Abstract

Research on non-market transactions is lacking in the field of economics, particularly among indigenous people groups. The purpose of this paper is to explore a portion of the economic system of a group underrepresented in economics literature: The Iroquois Confederacy of North America. This paper uses archaeological and ethnohistorical data on the Iroquois Confederacy of the Late Woodland period to analyze their unique institution of reciprocal gift exchange. It asserts a theory of the aspects of Iroquois society and economy - such as low technology, high information costs, and wide consumer preferences - that made the Iroquois Confederacy ripe for the development of gift exchange. It also theorizes that gift exchange may have developed as a mechanism to maintain economic efficiency despite these idiosyncrasies and as a tool to maintain accountability and social cohesion in the absence of a strong governmental authority.
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“Elves seldom give unguarded advice, for advice is a dangerous gift, even from the wise to the wise, and all courses may run ill.” - Gildor Inglorion\(^1\)

1 Introduction

That a gift may be a dangerous thing is a strange premise to many, but the concept of ‘gifting’ is much older and much more complex than many may realize. By all accounts a ‘gift’ in most modern industrial societies is something freely given to the benefit of some other party. Typically they are given unilaterally (or in some cases, exchanged) between two parties to mark a special occasion or as an act of celebration. Gifts are often associated with spiritual and secular holidays, commemorations of achievement, or advancements toward some kind of life milestone, such as a birthday or a graduation. Giving gifts is a natural human process, and indeed gifts were given long before the emergence of markets, money, or barter, although likely for different reasons. Reciprocal gift exchange as an institution of social and economic organization, while related to the giving of modern ribbon-wrapped packages, is something wholly separate. While it is true that the modern exchange of gifts (as well as the loans and interest) originated from traditional reciprocal gift exchange, the latter served a much more crucial role in economic and social organization among pre-market societies, as will be discussed in greater detail further on.

Reciprocal gift exchange, as is the case with most topics associated with indigeneous, traditional, or any manner of pre-market societies, is heavily underrepresented in economics research. Literature on the topic has been ignored for a number of reasons ranging from issues with data availability to a lack of understanding of the social and historical context in which such societies function. Indeed, the field of Economics has long veered from its original course as a study of human behaviour

\(^1\)From *The Fellowship of the Ring* by J.R.R. Tolkien.
in favour of the structures that such behaviours create. Where there are structures, there are rules, order, and compulsory patterns of behaviour. Thus, the existence of structures such as markets make the study of economic behaviour easier. But just as the Economics 101 student comes to realize that perfect competition is an edge-case that simplifies a more complex reality, so too must economists come to realize that markets are not the be-all-end-all of economic behaviour, but are instead a subset of human economic organization. This paper seeks to explore an outlier, to discuss an institution that borders on some scholars’ definitions of economic action, as a way to simultaneously test the limits of the explanatory power of western economic theory while presenting an overview of the history of an indigenous people group historically underrepresented in economics literature.

The present paper utilizes the reciprocal gift exchange institution of the Iroquois Confederacy as a case study to explore the economic and social conditions under which reciprocal gift exchange is not only a feasible but efficient distributive institution. Discussion pays particular attention to the effect that cultural and social institutions have on economic organization and the special interactions that occur between economic and non-economic facets of Iroquois society. It is important to note that the theories generated about reciprocal gift exchange among the Iroquois are indeed just that: theories about the Iroquois. I strongly encourage the reader to resist the urge to apply any understanding gained throughout the course of this paper to other societies that happen to ‘look like’ the Iroquois. Just because certain economic or social practices are common between the Iroquois and some other societies does not imply that the analysis of the current paper is applicable to them. Indeed, even the ensuing description and discussion of the Iroquois is bound to be somewhat reductive, as people and the societies they form are inherently complex, and vary from nation to nation, village to village, and individual to individual.

The reader should also note that some of the material surveyed in the literature
review predates the emergence of anthropological economics as a field, but the fact that the authors did not necessarily realize they were describing economic behaviour does not make the behaviour itself any less economic in nature. Indeed, anthropological and economic scholarship tend to look quite different, with anthropologists preferring a descriptive, qualitative approach and economists tending towards the use of models and quantitative methods to perform deeper analysis. It is the hope of the author that the current paper, as a self-described work of economic anthropology, represents a synthesis between these two methodologies of description and analysis.

The paper proceeds in the following manner. Section II reviews key literature on the topic of reciprocal gift exchange and outlines the advancements made in the Western scholarly understanding of the institution in a general sense over the course of the twentieth century. Section III introduces the case study by presenting critical information about the economic and social organization of the Iroquois Confederacy and describing their practice of reciprocal gift exchange in the Late Woodland period. Section IV discusses the author’s theories on the function and origin of gift exchange among the Iroquois based on ethnographic data from Section III and suggests potential topics for further research. Section V concludes.

2 Review and Summary of Existing Theories

2.1 On Malinowski (1921)

Malinowski (1921), originally written as a prelude of sorts to the longer and more famous work presented in Malinowski (1922), is one of the earliest modern works of ethnographic scholarship. Malinowski, with the combined publication of this preliminary essay, as well as his magnum opus a year later, is widely credited with developing the modern field of anthropology. The essay, in its brevity, essentially
serves three functions: it refutes the earlier conclusions of Bürcher & Wickett (1901) regarding the theorized *household economy* of ‘primitive’ peoples; it establishes a rationale for the scholarship of comparative economics between industrial and non-industrial societies; and it provides very condensed ethnographic information on the Trobriand Islanders of the western Pacific as a dataset to support these two points.

Malinowski (1921) - like Malinowski (1922) after it - is fundamentally an ethnography, and one of the earliest of its kind. It serves a special purpose to the present topic of discussion, as it is one of the first thorough and scholarly accounts of reciprocal gift exchange presented by an (at least somewhat) impartial observer. Malinowsksi never attempted to formulate a theory of the gift - or of any other institution - in his work, although he did suggest that someone ought to, in so many words: “If we had more accounts of native economics similar to this - that is, going more into detail and giving an economic synthesis of facts - we might be able to arrive, by comparative treatment, at some interesting results” (Malinowski 1921, 12). In many ways, this was a call to action for a scholar the likes of Mauss to compile a cohesive theory on the gift from a series of ethnographic data, much like that presented in Malinowski (1921).

What, then, does Malinowski have to say on the topic of the gift? As one of the earliest scholars to observe and document the phenomenon, the true answer is ‘not much’, and that which he has written has not well stood the test of time. The most astute observation made regards the all-encompassing nature of reciprocity in the Trobriand Islands society. Malinowsksi did well to recognize that gift exchange as he observed it was of a kind worlds away from that which was customary in the West. Thus scholarship arrives at the first development of the theory of the gift. Gifts given from one party to another are not given randomly or freely but, to the contrary, are given with great ceremony and always in exchange for something.

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2A field that one today could appropriately term ‘Economic Anthropology.’
Generalized reciprocity is not based on tenets of charity or altruism, but instead the presentation of a gift is personally or politically motivated. One then arrives at Malinowski’s claim that native man is ‘economic’ man. While this claim may seem obvious or self-evident among modern scholars, the racist notion that members of ‘primitive’ societies were incapable of economic thought or action was prevalent well into the twentieth century. In many cases, generalized exchange was used as evidence of notion until it was properly - or at least partially - explained. While the explanation of generalized reciprocity as completely and entirely self-interested was useful for the early development of economic theory of the institution, that notion today would be classified as heavily formalist and should be noted as not being the opinion of the author.

