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American Indian Culture and Research Journal

Title

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Permalink

<https://escholarship.org/uc/item/0f04m96b>

Journal

American Indian Culture and Research Journal , 23(4)

ISSN

0161-6463

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Publication Date

1999-09-01

DOI

10.17953

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Can a Myth Be Astronomically Dated?¹

DAVID HENIGE

All states and nations seek their founding moments. Myth accretes, commemoration re-enacts, academic controversy flourishes.²

All of these dates I regard as spurious. The whole search for an exact date of the formation of the Iroquois seems to be nonsense.³

INTRODUCTION

In a recently published paper, Barbara A. Mann and Jerry L. Fields make a simple, but arresting, assertion: "the Haudenosaunee [Iroquois] League was founded on the pleasant afternoon of August 31, 1142."⁴ This statement's precision—and, even more, its methodology—would, if justified, have profound implications not only for the founding of the Iroquois League, but also for the longstanding debate about the chronology of oral tradition and the ability of oral societies to retain such details accurately over countless transmissions.⁵ My intention in this paper is to speak generally to this issue by using Mann and Fields' extensive effort as a symptom of the larger issue.⁶ Mann and Fields arrive at their conclusion by arguing that a solar eclipse occurred at the very moment the League was formed. They then proceeded to determine which eclipse best suited this hypothesis.

This paper argues that this claim is not true, or rather that there is no serious evidence that it is true, for it can hardly be asserted categorically that the Iroquois League was not founded on this day or any other day before its first mention in contemporaneous sources.⁷ In developing this argument I will consider first the ways in which Mann and Fields establish a specific eclipse date; that is, the process by which they eliminate all other possibilities. I then discuss their use of sources, which, I argue, falls well short of the criti-

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cal canons that are widely accepted by historians for tying together evidence and argument. I conclude by suggesting that the particular foundation story of the Iroquois League is a story that began to evolve at some point, probably around the turn of the nineteenth century, to account for the League and to strengthen its purpose in the face of continuing white aggression.

HISTORICAL EVIDENCE

The first question to be considered is: what is the strength of the evidence that such an eclipse has been accurately remembered in Iroquois traditions? Mann and Fields immediately run into difficulties trying to answer this question. They begin by citing evidence that the skies were important in Iroquois lore. While true, this is irrelevant. Despite their argument that “[a]ny dating of the League must account for the Sky signs of tradition within their proper context,” and, further, that there “were a multiplicity of Sky signs in League tradition,” an interest in things celestial, no matter how consuming, is scarcely *prima facie* evidence either for an eclipse or for its remembrance for centuries.⁸

Such evidence is, as we will see, strikingly exiguous, though not less so than their efforts to subject this evidence to critical scrutiny. At no point in their discussion do Mann and Fields wonder whether such an eclipse in fact occurred at the time the League was founded. Instead, they are content to rely on the testimony of only one informant, Paul Wallace, who testified that:

As they were thinking it over there occurred a strange event. The sun went out and for a little while it was complete darkness. This decided those Senecas who were in doubt. They thought this a sign that they should join the Confederacy. This happened when the grass was knee high, I *think*, or when the corn was getting ripe.⁹

On the basis of this single opinion, hedged as it was, Mann and Fields continue: “Obviously, the statement, ‘The sun went out and for a little while it was complete darkness,’ can refer only to an impressive eclipse.”¹⁰

Mann and Fields display no interest in knowing just when and under what circumstances this datum was collected. To judge from Wallace’s above description, it would seem that the testimony dated from no earlier than about 1900, under conditions that are not specified and from an informant who had since died at the hand of another informant. Small wonder that Wallace, at least, made it clear that he was presenting the testimony “without making any claims for its infallibility.”¹¹

Mann and Fields express no such reservations themselves, but proceed to narrow the time of year that such an eclipse would have occurred, concluding that it must have been “between July and September, in early afternoon.” The former conclusion is based on the height of grass as mentioned in the tradition, and the latter conclusion on the grounds that “governmental activities are conducted in the early afternoon” among the Iroquois, now and, apparently, always.¹²

But does the word *always* apply here? Even the most extended accounts of the League's founding tradition do not provide enough information to decide upon the time of day at which meetings occurred. In addition, there is not much information on Iroquois councils that did not involve whites—a possible distorting factor. Still, looking at early accounts of the Iroquois provides some data seriously damaging to Mann and Fields' assumption. To take just one example, Joseph-François Lafitau, writing early in the eighteenth century, had this to say about the deliberations of what appears to be the League council:

This Council has sessions that are closed and others that are open. The first are held to deliberate on their different interests, of whatever nature they may be; and the second in order to declare publicly what has been resolved, or for all the other affairs of the Nation....Although there is no regular time for holding these councils, people usually go to them at nightfall [*à l'entrée de la nuit*].¹³

Of course, Lafitau might inadvertently have been describing an anomalous situation. There is no evidence to this effect, however, and Lafitau's description is a central work in early Iroquois ethnography. Under these circumstances, Mann and Fields have an obligation to address his assertion, since it directly refutes their own conclusion on this point, which is vital to their entire argument.¹⁴

MATHEMATICAL LEGERDEMAIN

In an attempt to bring independent evidence to bear on their proposed eclipse date, Mann and Fields turn to traditions regarding the number of Adodarhos, whom they describe as "Presiding Officers of the League." According to one of their correspondents, "there have been one hundred and forty five men who have served in the position of tadotarho."¹⁵ Since, they argue, "the Adodarho enjoys a lifetime appointment to office...we know that the League was founded 145 lifetimes ago, as of 1994," even though this confuses tenure in office with length of life. One hundred forty-five lifetimes at, say, thirty-five years each, would produce a founding date of 3081 B.C.: [1994 - (145 X 35)].¹⁶ Mann and Fields fail to notice this mathematical improbability, and turn to "still more benchmarks to aid in counting the years through the list of Adodarho." According to them, "[a] Mohawk tradition," as expressed by unidentified modern informants, stated that the Adodarho at the time of Jacques Cartier's first voyage in 1534 was the thirty-third in succession.¹⁷ If these traditions are to be taken as true, it would logically follow that there were 112 Adodarhos between 1535 and 1994, giving each of them an average tenure in office of less than four years. By the terms of their own argument then, extrapolating back from 1535 would give a date of 1409—[1534 - (3.8 X 33)]—for the founding of the Confederacy. However, Mann and Fields do not carry this calculation out, even though it is virtually mandated by their own choice of method and data.

Instead, Mann and Fields look elsewhere to find longer average tenures in office, not at all a difficult task. One of those they include is that of the popes, but they do so rather oddly and with clear hopes of conforming this average to better their argument. For instance, they speak of "129 pontiffs of the papacy," whereas there have been more than twice that many popes. Then they decided to treat "[t]erms of office shorter than one year...as unusual events" and "exclude [them] from consideration."¹⁸ Of course, this increases their hypothesized tenure average, although by how much is uncertain because it is impossible to know just which 129 popes (out of 266) they happen to be treating. Does it matter? Should papal tenures of less than one year be treated as so "unusual" that they need to be excluded? Far from it. No fewer than forty-six popes, or 17.2 percent of the total, reigned for less than a year. This is more than four times the number of popes (eleven) who held office for more than twenty years, though Mann and Fields presumably include these latter.¹⁹

This is surely an extraordinary definition of "unusual," but one that helps Mann and Fields' claim that "we are 99.7 percent confident that the time spanned by thirty-three offices falls between 400 and 900 years."²⁰ This result, a minimum average tenure of 12.1 years, is far higher than the actual papal tenure of 7.3 years, as well as that (8.7) of the *doges* of Venice, a similar gerontocratic office.²¹

This incorrect series of calculations enables Mann and Fields to place "the founding of the League somewhat between the year 634 C.E. and 1134 C.E." In fact, it does more: it renders their proposed date of 1142 ("a negligible eight years past 1134") downright conservative.²² Unfortunately, both the method and the methodology behind this attempt at chronological bracketing are too riddled with omissions, errors, and misconceptions to serve as more than a benchmark of the vacuity of the whole argument that the establishment of the League can be astronomically dated by means of excluding all but one possible eclipse event.

Mann and Fields close their discussion of eclipse-dating proper with a technical consideration of eclipse paths. From this they conclude, as already noted, that the 3.5-minute total eclipse that began at 3:20 P.M. on the last day of August 857 years ago coincided with the very founding of the Iroquois League. Mann and Fields are probably correct to consider only eclipses with a magnitude of at least 95 percent. In the past, as they point out, partial and annular eclipses have been put into the pool to be considered. In excluding these, they follow Robert R. Newton, who demonstrated that eclipses of less than 95 percent are barely perceptible even to astronomically-aware societies, that is, those with members who understand the physical properties and predictability of an eclipse and can anticipate its coming.²³

CARTIER AND LAFITAU

A microcosm of the insuperable problems that Mann and Fields place in their own path is the brief discussion by which they hope to bring Jacques Cartier and Joseph-François Lafitau to their assistance. The first passage reads as follows:

Interestingly, there is a probable European counterpart to this Mohawk tradition [of thirty-three Adodarhos] in Cartier's 1534 journal. After Cartier erected an enormous cross, staking the French claim to the St. Lawrence River valley, a Haudenosaunee sachem rebuked him vehemently, countering that the land in all four directions belonged exclusively to the Iroquois. It was probably during his "harangue" that the sachem read off the thirty-three Adodarho by way of proving his case.

At this point Mann and Fields cite Cartier as their source, which might lead readers to believe that he had mentioned such a recitation. He did not, and thus he offers no support for Mann and Fields' effort to co-opt him.²⁴

Mann and Fields fail to reveal that this encounter took place at Gaspé Harbour and that the Indians are thought to be from the settlement at Stadacona (Quebec city) that Cartier visited the next year. The Indians of Stadacona—and of Hochelaga to the west at Montréal—disappeared between Cartier's voyages and those of Champlain some seventy-five years later. Their identity and the reasons they disappeared have been the subject of much dispute for more than two centuries.²⁵ The weight of current opinion is that these groups were linguistically Iroquoian, but not historically or politically like the Iroquois.²⁶ Their language was related to those of the Five Nations, but there was otherwise no particular connection. Bruce Trigger, among others, holds that it is doubtful that there was any relationship at all, except that, according to some traditions recorded in the seventeenth century, the Laurentian Iroquois were attacked and dispersed by one or more of the Five Nations.²⁷

Mann and Fields seem oblivious to this entire discussion, enabling them to speak of "sachems" who were in a position to dilate on the origins of the Iroquois League far away from its locus. But even if there were a demonstrable relationship, there is nothing whatever in Cartier's account to permit their own conclusions as to the content of the Indians' discourse.

