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## SOME SOCIAL IMPLICATIONS OF THE IROQUOIS "IN SITU" THEORY

### INTRODUCTION

Iroquois archaeology has progressed considerably since Richard S. MacNeish (1952) first proposed his "in situ" hypothesis of Iroquois origins. Such have been the many new contributions of data, that now we have substantial outlines for the development of three northeastern Iroquois Traditions (Wright 1966; Noble 1968). Continuing studies substantiate "in situ" development to the point that MacNeish's once simplistic "enfant terrible" has matured and may now be considered a bona fide theory.

This paper turns to some of the social implications of the Iroquois "in situ" theory. Data other than pottery are utilized, but in fact are grounded in the chronological sequence provided by ceramic seriation, radiocarbon and historic dating. An attempt is made to reconstruct some of the major developments in prehistoric Iroquois social organization. To this end the author (1968) has recently synthesized four lines of archaeological evidence in Iroquois development -- settlement patterns, burials, subsistence and pipes -- extending over the period 1000-1650 A.D. Each line of evidence displays trends and provides evidence useful for interpreting something about Iroquois social organization. Not only do these four lines of evidence reflect and demonstrate "in situ" development, but when they are conjunctively interwoven it is possible to make a preliminary formulation of some of the major developments in the kinship and political structure of Iroquois social organization. Moreover, causal questions underlying these developments arise, and deserve answers. As a whole, Iroquois prehistory offers a rich field of data suitable for the construction of an evolutionary model of cultural change.

### METHODS

In essence, three methods underlie this approach.

First, there is use of the Direct Historic Approach -- a

method pioneered in Iroquois ceramics by MacNeish (1952). Using the documented facts and cultural remains of known tribes of the historic era as a base of reference and control, extrapolations are made backward into the prehistoric. I believe this method is equally valid in its application to various aspects of Iroquois social organization as it is to pottery. It is unreasonable to believe that the complex patterns of early historic Iroquois social organization developed spontaneously; they are rather the result of a period of prehistoric development.

Second, the use of ethnographic analogy constitutes another method which in the past has received only light treatment in its application to Iroquois prehistory. Again, historically documented facts can be used as a control for insights or interpretations about excavated data. For example, the small lithic, bone or antler masquettes of prehistoric Iroquois sites are analogous to the historic masquettes commonly exchanged between persons during dream-guessing ceremonies.

A third and most important method is the use of archaeological data. Settlement patterns and burials in particular offer obvious inferences about social organization. The use of inference from raw data is a keystone to much of archaeological theory, but, as Taylor (1948: 145) points out, the degrees or pyramiding of inferences are only as solid as the excavated facts and the archaeologist's ability to interpret.

## TRENDS AND SOCIAL IMPLICATIONS IN FOUR LINES OF EVIDENCE

Cultural trends in Iroquois prehistory are demonstrated in settlement patterns, subsistence, burials and pipes traced over the period 1000-1650 A.D. Each of these four lines of evidence will be reviewed briefly. Synthesis of one line of evidence by itself is insufficient for any attempt at reconstructing Iroquois social organization, for all patterns (including others not considered here) are functionally interrelated and provide different information. Future researchers may wish to consider other lines of evidence; certainly modifications can only serve to contribute a deeper understanding to this initial simplistic scheme.

The four lines of evidence are not equally well documented for the different Iroquois traditions in the Northeast. This is in part due to a lack of excavation and in part to incomplete reporting. Where information is not available, the assumption of basic similarity in Iroquois culture has been emphasized, not with the object of cloaking differences, for differences do exist, but rather in order to describe the basic trends and recognize comparable horizon levels of development. There is enough data presently available to define trends.

With Iroquois settlement pattern, the writer considers the longhouse to be the archaeological equivalent of the sociological lineage household, and the village the community. Murdock's (1949: 46-49, 79) definitions are used here. Iroquois lineages of the early 1600's were documented as being matrilineal in descent with the matrilineages residing as extended families within a longhouse. Residence was not always matrilocal (Sagard, 1939: 124, 182; Richards, 1967: 55-56). The longhouse as a residential and kinship unit forms the primary unit of Iroquois settlement pattern.