2.2 On Mauss (1926)

Mauss (1926) was one of the first texts to attempt to formulate a sociological ‘rule of the gift’ from anthropological and ethnographic data. Mauss, inspired by Malinowski’s work on the kula ring of the Trobriand Islanders, surveyed many ethnographies of culturally, geographically, and linguistically distinct peoples with the objective of using the common threads to form a cohesive theory of reciprocal gift exchange that transcends the idiosyncratic practices of any one people. Mauss projects his theory on the historical predecessors of modern industrialized societies by deriving the historical development of markets and barter from the practice of ritualized gift exchange. It is important to note that Marcel Mauss was not an anthropologist, but one of those first scholars to adopt the title of ‘sociologist’ and, as a result, was much more interested in the intersocietal nature of social institutions across people groups than the idiosyncratic nature of the same to one society. As a result, Mauss’ analyses require a reduction in the individual complexity

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Footnote: 3For those interested, a concise summary of the formalist and substantivist positions in economic anthropology can be found in the first few pages of Cicarelli (2012).
of institutions as they arise in societies. It is likely for this reason that such a unifying theory could only be attempted by a scholar of a sociological background as opposed to an anthropological one.

Mauss begins by investigating the form and function of ritualized reciprocal gift exchange in several ‘primitive’ societies, namely the Maori, the people of Samoa, the Native Americans of the pacific northwest, and Malinowski’s Trobriand Islanders. At the outset of his research, Mauss outlines a common core of three obligations that permeate reciprocal gift exchange, regardless of society. These are the obligation to give, the obligation to receive, and the obligation to give again, or to repay. Consider two parties, which could be clans, families, or tribes. The first party is placed under obligation to present the second party with a gift. With the presentation of this gift, the onus of action is also transferred from the first party to the second party. The action that is mandated is that of reception - this is to say, the reception of the gift is considered in every way as full and equal an action as the initial presentation of the gift. The second party is then finally obligated to respond in kind by presenting the first party with a gift, the value of which is roughly equal to the value of the first gift. In this manner the repayment becomes the initial gift in a new cycle of gifting and the relationship formed by the cyclic nature of reciprocal gift exchange becomes self-reinforcing.

What is the role of the gift in these societies? The Maussian theory of reciprocal gift exchange suggests that the gifts (or their value) are less important than the mechanism of gift exchange as a whole. A key political and economic function of reciprocity is the binding of clans or other kinship structures that compose a nation. An aphorism that is analogous to the modern practice of gift exchange may be ‘it’s the thought that counts,’ e.g., someone may present another with a gift to mark a special occasion or obtain a souvenir while traveling to help convey to another

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4 Purkayastha (2004) contains some economic justifications for why the market value of gifts may not always be equal.
person that the donor ‘was thinking about them.’ While the actual cost to the donor of obtaining the souvenir may be very low and the value in use of the souvenir for the recipient may be nonexistent, there is some positive value generated in the form of ‘goodwill’ between the two parties.\(^5\)

While analogies to modern practices of gifting are useful to understand the thought and mechanism behind reciprocal gift exchange, it is important to note that a gift of the context which Mauss describes is not necessarily the same as a gift in the modern context. Indeed, for the Maori, the Trobrianders, and many other societies a gift could possess dangerous potential. Upon receipt of the gift, the recipient becomes quite literally indebted to the donor, sometimes to the possible extent of claiming ownership over the recipient. In the case of the Maori, the reception of a gift was accompanied by the reception of the spirit of the gift,\(^6\) which had the ability to bring misfortune on the recipient if it was not transferred back to its original owner in the form of a new gift.

Interestingly, Mauss also derives the system of barter from a historical form of reciprocal exchange. As he outlines, time - and the passage thereof - is a critical component of the reciprocal exchange relationship. The occasions of gift and repayment are two discrete and disjoint periods in time. According to Mauss the evolution of barter is simply the “drawing together [of] the two moments of time which had previously been distinct” (Mauss 1926, 35).

2.3 On Sahlins (1972)

Sahlins (1972) may represent the first real attempt to synthesize economic methods and thinking with anthropological insights into reciprocal gift exchange. Sahlins suggests a heavily developed, general theory of economic organization in kinship societies. Utilizing the work of dozens of scholars before him, as well as extensive

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\(^5\)More on this can be found in the section on Purkayastha (2004) below.

\(^6\)The term used by the Maori people to describe this is hau.
ethnographic data, Sahlins formulates an economic model of production, distribution, and consumption among traditional or ‘primitive’ societies.

Sahlins’ theory of production is based heavily off of Karl Bücher’s theory of the domestic mode of production, first suggested in Bücher & Wickett (1901). The fundamental premise of the theory is that the household, not the individual, is the key economic actor, and that production and consumption take place entirely within the household, with little to no economic interaction taking place outside the domestic realm. Sahlins, while accepting the idea that the needs of the household - or the clan - are the key economic motivators (as opposed to the profit incentive of capitalism), disputes the notion that economic interaction did not occur outside of the household, citing ethnographic evidence of village-wide and nation-wide economic activities among traditional societies - a good example of which are the Iroquois, as will be discussed later on.

Furthermore, Sahlins dedicates two lengthy chapters of his book to discussing gift exchange as a distributive institution among traditional societies. The first chapter he devotes primarily to responding directly to the work of Mauss and Malinowski. While he does applaud Mauss for the insight his work has provided into the institution of reciprocal gift exchange, he criticizes Mauss for his lack of cultural understanding of the societies that constituted his ‘ethnographic dataset.’ While Mauss’s analysis regarding the sociological role of the gift in society is well formulated and insightful, Mauss’s understanding of the ‘spirit of the gift’ - or the hau of the taonga, in the Maori case - can be traced to a linguistic and cross-cultural misunderstanding between Mauss and his ethnographees.

Finally, Sahlin investigates the ‘sociology of primitive exchange,’ by differentiating between three kinds of gift exchange. The first is generalized reciprocity, which is most akin to altruism. Generalized reciprocity is the process by which gifts are given for the sole consideration of the gift itself. There is no anticipation
of repayment (although a birthday gift is typically reciprocated with a birthday gift in kind!) and they are given to foster goodwill or to mark a special occasion. Generalized reciprocity is most similar to modern practices of gift-giving in industrial societies. The second is balanced reciprocity, which is the form of reciprocal gift exchange that forms the subject of this paper. Balanced reciprocity is the giving of a gift with consideration for both the gift given and the obligation to repay in the future. This form of gift exchange often establishes a cyclical relationship of debts and credits between two groups that strengthen the social bond between them. The final form is negative reciprocity, which represents the presentation of a gift for the sole reason that the giver desires the counter-gift. A general example is a loan, which is a sum of money given from a creditor to a debtor with the understanding that the principal will be paid back at a future date with interest. The interest (counter-gift) is what entices the creditor to provide the loan with no consideration of the debtor’s needs or the relationship between the two outside of the transfer of wealth. A second example of negative reciprocity would be the giving of a gift so large as to make it virtually unrepayable, for the sole purpose of thereafter constantly holding the recipient in the donor’s debt.

2.4 On Posner (1980)

Richard Posner was one of the first scholars of a field outside of either anthropology or sociology to posit a semi-formal model of a reciprocal exchange economy, which he presented in a portion of a larger treatise that expounded a general theory of ‘primitive’ economics and law. As any modern anthropologist would echo, the notion of attempting to create an economic model - or any model, for that matter - that would explain the behaviors of the hundreds of diverse people groups practicing dozens of traditional economic systems is entirely ridiculous. It is a sisyphean fool’s errand. Despite this, Posner’s general outline and explanation of reciprocal
exchange does provide a useful framework for economists to think about and analyze reciprocal exchange relationships and answer questions about societies where such relationships are common.\textsuperscript{7}

Posner (1980) begins by outlining five key assumptions about the nature of the ‘primitive’ society and economy: the first assumption is that there is no effective government;\textsuperscript{8} second, it is assumed that low technology limits the catalogue of production to a relatively narrow array of consumer goods; third, it is assumed that trade between societies occurs infrequently, and thus goods not produced domestically are relatively hard to come by; fourth, it is assumed that consumer goods are perishable and cannot be stored into the future; fifth, it is assumed that privacy in a society is nonexistent, and thus innovations in consumer goods do not occur, as there is no way for the innovator to profit from any innovation due to the inherent lack of excludability in such a society.