But Mann and Fields are not yet done, for they then cite Joseph-François Lafitau by way of a modern paraphrase, which has Lafitau referring to "a stick of enlistment," which Mann and Fields take to mean a mnemonic device with a list of Adodarhos.²⁸ Regretably, this is not the purport of Lafitau's text. As Lafitau describes it, once war had been decided on, a "[b]uchette" was raised. This was "a piece of fashioned wood, decorated with vermilion, which each Warrior marked with some note, or distinctive mark, and gave it to the Chief, as a symbol that represented his [the warrior's] own person, and that could be regarded as a sign of his engagement so long as it lasted."²⁹

Lafitau goes on to observe that this "[b]uchette" was also used to identify deserters for punishment. This description does not fit the role of the Condolence Cane, which is a mnemonic device designed to aid in memorizing lists of past chiefs. As Lafitau described the case, any mnemonics the procedure provided were synchronic, dealing with the present, and not diachronic, concerned with the past. Lafitau might have been wrong, but demonstrating this requires more than distorting his evidence.³⁰

TRADITIONAL EVIDENCE

Mann and Fields are at serious odds with majority opinion when they claim that “traditionalists...see events as processes, not *faits accomplis* irrevocably attached to one moment in time,” in contrast to “Western scholars.”³¹ This line of reasoning runs directly counter to generations of analyses of such features as culture heroes, who are typically seen by oral tradition as singlehandedly introducing religion or agriculture or writing or monarchical rule to particular societies.

Armed with this notion, Mann and Fields go on to suggest, plausibly enough, that “[t]he formation of the League was...a lengthy process, *if one understands the language of tradition*. ‘Tomorrow’ means ‘next year.’ By the same token,” they continue, “when Deganawida provides for a Constitutional convention every ‘five’ years, he means about once a generation.” Finally, “the black sun may well have capped off a century of work.”³²

They call their discussion here “a small cautionary note.” Ironically, it is probably closer to being true than the rest of their argument. Under the circumstances, it is no surprise that they would tell readers that, in response to an inquiry, one informant assured them that “[t]he elders guess that it took a period of 100 to 120 years to bring the Five Nations together.”³³ To put faith in this claim, reasonable though it might seem, we would need to know—at least—the tenor of the question that produced this response, and it would be useful as well to learn more about the bases of this “guess,” but none of this is forthcoming.

Mann and Field’s greatest problems result from their impregnable trust in the accuracy of the few ‘traditions’ they choose to use. Their reading of these is powerfully simplistic, and requires that we believe that millennium-old traditions have survived the ravages of passing time virtually unscathed.³⁴ Mann and Fields prefer to deal with the problems inherent in this form of feedback by peremptorily dismissing all testimony that disagrees with their hypothesis. They are admirably candid about this, freely admitting, for example, that “[f]or purposes of this paper, ethnographic ‘sources’ like David Cusick and J.N.B. Hewitt are excluded. The reason for their omission is that such so-called Native informants are simply *not* interchangeable with traditional Keepers.”³⁵

Mann and Fields are fond of bringing crucial, if often unnamed, “Keepers” into their argument—aces in the hole against those who would criticize their data. They use the term more than twenty times, yet never define it. Presumably they do not have the traditional “fire keepers” in mind, since these are always Onondaga and they refer in at least one instance to “Mohawk Keepers” and mention “Keepers” from other nations as well.³⁶ All things considered, it hardly seems unfair to ask why they see so little evidence for the input of these “Keepers,” whoever they were, in earlier times.

As we will see, both Joshua Clark and Henry Rowe Schoolcraft claimed to rely heavily on Abram La Fort. Clark characterized La Fort as “successor...in the principal chieftainship of the Onondagas, and in all the mythology and intricate mysteries of the peculiar institutions of the Six Nations.”³⁷ This sounds a lot like he was a “Keeper,” yet neither Clark nor Schoolcraft have any-

thing at all to say about an eclipse in their otherwise fairly circumstantial accounts of the council at which, they claim, the League was formed. Could La Fort, as avatar of received tradition, have mentioned such an eclipse only to have both Clark and Schoolcraft disregard this detail as uninteresting?³⁸

The plain *gravitas* of Mann and Fields' argument is that informants like Cusick, although writing nearly two centuries ago, were actually more contaminated than contemporary "Keepers" who have corresponded with Mann and Fields. These, it would seem, have insulated themselves against a kaleidoscopically changing world and in the process have preserved authentic tradition that was unchanged for centuries. This notion has little support in the larger world of oral tradition, where it is recognized that political exigencies, literacy, and Christianization all play corrosive roles with respect to oral tradition.³⁹ And, of course, the Iroquois have undergone heavy doses of each of these. In fact, any effort—and there have been several—to date the formation of the League by reference to Columbus or Cartier or Champlain is, *ipso facto*, a borrowing.⁴⁰

In effect, Mann and Fields resort to the notion of "Keepers" largely as a means to accept certain dates and reject others. As we have seen, they reject the earliest accounts of the founding of the League on these grounds. This adroit maneuver is not only self-serving, but also disingenuous. The implication is clear: the authors have at last been able to penetrate the core of an unchanged Iroquois tradition. This is well illustrated in their citation to a statement by "Chief Jake Swamp (Mohawk):... 'I tend to think that two thousand years is not out of reach when you consider the highly sophisticated structure already in place by contact. To be on the safe side of things, I usually just mention one thousand years or somewhere between the two extremes.'"⁴¹ They follow this by quoting a "confederate lord of the Cayuga nation" to the effect that "the Peacemaker [Dekanawidah or Hiawatha]... was the same prophet that the white race call Jesus'. . . So this is according to the elders and what they talked about the founding of the League more than three thousand years ago."⁴²

Mann and Fields must see these strange observations as supporting their case. Most scholars would see them differently: as clear expressions of the fact that these sources do not have any idea when the League was founded, are indifferent to the issue, and are content to satisfy whatever needs they perceive in questions they receive on the matter. In fact, nothing could more clearly indicate the folly of attempting to date the founding of the League than these quotations.

In particular, one would think, in addressing the matter of "Keepers," Mann and Fields need also to take account of such testimony as offered by Chief John Buck in 1887. Buck was an Onondaga chief who was described as a "Firekeeper," yet he thought that the formation of the League took place "during the settlement of New York State by the English, Dutch, and French;" that is, even later than the majority opinion at that time and since.⁴³

Elsewhere, Mann and Fields take Elisabeth Tooker to task for implying that "the Keepers are in disagreement with one another." On the contrary, they argue, "[k]eepers uniformly date the League between 1000 B.C.E. and 1390 C.E. [!]"⁴⁴ Presumably, we are being asked to regard a difference of opin-

ion of nearly 2,500 years as “agreement,” while at the same time ignore the fact that Tooker was alluding to a range of less than two hundred years.

ARCHEOLOGY

Mann and Fields have little to say about archeological evidence. While this can hardly demonstrate the truth or falsity of an event recorded in tradition, as it happens, Iroquois archeology does suggest that “pervasive warfare” (e.g., larger and stronger palisades and population congregation) became endemic only *after* the mid-fifteenth century—a chronology that would turn the logic of Mann and Fields’ dating on its head.⁴⁵ Mann and Fields insist, however, that Iroquois oral tradition negates the idea that the organization of the League occurred, at least in part, as a response to news of the Europeans, which, they properly argue, well antedated the arrival of Champlain or even of Cartier. Their argument here is one of silence—it is simply that Europeans are not known to be mentioned in any traditions concerning the formation.⁴⁶

With more justification, they further insist that the palisading of the sixteenth century was in self-defense to the encroaching Europeans. However, they go too far when they claim that it was only defense against outsiders that occasioned such fortification, since this conclusion is the result of *petitio principii*; that is, it derives from their dating rather than being a cause for it. However, they advance the claim only to use against “conservative” historians:

Historians are aware that, absent internecine strife as the reason for mid-sixteenth century palisades, their claim for a post-contact League is in jeopardy. To get around the difficulty, some propose that the European invasion actually stimulated the formation of the League. This argument not only posits European contact as the central event of Haudenosaunee history, but it does so illogically. Somewhere in the middle of this circular spiel, the threat to the pre-League Iroquois transmutes from each other into the Europeans. The argument is specious.⁴⁷

Taking something that requires demonstration—their “Pax Iroquoia”—as fact, Mann and Fields embark on an argument that is at least as circular as any they would criticize. Moreover, it fails to consider that, as so often has been the case, the advent of Europeans in an area resulted in changing alliances and increased local tensions in the race to take advantages of new opportunities.⁴⁸ Thus, there is more than enough room to accommodate the hypothesis that both Iroquois tradition and Mann and Fields’ hypothesis are true rather than mutually exclusive.⁴⁹ This would not strengthen the case for a sixteenth-century date for the formation of the League, but it would negate Mann and Fields’ arguments against such a date.⁵⁰

EARLY ESTIMATES OF THE FOUNDING DATE

Mann and Fields discuss some earlier estimates of the date of the founding of the League and concede that none of these earlier theories advocate a date nearly as early as their own.⁵¹ One source they did not consider is actually one

which might be seen to give them some slight support (as would Cusick, of course). This was the account of Joshua V. H. Clark, an Onondaga who published an ethnohistory of his nation in 1849. According to Clark:

At what period or for what purpose this league was originally formed, is a matter wholly speculative, as the records of history and Indian tradition are alike uncertain, and throw but feeble light upon the subject....Common danger or a desire for conquest were the motives, rather than a far-seeing policy, which must have actuated these people to form a league of consolidation.

Having conceded that there was no evidence supporting the matter, Clark proceeds to offer an opinion just the same:

By some authors the time of the formation of the great league or confederacy was about the life of one man before the Dutch landed at New-York. By others, about a hundred years before that period. [Ephraim] Webster, the Onondaga interpreter, and good authority [and one of Dunlap's authorities; see below] states it at about two generations before the white people came to trade with the Indians. But from the permanency of their institutions, the peculiar structure of their government, the intricacy of their civil affairs, the stability of their religious beliefs and the uniformity of their pagan ceremonies, differing from other Indian nations in important particulars, we are inclined to the opinion that their federative existence must have had a much longer duration. And from the following tradition, we are inclined to the opinion, that the period is unknown, and the time lost, in the clouded uncertainties of the past.⁵²

Clark's reasoning for choosing an earlier, if unknown, date was qualitative rather than quantitative. Indeed, elsewhere he offered indirect evidence for a date even later than the very ones he was criticizing. Stating that "[f]rom time immemorial, the Onondagas have furnished the King—'TAH-TO-TAH,' or principal civil officer of the confederacy," he went on to write that the present incumbent was "the XIII., XIV. or XV. from the first."⁵³ Since he was only "about seven years old" and had acceded very recently, we can eliminate him from any calculations.

Now we have already seen that, by inference, Mann and Field accord this office an average tenure of either twelve years or four years. Taking the former, the first Adodarho would have acceded to office—and the Iroquois League founded—between approximately 1677 and 1701—[1845 - (12 X 14)] or [1845 - (12 X 12)]—or even as recently as between 1789 and 1797: [1845 - (12 X 4)] or [1845 - (4 X 14)]. For the sake of argument, we can raise these figures as high as twenty to twenty-five years per reign, but hardly any higher.⁵⁴ By this more generous line of reasoning, the League would have been founded, at least according to Clark, somewhere between *circa.* 1495—[1845 - (25 X 14)]—and *ca.* 1605—[1845 - (20 X 12)].

Such calculations are, of course, fatuous in the extreme. Those I have performed here for the sake of demonstration follow Mann and Fields'

exactly in their methodology and are based on evidence no worse than that which they bring to the table.

