300
	Owasco	Castle Creek	1200
		Canandaigua	1100
		Carpenter Brook	1000
Middle Woodland	Point Peninsula	Hunter's Home	900
		Kipp Island	600

Fig. 5.2. Ritchie's (1969) final late prehistoric culture-historic scheme for New York.

(Kipp Island → Hunter's Home) → *Owasco* (Carpenter Brook → Canandaigua → Castle Creek) → *Iroquois* (Oak Hill → Chance → Garoga → Five Nations) (see Tuck 1978 for a particularly strong interpretation of northern Iroquoian prehistory based on this sequence). The transitions from stage to stage and culture to culture were denoted by major trait changes, while those from phase to phase were defined primarily on the basis of changes in pottery type frequencies. Change was envisioned as the steady progression from one state to another, as climbing the rungs of a ladder, leading to the historic New York northern Iroquois in teleological fashion (Ritchie 1969, 273).

We have demonstrated on current evidence that the transition to *Owasco* from Point Peninsula and thus recognizable New York Iroquoian antecedents breaks down. In keeping with the long-standing tradition of extensional definition, we could redefine *Owasco* to account for the changed evidence, perhaps beginning as early as A.D. 600. However, we would only do that if we accepted the general, transitional, step-by-step progressive concept of change that goes hand-in-hand with culture history. To do so would be to accept that traits were routinely shared in consistent packages on the same time horizon over large geographical scales. We would need to accept that change occurred only at precise temporal boundaries marking shifts from one state to another. In essence, we would have to accept the reality of the taxonomic units in the past and conceive of them as long-established ethnic groups at least partially isolated from other such ethnic groups, responding to forces as a unit with little or no variation in the manners in which their members responded. The search for a specific origin of the New York Iroquoians is possible only under this framework. Migration hypotheses (e.g., Parker 1922; Ritchie 1944; Snow 1995a [chap. 1]) simply replace the transition from one unit to another with the influx of new ethnic groups, after which a new series of step-like progressive transitions occur on the way to the historic New York Iroquois. By using culture-historic taxa as units of analysis, we have limited ourselves in the kinds of questions asked and in the possible scales of analysis when investigating long-term change. The search for the origins of New York Iroquoians is enmeshed in and pre-

destined by the continued use of Ritchie's taxonomy with its step-like, progressive conceptualization of change.

If we accept that human behavior varies at any scale imaginable, and that change occurs as the result of differential persistence of this variation (Terrell and Hart 2002), then the use of culture-historic taxa as units of analysis becomes even more suspect. If we also accept that individual aspects of human behavior and their associated artifacts have separate histories and that those histories are reticulate, then we must also accept that human behavioral evolution consists of what can be thought of as an entangled bank, with endless divergences and anastomoses of traits (Terrell 1986; also see Hart 1999b). Configurations of traits are visible at any particular slice of time at any particular place (e.g., Dunnell 1982, 10–11), but these configurations are transient, with each trait having its own history (Terrell and Hart 2002). While there have been strong statements on the ability to track not only northern Iroquoian but also specific historic Iroquois nations well back in time (e.g., Niemczycki 1984; Tuck 1978), we wonder how much this signal is predetermined by the conceptual framework of Ritchie's taxonomy and geographical positioning.

While both ethnographic and archaeological taxa are assemblages of traits, those of the former may comprise functioning, interrelated, and ongoing systems of behaviors and beliefs, while those of the latter are parts of individual, not necessarily related, systems (such as craft production, subsistence, and settlement, among others) accessed indirectly through their residues. Cultural traits include factors relating to a social community's activities to meet basic needs, including the acquisition of food and shelter, access to territory and necessary resources, and the reproduction of the community itself through child bearing and socialization, among other processes. Ethnographically defined systems may include both material traits and the values and worldviews that guide and influence actions. By contrast, archaeologically defined units usually are too fragmentary and poorly known to be equated with ethnographic cultures, quite often being composed of little more than ceramic and/or lithic assemblages (e.g., Moore 1994). The notion that an assemblage of traits represents a "culture" leads us to believe that populations that share those traits also share other characteristics in common, such as language, worldview, ethnicity, and social structure, among others.