Posner then assumes there are two agents - which could be individuals, extended families, clans, tribes, etc - who are termed agent A and agent B. In Posner’s model, each agent is responsible for their own production, which is almost exclusively the procurement of foodstuffs, either via hunting or agriculture. Due to the relatively low level of technology in Posner’s archetypical archaic society, in any time period each agent has some probability $0 < p < 1\textsuperscript{9}$ of procuring a quantity of food that is calorically sufficient. In the event that the yield of a harvest or a hunt in a given time period is in excess of what can be consumed by the agent that produced it, it is important to recall the assumption that these goods are perishable and

\textsuperscript{7}Case in point, Rachel E. Kranton’s seminal 1996 paper on the subject of reciprocal exchange is based to some extent on Posner’s analyses on gift exchange in traditional societies, although she never cites him.

\textsuperscript{8}This is not to say that there is no centralized authority for the planning of economic activity or the organization of large projects, such as wars, but merely to outline that the levying of taxes is infeasible, as individuals are at liberty to roam in the event that the costs of living in a society become too high. The government may exist, but it does not have the resources or technology to track down and contain those who have fled the state to avoid paying taxes, etc.

\textsuperscript{9}Posner avoids usage of any form of mathematical notation, thus all notation is my own.
technology is insufficient to store this product into the long term, i.e., it must be consumed in the same period it is produced or it must be destroyed. What, then, is a particularly productive agent to do with a surplus? In a society where the sole product is food, where food is assumed to be non-storable, and where the product in any time period is subject to a great degree of random variability, Posner (1980) suggests that productive agents will transfer surpluses to less successful agents, on the condition that the debt is repaid if the roles are ever reversed. In this way, reciprocal gift exchange emerges in low technology societies as a form of social insurance against randomly determined variance in production.

In the event that an agent produces a surplus that is in excess of their need, why would they choose to redistribute their excess wealth to less fortunate agents as opposed to, say, simply raising their present level of consumption? Why do agents give gifts instead of hosting a lavish feast for themselves? While the answer to such a question is likely to be more psychological than economic in nature, an economist could suggest a theory. As discussed briefly in Kranton (1996), it is possible that a reciprocal exchange institution functions as a mechanism to smooth consumption over an agent’s lifetime in the event that the technology to do so does not exist in the agent’s society. If the present discounted value of presenting a gift - or rather, of the reciprocal gift relationship that is thereby established - is higher than the present value of immediate consumption in excess of necessity (which one would also expect to be decreasing at an increasing rate as the size of the surplus grows) it would be economically sound behavior to prefer to establish an insurance relationship and forgo the premium of immediate consumption.

2.5 On Kranton (1996)

Kranton (1996) investigates the relationship between market and reciprocal exchange in a closed economy via a general equilibrium model and attempts to explain
why reciprocal exchange might continue to exist in a society wherein market exchange is predominant. Kranton’s research is built strongly on the theoretical work of Posner (1980) and serves to formalize many of Posner’s preliminary ideas regarding generalized reciprocal exchange. The paper provides an excellent framework for understanding the conditions under which reciprocity economies may arise and why they may persist under suboptimal conditions. In Kranton’s view, the key economic motivator for the predominance of a reciprocal exchange economy is linked to high market search costs that could arise from limited technology, low population, or a thin initial market - that is to say, it is difficult for a market to emerge where there is not one already present.

The methodology of Kranton’s paper is relatively simple, yet is summarized briefly for the insight it provides.\textsuperscript{10} Let there be a society, the individuals in the population of which are divided into those who utilize market exchange and those who utilize reciprocal exchange. Whereas market exchange takes place between a group of private or “anonymous” citizens, each member of the reciprocal exchange cohort has a partner who they “know well” thus they completely understand each other’s preferences in consumption and costs of production (Kranton 1996, 833-834). The reciprocal exchange cohort is then expected to participate in a non-cooperative game of exchange to obtain goods and services while the market cohort obtains these same necessities via anonymous market exchange. Thus, information is complete among reciprocal exchange partners and incomplete among market utilizers.

Several key parameters are relevant in determining equilibrium in Kranton’s model. The first is $\mu$, which represents the proportion of the population that engages in market exchange. The second is $m$, which represents the proportion of the market exchange cohort that are ‘sellers’ of a commodity, with $1 - m$ being the proportion of market utilizers acting as buyers. A third key parameter, $x$,\textsuperscript{10}A full explanation of Kranton’s dual-distribution economy model is found on pages 834-836 of Kranton (1996).
measures the proportion of goods produced by an agent in the exchange cohort that is desired by their reciprocal exchange partner. Fundamentally, this parameter attempts to measure the ‘substitutability of goods’ produced in the reciprocity economy. As discussed below, \( x \) will ultimately prove to be the deciding factor of the comparative efficiency of reciprocity versus market exchange. This is due to market exchange (generally) being more efficient in societies characterized by more specific preferences (low \( x \)) as market exchange theoretically results in a diversification of consumer goods. Likewise, reciprocal exchange is more efficient in societies characterized by more general preferences (high \( x \)), as the likelihood that a reciprocal exchange agent produces a good consistent with their partner’s preferences is higher, in addition to the absence of search costs associated with market exchange. Finally, \( \delta \) represents the discount rate of utility and functions to capture the future-orientedness of individuals.

The key results of Kranton (1996) are the five propositions of equilibrium that it suggests. The first proposition is that “[t]he equilibrium gains from market exchange are higher when markets are larger: \( V_s^* (\mu) \) is increasing in \( \mu \),” where \( V_s^* \) represents the utility from participating in market exchange. The logical justification for this is that, as the size of the market increases, there are more vendors selling a wider variety of goods, thus buyers’ search costs of finding a good that meets their preferences are lower. Additionally, as the size of the market increases, the number of potential buyers in the market also increases, raising the potential benefit of selling in the open market, as opposed to reciprocal exchange. The second proposition is that “[t]he optimal enforceable gains from reciprocal exchange are lower when the market is larger: \( c_R^* \) and \( V_R^* \) are (weakly) decreasing in \( \mu \).” Note that \( c_R \) is the cutoff cost, beyond which reciprocal agents do not produce for their reciprocal exchange partners and \( V_R^* \) represents the equilibrium utility of participating in the reciprocity economy. The motivation behind this assertion is that, as the market
increases in size, the potential utility of participating in market exchange increases (by Proposition 1) and there is more of an incentive to abandon one’s reciprocal exchange relationship and enter the market. Thus, in dual economies where the market sphere is growing one would expect to see the reciprocal economy shrink, with an equilibrium \( \mu = 1 \).