ECLIPSES AND THE HISTORICAL RECORD

In assessing the likelihood that Mann and Fields are correct in concluding that Iroquois oral tradition can combine with eclipse-track data to date an eight-centuries-old event to within three-and-a-half minutes, we need to consider similar sets of circumstances. For instance, in 1142 Stephen and Matilda were contesting the throne of England, Louis VII of France had just acceded to the throne, the Second Crusade was about to embark, the Mongols had yet to make an appearance, and the Inca and Aztec states were several centuries yet in the offing. Consider the possibility that these events and others contemporaneous with them would be remembered with such exactitude so much later with nothing but the dubious fidelity of orally transmitted material to buttress them.⁵⁵ It is hard to imagine any historian taking such a claim nearly as seriously as Mann and Fields take one skein of Iroquois oral tradition.

Had Mann and Fields made an attempt to test probabilities by looking at cases from other places and times, they would quickly have had more than enough examples of astronomical events that had been wrongly assimilated to historical events. A famous example—and one that might well have come to the attention of the Iroquois as early as the seventeenth century—is the tradition that Christ's crucifixion was accompanied by an eclipse.⁵⁶ This can be shown not to have been the case, leading some trying to salvage the biblical record by conjuring up such eclipse-like phenomena as a dust storm.⁵⁷

Many other dramatic historical events have also been clothed with eclipse vestments; somewhat like the emperor's new clothes, they have been found not to fit—indeed, not to exist.⁵⁸ Instead we are in the presence of a perfectly commonplace, and perfectly reasonable, literary topos. Events which man marks as epochal are then made by man to be noticed by the heavens as well. It is seen as a fit and neat exercise of literary talent, a practice that began as early as the second millennium B.C. and which continues even in a world seemingly made uncongenial by its remorseless ability to detect assimilation of just this kind.

Mann and Fields' approach mirrors a familiar desire to fix absolute dates to events mentioned in the historical record or otherwise recorded. This is absolutely natural and normal and follows the old dictum: "no chronology, no history." But the desire does not always avoid becoming blind to the hazards involved. Dating the volcanic destruction of the island of Thera in the Aegean by means of Greenland ice cores is a case in point. Evidence from the latter could possibly point to unusually severe volcanic activity from 1628 to 1626 B.C., and this evidence has been repeatedly pressed into service recently to date the destruction of Thera and to correlate it with other events. Recently, a more skeptical look at the ice core evidence shows it to be far too complicated to permit such a straight-line correlation.⁵⁹ The totality of evidence suggests that a case for dating Thera by ice cores cannot resist the arguments that can be brought against it. It is not just a case of "not proven," but one of "not likely."⁶⁰

NINETEENTH-CENTURY ACCOUNTS

It does not seem unreasonable and, under the circumstances, particularly necessary, to expand the discussion to Hiawatha. Was he a historical personage, or should he be regarded more like King Arthur, the Five Good Emperors of China at the end of the third millennium B.C., or a host of other culture heroes?⁶¹ The strong consensus is that he did occupy historical time and space, but it is worth looking at the way in which this figure emerged in the traditional record before deciding if this is really where the weight of evidence points.⁶²

The first reference to a named person connected with the founding of the Iroquois League is Johann Heckewelder's note that the Moravian missionary Johann Christopher Pylaeus wrote in about 1743 that "Thannawage was the name of the aged Indian, a Mohawk, who first proposed such an alliance."⁶³ For some, "Thannawage" equates with "Hiawatha," though for most the differences are clearly greater than the similarities.⁶⁴ It would be optimistic then to consider this to be the first mention of the figure now known as Hiawatha, although it does speak to the fact that by the mid-eighteenth century the idea of the formation of the League, led by a single individual, was underway.⁶⁵

It was to be some time before more details about such a figure were to surface. In 1801, the Mohawk chief Joseph Brant recounted the founding of the League. While he mentioned "Tekanawitagh," neither Hiawatha nor an eclipse were brought up.⁶⁶ Not long after, however, John Norton, Brant's adopted nephew, composed a version of his own. The central character in Norton's version is "a Chief called Hayouwaghtengh." Otherwise, however, the elements of Norton's story agree only roughly with the more or less canonical version that was to emerge several decades later.⁶⁷

Although Hiawatha finally made an appearance with Norton's account, it was to be thirty years or more before alternative accounts were banished from the emerging canon. For instance, as late as 1839, William Dunlap wrote that many years earlier he had "seen and conversed with three Indian Interpreters, men who had been carried away in childhood and adopted among the Iroquois," but had since returned to "civilized life."⁶⁸ One of them, a certain Ephraim Webster, told a story apparently not unlike subsequent traditions. According to Webster, the notion of a "union for defence" arose in the mind of "an inferior chief of the Onondagas [rather than the Mohawks, as with Pylaeus]...who we will call *Oweko*." This *Oweko* campaigned for a confederation and "a great council" was held. At this council, the assembled chiefs received word of an Iroquois defeat by Champlain. In short, no eclipse, no Hiawatha by name, and a date after 1600.⁶⁹

Writing in the 1840s, Joshua Clark was not impressed with the inchoate culture hero, and had this to say about Hiawatha:

This tradition [of Hiawatha], like all others, proves nothing positively, further than that the Iroquois themselves know little of their origin, history, of the antiquity of their most prominent characteristics and institutions. These being orally transmitted from generation to gener-

ation,...events are magnified to miracles, distinguished men are deified, and every circumstance of note is mystified.⁷⁰

At about the same time, however, Hiawatha finally triumphed—he was as much a part of the League formation as tradition would have it. It is not without some irony that this occurred by transporting the Hiawatha figure from New York to the upper midwest. The transformation took place in the influential works of Henry Rowe Schoolcraft published between 1846 and 1857. Schoolcraft's account of the occasion mentioned Hiawatha by name and even had an account of a miraculous event, but one that was atmospheric rather than celestial. As Schoolcraft described it:

As [Hiawatha] walked up [the shores of a lake], a loud sound was heard in the air above, as if caused by some rushing current of wind. Instantly the eyes of all were directed upward to the sky, where a spot of matter was discovered descending rapidly, and every instant enlarging in its size and velocity. Terror and alarm were the first impulses, for it appeared to be descending into their midst and they scattered in confusion.

This specter turned out to be “a gigantic white bird” which crashed to earth killing Hiawatha's daughter and being killed in its turn. Despite this personal tragedy, Hiawatha persevered in his mission and the League was consummated shortly thereafter.⁷¹

In its details, this description includes several elements of the canonical account, and could be said to have inspired it. However, it created no controversy at the time. Schoolcraft's account provided an occasion where the silence was especially deafening. On its publication, the aforementioned Joshua V. H. Clark wrote to a local newspaper complaining that Schoolcraft had appropriated his own account without attribution—in short, he accused him of plagiarism. Schoolcraft replied, heatedly denying the charge and pointing to a general body of tradition relating to the matter. Clark claimed that Schoolcraft's attested informants had not provided him with the information with which he credited them and cited two informants of his own: “the Onondaga chiefs, Captain Frost (Ossahinta) and Abram La Fort,” the latter the very source Schoolcraft had named. The issue reverberated in the newspapers for a couple of months, with further charges and denials before it petered out. In the exchange, neither Schoolcraft nor Clark, though each expanded a bit on their published versions, mentioned an eclipse.⁷²

In 1849, Alfred Street published a book-length poem on the Iroquois, a soon-to-be-forgotten precursor to Longfellow's more successful work.⁷³ In its details concerning the founding of the League, it closely resembled Clark's and Schoolcraft's work. Although Street did not discuss the sources for his work, the situations and *dramatis personae* run parallel to these other accounts published at approximately the same time and in much the same place.

Lewis Morgan's evolving treatment of Hiawatha provides a useful microcosm of this figure's progress through the literature. In his earliest pub-

lished account of the formation of the Iroquois League, which appeared in 1847, Morgan mentioned Dekanawidah's instrumental role, but had nothing to say about anyone named Hiawatha. Instead he merely listed "Ha-yó-went-ha" as the name of one of the Mohawk sachemships without further ado—certainly a curious silence if he knew more.⁷⁴ Four years later, Morgan's research turned into a book and in it the treatment accorded the foundation of the League—and Hiawatha—is identical.⁷⁵ Hiawatha finally appeared in Morgan's classic work, *Ancient Society*, published more than twenty-five years later, in which Hiawatha shared equal billing with Dekanawidah.⁷⁶

A quarter of a century later, Charles Henning, aware of the divergent tales regarding Hiawatha's role in the League's formation, asked Daniel La Fort for an explanation. According to La Fort (via Henning): "We all know that Hiawatha was the true and only founder of the League; he was our great forefather and has really dwelt among us. We believe in him. . . ."⁷⁷ Henning agreed: "I suggest that Hiawatha was not a mythical being, but a man of flesh and blood, who lived towards the end of the sixteenth century, and was the founder of the Confederacy of the Five Nations."⁷⁸

Two decades earlier, Horatio Hale found himself agreeing as well, calling Hiawatha "actually an historical personage," and devoting some attention to "the singular compilation of mistakes" that caused him to become euhemerized.⁷⁹ In forming this judgment, Hale cited the Iroquois Book of Rites and wampum belts that Hiawatha had "handled" to convince himself that Hiawatha had been a historical figure.

Nowadays this kind of evidence would not be taken quite so seriously, and the late appearance of a personage named Hiawatha and a story to explain his existence must raise doubts, especially when we compare this pattern to similar ones in many other places. There is no need to do this here, but only to emphasize that neither independent contemporary testimony nor consistent subsequent traditions force us to believe in a real Hiawatha, whether or not he is treated as a figure who played an instrumental role in establishing the Iroquois Confederacy.

Certainly, Daniel La Fort expressed an important truth when he replied that he and his fellow Iroquois "believe[d]" in the reality of Hiawatha, and those who have considered the matter can do no more than that. At best, Hiawatha's existence can be treated as "not proven" and therefore his historicity is a matter open to individual tastes. Certainly, any belief in his reality must be compromised by the mythic elements that are a part of every story surrounding the foundation of the League.⁸⁰ Some might think it an easy thing to sequester these elements in order to save Hiawatha from being their victim. But why? Surely it is more sensible to assume that the entire tradition regarding the foundation of the Iroquois League is nothing more than a routine etiological myth—not different from the myths of Menes, the "first" Egyptian pharaoh; Romulus and Remus; Moses in the bulrushes; or the first Inca, Manco Capac. These are all designed to explain satisfactorily the existence of a set of circumstances existing at centuries' remove from the foundation itself.