In both Ontario and New York, the longhouse may be traced back from 1650 A.D. to 1000 A.D. Clearly, the early longhouses of the developmental Iroquois period (1000-1300 A.D.) are ancestral to the classic structures of historic times. In fact, it appears that we must now turn back prior to 1000 A.D. to seek the origin of this basic Iroquois household unit. Longhouses of the Pickering Branch of the early Ontario Iroquois Tradition are known to exceed 50 feet in length (Wright, 1966; Kenyon, 1967) and similarly some houses at the 1100 A.D. Maxon-Derby and 1190 A.D. Bates Owasco sites in New York exceed 50 feet (Ritchie, 1965). From this it is inferred that the extended family or lineage concept was established during the developmental Iroquois period. Moreover, using the Direct Historic Approach it seems probable that these early lineages were matrilineal. Rules of residence, however, cannot be strictly inferred for even in historic times matrilocality was not strictly followed; it was, however, the traditionally favoured rule.

But complete transition to the use of longhouses during the developmental Iroquois period is not evident at all Owasco sites in central-eastern New York. For instance, the Maxon-Derby and Sackett sites (Ritchie, 1965: 281, 286) exhibit circular houses, some of which are found alongside longhouses. This author proposes that this is not an aberrant feature for this region of New York, for the same situation occurs at the later Can 29-3 site (Hayes, 1963), and possibly much earlier at Kipp Island (Ritchie, 1965: 246). The important problem in interpretation here is to determine whether Iroquois or some other group resided in the round houses. It is conceivable that some kinship group other than a lineage resided within them.

As for the lineages themselves, they appear to have been in a transitional state up until c. 1200 A.D. in both Ontario and New York. No standardized arrangement of living space is evident within the early 1100 A.D. longhouses at the Miller (Kenyon, 1967) or Maxon-Derby (Ritchie, 1965) sites. Hearths are not aligned down the centres of the houses, nor are interior sleeping cubicles or special storage cubicles marked off. It is only around 1200 A.D. that the purposeful alignment of communal hearths down the centre of longhouses appears to be taking form. This **is** the case

at the Bates site (Ritchie, 1965: 286), and by 1260 A.D. the definite alignment of central hearths is established at Bennett (Wright: personal communication). This suggests that until 1200 A.D., early Iroquois lineages were in a transitional state of organization, involved in a process of establishing basic rules and patterns of residence.

Fundamental to the establishment and extension of lineages is the rule of exogamous marriage. While intra-village marriages probably prevailed, at least one good case of extra-village marriage can be made for the single longhouse village of Bates (1190 A.D.). This single longhouse, rebuilt and extended four times, clearly exhibits household growth as pointed out by Ritchie (1965: 286). But marriage within the Bates extended family seems improbable, for Iroquois custom ideally prohibits marriage with any known relative. More probably a rule of exogamy existed, thereby compelling marriage and extension of the lineage to other villages.

Village (community) patterns prior to 1300 A.D. in both Ontario and New York were not formally arranged. Longhouses were randomly erected over a village in a manner suggesting that community planning by a village council was either non-existent or unnecessary in view of low population. Chang's (1958: 306) ethnographic correlations of multilineages within unplanned villages would apply here.

The fact that most villages of the developmental Iroquois period cover four acres or less, aside from the 5 to 10-acre Glen Meyer sites, and that they are palisaded also offers obvious social interpretations. The suggestion is made that village populations were low and that the fortifications were a response to an endemic warfare pattern similar to that among the historic Iroquois.

After 1300 A.D., the time defined for the beginning of classic Iroquois culture, there are other major changes in settlement patterns. Iroquois villages continue to be palisaded, but a significant change occurs in the arrangement of longhouses within villages. For the first time, longhouses are deliberately aligned parallel to one another, and this feature persists to the historic period (White, 1963: 8; Ritchie, 1965: 312-313; Emerson, 1961; Noble, 1968). This parallel alignment may be in response to population increase; it may also reflect complete crystallization of matrilineage groupings. Clearly, there is a more sophisticated degree of village integration with village planning. Presumably a village council of chiefs directed the community planning.

The longhouses themselves are refined internally after 1300 A.D. In addition to the central hearths of earlier times, some houses (e.g. Oakfield -- White, 1963: 8) display definite storage cubicles at the ends. There are also indications of interior

sidewall sleeping cubicles at Oakfield (White: personal communication) and Kelso (Ritchie, 1965: 308). The initial appearance of storage cubicles during the 1300's implies surplus cultigen production, allowing more permanent occupation. Perhaps the role of women was growing more important as a result of their involvement with crops.