The third proposition suggests that “[w]hen agents place a sufficiently high value on future utility, reciprocity is enforceable at positive market sizes: for any \( x \), there exists a \( \delta(x) < 1 \) such that for all discount factors \( \delta \geq \delta(x), \bar{\mu} \geq 0 \),” where \( \bar{\mu} \) is the equilibrium final size of the market. Thus, if agents are future-oriented enough, Kranton’s model suggests that reciprocal exchange can persist despite relatively higher potential gains from market exchange. In essence, if one is sufficiently future-oriented, the reception of a product from their reciprocal exchange partner that is inconsistent with their preferences will not result in an immediate severance of the exchange relationship. This would also partially explain - in conjunction with Proposition 1 - why certain societies or enclaves within societies would be slow to adopt market exchange. The fourth proposition asserts that “[w]hen goods are less substitutable, it is possible for the market to be so large that reciprocity is not enforceable: For any \( \delta \), there exists an \( \bar{x}(\delta) \) such that for all \( x < \bar{x}(\delta), \bar{\mu} < 1 \).” This proposition fundamentally functions as a complement to Proposition 3, providing a more complete framework by which one can understand the viability (or ‘enforceability’) of reciprocity subject to given \( \mu \) based on determined parameters of \( x \) and \( \delta \). As will be discussed later, we will see that these propositions have interesting implications for horticultural or hunter-gatherer societies which anthropological theory suggests are characterized by relatively low \( x \) and high \( \delta \) (Sahlins 1972).

The fifth and final proposition is that “[f]or preferences in the range \( x^*(\delta) < x < \bar{x}(\delta) \), reciprocal exchange is efficient, but if the market starts out too large, \( \mu_0 > \bar{\mu} \),
reciprocal exchange will disappear. For preferences in the range \( x < x^*(\delta) < \bar{x}(\delta) \), market exchange is efficient, but when reciprocal exchange starts out too large, \( \mu_0 < \bar{\mu} \), the market will disappear.” Note that \( x^*(\delta) \) defines “critical preferences,” or the cutoff level of \( x \) beyond which reciprocal exchange becomes the more efficient institution and below which market exchange is more efficient. By this proposition, Kranton suggests that based on a society’s median \( x \) and \( \delta \) parameters, it may be that a society’s prevailing equilibrium distributive institution may not be optimal.

2.6 On Purkayastha (2004)

Purkayastha (2004) takes a game theoretic approach to modeling reciprocal gift exchange as a form of public goods provision. The paper seeks to reconcile sociological and anthropological theories of gift exchange with the modeling technology of modern microeconomics. The central question surrounding Purkaystha’s contribution is why gifts exchanged between two individuals rarely have equal market values and why this fact rarely matters. “If Mary gives Patricia a skirt worth $25 this Christmas, and if Patricia returns the favor by giving Mary music CDs worth $20, no one seems to mind too much about the unequal exchange.” Purkayastha (2004) seeks to explain why ritualized gift exchange still occurs, even when the likelihood of ‘losing out’ in a gift exchange is relatively high. Purkayastha’s theoretical explanation for this phenomenon relies upon his characterization of gift exchange as a public good. In the process of giving a gift, while there is certainly an actual physical transfer of wealth from one party to another, the key benefit reaped from the process of gift exchange is the social value that is generated from the ritual of exchange itself. Purkayastha terms this social value or relationship generated by exchange a *goodwill commodity*, which he argues is similar to a public good.

Purkayastha frames the gift exchange as a game played between two players \( F \) and \( M \), where each is subject to individual budget and time constraints. Briefly,
it is assumed each player has a finite amount of time that can be divided between
either labour or leisure, where each player receives some wage for their time spent
in labour. Each player is then allowed to spend their income on either a gift, which
they purchase for the other player, or on a private good (denoted N for F and Q for
M), which they purchase for themself. In the model, the goodwill commodity, or the
public good generated by the reciprocal exchange of gifts is given by $H = H(J, K)$,
where $J$ is the gift purchased by F for M and $K$ is the gift purchased by M for
F. It is assumed that market prices $P_J, P_K, P_N, P_Q$ are determined exogenously for
goods $J, K, N, Q$ independently of the players’ control. Utilities are then defined as
$U = U(H + N, T_1)$ for player F and $V = V(H + Q, L_1)$ for player M, where $T_1$
and $L_1$ define the time spent in leisure for player F and M respectively. Thus, the
sources of utility in Purkayastha’s model are the sum of private goods consumed
and public goods provided for each individual and the hours of leisure time enjoyed.

Given the research question, however, consideration of simple market prices is
insufficient to establish an equilibrium level of gift exchange between two parties.
In the Purkayastha model, a difference is established between $P_J$, which is termed
the market price of gift $J$ - and $P_J^*$, which represents the social exchange price
of the gift $J$, or the perceived price of the gift as received by the opposite party. In the
context of the Purkayastha model, the social exchange price is generally assumed
to be higher than the simple market price, as the process of gift giving results in a
valuation of the social exchange price via the attainment of some positive social value
added (denoted $R_f$ for player F and $R_m$ for player M). Purkayastha exemplifies
the social value added as the process of wrapping or packaging a gift ceremonially,
which he assumes to be costless. The social exchange value can then be decomposed
as the sum of the market price and the social value added, or $P_J^* = P_J + R_f$ and
$P_K^* = P_K + R_m$ for players F and M, respectively.

It is my opinion that the scope of this social value added could be increased in
order to wield more explanatory power over the general human institution of gift exchange. I would assert that in Purkayastha’s model, such variables as the social context of the gift (the gift was received as a wedding present, birthday present, out of the blue, etc), the ‘thoughtfulness’ of the gift, and added labour value can all be represented as social value added. For example, if \(F\) crafted a handmade gift that represented something of special significance to \(M\), but was made of relatively inexpensive materials (i.e., low \(P_j\) but high \(R_f\)) it may be viewed as equivalent in social exchange value to a gift that \(M\) purchased for \(F\) for a substantial amount of money, but required no additional labour to prepare for exchange (i.e., high \(P_k\) but low \(R_m\)). Purkayastha’s social exchange parity condition (the assumption the total social exchange values between gifts must be roughly equal) indicates that true reciprocal gift exchange occurs when \(P_k^* K = P_j^* J\), which can be represented in their decomposed form as \((P_k + R_m)K = (P_j + R_f)J\). The comparative statics of the gift exchange equilibration are easy to see. Since it is assumed that market prices for gifts are exogenously fixed, an increase in the total value of exchange of \(M\)’s gift to \(F\) must be accompanied by either an increase of \(J\) or an increase in \(R_f\). This is to say that if the total value of one party’s gift appreciates, it must be met in kind by either an increase in the total size of the gift or an appreciation of the social value added of the gift.

3 The Iroquois Confederacy: A Case Study

3.1 An Overview and Important Preface

The Iroquois Confederacy (endonymically, the Haudenosaunee - trans. “the League of the Longhouse”) is a confederation of indigenous Native American nations that historically occupied the territory of upstate New York on the southern shore of Lake Ontario, although geographic claims such as traditional hunting
grounds and spheres of trade extended as far south as the Allegheny mountains of Pennsylvania and as far east as the Hudson river. The term ‘confederacy’ here specifies that the name ‘Iroquois Confederacy’ does not refer to a single cultural or linguistic people group, but rather a political structure composed of five nations, namely the Seneca, Cayuga, Onondaga, Oneida, and Mohawk. Additionally, the five nations of the Iroquois Confederacy taken together with linguistically similar nations, such as the Wenro, Neutral, Petun, Huron (Wyandot), and Susquehannock are commonly referred to as the Iroquoian nations (or northern Iroquoian nations, more specifically). Finally, one should note the ambiguous nature of the term “Iroquois,” as the interwoven nature of Northeastern Native American kinship structure confounds general understanding of identity, and by extension, the terminology used to refer to particular identities. Thus it is critical to refer very specifically to social, cultural, or political subgroups found within (and without) the Iroquois Confederacy. When used in this paper, the term ‘Iroquois’ should be understood to refer to the people of the Iroquois Confederacy, and not to any particular subgroup or political structure within the Confederacy, although it should also be understood that the same may not be the case in other literature. Thus, one can see that the terms ‘Iroquois,’ ‘Iroquois Confederacy,’ and ‘Iroquoian’ all refer to different groups of people with varying degrees of specificity.