TWENTIETH CENTURY ACCOUNTS

Turning at last to the crucial question of the spoor of the eclipse in the available record, we might be surprised to discover that in fact it was to be still another fifty years after Clark et al. when mention of an eclipse in association with the founding of the League finally appeared in print. This occurred in William W. Canfield's *The Legends of the Iroquois*.⁸¹ The subtitle of this work ran "Told by 'The Cornplanter,'" with the addendum that the materials derived "From Authoritative Notes and Studies." Cornplanter was an important figure in Iroquois history. A Seneca and half-brother of the prophet Handsome Lake, he had a long and distinguished career of his own before he died in 1835, traditionally a centenarian.⁸²

To some, this might sound promising for indicating an otherwise unknown—and early—eclipse tradition. Canfield did his part to convince his readers by claiming that Cornplanter "was more thoroughly acquainted with the traditions of his people than any contemporary chief in the nations comprising the Iroquois," a claim that is expedient though insubstantial. Just the same, Canfield's further comments are bound to dampen the ardor of the sanguine. According to Canfield, Cornplanter whiled away the winters by telling stories "of his people, their past, their present condition, and their future." He went on to say that "[t]he legends were preserved in outline notes upon the blank pages of some diaries and civil engineer field-books which the white man was accustomed to keep; and these outlines, with full oral explanations came finally into the possession of the present writer." In the 1870s, he continued, the materials were discussed with "some of the most intelligent Indians in New York State." Canfield took the outline notes and brought them to "a point approximating their original beauty,...and only such additions that seem to be warranted have been made."⁸³

At first glance, this sounds like a plausible and circumstantial provenance, but all the crucial details are absent. For instance, Canfield does not reveal to his readers just what his "additions" were. Moreover, none of the names of those who interviewed Cornplanter, and only a few Iroquois who later helped Canfield, are included. The "legends" as Canfield presented them passed through any number of filters, not least of all himself, and we have nothing with which to substantiate or indict any claims of authenticity and reliability. We need also to keep in mind that Canfield wrote that it was "during the last twenty years" of Cornplanter's life that these reminiscences were recorded, that is, when he might have been well over eighty years of age.⁸⁴

Finally, the story as Canfield recorded it is significantly different from the versions of Clark, Schoolcraft, Hale, and others. The eclipse does not occur as a celestial *imprimatur* of a process already long underway and all but completed. Instead, it comes just as the Senecas and the allied Mohawks and Onondagas are about to come to blows over some reciprocal kidnapping. Moreover, none of the protagonists in the canonical version appear here; the eclipse is noticed just in time by an unnamed Mohawk girl; its message of peace is miraculously understood by all concerned, and amity quickly prevails: "In the light of the twice-dawned day, and in the presence of the sacred dead...the Confederacy of the Iroquois was formed."⁸⁵ The Cayugas and

Oneidas are not even mentioned. On balance, then, this maiden appearance of an eclipse is not particularly propitious for arguments that the eclipse had always been an element of the founding tradition.⁸⁶

SUSPICIOUS SILENCE

What about the many versions of the formation tradition collected *before* this belated appearance, some of which, all missing an eclipse, have already been mentioned? When referring to the testimony of contemporary “Keepers,” Mann and Fields studiously ignore these pregnant silences in the historical record. Nonetheless, it is needful to consult them, even at the risk of boring readers, for these silences, while hardly fascinating, are critical to understanding why it is impossible to imagine that the establishment of the Iroquois Confederacy was accompanied by an eclipse and, therefore, is datable.⁸⁷

The silence begins early; the first known testimony about the formation of the League directly from an Iroquois is disappointing for the enthusiast. In answer to a questionnaire, the Mohawk chief Joseph Brant offered a brief narration of the founding of the League. In answer to a question about the dating of this event, Brant was obliged to confess ignorance: “We can say [no] farther respecting the date than that it appears by the transaction to have been a considerable time before the arrival of the Europeans.”⁸⁸ In his turn, and shortly thereafter, John Norton, as noted above, had nothing to say about an eclipse.

Having already discussed Clark, Schoolcraft, and others of the mid-nineteenth century, we can move forward to the Six Nations’ General Council proceedings held in 1870—that is, about the very time that Canfield claims that his eclipse tradition surfaced. For the benefit of visitors, the presiding officer began with an introduction to Iroquois tradition. About this he made no claims as comprehensive as those of Mann and Fields. On the contrary, he observed only that “[t]his tradition has been handed down from our forefathers, it is the old customary rule. Yet,” he added, “it is hard to remember all.” Chief J. Smoke Johnson followed with a brief description of the founding of the League. This occurred, he observed, “before the white man came” and was the response to “murder and butchery among the different tribes.” His story is sketchy and does not conform particularly well with what has become the canonical version. For instance, there is no mention of the great white plummeting bird or of Hiawatha’s ascent to heaven. And there was no mention of any eclipse either.⁸⁹

Shortly after this, Horatio Hale provided a sympathetic and extended account of the establishment of the League and in particular Hiawatha’s role in it. Generally this follows the usual story, although Dekanawidah is treated as a Mohawk chief rather than a deity, and the establishment is taken to be a gradual process extending over at least several years. But, again, in this account there is no mention whatever of an eclipse occurring at any stage in the proceedings, however extended they might have been.⁹⁰

Hale’s account marks one stage in the development of variant sub-traditions about the League. For instance, he regarded Hiawatha’s Elijah-like

departure, the climax of Clark's and others' accounts, as no more than "a wild legend" peculiar to the New York-based Iroquois. Hale would have it that Hiawatha spent his last years "clearing away the obstructions in the streams which intersect [Iroquois] country," an early precursor of DeWitt Clinton.⁹¹

Only a few years before Canfield's version appeared, Charles Henning addressed the question, citing as his chief informant Daniel La Fort, "the head chief of the Onondagas [and] also the Chief of the Six Nations." This story is like other versions in general but, as usual, it departs from them in many of its details. However, it joins them in failing to include any mention of an eclipse.⁹²

I cannot claim that this silence was necessarily pervasive and continuous—an impossible task—but I consider it to be stronger than many arguments from silence in the sense that it is counterintuitive that a number of references to such an eclipse would have been passed over in the 250 years during which fragments of Iroquois tradition were recorded.⁹³ It is strong enough, in any case, that unless and until Mann and Fields or others adhering to their argument can cite examples before Canfield where this silence was breached, it is hard to account for this apparently studied indifference to the matter earlier than the twentieth century. Even then, the case against an eclipse would only be weakened since there would remain an embarrassingly large residue of sources that ignore it—those cited above as well as others.⁹⁴

TRADITIONAL ECLIPSE EVIDENCE

Thanks to Schoolcraft and Longfellow, Hiawatha overcame his suspiciously tardy appearance in tradition to become the central figure in the League's formation story; the same can hardly be said of the eclipse tradition on which Mann and Fields premise their entire argument. Quite the opposite, in fact. When we move into post-Canfield times, we find, significantly, that this first appearance of an eclipse in print had no apparent ripple effects at all; that is, it did not coax out any further dormant traditions of an eclipse. Less than a decade after Canfield's book was published, there appeared one of the most extensive accounts of the formation ever published. This version is said to have been "written from dictation by the ceremonial Chiefs," the names of several of whom followed, in the summer of 1900. The narrative claimed to be an undoctored text and runs well over 10,000 words. Much is mentioned, sometimes in glorious detail, in this authoritative account—but there is not so much as a hint that an eclipse accompanying this historic occasion.⁹⁵

Nor is an eclipse a part of the detailed, dialogic account in Mary Laing's "biography" of Hiawatha. Although a chapter is entitled "The Conquest of Darkness," it was "the darkened mind" of Atotarho that was in question.⁹⁶ And Helen Howard's account, collected from Mohawk informants, has not a word to say either,⁹⁷ nor do more recent Cayuga and Mohawk versions of the tradition.⁹⁸

Along with other students of the matter, Mann and Fields think especially highly of the narrative delivered by John A. Gibson, much the longest written account of the League's formation.⁹⁹ This version was published in its

entirety in 1992, and, though Mann and Fields are aware of this edition, they seem not to have consulted it.¹⁰⁰ In light of their high, if perhaps inadvertent, opinion of this work, perhaps its contents deserve attention.¹⁰¹

John A. Gibson was a prominent member of the Committee of Chiefs whose version, dictated in 1900, is noted above. Gibson's account in question was proffered in 1912, the year after the committee's testimony appeared in print. On this occasion, however, Gibson preferred to attempt a synthetic version. As a result, the recent edition runs to more than seven hundred large format, closely printed pages. Gibson's account includes details of several prodigies that tradition now remembers as preceding and accompanying the activities with which tradition marks the formation of the League. But Gibson does not mention any eclipse among these or any circumstances that might be construed as suggesting an eclipse.¹⁰² In short, other than Wallace's half-hearted allusion to an eclipse mentioned earlier, there are no further such references either before or after Canfield's claim.

RECENT ESTIMATES OF FOUNDING DATE AND HYPOTHESIS

Despite so belated and exiguous an appearance in the historical record, the notion that an eclipse might have accompanied the founding of the Iroquois League has proved tempting to others interested in Iroquois history. Elisabeth Tooker surveyed a large number of posited dates and concluded that "one Iroquois tradition suggests a mid-fifteenth-century date."¹⁰³ Tooker presumably had the solar eclipse of 28 June 1451 in mind, but this tradition hardly suggests any date at all; it can only allow those with a range of dates already in mind to look for eclipses that match the range, and in this sense Tooker behaved much as Mann and Fields did.¹⁰⁴

The most extensive recent treatment is that of Dean Snow, who addresses the issue to complement an archeologically based argument. Snow is almost content to leave the matter of dating the League open, "as one should if a set of contradictory assertions is all one has to go on."¹⁰⁵ However, he then relents just enough to note that "[t]here is, however, a source that might provide a means to choose between the many options." This of course is the eclipse reference, and Snow proceeds to attempt to isolate one most probable eclipse, if only as an exercise.

In two ways his approach is different than—yet similar to—that of Mann and Fields. The dating has to fall between a specified range of dates, though a different one in his case (1350 and 1650), but he applies a more generous 80 percent totality measure. On these terms, and "if the Seneca traditions are interpreted narrowly as meaning that there was a total eclipse," he comes to the tentative conclusion that the eclipse of 28 June 1451 is slightly more likely than any other, with the annular eclipse of 18 June 1536 running second.¹⁰⁶ Snow concludes that, "for the moment,...it appears that the League of the Iroquois was complete by 1536 at the latest."¹⁰⁷ In choosing this specific terminus, Snow appears to rely as much on eclipse data as on any other evidence.