Continuing after 1400 A.D. to the historic period, other changes in settlement pattern occur. For instance, sidewall sleeping platforms documented for the Huron Attignawantan (Bear) and Attigneenongahac (Cord) clans\* (Jesuit Relations, 1959: Vol. 8, 107; Vol. 17, 203) do appear at the 1500 A.D. Huron Copeland site (Channen and Clarke, 1965: 7) but do not appear at the Huron Arendahronon (Rock) clan villages of Sopher (Noble, 1968: 96) or Cahiague (personal observation). Village sizes remained small in New York and Ontario until the historic era; they were probably relatively autonomous communities united primarily by lineage and clan cross-ties. During the historic era, however, some tribal villages increased greatly. Huron towns are known which cover 15 to 25 acres, and the Seneca sites of Dutch Hollow and Factory Hollow attained sizes of 10 to 15 acres. Truly the largest Iroquois town in the Northeast is the 40-acre historic Ibaugh Susquehannock site (Witthoft et al. 1959) and Strickler spreads over 30 acres (Futer 1959). These large historic Iroquois communities were established for reasons of trade, mutual aid and preservation of identity in the face of competition and hostilities.

The writer would now like to consider subsistence, a major factor underlying population and settlement pattern. Data for this line of evidence are more complete for the Ontario Iroquois than for the other Iroquois traditions. Consequently, most of the information regarding changes in Iroquois subsistence is drawn from the Ontario sequence with supplementary data from New York given where possible.

It is clear that game, fish and birds have always constituted an important portion of Iroquois subsistence. This is particularly true for Virginia deer, which constitute the most common bone refuse from developmental Iroquois sites in Ontario (Noble 1968: 280). Even by 1300 A.D. deer bone refuse remains high (70% at Uren) and continues to be a preferred game animal until c. 1600 when beaver becomes the dominant mammal found on Huron-Petun sites.

\* Editor's Note: It should be noted that a difference of opinion exists between archaeologists such as J. V. Wright and W. C. Noble and ethnohistorians such as E. Tooker and B. G. Trigger as to whether the Huron groups Attignawantan (Bear), Arendahronon (Rock), Attigneenongahac (Cord), Tohontaenrat (One-White-Lodge) and Ataronchronon (People-of-the-Fens) were "clans" or "tribes". It is hoped that future research will resolve this problem.

This shift obviously reflects the stimulus of the European fur trade. In general, Caldwell's (1958) concept of "forest efficiency" most adequately applies to the pre-1400 A.D. period of Iroquois development.

Emerson's (1961: XI) synthesis of mammals from Ontario Iroquois sites dating between 1300 to 1600 A.D. shows an increase in number of species from early to late. The important trend, an increase from seventeen to twenty-two species added to the subsistence diet, parallels a similar trend in the vegetal cultigens.

With regard to vegetal domesticates, it is apparent that 8 and 10-row Northern Flint (*zea mays*) corn has been cultivated by the Iroquois since 1100 A.D. at least (Noble, 1968: 279). These two kinds of corn continue to the historic era in both Ontario and New York, but in Ontario other hybrid forms (4, 6 and 12-row corn) appear shortly after 1400 A.D. Concomitantly, around 1400 A.D., beans, sunflowers and squash appear in Ontario to form the classic corn, beans, sunflowers and squash cultigen complex. This same development does not hold true for New York where beans appear early at the 1156±200 A.D. Snell site in the Mohawk Valley (Ritchie, et al. 1953: 11). Tobacco or some substitute can be traced back to 1100 A.D. in both New York and Ontario (Noble 1968: 281), and its importance in Iroquois ritual is well documented in the historic period.

The importance of the cultigens is obvious. Combined with the forest and lake products there is potential for a stable subsistence base necessary for semi-permanent settlement. Corn, if produced in surplus, could be stored and allow year-round village occupation regardless of the vagaries of seasonal game. Clearly, surplus production of corn is documented in the historic period along with special storage rooms at the ends of longhouses and such storage rooms may be traced back to 1300 A.D. (e.g. Oakfield). But how successful was early Iroquois horticulture during the 1000-1300 A.D. developmental period? Were large field crops grown and surplus yields produced? Present evidence is tenuous. No storage rooms are found within the early longhouses, but surplus corn may have been stored in large pits outside the longhouses, such as were found at the Bennett site. Wright (1966: 22) has suggested that possibly the Glen Meyer people depended more upon horticulture at this time than did the people of the Pickering and Owasco villages. Certainly there is a correlation between the use of horticulture and semi-sedentary village settlement during the developmental Iroquois period. Chang (1958: 300) believes the two are causally integrated.