The reader ought to bear in mind that the following discussion and analysis on the Iroquois and the Iroquois Confederacy is a historical one and is descriptive of those people in a state of being in which they no longer exist. It is the hope of the author that discussion and analyses made vis-a-vis the Iroquois people will not necessarily inform the reader’s understanding or opinion of the modern Iroquois nations. The historical period in question is the Late Woodland Period of North-

\[\text{There would later come to be six nations, as the Tuscarora nation of North Carolina would migrate to New York to join the Iroquois Confederacy in the early 18th century following a military defeat at the hands of the English following increased white settlement in that area.}\]
eastern Native American history, which was chosen in the case of the Iroquois specifically, as it is the most recent period before European contact. Thus, archaeological data is most plentiful in this period but sustained European contact had yet to influence or alter Iroquois social or economic institutions.

It is also worth mentioning that European contact was not the only impetus of social or economic change in Iroquois history. To construe Iroquois history as a two-period history defined solely by the absence of Europeans in period one and the presence of Europeans in period two is not only historically inaccurate, but is also unfair, as it defines the history of a people entirely by their interactions with another group. The Iroquois Confederacy certainly underwent a number of social, economic, and technological developments throughout the period in question independent of interaction with any other group, nation, or state. This is to say that the Iroquois of 1000 AD were certainly not the Iroquois of 1500 AD, and the developments made and unmade throughout this period are connected to the analyses conducted in the following pages. Specification of the dates of the development (and if relevant, abandonment of certain institutions) are omitted due to the nature of the work at hand. The present paper is an economic one, and those wishing to enhance their understanding of Iroquois history beyond the scope of this paper are encouraged to reference the excellent and thorough works on the subject found in the bibliography below.

Additionally, a degree of cultural generalization is required for the sake of brevity. When something is mentioned as being ‘an institution of the Iroquois,’ this should truly be read as ‘an institution common among many nations, clans, etc. of the Iroquois Confederacy.’ While it is entirely feasible (and likely desirable) for an archaeological or an anthropological work on the Iroquois to compare and contrast common practice between the Seneca and the Mohawk, for example, it is

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12 The definition of this period is imprecise and varies from scholar to scholar. I have chosen the period 1000 AD - 1500 AD as my working definition of the Late Woodland Period.
the position of the author that such a level of detail and explanation is not required (and is discouraged) for the present discussion. Indeed, the ‘common practice’- if such a thing exists - of such a (relatively) sparsely populated civilization as the Iroquois Confederacy could have - and most certainly did - differ from clan to clan and from village to village. Thus the author encourages the reader to be wary in extending the understanding of institutions presented herein to every corner of the Iroquois people, and to take extreme caution in extending such an understanding to Iroquoian people of nations not a part of the Iroquois Confederacy. To extend this understanding to non-Iroquoian Native Americans is out of the question entirely.

3.2 On Kinship Structure

The study of Iroquois kinship structure is a specialization in and of itself. The interwoven and overlapping nature of group and clan identities, lineages, and marriage relations gives a labyrinthian effect to the relationship system that binds all Iroquois individuals to one another. The complexity of Iroquois kinship would be sufficient to warrant omission for the purposes of such an introductory overview if it were not equally as important as it was complicated. Nuances aside, in the absence of a strong central authority that could be termed a government, the Iroquois in the Late Woodland Period relied heavily on interpersonal and kinship relationships, not only as an organizing principle around which large-scale economic actions such as hunting and agriculture could be pursued, but as an alternative to the rule of law that had developed contemporaneously in Western Europe. Consider the clan, a kinship structure that will be discussed in greater detail below. An individual relied upon the clan for many things, from material goods such as food and clothes to more abstract benefits such as access to preferable marriage opportunities and religious services. If an individual were to commit some crime or other negative action against a member of a different clan, this could potentially result in the de-
velopment of animosity\textsuperscript{13} between these two clans. The individual is beholden to their clan above all else. In the absence of law or government, some institution is required to bind clans to each other. A later section of this paper elaborates on how gift exchange and a complex, rigidly defined kinship structure play the role typically filled by legal institutions by providing an incentive for kinships to police their members.\textsuperscript{14}

The following description of Iroquois kinship structures, while general, is designed to give the reader a solid understanding of the social structure of the Iroquois Confederacy. At the lowest level, there exists the individual. The Iroquois are matrilineal, meaning that the individual inherits their kinship relations from their mother. Thus if an individual’s mother is of Clan A and an individual’s father is of Clan B, the children they produce will be of Clan A. Matrilineages of common descent taken together are referred to as Clans, and are typically headed by the eldermost woman of that clan, referred to as a clan mother. A clan is typically associated with one or more longhouses, an enormous rectangular multi-family dwelling constructed with doors on either end and a large central hearth. A longhouse is typically divided into cubicles spanning the width of the house, with a single nuclear family occupying a cubicle. The Iroquois were also historically a matrilocal society, meaning that when a man married he was expected to leave his longhouse and move to the longhouse of his wife’s clan.\textsuperscript{15} Villages were formed by a number of constructed longhouses representing a number of clans that depended on the nation. Nations were formed by clusters of villages confined to geographic subregions typically delineated by natural features such as mountains and rivers and represented groups of common cultural and linguistic idiosyncrasies that eventually

\textsuperscript{13}Sometimes termed a “blood feud” by Anthropologists.
\textsuperscript{14}Posner (1980) contains a discussion on this idea.
\textsuperscript{15}A man and woman of the same longhouse could never marry as all of the occupants of a longhouse were of a common clan and the Iroquois enforced strict clan exogamy. This was enforced across national lines as well, so a Bear clan member of the Mohawk could not marry a Bear clan member of the Oneida without this being viewed as incest, and thus being condemned as taboo.
resulted in distinct identities. Members of the same clan can also be of separate nations, thus the clan kinship structure could be said to run horizontally across the nation kinship structure, with the first being defined by blood and spirituality and the latter being defined by culture and language.

### 3.3 On Material Conditions and the Structure of Production

For the purpose of analysis, it is useful to break down the structure of Iroquois production into a number of component parts, beginning at the highest level with two primary subgroups. Following the precedence of Sahlins (1972), the first subgroup I term *subsistence production*, this being the sector of the economy that tasks itself with the cultivation, harvest, refinement, and storage of food products. The second sector I term non subsistence production which can be loosely viewed as the sector containing all other kinds of economic activity. Examples of non-subsistence production are the manufacture of axes, adzes, and other capital goods; canoes and transportation goods; bows and arrows, spears, and other weapons; clothes, jewelry, and other ‘consumer’ goods; and many others. I will highlight non subsistence production later on.

I turn now to focus on subsistence production. The subsistence sector of the economy, being the most crucial to the survival of the Iroquois people, would have more fully occupied the time, efforts, and resources of the Iroquois, both in times of plenty but especially in times of want. The subsistence sector of production may be further subdivided into *agriculture* and *forest husbandry*.¹⁶ Labour was employed in these subsectors almost exclusively along gender lines, that is to say that those goods whose production lay within the realm of the forest were considered the sole charge of men, while those goods whose origin lay in the field were made to be the task of women. I shall proceed by highlighting each of these subsections in turn.