When Snow speaks of "Seneca traditions" regarding an eclipse, he overstates the case. If we are to believe Canfield, the eclipse story emanated from

a single source, Cornplanter, and entered the public domain only a century later. In any case, it is counterintuitive to believe that of the Five Nations only the Seneca would have remembered such an event. And, for that matter, one must doubt whether there were many Seneca who did. Ely S. Parker, Lewis H. Morgan's principal informant, was a Seneca, yet there is no mention of an eclipse in any of Morgan's works on the Iroquois.¹⁰⁸ Even more ominously, in a short narrative Parker himself wrote on the foundation of the League, he had nothing to say about an eclipse, and he referred to the founding tradition as "more of an allegory than real."¹⁰⁹ Asher Wright, a missionary among the Seneca, observed in the 1850s that his informants "state positively that the union was consummated four years prior to the discovery of the continent by Columbus," presumably unaccompanied by an eclipse.¹¹⁰ Finally, is it not odd that the Seneca historian Arthur C. Parker could write of "Iroquois sun myths" without mentioning such an eclipse had he known of it?¹¹¹

This is certainly another formidable arrayal of silence, and silence precisely where we might expect some high-decibel noise. It raises questions. The most obvious of these is simply: when traditions about the formation of the League are the greatest common stock among the Iroquois, why would the eclipse simply disappear from that corpus?¹¹²

In canvassing possible eclipses, Snow points out that one total eclipse, that of 1806, "is much too recent," and Mann and Fields seem not to have considered eclipses dating after 1536.¹¹³ This might be a tactical error, however. While this is true enough—if we confine ourselves to the actual formation of the League—the dating is just right if we broaden our thinking to include times when the notion might have arisen that such an eclipse had occurred.¹¹⁴

This was the era immediately following the imposition of effective colonial rule and the Iroquois diaspora was spread throughout the United States, as far away as Wisconsin, and Canada. Not coincidentally, the revivalist movement of Handsome Lake was at its height, and an actual eclipse could well have served the purpose of prompting Cornplanter to use the opportunity to transport the phenomenon back to the defining moment in Iroquois history.¹¹⁵ This is, after all, precisely how tradition works and, for that matter, how eclipses affect non-astronomical societies as well.¹¹⁶ On the available evidence, this argument can hardly be demonstrated conclusively, but it seems useful to raise it and to suggest it as an alternative to the far less likely notion that a single strand of Seneca oral tradition retained the true memory of an eclipse for centuries, while traditions of the other four nations did not, even though, *ex hypothesi*, the occasion was experienced equally by members of each of them.¹¹⁷

Iroquois history since 1806—not to mention before—has been fraught with military, political, and economic tensions. But then no society is really free of these conditions. Despite an eagerness to think otherwise, these are circumstances under which tradition not only bends but breaks, only to reconstitute itself to accommodate new exigencies.¹¹⁸ When this happens behind the scenes, such tradition eventually becomes irretrievably encrypted. It is quixotic to think otherwise.

CONCLUSION

At one point in their paper, Mann and Fields proclaim rather mischievously that “[a]ll traditions are simultaneously correct.”¹¹⁹ Rather than attempt to plumb the meaning of this peculiar remark, I will simply point out that it sits oddly with their argument that only one eclipse can fit their case—clearly all eclipses are not “simultaneously correct”! And it sits even more oddly with their tacit rejection of every tradition of the formation of the League but a trifling one.

It would be as pleasant as that day in August if it could be demonstrated that, after many centuries, at least some parts of Iroquois oral tradition have survived intact. Mann and Fields, however, have accomplished nothing of the kind. Nor does their bringing to the argument astronomical arguments, eclipse paths, and the like serve any purpose but to disguise this fact.

The present discussion is designed to underscore the tantalizing nature of apparent chances to date the past in scientific ways. Sometimes the chance is one well taken, but this is not such a case; here, all the evidence reinforces the idea that any claim of an eclipse is belated and eccentric. Unfortunately, the notion that “we must sift the various traditions still to be found among the Iroquois, and in this way piece together the approximate truth” must be rejected as hopelessly quixotic.¹²⁰ It is no longer possible—if it ever was—to determine which competing traditions about the founding of the Iroquois League are more reliable than others. Far too much time and far too many circumstances have intervened for even the most patient and optimistic investigator to make such progress—even if there was such an occasion.

Why? Because, I suggest, Fenton was right when he wrote that “[t]he Deganawidah epic as a discourse is a composite of myth and legend that approaches native history, having undergone transformation from myth toward historical tradition, a process that has affected Iroquois mythology generally since it was first collected,”¹²¹ and, one might add, continues to do so with ever greater purposefulness. Looked at conspectively, it is hard to understand why this should not be the default view. After all, the tradition of the founding of the League is redolent with one preternatural or supernatural occasion after another, some of which hint pretty broadly at Christian influences.¹²² In this they resemble such etiological myths in many oral societies, particularly those that have undergone extended periods of acculturation.¹²³

These circumstances allow those who wish to believe to do so, while those who prefer to doubt will find nothing to deter them. Mann and Fields have tried to tip the balance by taking one minuscule element of modern tradition and putting a very specific date to it, thereby granting it both substance and history. Unfortunately, they have breached too many rules of historical criticism. They freely accept testimony that supports their case while rejecting—or ignoring—contradicting evidence. They misunderstand the historical record they use in order to establish a plausible average tenure in office. Most of all, perhaps, they fail dramatically to subject either the evidence or their own conclusions to testing. If they had, they could only have realized that their mission was an impossible one.

Unfortunately, there is little chance that Paul Wallace was right when he optimistically wrote that “there must have been some final political crisis which precipitated the concrete substance known as the Five Nations, and researchers will some day tell us when that occurred.”¹²⁴ And only a microscopic chance that this unlikely event occurred on “the pleasant afternoon of August 31, 1142.”¹²⁵

NOTES

1. A word about my use of the term *myth* is in order. Common sense tells us that any story about the past can be based on true recollections of real events, no matter how it is used in the evolving present. However, experience has shown that when these are put to broader explanatory purposes, they tend to stop trying to be merely accurate in aid of being expedient. The Masada myth that helped to sustain the state of Israel before the mid-1970s is an example, but only one of hundreds. Being labeled a myth does not make an account untrue, no more than labeling it history does. But the uses to which myth is put tend to put greater, sometimes intolerable, stresses on its tensile strength.

2. Julia M. H. Smith, review of Michel Rouche, *Clovis* (Paris, 1988), *English Historical Review* 113 (April 1998): 395.

3. William N. Fenton, “Problems in the Authentication of the League of the Iroquois,” in *Neighbors and Intruders: An Ethnohistorical Exploration of the Indians of Hudson’s River*, eds. Laurence M. Hauptman and Jack Campisi (Ottawa: National Museums of Canada, 1978), 266.

4. Barbara A. Mann and Jerry L. Fields, “A Sign in the Sky: Dating the League of the Haudenosaunee,” *American Indian Culture and Research Journal* 21:2 (1997): 105. In the arguments that follow I assume that the eclipse tracks are accurately calculated, that is, that there really was an eclipse visible in central New York on 31 August 1142.

5. For more like this, see David Henige, *The Chronology of Oral Tradition: Quest for a Chimera* (Oxford: Clarendon Press, 1974).

6. I plan to deal more extensively with the whole matter of astronomical dating (ancient Mesopotamia, early China, the New Testament, and elsewhere) in a chapter in a forthcoming book entitled *Historical Evidence and Argument*.

7. Like Mann and Fields, and most others, I use the terms *Iroquois League* and *Iroquois Confederacy* interchangeably, and I treat the two terms as interchangeable in the sources to which I refer. On this see José Antônio Brandão, “Your fyre shall burn no more”: *Iroquois Policy Toward New France and Its Native Allies to 1701* (Lincoln: University of Nebraska Press, 1997), 29.

8. Mann and Fields, “Sign,” 134.

9. *Ibid.*, 136, quoting Paul A. W. Wallace, “The Return of Hiawatha,” *New York History* 29 (October 1948): 399 (emphasis added).

10. *Ibid.*, “Sign,” 136.

11. Wallace, “Return,” 399. Wallace listed possible eclipse dates of 258, 664, 1451, 1806 (of which more later), and 1925, and opted for that of 28 June 1451.

12. Mann and Fields, “Sign,” 137.

13. Joseph-François Lafitau, *Moeurs des sauvages américains comparées aux mœurs des premiers temps*, vol. 1 (Paris: Saugrain, 1724), 477–478; cf. Fenton, *The Great Law and the Longhouse: A Political History of the Iroquois Confederacy* (Norman: University of

Oklahoma Press, 1998), 358–360. Lafitau’s seminal contributions to Iroquois ethnography are summed up in William N. Fenton, “J. F. Lafitau (1681–1746), Precursor of Scientific Anthropology,” *Southwestern Journal of Anthropology* 25 (1969): 173–187. For what it is worth, in 1636 Jean de Brébeuf described similar “national” councils among the Hurons as occurring “more often at night than day, they often pass entire nights there.” *Jesuit Relations and Allied Documents*, vol. 10, ed. Reuben G. Thwaites (63 vols.: Cleveland: Burrows Bros. Co., 1896–1901), 250. Fenton, *Great Law and the Longhouse*, 359, wonders whether Lafitau’s account might have been based on that of Brébeuf.

14. In addition, the fact that the General Council of 1870 was recorded as convening at 11 A.M. one day and 10 A.M. the next also hurts their argument, though to a lesser degree. *The General Council of the Six Nations, and Delegates from Different Bands in Western and Eastern Canada, June 10, 1870* (Hamilton, Ont.: Spectator Office, 1870), 6, 10.

15. *Ibid.*, 115, citing Jake Swamp.

16. Mann and Fields, *ibid.*, seem to accept the notion that the Iroquois often lived to be “from 100 to 120 years old.”

17. Mann and Fields, *ibid.*, citing Helen A. Howard, “Hiawatha: Co-Founder of an Indian United Nations,” *Journal of the West* 10 (July 1971):428 n1, who credited the information to “my Mohawk informants” without further details.

18. Mann and Fields, “Sign,” 117.

19. For details see Matthew Bunson, *The Pope Encyclopedia* (New York: Crown, 1995); J. N. D. Kelly, *The Oxford Dictionary of Popes* (New York: Oxford University Press, 1988); or Richard P. McBrien, *Lives of the Popes* (San Francisco: Harper, 1997).

20. Mann and Fields, “Sign,” 117.

21. For Venice, see Andrea da Mosto, *I dogi di Venezia* (Venice: A. Martello, 1960).

22. Mann and Field, “Sign,” 117–118.

23. *Ibid.*, 138–141. The matter is touched on in David Henige, “‘Day Was of Sudden Turned into Night’: the Use of Eclipses in Dating Oral History,” *Comparative Studies in Society and History* 18 (1976): 576–601. This article is an attempt to deal more generally with the chronological value of eclipses as recorded at some point in oral tradition. Even so, this argument enjoins Mann and Fields to explain the several references in the *Jesuit Relations* to *partial* eclipses. See note 52 below.

24. Mann and Fields, “Sign,” 115, citing Jacques Cartier, ed. Ramsay Cook, *The Voyages of Jacques Cartier* (Toronto: University of Toronto Press, 1993), 26.

25. These are described and assessed by Bruce Trigger in *Cartier’s Hochelaga and the Dawson Site*, ed. James F. Pendergast and Bruce G. Trigger (Montreal: McGill-Queens University Press, 1972), 41–93; and James F. Pendergast, “The Identity of Jacques Cartier’s Stadaconans and Hochelagans: the Huron-Iroquois Option,” in *Origins of the People of the Longhouse*, ed. André Berman and Gary Warrick (North York: Ontario Archaeological Society, 1995), 106–118.

26. There is an irredentist historiography that claims that Mohawks inhabited Hochelaga in Cartier’s time; for this see Pierre Trudel, “Les Mohawks ont-ils découvert Jacques Cartier?” *Recherches Amérindiennes de Québec* 21(Spring 1991): 53–58; and Alexander von Gernet, “The Date of the Time Immemorial: Politics and Iroquoian Origins,” in *Origins of the People of the Longhouse*, 119–127. Mann and Fields may have relied on this historiographical strand.

27. Pendergast and Trigger, *Hochelaga*; cf. Bruce G. Trigger and James F. Pendergast, “Saint Lawrence Iroquoians,” in *The Handbook of North American Indians*,

vol. 15, ed. Alfonso Ortiz (Washington, DC: Smithsonian Institution, 1983), 357–361.