Subsistence also has implications regarding population; in fact, it is one of the key factors regulating population growth which in turn has important ramifications for social groupings. As noted above, it is shortly after 1400 A.D. that corn, beans and squash come together as a subsistence complex in the Ontario

Iroquois Tradition. Population also increases at this time, as manifested by more concentrated villages and increased numbers of ossuary inclusions. The relation between this population increase and the combination of the corn, beans and squash subsistence complex is probably more than contemporaneous coincidence. Causal implications appear highly plausible.

A comparable population increase, however, is not evident from settlement, subsistence or burial patterns of the League Iroquois tribes during this 1400 A.D. period. Yet they had the same basic subsistence complex. New developments in technology, use of irrigation or more efficient hunting practices are not evident, thus suggesting the difference between New York and Ontario Iroquois was one in the degree to which cultigens were exploited. Did the League tribes simply fail to plant as large fields of corn, beans and squash, or were their lands not as productive? Certainly, the hilly upland regions of central-eastern New York are not as amenable to large-scale horticulture as are the flat fertile fields of southern Ontario. Possibly they did not use effective planting techniques. Whatever the difference may have been, the population discrepancy between the historic tribes of the Ontario Iroquois Tradition (estimated at 60 to 70,000 individuals) and those of the League (10 to 12,000 individuals) can be traced back to around 1400 A.D.

As a final note on social implications from subsistence data, it is obvious from the wide range of mammals and birds represented in Iroquois diet between 1100 to 1650 A.D. that no food taboos were practised with regard to totem animals.

With burials there is a major distinction between the practice of the Ontario Iroquois Tradition and the other Northeastern Iroquois; namely, the use of ossuary burial by the former. In Ontario, the term ossuary is restricted to a communal, secondary burial expression; it does not include multiple primary burials which do occur at some Seneca and Susquehannock sites.

Ossuaries of the Ontario Iroquois Tradition may be traced back to the 1115 A.D. Miller site of the Pickering Branch. Here, ossuary burial practice was just developing, for in addition to the ossuary other types of burials were found within the village proper (Kenyon, 1967: 40-43). The limited number of thirteen burials within the Miller ossuary suggests no more than a single extended family (lineage) burial. Having seriated ten attributes for seven ossuaries in Ontario, the writer (1968: 220) finds that ossuary widths increase from 6 feet in 1115 A.D. to 18 or 20 feet in historic times, and proportionately correlate with an increase in the number of individuals interred. Unprecedented numbers of up to 500 individuals occur in the Ontario ossuaries between 1400 and 1500 A.D. This is contemporaneous with the amalgamation of the corn, beans and squash subsistence complex, and the increase

is attributed both to population explosion and to the innovation of new rules governing ossuary inclusion. It seems probable that while ossuaries prior to 1400 A.D. contained primarily the deceased of an associated village, afterwards, several villages cross-cut by lineages contributed their dead to a common ossuary (Noble, 1968: 56). This certainly was the case in early historic times.

In the Mohawk-Onondaga-Oneida-St. Lawrence Tradition, burial practice changes imperceptively over the 500 years prior to the historic period. Flexed, primary interments generally without accompanying grave goods are characteristic at the Kingston (Ritchie, 1952: 11), Roebuck (Wintemberg, 1936: 114), Mclvor (personal excavation under J.V. Wright) and Crystal Rock sites. This pattern differs slightly from the ancestral Owasco pattern at the Snell, Turnbull, Bainbridge, Bell-Philhower, St. Helena and Castle Creek sites (Ritchie, et al. 1953: 13n, 33-34). At Snell, however, the burial pits are located in two separate localities (Ritchie, et al. 1953: 12-14), a feature which also shows up in central New York at the Sackett site (Ritchie, 1936: 55-66). This clearly indicates that for these two sites at least social rules for the segregation of burials existed. Ritchie (1965: 295) has suggested that such cemeteries may represent family or clan burials. Lineage burials seem probable, but it is exceedingly difficult to pinpoint the existence of clans from the archaeological data for this period and most other succeeding periods of prehistoric Iroquois development. The writer suggests that if clans were in existence during the 1100's, they were in an incipient stage of development, for the lineages themselves were still in the process of establishing fundamental residential rules.