Confusing material culture and social identity would not appear to be a problem, but it has been, as discussed by William E. Engelbrecht (1999; 2003). For example, both Ritchie and MacNeish acted under the premise that ceramics were an ethnic marker, even when their own research and that of others clearly seem to argue the contrary. When MacNeish (1952, 85) began his study of Late Woodland ceramics, the prevailing hypothesis of Northeast prehistory interpreted Owasco, Point Peninsula, and earlier taxa as that of Algonquians who were displaced and eventually pushed out of upper New York State by the incoming Iroquois. However, excavations at sites of historic Algonquians in Pennsylvania recovered ceram-

ics very similar to those of New York Algonquians, also out of an Ontario context. Many of the artifacts are similar to those expected if Owasco were its own observation of Iroquois-style pottery. The assumption that the style "Iroquois" is a tribute of ceramic markers.

Similarly, the Point Peninsula areas of the northwestern Ritchie and MacNeish along the Allegheny River west into Pennsylvania historic time associated with economies, a trilineal descent system. H. Steward's model of the agricultural longhouse village.

Ritchie, even assuming historic periods groups are identical activity (Steward) sarily equivalent should not be variations of are never present.

These premises the concepts strongly argue that none can be the discipline race, language

ics very similar to Mohawk Iroquois types. Other excavations at sites in eastern New York and Long Island, all believed to have been occupied by ancestral Algonquians, also produced Mohawk types, although some of these sites did not develop out of an Owasco base (MacNeish 1952, 86–87). MacNeish (1952) concluded that many of the Algonquian groups east and south of the Iroquois had pottery more similar to the Iroquois than to Owasco, which is contrary to what would be expected if Owasco were the archaeological culture of the Algonquians. Despite their own observations that members of various language groups manufactured Iroquois-style pottery, both Ritchie and MacNeish continued to operate under the assumption that these ceramics rigidly reflected some cultural entity and termed this style "Iroquois." In other words, the ceramic types became more than associated attributes of craft production and decoration; they were treated as cultural and ethnic markers.

Similarly, ethnic and linguistic attributions were made for both Owasco and Point Peninsula. This error arose because Point Peninsula ceramics were found in areas of the Northeast not occupied by historic northern Iroquoians. According to Ritchie and MacNeish (1949, 102), some Point Peninsula ceramic types were found along the Atlantic from Nova Scotia to New York including New England, and west into parts of Ontario, Michigan, Wisconsin, and Minnesota, areas occupied in historic times almost exclusively by Algonquian-speakers. Point Peninsula became associated with speakers of an Algonquian language, fishing and foraging economies, and small-scale societies with preferential patrilocal residence and patrilineal descent, with some of these ideas representing a misapplication of Julian H. Steward's "patrilineal band" model (Steward 1955). These traits contrasted with the agricultural economy, matrilineal descent, and residence in large matrilineal longhouse villages of historic northern Iroquois.

Ritchie, MacNeish, and others, by complicating issues of style and ethnicity, even assuming that the ethnic landscape of the past was similar to that of the early historic period, which is unlikely, were operating under the assumption that ethnic groups are identifiable in the archaeological record and that upstreaming is a viable activity (Starna and Funk 1994). Instead, we argue that material culture is not necessarily equivalent with or reflective of ethnic identity, and that culture-historic taxa should not be used uncritically in historical reconstruction, in upstreaming, and in variations of the direct historical approach. This is not to say that such approaches are never productive, but only that they can be seductive and often misleading.

These problems in interpretation derive in part from a misuse or conflation of the concepts of race, language, and culture. While anthropology as a discipline strongly argues that race, language, and culture do not necessarily co-vary, and that none can be assumed to be a predictor of the others (Boas 1940), the practice of the discipline, especially by some archaeologists, has not heeded this wisdom. That race, language, and culture do not co-vary has been demonstrated in many case