28. As they put it (“Sign,” 154 n55), the stick “seemed to have tallied up office holders.” The matter of mnemonic devices among the Iroquois is taken up in William N. Fenton, *The Roll Call of the Iroquois Chiefs: A Study of a Mnemonic Cane from the Six Nations Reserve* (Washington, DC: Government Printing Office, 1950).

29. Lafitau, *Moeurs des sauvages américains*, 2: 186–187.

30. That he was probably not wrong, however, is suggested by other and similar descriptions deriving from before and after his own. These are discussed in Fenton, *Roll Call*, 2–10.

31. Mann and Fields, “Sign,” 138.

32. Ibid. Here they cite Arthur C. Parker, *The Constitution of the Five Nations* (Albany: University of the State of New York, 1916), 74 n3, who included the word “frequently” (emphasis added).

33. Mann and Fields, “Sign,” 138.

34. The notion of a pristine oral tradition was given the lie by the Iroquois themselves over a century ago. Vecsey, for instance, points out examples of demythologizing through rationalizing as far back as Seth Newhouse in the 1880s: Christopher Vecsey, “The Story and Structure of the Iroquois Confederacy,” *Journal of the American Academy of Religion* 54 (Spring 1986): 82. An even earlier example is illustrated in a tradition derived from Governor Blacksnake in the 1830s or 1840s; see Thomas S. Abler, ed., “The Indian Old Dratition [*sic*],” *Man in the Northeast* 24 (Fall 1982): 71–87. These demonstrate the truism that oral tradition can and does change as often as necessary to meet new exigencies. They might also have heeded the comment of Jesse Cornplanter that “our older men...differ some to a certain degree—who wouldn’t when it is not written nor recorded? It is bound to be lost or forgotten soon[er] or later.” Cornplanter, *Legends of the Longhouse* (Philadelphia: Lippincott, 1938), 34.

35. Mann and Fields, “Sign,” 112–113 (emphasis added).

36. Ibid., 105–115 *passim*.

37. Joshua V. H. Clark, *Onondaga, or Reminiscences of Earlier and Later Times, Being a Series of Historical Sketches Relative to Onondaga, with Notes on the Several Towns in the Country, and Oswego*, vol. 1 (Syracuse: Stoddard & Babcock, 1849), 114.

38. It might be argued that neither Clark nor Schoolcraft was particularly interested in this issue and so failed to record what they knew, but, as noted in note 48, Schoolcraft at least made several efforts to date the foundation of the League and, if he was aware of this eclipse datum, it is hard to see why he would have failed to mention it, as for instance he tried to use tree-ring evidence elsewhere.

39. The issue of feedback has begun to assume significance in interpretations of the dynamics of oral tradition. See, among many others, Alison Redmayne, “The War Trumpets and Other Mistakes in the History of the Hehe,” *Anthropos* 65:1(1970): 98–109; David Henige, “The Problem of Feedback in Oral Tradition: Four Examples from the Fante Coastlands,” *Journal of African History* 14:2 (1973): 223–235; Francis Lee Utey, “The Migration of Folktales: Four Channels to the Americas,” *Current Anthropology* 15 (March 1974): 5–27; Jeffrey L. Klaiber, “The Posthumous Christianization of the Inca Empire in Colonial Peru,” *Journal of the History of Ideas* 37 (July–September 1976): 507–20; Louis-André Vignerat, “Saint Thomas, Apostle of America,” *Hispanic American Historical Review* 57 (February 1977): 82–90; N. C. Ejituwu, “The Problem of Feedback in Oral Tradition: The Obolo (Andoni) Example,” *Kiabarà*

4 (Harmattan 1981): 67–80; Philip A. Noss, “The Oral Story and Bible Translation,” *Bible Translator* 32 (July 1981): 301–318; Veronika Görös-Karady, “Retelling Genesis: The Children of Eve and the Origin of Inequality,” *Journal of the Anthropological Society of Oxford* 13 (Hilary 1982): 31–44; James J. Fox, “Adam and Eve on the Island of Roti,” *Indonesia* 36 (October 1983): 15–23; *The Flood Myth*, ed. Alan Dundes (Berkeley: University of California Press, 1988). As these studies suggest, a principal source of this feedback was the Bible, a matter taken up, for the Iroquois, in Victor Egon Hanzeli, *Missionary Linguistics in New France* (The Hague: Mouton, 1969). For a discussion of several Iroquois folktales borrowed from European sources, see F. G. Speck and H. P. Beck, “Old World Tales among the Mohawks,” *Journal of American Folklore* 63 (July–September 1950): 285–308. A principal contaminant might have been the work of the Rev. John Campbell, who in his “The Earliest Written Records of the League of the Iroquois,” *Transactions of the Royal Society of Canada* 6 (1898/99): 245–72, concluded (*ibid.*, 264) that “the League, which we call of the Iroquois, was an old Hittite League, dating back to the end of the nineteenth or the beginning of the eighteenth century B.C., and that at least three of its founders recorded in the Iroquois Book of Rites, have their record on the rocks of the Sinaitic peninsula. These are Odatshehte, Dekanawidah, and Atotarho, in the forms of Achudzath, Dekanata, and Hadad-ezer.” He continued that “[i]t remains to show that Job or Hiob, the orginial Hiawatha, gave name to a people at the same time.” Furthermore, Teharihoken, “whose name stands at the head of the League founders,” was none other than Sargon of Agade, who ruled even earlier. However risible all this might now seem, it is of a piece with much mainstream thinking at the time and, whether absorbed or not, such interpretations presented temptations to those seeking an early genesis for the Iroquois.

40. This habit began as early as David Cusick, whose entire chronological schema is based on 1492: David Cusick, *David Cusick's Sketches of the Ancient History of the Six Nations* (Lewiston, NY: author, 1827). For an appraisal of Cusick's work see Russell A. Judkins, “David Cusick's *Ancient History of the Six Nations*: A Neglected Classic,” in *Iroquois Studies: A Guide to Documentary and Ethnographic Resources from Western New York and the Genesee Valley*, ed. Russell A. Judkins (Geneseo, NY: Geneseo Foundation, 1987), 26–40.

41. Mann and Fields, “Sign,” 114, citing Chief Jake Swamp, Tree of Peace Society, Mohawk Nation.

42. *Ibid.*, 114, citing Jacob E. Thomas of the Jake Thomas Learning Center.

43. John Buck, “What is Wampum?” *Thirty-Sixth Annual Archaeological Report, Appendix to the Report of the [Ontario] Minister of Education* (Toronto: Ministry of Education, 1928), 50. And they might be concerned as well that, just five years earlier, the same John Buck had told Horatio Hale that it was “‘about four hundred years’ since the League was formed.” In fact, he went on directly to contradict his later statement by asserting that “[h]e was confident that it was before any white people had been heard of by his nation.” Hale, *The Iroquois Book of Rites* (Onsweken, Ont.: Iroqrafts, 1983; 1889), 178.

44. See, for example, Mann and Fields, “Sign,” 111.

45. Dean R. Snow, *The Iroquois* (Cambridge, MA: Blackwell, 1994), 52–55, 230 n1, 231 n10; and P. G. Ramsden, “Palisade Extension, Village Expansion, and Immigration in Iroquois Sites in the Upper Trent Valley,” *Canadian Journal of Archaeology* 12 (1988): 177–183.

46. Mann and Fields, "Sign," 120–126.
47. *Ibid.*, 109.
48. See, for example, Bruce Trigger, *Natives and Newcomers: Canada's 'Heroic Age' Reconsidered* (Kingston: McGill-Queens University Press, 1985).
49. In the sense, that is, that the League coalesced after the first effects of the European presence but before direct contact, i.e., between ca. 1500 and ca. 1620.
50. It could have helped had Mann and Fields attempted to deal with the views of those, like Tuck, who dates "the founding of the Onondaga Nation" to no earlier than "the early fifteenth century" on archeological grounds. James A. Tuck, *Onondaga Iroquois Prehistory: A Study in Settlement Archaeology* (Syracuse: Syracuse University Press, 1971), 212–216. Presumably, this process antedated the formation of the League by quite some time. On the other hand, based on the same evidence, James W. Bradley, *Evolution of the Onondaga Iroquois: Accommodating Change, 1500–1655* (Syracuse: Syracuse University Press, 1987), 34–43, attributes the foundation of the League itself to this period.
51. Like Mann and Fields, Elisabeth Tooker, "The League of the Iroquois: Its History, Politics, and Ritual," in *The Handbook of North American Indians*, vol. 15, ed. Alfonso Ortiz (Washington, DC: Smithsonian Institution, 1983), 418–422, lists several suggestions as to the date of the formation of the League, as does Fenton, *Great Law and the Longhouse*, 69. Despite this, it seems useful to include a sampling of my own, which is arranged here by date of publication, and which includes only a few cited by Mann and Fields: (1) more than one thousand years before Columbus: Cusick, *Sketches*, 16; (2) about 1539, Schoolcraft, *Notes on the Iroquois: or, Contributions to the Statistics, Aboriginal History, Antiquities, and General Ethnology of Western New York* (New York: Bartlett & Welford, 1846), 51–52, where a tree-ring count was said to provide a date of 1555; (3) 1605, according to "a tradition among portions of the Senecas," but "all other authorities indicate an earlier date." Henry R. Schoolcraft, *Notes on the Iroquois; or Contributions to American History, Antiquities, and General Ethnology* (Albany: E. H. Pease & Co., 1847), 262, emphasis in original; (4) the unnamed founder of the League was "said to have been a grandfather of the celebrated orator Red Jacket" (died 1830): Charles Lanman, "The Peace Maker: A Tradition of the Senecas," *Southern Literary Messenger* 15 (July 1849): 413–414; (5) a few years before Columbus: Minnie Myrtle [Anna C. Miller], *The Iroquois, or the Bright Side of Indian Character* (New York: D. Appleton & Co, 1855), 32–33; (6) "Tradition places it about 1539, upon what authority is not so clear." William Ketchum, *Authentic and Comprehensive History of Buffalo* (2 vols.: Buffalo: Rockwell, Baker, and Hill, 1864–65), 1:25; (7) "about A.D. 1400–1450" Lewis Henry Morgan, *Ancient Society* (New York: H. Holt, 1878), 126; (8) "some date later than A.D. 1600, which is not far out of the way." W. M. Beauchamp, "Hi-a-wat-ha," *Journal of American Folklore* 4 (October–December 1891): 296; (9) "the year 1600 will do." Beauchamp, *The Iroquois Trail, or Foot-Prints of the Six Nations* (Fayetteville, NY: H. C. Beauchamp, 1892), 138; (10) "[a] little over three hundred years ago." Daniel La Fort in Charles L. Henning, "The Origin of the Confederacy of the Five Nations," *Proceedings of the American Association for the Advancement of Science* 47 (1898): 477; (11) "about 1390." Committee of Chiefs, "Traditional History of the Confederacy of the Six Nations," ed. Duncan C. Scott, *Proceedings and Transactions of the Royal Society of Canada* 3/5 (1911), 196; (12) "I usually date the League in 1590, in deference to some others, but with an inner feeling that ten years or more later is nearer the truth. William M.