Burials of the Seneca-Cayuga-Susquehannock Tradition are primarily known for the historic period, and, like those of the Mohawk-Onondaga-Oneida Tradition, they yield fewer inferences about population than does the Ontario burial sequence. Multiple cemeteries with primary flexed interments are common, however; they occur at the Adams and Dutch Hollow sites (Ritchie, 1954: 18), at the Belcher site (Ritchie, 1954: 18n), the Strickler site (Futer, 1959: 136), and the Ibaugh site (Witthoft, et al. 1959: 101). These multiple cemeteries in New York and Pennsylvania may be traced back to Owasco antecedents such as Sackett and Snell. Unfortunately, there is no direct documentation of clan-segregated cemeteries among the early historic Iroquois. However, Morgan (1877: 84), Goldenweiser (1914: 368) and Fenton (1951: 43) do speak of such kinship segregated cemeteries among the relatively modern Iroquois, and they may well extend back into the prehistoric period.

The study of Iroquois pipes helps demonstrate "in situ" development and has important social implications. In Ontario the smoking complex extends back to at least 1100 A.D., but pipes of the developmental period are rare, crudely made and of limited



variety (Wright, 1966: 32). They are nowhere as elaborate as specimens from contemporaneous sites in New York. By Middleport times (c. 1400 A.D.), however, a marked change takes place. The variety of pipe types increases to eighteen, and greater skill in manufacturing is apparent. From 1400 to 1650 A.D. there is a steady increase in the number of Huron-Petun pipe types to a total of thirty-nine, twenty-one of which are effigy forms (Noble, 1968: 296). Human effigies, particularly, flourish after 1500 A.D.

In New York, a similar "in situ" development of pipe types has been traced by Lenig (1965: 54), and Ritchie's (1965) work extends the pipe sequence back through Owasco times into the Middle Woodland Kipp Island phase. By contrast, the New York pipes are more fully advanced than those in the early Ontario sequence, and Lenig (1965: 56) offers the plausible suggestion that some of the Oak Hill horizon pipes (c. 1300 A.D.) diffused northward into Ontario during Middleport times.

But the pipes of the Huron-Petun hold a significance beyond being solely chronological indicators -- a significance which may also be true for the pipes of the other Northeastern Iroquois tribes. This is the fact that many of the Huron-Petun effigy pipes carry the same caricatures that are described as being matrilineage totems painted on the fronts of historic Huron longhouses. These eponyms are described by Sagard (1939: 98) and Francois du Peron (Jesuit Relations, 1959: Vol. 15, 181) as being armorial bearings of the family within the associated longhouse. It is also of interest to note that many of the tattoo designs described by Sagard (1939: 145) on some Huron and many Petun men are also identical to the caricatures he describes for the longhouse eponyms. Thus, while Sagard does not expressly state that the pipe effigies and body tattoos were identical to the household eponyms, such appears to have been the case. Therefore, effigy pipes and possibly the non-effigy forms as well, by representing lineage totems, should provide information on kinship and marriage patterns.

A pipe effigy was probably affiliated with the matri-lineage totem of a male's lineage, for Iroquois men did not forfeit membership in their mother's lineage, even when married (Murdock, 1957: 302). Huron men are documented as making their pipes by Pierre Boucher (1896: 150) and pipes were certainly the property of men. Historically, Huron-Petun women are not recorded as smoking. Sagard (1939: 197) recounts that the Huron mended broken pipes by drawing blood from their arms to stick the broken pieces together. Could not this curious practice reflect a ritual demonstration of blood-bond relationship, and perhaps be a further indication of the association of pipes with lineages?

Research on pipe effigies should prove fruitful. If future excavators would plot the distribution of pipes from middens, not

only in relation to associated longhouses, but over an entire village, patterns of pipe types may reveal the locations of lineages represented within a given village. The writer's (1968: 249) distribution study of pipe types from various Huron-Petun villages allows the tracing of the development and exogamous marriage patterns of particular lineages. The distribution of effigy pipes from Huron-Petun sites is not unlike one would expect with cross-cutting lineage ties.