studies (see e.g., papers in Terrell 2001). Ethnographic studies reveal that different linguistic and ethnic groups often share the same elements of material culture (e.g., Brumbach 1975; 1995). Individuals can change both ethnic group identity and language. In separate research carried out by Hetty Jo Brumbach and Robert Jarvenpa (1989), study of nineteenth- and twentieth-century genealogical and historical records, as well as ethnographic study of kinship and ethnicity, revealed cases where language use among several Native American communities shifted dramatically over three generations and where individuals and whole families shifted ethnic and cultural affiliation in the course of two or three generations. Rather than dismissing such transformations as artifacts of modern political economy, they should be viewed as case studies of the ways individuals and groups make strategic use of language, culture, and ethnicity. Neither language nor race is a barrier to cultural exchange, as was clearly demonstrated by the recovery of Iroquois-style ceramics on sites occupied by presumed Algonquian-speakers. Despite these observations, Ritchie and MacNeish seemed uncomfortable with the idea that speakers of different language families could share a pottery tradition, or similarly that language was not a barrier to the exchange of cultural ideas.

Conclusions

Snow (1995a [chap. 1]) argues that the *in situ* model has been a straightjacket on our perceptions of northern Iroquoian origins. We suggest that the straightjacket is actually the continued use of a culture history that forces us to think in terms of origins. In fact, the *in situ* vs. migration debate is only possible within the culture-historic construct that predicates step-like, progressive developments. We have shown that the key taxon in Ritchie's culture history does not stand up to empirical scrutiny.

Reliance on culture-historic taxa as units of analysis is ubiquitous in North American archaeology. The analysis we have done on Owasco is a case study that has broader implications for the use of culture-historic taxonomies in North America. We think it important that the following points be considered before extending that reliance:

1. The history of culture-historic taxa definitions must be understood. It is important to know how and why they were defined and how and why those definitions have changed.
2. Culture-historic taxa are modern constructs; their only reality is within specific definitional contexts, which are theory bound. Consideration must be given to the appropriateness of those units under the theory being used to interpret the past.
3. Culture-historic taxa are constructed so as to minimize internal variation that may be of explanatory interest if recognized.
4. Culture-historic taxonomies foster interpretations of change that are step-like and progressive.

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5. Culture-historic taxa can foster the conflation of ethnicity, language, and culture, and can foster a view of static ethnic and linguistic landscapes contrary to numerous case studies.

6. The use of culture-historic units can limit research to the search for additional, defining traits and to analysis oriented toward fitting components and artifacts into their "correct" place in existing taxa and/or typologies.

Culture-historic taxa, whether or not they "facilitate communication" among archaeologists, should be regarded with caution because they tend to affect the way we view the past and the people who occupied the past. Culture-historic taxa are not the direct correlates of ethnic groups, language groups, or cultures, nor should it be assumed that they bore any social or cultural reality in the past. These taxonomic units are modern constructs and, as such, exist only in the present as heuristic tools. We recommend abandoning assumptions that the ethnic and linguistic landscape observed at the time of the European entrada represented anything other than a temporary accommodation. We do not know enough about the prehistory of the Iroquoian and Algonquian languages to be able to substitute language history for empirical archaeological research. It is a mistake to assume that these language families can be extended backwards in time unchanged for several or more millennia, or that the speakers of these languages remained unchanged and stationary in their original homelands. Likewise, the ethnic divisions observed at the time of contact were unlikely to be those that existed in the past. Ethnicity is related to a dynamic complex of interacting social, economic, and political factors, which themselves should be subjects of research. For archaeologists to believe they can hold variables of ethnicity and language constant in order to study change in settlement or subsistence patterns or ceramic technology and decoration is untenable.

The demise of Owasco leaves a void that presents an opportunity to reevaluate the manners in which the past of New York is visualized. There are numerous hints at the variation that is present in the record that has not been well dealt with under Ritchie's culture-historic construct, including the broad patterning of pottery styles that cross-cut traditional culture-historic space and time boundaries (e.g., Brumbach 1975; 1995; Graybill 1989; Prezzano 1992; Rieth 1997; 2002a; Schulenberg 2002a; 2002b [chap. 4]), and variations in settlement pattern traits including the first evidence of villages, persistence of different site categories, and house sizes (e.g., Hart 2000a; Knapp 2002; Miroff 2002; Niemczycki 1984; Rieth 2002b; Ritchie and Funk 1973). By breaking the pattern of trying to fit variation into existing culture-historic constructs, we will probably find that the past is a much more complicated place than previously imagined.

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PART 1

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