Beauchamp, *The Founders of the New York Iroquois League and Its Probable Date* (Rochester: Lewis H. Morgan Chapter, 1921), 33; (13) A. Leon Hatzan, *The True Story of Hiawatha* (Toronto: McClelland and Stewart, 1925), 32–33, actually mentions the date A.D. 1142, but settles for the year 1193, based on testimony of “Chief Sah-ren-ho-wah-ne;” Hatzan sees 1190 as “three generations prior to the advent of the white man—a generation counting one hundred years, as Sah-ren-ho-wah-ne was very careful to point out.” *Ibid.*, 38. Mann and Fields, “Sign,” do not cite Hatzan; (14) “about A.D. 1600. Beauchamp, “The Principal Founders of the Iroquois League and Its Probable Date,” *Proceedings of the New York Historical Association* 24 (January 1926), 36, emphasis in original; (15) “possibly [Horatio] Hale’s 1450 or thereabouts:” Paul A. W. Wallace, *The White Roots of Peace* (Philadelphia: University of Pennsylvania Press, 1946), 33; (16) “Four hundred years ago perhaps:” Elisabeth Tooker, “The United States Constitution and the Iroquois League,” *Ethnohistory* 35 (Fall 1988): 305; (17) “It seems that it was already in place in 1630:” Marie-Laure Pilette, “Un dilemme iroquois: combattre pour s’allier et s’allier pour combattre,” *Recherches Amérindiennes au Québec* 21 (Spring 1991): 71; and (18) “the process of confederation was going on fairly early in the sixteenth century.” Fenton, *Great Law*, 69. Please note that a few other datings are discussed at greater or lesser length below.

52. Clark, *Onondaga*, 20–21. The “following tradition” recounted the coming of Hiawatha, which Clark dated to “[h]undreds of years ago.”

53. *Ibid.*, 113.

54. For reasons why this number is no higher, see Henige, *Chronology of Oral Tradition*, 121–144.

55. It might seem that I am drawing an invidious contrast here between oral and written data. I agree that, at least *prima facie*, written sources require the same critical attention as oral ones, but the likelihood that the former change frequently is small and the ability to detect the changes greater, and this is a significant epistemological difference.

56. There are numerous instances recorded in the *Jesuit Relations* where eclipses were discussed between the missionaries and the Iroquois. See, e.g., *Jesuit Relations* 12: 30, 12: 72, 12: 142, 54: 240, 58: 28. For a case in which an eclipse prediction by the Jesuits appeared to impress the Iroquois, see Daniel K. Richter, “Iroquois versus Iroquois: Jesuit Missions and Christianity in Village Politics, 1642–1686,” *Ethnohistory* 32 (Winter 1985): 6.

57. See, e.g., Nikos Kokkinos, “Crucifixion in A.D. 36: The Keystone for Dating the Birth of Jesus,” in *Chronos, Kairos, Christos: Nativity and Chronological Studies Presented to Jack Finegan*, ed. Jerry Vardaman and Edwin M. Yamauchi (Winona Lake, IN: Eisenbrauns, 1989), 133–163; Colin J. Humphreys and W. G. Waddington, “Astronomy and the Date of the Crucifixion,” in *ibid.*, 165–181; Giulio Firpo, “Il terremoto del 31 A.C. in Palestina e la cronologia della Passione,” in *Fenomeni naturali e avvenimenti storici nell’antichità*, ed. Marta Sordi (Milano: Vita e Pensiero, 1989), 184–218.

58. See, e.g., David Henige, “Day was of Sudden Turned into Night”; M. G. L. Baillie, “Marking in Marker Dates: Towards an Archaeology with Historical Precision,” *World Archaeology* 23 (October 1991): 233–43; Baruch Margalit, “The Day the Sun did not Stand Still: A New Look at Joshua X 8–15,” *Vetus Testamentum* 42 (October 1992): 466–490; Paul W. Taylor, “Myths, Legends, and Volcanic Activity: An Example from Northern Tonga,” *Journal of the Polynesian Society* 104 (September 1995): 323–346.

59. Paul C. Buckland, Andrew J. Dugmore, and Kevin J. Edwards, "Bronze Age Myths? Volcanic Activity and Human Response in the Mediterranean and North Atlantic Regions," *Antiquity* 71 (September 1997): 581–593.

60. In a related matter, more thorough radiocarbon dating has undermined the widespread notion that the supernova of A.D. 1054, which formed the Crab nebula, was recorded at the time in rock drawing from northern California. R. A. Armitage et al, "Rock-Art Image in Fern cave, Lava Beds National Monument, California: Not the AD 1054 (Crab Nebula) Supernova," *Antiquity* 71 (September 1997): 715–719. New tests show that the drawings date from after A.D. 1440.

61. A sampling of such figures, largely drawn from the British Isles, can be found in FitzRoy Richard Somerset, Baron Raglan, *The Hero: A Study in Tradition, Myth, and Drama* (New York: Vintage Books, 1956).

62. For ways in which the Five Good Emperors became dehumanized see, e.g., Michael Szonyi, "The Illusion of Standardizing the Gods: The Cult of the Five Emperors in Late Imperial China," *Journal of Asian Studies* 56 (February 1997): 113–135; and Robert G. Henricks, "Fire and Rain: A Look at Shen-Nung (the Divine Farmer) and His Ties with Yen Ti (the 'Flaming Emperor' or 'Flaming God')," *Bulletin of the School of Oriental and African Studies* 61.1 (1998): 102–124.

63. John Heckewelder, *History, Manners, and Customs of the Indian Nations*, ed. William C. Reichel, rev ed. (Philadelphia: Historical Society of Pennsylvania, 1876), 234n.

64. Dekanawidah would probably be as good a fit, as suggested by one of the anonymous referees.

65. Heckewelder, *ibid.*, did name "the chiefs of the Five Nations, which at that time met and formed the alliance," one of whom was "Toganawita of the Mohawks." The notion that five chiefs met as consenting equals does not conform well to the subsequent canonical version.

66. Douglas W. Boyce, "A Glimpse of Iroquois Culture History Through the Eyes of Joseph Brant and John Norton," *Proceedings of the American Philosophical Society* 117 (August 1973): 288–289.

67. John Norton, *The Journal of Major John Norton, 1816*, ed. Carl F. Klinck and James J. Talman (Toronto: Champlain Society, 1970), 99–105. I apply the term *canonical* to the so-called Chiefs' version, published in 1912, and to its elaboration by Gibson a few years later, which was published only in the 1990s but presumably had an influence in the meantime.

68. William Dunlap, *History of the New Netherlands Province of New York, and the State of New York to the Adoption of the Federal Constitution*, vol. 1 (New York: Carter & Thorp, 1839–40), 29. Apparently these abductions took place during the Revolutionary War and the interview with Webster in about 1815. Dunlap seems to be providing a pseudonym here, although it is hard to see why he would choose to. But then, maybe not—the Minutes of the Six Nations Council held 17 July 1839 record that "Oyehgwohdoh was the name of the founder of the Confederacy." See Parker, *Constitution*, 139.

69. Dunlap, *New Netherlands*, 29–30, with italics in original. Cf. W. M. Beauchamp, "Onondaga Notes," *Journal of American Folklore* 8 (July–September 1895): 215–216.

70. Clark, *Onondaga*, 1:31. As if to prove his point Clark went on to narrate a brief history of the Iroquois using only French, English, and American sources.

71. H. R. Schoolcraft, *Information Respecting the History, Tradition and Prospects of the Indian Tribes of the United States*, vol. 3 (Philadelphia: Lippincott, Grambo, 1851–57),

315–317. Schoolcraft described his source for this story as “the verbal narrations of the late Abraham Le Fort, an Onondaga chief.” *Ibid.*, 314n. A slightly more elaborate version is given at *ibid.*, 5: 158–163. Here Hiawatha ascends into heaven in a canoe to cap off the proceedings. Somewhat earlier Schoolcraft had related virtually the same story in which he spoke of “Hi-a-wat-ha,” who had earlier been named Tarenyawagon.

72. *Syracuse Weekly Record*, 30 January 1856, 27 March 1856; *New-York Daily Tribune*, 27 February 1856; *Syracuse Daily Journal*, 7 March 1856. See as well Clark, *Onondaga*, 30–31.

73. Alfred B. Street, *Frontenac; or the Atotarho of the Iroquois* (New York: Baker and Scribner, 1849), esp. 25–26, 48–49, 288, 299–300. Myrtle, *Iroquois*, 32–33, reported the story in much the same way as Clark and Schoolcraft, though with fewer details.

74. Skenandoah (i.e., Lewis Morgan), “Letters on the Iroquois,” *American Review* 5 (February 1847): 181.

75. Morgan, *League of the Ho-de-no-sau-nee, or Iroquois* (Rochester: Sage and Brother, 1851), 61–64. This, even though Morgan had acquired a copy of Clark’s account in the meantime; Thomas R. Trautmann and Karl Sanford Kabelac, *The Library of Lewis Henry Morgan* (Philadelphia: American Philosophical Society, 1994), 136.

76. Morgan, *Ancient Society*, 127–128. Morgan, *ibid.*, could not decide “[w]hich of the two persons was the founder of the confederacy.” Nor could he decide (*ibid.*, 127) whether Hiawatha was “a mythical, or, at least, traditionary person” or “a real person of Iroquois lineage.”

77. Charles L. Henning, “Hiawatha and the Onondaga Indians,” *The Open Court* 16 (September 1902): 556. Henning proceeded to cite several discrepant interpretations of Hiawatha’s name then current. La Fort’s wording suggests he was aware of the case for Dekanawidah and rejected it.

78. *Ibid.*, 558.

79. Horatio Hale, “A Lawgiver of the Stone Age,” *Proceedings of the American Association for the Advancement of Science* 11(1881): 326, 338–341, where he attributed the confusion to “[a]n accidental similarity, in the Onondaga dialect, between the name of Hiawatha and that of one of their ancient divinities,” Aronhiawagon. By this explanation he was able to explain to his own satisfaction Pyrlaeus’ “Thannawage” and the account of Hiawatha’s assumption into heaven in Clark and other earlier versions.

80. As do differences of opinion about such nuclear matters as the respective roles of Hiawatha and Dekanawidah, the number of Hiawatha’s daughters, and the very meaning of Hiawatha’s name. If a historical event and a real person had been involved, such great disparities would never have arisen. It is more logical to assume that, had Hiawatha lived, the meaning of his name would have been unambiguous and this meaning would have been handed down without diverging into such numerous and contradictory *ex post facto* etymologies.

81. William W. Canfield, *The Legends of the Iroquois* (New York: A. Wessels, 1902).

82. For the unlikelihood of this age, see John Philips, “A Nineteenth-Century Journal of a Visit to the Indians of New York,” ed. Marle H. Deardorff and George S. Snyderman, *Proceedings of the American Philosophical Society* 100 (December 1956): 600.

83. Canfield, *Legends*, 15–17.

84. *Ibid.*, 20. The effects of old age on memory are well known and are discussed in, among many others, *Everyday Cognition in Adulthood and Late Life*, ed. Leonard W. Poon et al. (Cambridge: Cambridge University Press, 1989); *Aging and Cognition: Knowledge Organization and Utilization*, ed. Thomas M. Hess (New York: North-Holland

Publishing Co., 1990); Timothy A. Salthouse, *Theoretical Perspectives on Cognitive Aging* (Hillsdale, NJ: Lawrence Erlbaum Associates, 1991).