¹⁶I have appropriated the term forest husbandry from Johansen 1999, pg. 120-134.
Agriculture\footnote{Also termed - inaccurately, in my opinion - \textit{horticulture} by some scholars.} was a large and indispensable portion of the Iroquoian subsistence economy, with some experts indicating that archeological evidence suggests that maize alone could have represented up to two-thirds of the caloric intake of certain Iroquois individuals, although some scholars assert that the true proportion is somewhat under half (Engelbrecht, 2003, 24-26). According to Johansen (1999, 122), “at contact, women’s crops accounted for 65 percent of foodstuffs, while the men’s game preserves and fisheries accounted for 35 percent of foodstuffs.” The most well known of the Iroquoian cultivated crops are known commonly as the “three sisters,” these being maize, beans, and squash, which represented the majority of Iroquois agricultural output. These crops were almost always grown together as each complemented the growing habits of the other two: the tall and sturdy stalk of maize provided a structure for the bean plants to climb; the beans introduced nitrogen back into the soil which maize leached out; squash replenished lime in the soil which was utilized by the beans and provided a cover that prevented the growing of unwanted weeds in agricultural plots (Engelbrecht 2003, 32). Such a practice nicely represents the general nature of Iroquian technological development, although discussion of technology shall be held for a later section. Additional Iroquois crops in the pre and early post-contact period consisted of the cantaloupe-like muskmelon, the watermelon, the cucumber, the Indian potato, the Jerusalem artichoke, and the sunflower, which was cultivated for its seed oil as both an ingredient in cooking and as an input in the manufacture of dyes and paints (Engelbrecht 2003, 27; Johansen 1999, 124).

The agricultural process itself warrants some discussion, as the idiosyncrasies of the Iroquois practice render it unique when compared to other pre-market societies. Johansen (1999, 122-126) provides an excellent description of these practices, from which I source the following description in paraphrase: “Firstly, the whole of the
land\textsuperscript{18} is held in common by the clans of the village. The Council of the Clan Mothers of the village met biennially in the spring to divide up land claims to each clan - rather than to individuals - in proportion to the number of persons in a clan. Additionally, some excess land was reserved to be held in common for the benefit of all clans. The Council of Clan Mothers acted as the governing body of land and agriculture, and was responsible for mediating disputes between clans over land, resolving clans’ petitions regarding the assignment of plots, and ensuring that clans were making proper use of their assigned parcels. The Council of Clan Mothers would issue up to three warnings to a clan before declaring it derelict of duty and reassigning its land to another, more enterprising clan.”\textsuperscript{19}

Unlike the agricultural sector, the term forest husbandry is less straightforward and this sector consists of a much more diverse array of productive activities. While the tasks of forest husbandry did include the standard practices of hunting and fishing that were and are common among neolithic or hunter-gatherer societies, men were also charged with a number of practices to increase the productivity of agricultural and game land, resulting in higher anticipated yields in these respective subsectors in the future. Of these practices, the most common was \textit{swidden},\textsuperscript{20} the practice by which Iroquois men would burn fallow to assist in the artificial fixing of nutrients into agricultural soil, resulting in higher agricultural output and healthier crop. (Englebrecht 2003, 28-31). Swidden was also used to the benefit of the hunters themselves, as it was common practice to burn the underbrush of gamelands to facilitate movement, both of hunters around their own land, but also of unsuspecting prey into the hunting grounds of the Iroquois. The firing of dead brush in late winter also promoted earlier regrowth of flora in spring and promoting visibility

\textsuperscript{18}Specifically “productive land,” or that land used in the process of agriculture. 
\textsuperscript{19}I have trimmed many details for the sake of brevity, but interested parties are encouraged to read the description of these practices in their entirety, as these practices appear so unique to me as not to parallel those of any other civilization I have encountered before. 
\textsuperscript{20}Of an old Norse etymology, meaning “to burn.”
of browsing prey during the traditional winter hunts of the Iroquois (Englebrecht 2003, 9). Men also assisted in the establishment or expansion of agricultural plots, cutting away shade trees and leaving nut and fruit trees standing isolated amidst a field or clearing for easier gathering and protecting them from interference by meddlesome herbivores. Some archeological evidence may suggest the planting or transplanting of entire food trees (Englebrecht 2003, 28-29).

Iroquois hunting practices were typically carried out over the long-term span of a season (fall to early-winter) by a party of many men and several women who operated out of temporary hunting shelters constructed deep in hunting territory and far away from villages. The men were tasked with tracking and killing the animal while the women of the party were charged with the cleaning, smoking, and storage of the meat, and the tanning and refining of hides and furs (Englebrecht 2003, 10-12). The Iroquois hunt was rigorous, exhausting, and, oftentimes, dangerous (Johansen 1999, 128). Despite this, Iroquois men continued to hunt annually long after the advent of agriculture, due to the variety of goods that could be manufactured from the product of the hunt, both for domestic consumption and for trade with neighboring nations. While meat was certainly the critical product of the hunt in the subsistence sector, a whole host of ‘consumer goods’ such as clothes, shoes, animal skin parchments, arrow points, clubs, and the like could be manufactured with precision outside of time dedicated to subsistence labour from animal hides, leathers, bones, and antlers. Thus the hunt could be said to be a ‘high risk, high reward’ activity and successful hunters brought prestige upon themselves and their clan, as well as material well-being to the whole of the village.

It is important to note that there was a time in the not-to-distant past when American and Euroamerican observers commonly misconstrued the careful practices of forest and field maintenance of the Iroquois men as akin to the hobby of the European leisure classes (Johansen 1999, 126-127; Webster 1985, 41-42). Inac-
curate parallels were drawn between the complicated Iroquian practices of hunting, trapping, driving, stalking, and fishing and European practices of game or hobby hunting, with the implied notion that Iroquoian hunting was neither effective nor necessary. Thanks to the efforts of experts in the fields of history, archaeology, and anthropology, such notions have been laid to rest and the importance of hunting in the subsistence economy of the Iroquois has been reemphasized.

Finally, it is worth mentioning fishing and gathering, even if briefly. Iroquois fishing was accomplished both through the use of nets and canoes in open bodies of water and via the construction of weirs, which was the task of men. Fishing typically occurred in the spring when it began to replace some of the caloric and nutritional burden of hunting. Additionally, fishing, being substantially less physically straining than the Iroquois hunt, allowed the young and the elderly to participate in the production of food for the village, widening the productive years of one’s life (Engelbrecht 2003, 16-18). The Iroquois also gathered fruits, nuts, and a very large number of medicinal plants to reinforce their diet. I would wager that gathering was done in summer or early fall before the harvest, when movement was easiest. The Iroquois also gathered sap from maple trees which they refined into a sweetener for food and drink which would later come to be known as maple syrup (Engelbrecht 2003, 19-21).

I now turn to discuss the non subsistence sector of the economy. As mentioned above, I employ the term non subsistence economy or non subsistence sector to refer to that portion of the Iroquois economic system that concerns itself with the production of goods that are non perishable in nature and distinct from food goods. While the fulfillment of demand in the subsistence sector of the economy is

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21 See Dr. Gary S. Webster’s 1983 dissertation and 1985 paper in the North American Archaeologist for more information on this academic controversy.

22 The study of Native American medicinal plants has generated the field of study known as Ethnobotany, which is dedicated to identifying and cataloging these plants and their properties. Even the most brief ethnobotanical reference works can number into the thousands of pages, indicating the level of development and intricacy of native medicine.
certainly always the first priority of the Iroquois economic system, the production of capital and ‘consumer goods’ is equally important. Similar to the agricultural sector, women prepared most consumer goods that were utilized by the household. Unlike the subsistence economy, however, the non subsistence economy had more individualistic tendencies. It was more common for goods to be manufactured by an individual woman for herself or for a member of her household. Whereas the Euroamerican economic system emphasizes specialization and exchange through the medium of markets as the ultimate method of providing consumers with material goods, the Iroquois system emphasized a personal - if limited - understanding of all manufacture. Although the average individual may not be a stellar cobbler, it is likely that she understands the fundamentals of shoemaking and could produce a pair of middling quality without too much trouble. Thus I arrive at the general structure: the raw resources of the hunt and the harvest - meat, maize, skins, antlers, bones, etc - were produced collectively and distributed equally among the clans and households to be used in the manufacture of personal goods as they saw fit. On occasion manufactured goods would be transferred from one clan or household to another in the form of a gift, which I shall explain in greater detail later on.