Above the lineage level, correlation of Huron pipe effigies with clans and clan totems can be ruled out. There is no recognizable spatial concentration of particular pipe types with the known historic clan districts of Huronia (Hunter, 1902: 64). Also, the twenty-one known Huron-Petun effigy pipes far exceed the known eight historic clans, and show little or no correspondence to the known clan names.

Wintemberg (1936: 75) once suggested a parallel between wooden masks and Iroquois pipe effigies. The writer has found no such correlation, other than the fact that both Iroquois masks and pipe effigies depict a mythological concept or being.

## DISCUSSION

In the writer's opinion, this brief survey of some of the pertinent highlights in settlement, subsistence, burial and pipe patterns helps demonstrate and confirm the "in situ" theory. Moreover, some of the social implications are pertinent to the construction of an evolutionary model.

Morgan (1851) long ago posed an evolutionary model for Iroquois development in which he saw a progression from family organization to the complexities of a confederacy -- the League. In essence, he considered Iroquois political organization to be rooted in kin-ship. The social implications from archaeological data do not contradict Morgan's hypothesis; but archaeology provides a more adequate basis for demonstrating developments in Iroquois social organization than does Morgan's theorizing.

Clearly, an evolutionary sequence of culture change can be demonstrated from the Iroquois archaeological record. The Iroquois lineage system, while existing during the early developmental period (1000-1300 A.D.), appears to have been still in the process of establishing basic rules of residence up until c. 1200 A.D. Whether clans existed during this early period is extremely difficult to determine from the archaeological record. Villages were not formally arranged until 1300 A.D., at which time the writer has suggested village councils directed community planning. By 1400 A.D. most of the basic elements of historic Iroquois culture were established. Clans, on a higher level but essentially

extensions of the lineage system, probably constituted one of these basic units, and certainly tribal differentiations had emerged (MacNeish, 1952; Wright, 1966).

The development of moieties, like clans, is almost impossible to determine from the archaeological record. Sapir (1916: 39) believed the Iroquois moiety system to be a secondary confederation of clans which developed later than the clan tradition. This seems reasonable. In the late prehistoric (1540 to 1600 A.D.) the development of confederacies marked the highest level of political complexity in Iroquois social organization. Through archaeology it is possible to trace the local migrations which in part stimulated the formation of tribal confederacies. Certainly this level of political organization was the highest reached by any indigenous group in the Northeast after 1000 A.D.

## REFERENCES

- Boucher, P., (1896). *Histoire Veritable et Naturelle des Moeurs et Productions du Pays de la Nouvelle France. Suite, B.* (ed). *Royal Society of Canada, Proceedings and Transactions, Series 2, Vol. 2, Section 1, 1896, pp. 99-168.* (First edition, Paris, 1664).
- Caldwell, J. R., (1958). *Trend and Tradition in the Prehistory of the Eastern United States. American Anthropological Association, Memoir 88.*
- Chang, K. C., (1958). *Study of the Neolithic Social Grouping: Examples from the New World. American Anthropologist, Vol. 60, No. 2, Part 1, pp. 298-334.*
- Channen, E. R. and N. D. Clarke, (1965). *The Copeland Site: A Pre-Contact Huron Site in Simcoe County, Ontario. Anthropological Papers, No. 8, National Museum of Canada.*
- Emerson, J. N., (1961). *Cahiague 1961. Public Lecture Series, University of Toronto Archaeological Field School. Orillia.*
- Fenton, W. N., (1951). *Locality as a Basic Factor in the Development of Iroquois Social Structure. In "Symposium on Local Diversity in Iroquois Culture", Bureau of American Ethnology, Bulletin 156.*
- Futer, A. A., (1959). *The Strickler Site. In Suscuehannock Miscellany. Pennsylvania Historical and Museum Commission. Harrisburg.*