85. Canfield, *Legends*, 31–40. Vecsey, “Story and Structure,” 80, regards Canfield’s version as “clearly bogus.”

86. This argument is strengthened by the fact that other studies of the Iroquois published around this time mentioned the Hiawatha figure but not an eclipse; see Edward M. Chadwick, *The People of the Longhouse* (Toronto: Church of England Publishing Co., 1897), 13–14; and S. C. Kimm, *The Iroquois: A History of the Six Nations of New York* (Middleburgh, N.: P. W. Danforth, 1900), 12–15.

87. For brief but accessible orientations to this literature see William N. Fenton, “Collecting Materials for a Political History of the Six Nations,” *Proceedings of the American Philosophical Society* 93 (June 1949): 233–238; and idem., “The Lore of the Longhouse: Myth, Ritual, and Red Power,” *Anthropological Quarterly* 48 (July 1975): 131–147.

88. Boyce, “Glimpse,” 288. Here, as we notice, Brant was tying the date to European activities—a clear example of the feedback spoken of earlier. Hiawatha was not mentioned.

89. *General Council of the Six Nations* (1870), 6–8.

90. Hale, “Lawgiver,” 324–341. Cf. Hale. *Iroquois Book of Rites*, 24–37, where the variations in detail differ.

91. Hale, “Lawgiver,” 338.

92. Henning, “Hiawatha,” 459–466, 550–558. Earlier, Henning had published a preliminary version of this account: Henning, “Origin,” 477–480, where he described his account as “recently” secured.

93. But it recurs in two pageants on the formation of the Confederacy which were written and performed in the 1950s. Although full of dramatic effects and based on Seneca traditions, neither play mentions an eclipse; see Robert E. Moody, *Hiawatha, the Coming of the Senecas* (n.p.: Nundawaga Society for History and Folklore, 1956); idem., *Dekanawida, the Coming of the Senecas* (n.p.: Nundawaga Society for History and Folklore, 1957).

94. See, e.g., the epic poem by Benjamin Hathaway, *The League of the Iroquois and Other Legends, from the Indian Muse* (Boston: Arena Publishing Co., 1882); Elias Johnson, *Legends, Traditions, and Laws of the Iroquois and History of the Tuscarora Indians* (Lockport, NY: Union Printing and Publishing Co., 1881), 46–53; J. N. B. Hewitt, “Legend of the Founding of the Iroquois League,” *American Anthropologist* 5 (April 1892): 131–148 (collected in 1888); William N. Fenton, “Seth Newhouse’s Traditional History and Constitution of the Iroquois Confederacy,” *Proceedings of the American Philosophical Society* 93 (May 1949): 141–158 (written ca. 1885). For Seth Newhouse’s role in Iroquois affairs at this time, see Sally M. Weaver, “Seth Newhouse and the Grand River Confederacy at Mid-Nineteenth Century” in *Extending the Rafters: Interdisciplinary Approaches to Iroquoian Studies* (Albany: SUNY Press, 1984), 165–182.

95. Committee of Chiefs, “Traditional History,” 195–246. Mann and Fields, “Sign,” 112, briefly allude to this, but seem not to have consulted it. Though published after, this version was collected before Canfield’s book appeared.

96. Mary E. Laing, *The Hero of the Longhouse* (Yonkers: World Book Co., 1920), 293–301.

97. Howard, “Hiawatha.”

98. José Barreiro, “Chief Jacob Thomas and the Condolence Cane,” *Northeast*

Indian Quarterly 7.4 (Winter 1990): 77–85, and David Blanchard, *Seven Generations: A History of the Kahnienkehaka* (Kahwanake: Kahwanake Survival School, 1980), 54–84.

99. See, for example, Fenton, “Seth Newhouse,” 158, who regarded it as “being altogether the most satisfactory single native account of the League.”

100. John Arthur Gibson, *Concerning the League: The Iroquois League Tradition as Dictated in Onondaga by John Arthur Gibson*, ed. and trans. Hanni Woodbury (Winnipeg: Algonquian and Iroquoian Linguistics, 1992). Cf. Mann and Fields, “Sign,” 113. Their suggestion that this and an earlier version dating from 1899 have been suppressed is easily contradicted by the editorial introduction, wherein, for instance, it is noted that the 1899 version is virtually the same as the Committee of Chiefs’ version. See as well Fenton, “Seth Newhouse,” 158.

101. Fenton, *Great Law*, 85–103, regards Gibson’s last version as the encompassing myth of the formation and treats it far more extensively than other versions, pointing out along the way how Gibson frequently disagreed with himself.

102. Gibson, *Concerning the League*, *passim*.

103. Tooker, “League,” 420.

104. Fenton, *Great Law*, 70–72, also reflects the appeal of exact dating. Even though he clearly illustrates the exiguous database for the eclipse tradition, Fenton is loath to reject it out of hand because (assuming the eclipse of 28 June 1451) it seems to correlate well with an accumulating body of archeological evidence regarding the timing of population aggregation and the initial florescence of Iroquois material culture.

105. Dean R. Snow, “Dating the Emergence of the League of the Iroquois: A Reconsideration of the Documentary Evidence” in *A Beautiful and Fruitful Place: Selected Rensselaerswijck Seminar Papers*, ed. Nancy A. Zeller (Albany: New Netherland Publishing Co., 1991), 141.

106. *Ibid.*, 141–143.

107. *Ibid.*, 143. Mann and Fields, “Sign,” 105,” regard this—erroneously, I think—as Snow’s preference for the date of 1536. Mann and Fields’ emphasis on “a mid-sixteenth century” dating is a bit of a red herring since datings of a century earlier are more commonplace. See, e.g., Fenton, *Great Law*, 69.

108. Scott Michaelsen, “Ely S. Parker and Amerindian Voices in Ethnography,” *American Literary History* 8 (Winter 1996): 615–638.

109. Ely S. Parker, “Iroquois or Confederacy of the Five Nations” in *The Heath Anthology of American Literature*, vol. 1 (Lexington: D.C. Heath Co., 1990), 56–59, probably dating from the 1850s.

110. William N. Fenton, ed., “Seneca Indians by Asher Wright (1859),” *Ethnohistory* 4 (Summer 1957): 309. A few sentences earlier Wright claimed that “their ignorance of their former history, and entire destitution of all chronology, have misled them often when they intended to communicate the truth.”

111. Arthur C. Parker, *The Code of Handsome Lake, the Seneca Prophet* (Washington, DC: Government Printing Office, 1913), 131–138.

112. In particular, it would be necessary to explain why John A. Gibson, himself a Seneca, omitted such a choice morsel from the longest and most inclusive origin tradition we have. For reasons why the Seneca might have wanted to invent such a tradition see Thomas McElwain, *Mythological Tales and the Allegory Seneca* (Stockholm: Almqvist and Wiksell, 1978); *idem.*, “Technology and the Supernatural as Factors in Native Interpretation of Seneca Iroquoian Oral Tradition,” *Temenos* 28 (1992): 145–159.

113. Snow, "Dating," 141; Mann and Fields, "Sign," 142–149.

114. This eclipse actually received advance publicity in Andrew Newell, *Darkness at Noon, or, the Great Solar Eclipse of the 16th of June, 1806, Described and Represented in Every Particular* (Boston: D. Carlisle and A. Newell, 1806).

115. For the context of the Handsome Lake movement see, most accessibly, Anthony F. C. Wallace, "Origins of the Longhouse Religion," in *The Handbook of North American Indians, Vol. 15*, ed. Alfonso Ortiz (Washington, DC: Smithsonian Institution, 1983), 442–448, and in greater detail, idem., *The Death and Rebirth of the Seneca* (New York: Knopf, 1970), 111–236.

116. Strengthening this view is Wallace's analysis of the founding tradition as an embodied revitalization movement; Anthony F. C. Wallace, "The Dekanawidah Myth Analyzed as the Record of a Revitalization Movement," *Ethnohistory* 5 (Spring 1958): 118–30.

117. Beauchamp, *Iroquois Trail*, 142, seems to agree, suggesting that the Hiawatha story "may have taken form after the separation of the Iroquois at the close of the Revolution."

118. Recent examples of this, and some of the means to account for it, are discussed in Gail Landsman, *Sovereignty and Symbol: Indian/White Conflict at Ganienkeh* (Albuquerque: University of New Mexico Press, 1988); Landsman and Sara Ciborski, "Representation and Politics: Contesting Histories of the Iroquois," *Cultural Anthropology* 7 (November 1992): 425–447; Landsman, "Informant as Critic: Conducting Research on a Dispute Between Iroquoianist Scholars and Traditional Iroquois," in *Indians and Anthropologists: Vine Deloria, Jr. and the Critique of Anthropology*, ed. Thomas Biolsi and Larry J. Zimmerman (Tucson: University of Arizona Press, 1997), 160–176. Fenton, *Great Law*, 67–73, notes several other examples beginning as early as the turn of the nineteenth century.

119. Mann and Fields, "Sign," 158 n114. In this view they find an ally, probably an unwanted ally, in Rudyard Kipling, who wrote in his "In the Neolithic Age:" "There are nine and sixty ways of constructing tribal lays / And—every—one—of—them—is—right."

120. M. R. Harrington, "Hiawatha's Peace League," *Pennsylvania Archaeologist* 15 (July 1945): 70.

121. William N. Fenton, "Structure, Continuity and Change in the Process of Iroquois Treaty Making" in *The History and Culture of Iroquois Diplomacy*, ed. Francis Jennings (Syracuse: Syracuse University Press, 1985), 15.

122. The material collected by Selden from informants in 1963 shows an alarming predilection to treat Dekanawidah as a Christ-like figure, or even as Christ; see Sherman W. Selden, "The Legend, Myth, and Code of Deganaweda and Their Significance to Iroquois Cultural History" (Ph.D. diss., Indiana University, 1966), 131–169 *et passim*.

123. For a comparative view of such assimilation, see Henige, "'Truths Yet Unborn'? Oral Tradition as a Casualty of Culture Contact," *Journal of African History* 23:3 (1982): 395–412, and note 39 above. For Snow, *Iroquois*, 58, on the other hand, "the story of the origin of the League reads like history with only a patina of myth." Actually, mythical elements are much more than a veneer. The notion that the League was created in a short period of time, as little as a few days in some versions, is the typical telescoping or timelessness that is associated with protracted processes in myth and oral

tradition. So, too, is the notion that great things are typically effected by great individuals. This does happen, of course, but the Alexander the Greats of history are sufficiently rare as to provoke doubt in cases where this interpretation is advanced too insistently. The Swiss Confederation was established incrementally over more than five centuries and, if William Tell existed, he had small effect on the tempo of this creeping coalescence. And it took nearly forty years—and more than George Washington—to get the United States in business.

124. Wallace, "Return of Hiawatha," 398.

125. By "microscopic" I mean the probability that it occurred at all multiplied by the number of days between ca. 1000 and ca. 1600 A.D. Thus, a 10 percent probability would mean that the odds are 1:2,191,500 that it was the day of Mann and Fields' choice and a zero percent probability of demonstrating that.