The material culture of the Iroquois people is extensive, despite claims of some to the contrary. One of the most integral classes of consumer goods among the Iroquois were clothes, which would have been of particular importance to male hunters who were expected to endure gelid conditions during the traditional hunting season of the early winter. Clothing, in addition to shoes, were made from deer skin - sometimes requiring the skins of several animals - which placed additional emphasis on the necessity of the hunt. Pipes and sacrificial knives used in spiritual or religious ceremonies also held high regard in Iroquois society and were produced and maintained with care. Capital goods such as axes, adzes, and knives, as well as weapons such as bows, arrows, and spears were also common manufactured goods.
Parties interested in the breadth and diversity of Iroquois manufacture goods may refer to Stephanie Tooker’s *Lewis H. Morgan on Iroquois Material Culture* (1994). The text provides a robust survey and commentary on the material collections of anthropologist Lewis Henry Morgan, acquired during his tenure among the Seneca Iroquois of western New York.

### 3.4 On Distributive Mechanisms and The Gift

There are no markets in the society of the Iroquois, and just as goods are produced solely under the consideration of the object-in-question’s value in use, so too does the distribution of the same object consider solely who has the greatest need of it or, if there is no need, who can make the greatest use of it. In addition to the lack of a market structure, one also finds a distinct lack of money, or even at the very least a universally accepted medium of exchange.

The closest approximation to a Western concept of currency in the Iroquois economy is *wampum*, these being belts or strings of tiny colorful shell beads arranged into patterns, produced in varying lengths. The functions of wampum belts in Iroquois society are manifold. The patterns of wampum belts were used to memorialize important events, represent oral contracts, and function as a bill of sale for transactions occurring between parties of different clans or nations. In addition, the accumulation of wampum brought prestige to those who amassed a significant yardage, thus wampum was considered valuable and was often traded for other goods. In the case of the Eastern Algonquin nations of New England (specifically the Narragansett and the Wampanoag), wampum was frequently used by European (English) settlers as the currency of choice for the acquisition of native land (Brooks 2018). In some cases, wampum also functioned as a passport, allowing individuals of one clan to access the restricted trails and waterways of another clan. *Permission*
wampum was issued by the clan who ‘owned’
(usually implying establishment and maintenance of) certain routes or geographic features and was usually either given gratis or in exchange for some small gift (Johansen 1999, 128-129).

In the absence of markets and money, how were resources allocated to the people? This occurred through dual processes. The first is a centralized pooling and redistribution system managed by female elders. The second is a system of balanced reciprocal exchange that occurred between clans. The product of all labour is held in common at the time of its manufacture by the women of the Iroquois, including the products of the men’s hunt. Iroquois conceptualizations of personal and private property, and entitlement to the product of one’s labour, are heavily informed by Iroquois cosmology and religious beliefs. The earth exists and is maintained independently of the actions of humans, therefore no one human can lay claim to the produce of the earth. It is for this reason that the product of agriculture, hunting, fishing, and gathering was accumulated, refined, and stored in the village by a centralized body of women to be redistributed back out again to individuals or clans in proportion to their needs (Johansen 1999, 129-132).

The centralized distribution of the Clan Mothers was not perfect and, in fact, often allocated too much of one good to one clan and too little of one good to another. Indeed, surpluses of both food products and consumer goods amongst the Iroquois were very common (Johansen 1999, 130). It is at this stage that reciprocity becomes a critical institution. Gifts were exchanged from one clan to another as a way of more accurately dispersing accumulated surpluses to where they were needed. This idea will be explored in greater depth in the following section.

Reciprocal gift-exchange also functioned as a method by which a trust relationship between clans may be built and the lines of communication maintained. Since the production of all subsistence goods occurred collectively, it was imperative that

\footnote{The more accurate term may be “claimed,” but I have not chosen this word as, to my ear, it implies some room for other tribes to dispute this ‘claim,’ which in many cases there was not.}
a clan could trust other clans to participate equally in the labour of food production. The productive system of the Iroquois economy rendered a situation wherein the labour any one individual exerted in the course of subsistence production was decoupled from the product that they received in turn. If there was even a suspicion that a clan was withholding labour from production - that is to say, doing the bare minimum required to avoid forced land redistribution - it could result in other clans beginning to withhold their labour from food production in turn, causing a productive ‘death spiral’ that ends in starvation, warfare, or the breaking of the village. Thus one can understand the necessity of an institution that fostered trust between clans. Gift exchange gave clans an incentive to monitor and self-police the efforts of their members, as mentioned in an earlier section. If a young woman of the Bear clan begins to shirk her work, it could damage the trust relationship - and by extension the reallocative gift cycle - that has been established with the Turtle clan. Thus the leadership of the Bear clan has an incentive to compel the young Bear clan woman to work, thus overcoming any free-rider problems that could occur.

4 On The Functions and Origins of The Iroquois Gift

4.1 The Topics of Discussion

Now that a general understanding of reciprocity economies has been established and explored, and with the description and investigation of Iroquois reciprocity having been complete, I now proceed to the core task at hand: the discussion of two key questions. The first question is “What social/economic niche does the reciprocal gift exchange institution fill in Iroquois society specifically?” The second question is, in very few words, “Why reciprocity?” What were the unique aspects
of Iroquois society that allowed reciprocity to emerge as a dominant and vital institution? What, if any, were the facets of Iroquois society that would have impeded the development of distributive institutions alternative to the Iroquois systems of pooling and reciprocal gift exchange? In regards to the first question, sociological, anthropological, and economic theories all provide their own interesting insights to the Iroquois case. As for the second question, we will see that economic models contain some surprising explanatory power that could provide a path toward an answer.

### 4.2 Explanations of Reciprocal Gift Exchange

The first theory of the function of gift exchange in Iroquois society I term the *information theory*, this being that *reciprocity is an institution by which Iroquois clans can resolve errors in central planning that can arise via imperfect information*. As was mentioned above, the Iroquois distributive mechanism contained two pieces that occupied different places in time. First, stockpiled resources were apportioned to clans by a central group (of elders) depending on the anticipated needs of each clan. Following this, clans were then at liberty to present other clans with gifts, based either on obligations from past gifts received or on other factors, if no such obligation existed between two clans. Thus, clans could reallocate received surpluses that were distributed erroneously by the central planners to clans that may have received insufficient resources. Essentially, this gift exchange disseminated wealth from the clans of ‘haves’ to the clans of ‘have-nots’ in a given period, knowing that in any future period it is just as likely that the tables of material fortune could easily be turned. This is very similar to Posner (1980)’s insurance model of gift exchange, except that the randomness of a clan’s material wealth is determined by imperfect information on behalf of the central planner, as opposed to variable subsistence yield that depends on random environmental conditions. The cause of
this difference in the case of the Iroquois is attributable to their undertaking of large economic projects - namely agriculture and hunting - on a village level, as opposed to a clan level, and the system of pooling that accompanies this.