- Goldenweiser, A. A., (1914). On Iroquois Work, 1913-1914. *Summary Report for 1913, Geological Survey of Canada*, pp. 365-372.
- Hayes, C. F., (1963). The Excavation of Two Iroquois Structures. *Museum Service Bulletin of the Rochester Museum of Arts and Sciences*, Vol. 36, No. 10, pp. 168-171.
- Hunter, A. F., (1902). Notes on Sites of Huron Villages in the Township of Medonte. *Annual Archaeological Report of Ontario for 1901*, pp. 56-100.
- Kenyon, W. A., (1967). The Miller Site. Ph.D. Dissertation, Department of Anthropology, University of Toronto. Toronto.
- Lenig, D., (1965). The Oak Hill Horizon and its Relation to the Development of Five Nations Iroquois Culture. *Researches and Transactions of the New York State Archaeological Association*, Vol. 15, No. 1.
- MacNeish, R. S., (1952). Iroquois Pottery Types: A Technique for the Study of Iroquois Prehistory. *National Museum of Canada*, Bulletin 124.
- Morgan, L. H., (1851). *League of the Iroquois*. Reprinted 1962, Corinth Books, New York.
- Murdock, G. P., (1949). *Social Structure*. New York.
- (1957). *Our Primitive Contemporaries*. New York.
- Noble, W. C., (1968). Iroquois Archaeology and the Development of Iroquois Social Organization (1000-1650 A.D.). Ph.D. Dissertation, Department of Archaeology, The University of Calgary, Alberta.
- Richards, C. A., (1967). Huron and Iroquois Residence Patterns 1600-1650. In: *Iroquois Culture, History and Prehistory*, Tooker, E. (ed.), pp. 51-56. Albany.
- Ritchie, W. A., (1936). A Prehistoric Fortified Village Site at Canandaigua, Ontario County, New York. *Research Records of the Rochester Museum of Arts and Sciences*, No. 3.
- (1954). Dutch Hollow, an Early Historic Period Seneca Site in Livingston County, New York. *Researches and Transactions, New York State Archaeological Association*, Vol. 13, No. 1.
- (1965). *The Archaeology of New York State*. Natural History Press, New York.

- Ritchie, W. A., Lenig, D., and P. S. Miller, (1953). An Early Owasco Sequence in Eastern New York. *New York State Museum, Circular 32*.
- Sagard, G., (1939). *Long Journey to the Huron Country*. The Champlain Society, Toronto.
- Sapir, E., (1916). Time Perspective in Aboriginal American Culture: A Study in Method. *Geological Survey of Canada, Memoir 90*.
- Taylor, W. W., (1948). A Study of Archaeology. *American Anthropological Association, Memoir 69*.
- Thwaites, R. G. (ed.), (1959). *The Jesuit Relations and Allied Documents*. 73 Volumes, New York.
- White, M. E., (1963). Settlement Pattern Change and the Development of Horticulture in the New York - Ontario Area. *Pennsylvania Archaeologist, Vol. 33, Nos. 1-2, pp. 1-12*.
- Wintemberg, W. J., (1936). Roebuck Prehistoric Village Site, Grenville County, Ontario. *National Museum of Canada, Bulletin 83*.
- Witthoft, J. (et. al.), (1959). A Susquehannock Cemetery, The Ibaugh Site. In: *Susquehannock Miscellany, pp. 99-119*. The Pennsylvania Historical and Museum Commission, Harrisburg.
- Wright, J. V., (1966). The Ontario Iroquois Tradition. *National Museum of Canada, Bulletin 210*.

Social theories are analytical frameworks, or paradigms, that are used to study and interpret social phenomena. A tool used by social scientists, social theories relate to historical debates over the validity and reliability of different methodologies (e.g. positivism and antipositivism), the primacy of either structure or agency, as well as the relationship between contingency and necessity. Social theory in an informal nature, or authorship based outside of academic social and political science, may Some sociological theories explain aspects of the social world and enable prediction about future events,[2] while others function as broad perspectives which guide further sociological analyses.[3]. YouTube Encyclopedic. 1/5.Â The benefits of this approach include increased clarity and the ability to use mathematics to derive implications of a theory that cannot be arrived at intuitively. The models typically used in mathematical sociology allow sociologists to understand how predictable local interactions are often able to elicit global patterns of social structure.[41]. Discuss Meadâ€™s theory of social psychology in terms of two concepts â€“ pragmatism and social behaviorism. Key Takeaways. Key Points.Â He is regarded as one of the founders of social psychology and the American sociological tradition in general. Mead was a very important figure in twentieth century social philosophy. One of his most influential ideas was the emergence of mind and self from the communication process between organisms, discussed in the book, *Mind, Self and Society* , also known as social behaviorism. For Mead, mind arises out of the social act of communication. Meadâ€™s concept of the social act is relevant, not only to his theory of mind, but also to all facets of his social philosophy.