Why, then, is reciprocal gift exchange the institution that fills this niche? Why do clans not simply return surpluses to the central planners to be stockpiled and distributed again in a second period based on updated information on clans’ necessities? The first possible explanation is that repooling is less time efficient than gift exchange. The time that would be required for a single organization of central planners to evaluate which clans possessed either surpluses or shortages, stockpile the surpluses, divide the stockpile according to the extent of each clan’s shortage, and then redistribute the stockpile is likely to be much higher than each clan resolving issues of dearth or abundance privately. Additionally, the possibility of repooling rests on the assumption that the central planners update their information in the second period, which may not be the case, given the high information costs that tend to plague non-literary societies (Posner 1980), the Iroquois Confederacy being one such society. As information costs rise and therefore the process of updating information becomes more laborious, one would expect such updating to occur less frequently, decreasing the efficiency of repooling relative to reciprocal gift exchange.

The second possible explanation is that, by giving clans the agency to resolve misallocations in resources themselves - as opposed to via redistribution by some organization of central planners - the clans are able to capitalise on the goodwill commodities that are associated with the exchange of gifts. As was discussed in Purkayastha (2004), when gifts are exchanged between two parties, both parties often feel as though they ‘come out on top’ in the gift exchange, even though the actual market value of the gifts exchanged are rarely exactly equal. Purkayastha attributes this to the creation of a kind of public good - the so-called ‘goodwill commodity’ - that represents the sowing and growing of a trust relationship between
two agents or parties. The more gifts are exchanged, the larger the goodwill commodity becomes. In a more specific case, the Iroquois society of the late Woodland Period was heavily built on kinship structures and the mutual trust that developed between these kinships. It is for this reason that, hypothetically, even if the information costs associated with the Iroquois Confederacy were extraordinarily low (approaching zero) and near-infinite periods of repooling were feasible,\textsuperscript{25} it is still entirely possible that gift exchange would persist as an institution among the Iroquois. This is because the utility generated by the goodwill commodity associated with the gift less the costs of information associated with the gift may still be larger than the hypothetical zero-cost situation of perfect pooling.

The second theory of the function of gift exchange in Iroquois society I term the \textit{kinship accountability theory}, this being that \textit{reciprocal gift exchange emerged in Iroquois society as a regulatory institution via which leaders of a clan would have an incentive to police the behaviour of their own clan members}. This theory is based on the \textit{insurance theory of reciprocal gift exchange} suggested by Posner (1980). As was mentioned in the previous section, individuals were heavily beholden to the rules, customs, and impositions of their clans. In the Iroquois kinship system, individuals were reliant upon the clan for critical goods and services. Thus, individuals had an incentive to avoid anti-social or harmful behaviour towards members of their own clan, for fear of being cut off from the economic benefits associated with clan membership - a fate worse than death, by many accounts. In the absence of the gift, however, the economic consequences of such harmful behaviour cease when such actions are carried out against members of another clan. If the member of clan A commits a crime against the member of a different clan B, without incentive it is unlikely that clan A will punish the offending individual and clan B cannot punish the individual, as they are under the protection of clan A. Furthermore, if

\textsuperscript{25}Or, alternatively, that information was always perfect and central planners could always exactly anticipate clans’ needs.
clan B attempts to retaliate for the crime committed, it is possible that clan A will protect the offending individual, potentially resulting in a conflict between the two clans. In such a situation, there is no mechanism to consistently punish crimes committed outside the ‘jurisdiction’ of one’s own clan.

This is the societal niche that the institution of reciprocal gift exchange fills. Consider a kinship-based society with reciprocity as a prevalent social institution. If a member of clan A commits some kind of offense against a member of clan B, clan B may threaten to sever relations with clan A - thus cutting off the future flow of goods or services and depriving both clans of the associated goodwill commodities - if they do not punish the offending individual. Reciprocity gives a clan an economic incentive to act cordially toward other clans and to promote social behaviour amongst its members towards other individuals in the wider community. Thus the very real economic interactions that occur between every member and kinship structure in the community is additionally accompanied by a more abstract sociological relationship or a change thereof. The transfer of goods is at once simultaneously associated with a shift in obligations, which is generally equivalent to the assertions made in Sahlins (1972) regarding the nature of economic relationships. All of this occurs without an extensive and complex written code of laws or established tradition of jurisprudence.

4.3 Why Reciprocity?

Answering the question of “Why reciprocity?” is more difficult due to the abstractness of the question and the logic justifying the answer is likely to be less compelling and more specific to the case of the Iroquois. Although this question has been proposed by anthropologists, economists, and sociologists alike, I find this particular phrasing to be unproductive. In short, the answer to such a question is simply “reciprocity is because reciprocity is.” To ask why a group of people do a
certain thing is a question so large that even wiser minds are likely to arrive at the same tautology. I instead consider the more appropriate question - that is, the one that wiser minds may be interested in: “Why reciprocity and not markets?” Most of the logical and theoretical framework for understanding this question is sourced from Kranton (1996).

At the outset, the most convincing explanation from Kranton’s five propositions provides scant insight: the market is nonexistent because the market is nonexistent. As Kranton establishes, the returns of market exchange are decreasing with the size of the market. Therefore, if the initial market size is zero,\(^{26}\) then it follows that there is very little - if any - benefit to abandoning one’s reciprocal partnership or kinship structure and entering the market. This suggests a kind of vicious cycle: there is no market, so there is no benefit to entering the market, thus no one enters the market, and therefore there is no market. It is difficult to see how such a cycle can be broken, barring some kind of exogenous shock.

It is entirely possible that market structures did not emerge among the Iroquois due to this reason. The more likely explanation I would assert, however, is that market exchange was simply less efficient in equilibrium than reciprocal gift exchange in the case of the Iroquois. As was asserted in Kranton (1996), the efficiency of reciprocity versus market exchange is heavily dependent on the \(x\) parameter, this being a measure of the ‘narrowness’ of the average agent’s preferences or the general substitutability of goods in a society. As is suggested in Sahlins (1972) - and referenced to less effect in Posner (1980) - ‘archaic’ type societies are characterized by low technology and, consequently, a very high substitutability of goods (this being a higher \(x\) value in Kranton’s model). Thus, it seems likely that the \(x\) parameter of the Iroquois would fall into the \(x^*(\delta) < x < \bar{x}(\delta)\) range where reciprocal gift exchange is the most efficient distributive institution. The determinants of low versus

\(^{26}\)That is, the proportion of the population engaged in market exchange is zero.
high $x$ for a given society are not entirely clear. It is possible that it is partially psycholog-ically or culturally determined on the level of the individual. It is also possible that the psychology of narrowness of preferences is endogenously determined within a society by that society’s standard of living and productive capacity. Is it the case that this parameter $x$ is determined by the material wealth of a society? The con-verse is quite clear and supported by Sahlins (1972), Graeber & Wengro (2021), and others. It remains to be seen whether or not an increase in material wealth or standard of living would cause individuals in a high $x$ society to become accustomed to particular goods and thereby raise the narrowness of their preferences, lowering their $x$. Unfortunately, the answer to this question likely lies outside the plane of the theoretical and inhabits the realm of empirics, with which the present paper is not concerned. This research topic could form an intriguing primer for interested parties with a background in economic anthropology and empirical methods.

5 Conclusions

The aim of the paper was not to produce results, nor to generate a powerful mathematical model, or even to draw evidence of correlation between two phenom-enae. Indeed, as a work of economics, the current paper may seem a little archaic. It returns to the roots of economic inquiry that predate robust datasets or the econometric ‘cutting-edge.’ The task was simply to analyze behaviour and to tell a story about a group of people. Such a process was, at one point, the economist’s first, best recourse. As the field of economics continues to pressure itself towards the implementation of complex mathematical modeling and big data analytics, it is important to remember that the common subject of all economic inquiry is the human being.
References


