

## ARTICLE

# New institutional economics in Viking studies. Visualising immaterial culture

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## Abstract

In this paper, we argue that closer engagement with the field of new institutional economics (NIE) has the potential to provide researchers with a new theoretical toolbox that can be used to study economic and social practices that are not readily traceable in material culture. NIE assumes that individual actions are based on bounded rationality and that the existence of rules (institutions) and their enforcement – the institutional framework – influences agents' actions by providing different incentives and probabilities for different choices. Within this theoretical framework, we identify a number of concepts, such as *collective identity* and *mobile jurisdictions*, that seem to fit what we know of Viking age economic systems. In applying these models to the available archaeological and textual data, we outline the ways in which further research could provide a new understanding of economic interaction within a rapidly evolving context of diaspora and change.

**Keywords:** Collectives; Economic theory; Oaths; Jurisdictions; Trade and Taxation

## Introduction: problems and potential in the study of Viking economics

In the final paragraph of Richard Hodges' *Dark Age economics: a new audit* (a follow-up to his similarly titled book from 1982), he concludes that 'the Dark Age economy, it now appears, was more varied, more regional and more complex than DAE envisaged. It was also much more rational in all spheres of its organisation' (Hodges 2012, 138). In any organized society, most human interactions are the result of invisible and empirically untraceable cultural factors, which provide actors with different incentives for various actions. These actions are underpinned by unwritten codes of conduct that constantly work to reproduce and maintain such incentive structures. The study of these structures, however, is a challenge for any empirically based social science, not least of all archaeology, with its material database that is, by definition, fragmented and incomplete. The aim in this paper is to outline the ways in which a theoretical school of thought known as new institutional economics (NIE) can help us to visualize economic organizational structures and the ways in which they operated during the past.

Within the discipline of Viking studies, scholars are becoming increasingly interested in the economic organization of early medieval Scandinavia – a sub-field of research that we might describe as 'Viking economics'.<sup>1</sup> However, even if economics as an academic discipline is at heart the study of incentives and incentive structures, in archaeology and ancient history much of the research so far has been conducted outside the scope of economic theories. In seeking to

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understand more complicated trading networks, Viking scholars draw inspiration largely from the field of anthropology via theories of internal ‘non-market economic bonds’ that operate through a variety of mechanisms, most notably procedures of gift-giving practices (the literature here is vast, going back to Malinowski and Mauss, but for key works see Gregory 1982; Parry and Bloch 1989; Godelier 1999). We argue that this focus on gift-giving practices has obscured the understanding of economic practices and structures. NIE provides the theoretical framework for studying the immaterial culture that would be necessary for any economic system that included such important features as high degrees of specialization, deferred payments and so on outside of the circle of an extended family.

The study of Viking economics has come a long way in recent decades, enriched by the research focus on silver and other commodities (e.g. Graham-Campbell 2011; Graham-Campbell, Sindbæk and Williams 2011 – especially Skre’s chapter; Graham-Campbell and Williams 2007; Gruszczynski 2019; Kershaw and Williams 2019; Pettersson 2008; Skre 2007). This was embedded in the socio-political context of prestige gift exchange and the martial society.

However, an argument can also be made that significant, even central, aspects of Viking age economic activity have largely been overlooked, especially in relation to the mechanisms that enabled its functioning over long distances and cultural divides. This concern has been raised repeatedly by Viking scholars over the past 15 years or so (e.g. Gustin 2004; Sindbæk 2007; 2011; Skre 2013, 2017a and b). One collection in particular has begun to explore the connections between the development of economic and legal practices, rural economies and monetary systems within the context of state formation and the institutionalization of royal power (Glørstad and Loftsgarden 2017 – see especially Skre’s paper), while more recently another has begun a systematic pursuit of agent-oriented socioeconomics (Baug et al. 2019). From our perspective, the evolution of these legal systems represents a cornerstone of organized economic activity, including any kind of fiscal system, systematic economic specialization, possibilities of deferred payments (credit), etc.

In parallel with these trends in Viking studies, an important strand of economic theory has emerged in economics under the umbrella of ‘public choice’, which researchers are using to explain the development of state formation as a result of rational decision-making.<sup>2</sup> Within this field, several articles have used case studies of the Vikings’ westward expansion and the occupation of England in the 9th and 10th centuries to further develop these ideas (Baker and Bulte 2010; Kurrild-Klitgaard and Tinggaard-Svendsen 2003; Tinggaard-Svendsen 2020). Admittedly, some of this work within public choice theory relies on reductionist, stylized views of the Viking Age, even to the point of extrapolating the high level of social trust in today’s Scandinavian countries from the supposed oral traditions of the past (Lind Haase Svendsen and Tinggaard-Svendsen 2016). Nonetheless, combining this kind of theoretical framework with the more traditional tools of Viking studies – such as empirical material analysis and textual source critique – can help us to better interpret the invisible dimensions of socio-economic organization, that is, the parts that were not direct transactions involving physical means of exchange such as goods, coins and/or precious metals.

This paper attempts to initiate a new approach to Viking economics, arguing that their complexities can be illuminated through the application of theoretical tools from what has been called new institutional economics (NIE). Presented in more detail below, this is a public choice approach based on bounded rationality. To this, we add Bourdieu’s sociological theory on different ‘forms of capital’ to understand incentives that were not expressed directly in terms of material wealth, which we suggest is an important step towards accessing the hidden incentive structures of Viking age Scandinavian societies. In applying these theories, we aim to shed light on arrangements that were necessary for functional economic organization – something that we believe almost certainly existed but which is difficult to trace in material culture. In support of this notion, one can turn to the example of legal codes and systems: although they were stored as memory and communicated orally in the Viking Age proper, the later written versions reveal

their immense complexity. Moreover, the central importance of the law and the institution of popular assembly is not in doubt, even though its only material traces are thing sites and occasional finds such as objects interpreted as oath rings (cf. Sanmark 2017). In defining a new theoretical framework for Viking economics, we hope that it will thereafter be possible to revisit the archaeological record in search of further support (for a similar approach, see Ruitter and Ashby 2018).

We begin with an explanatory overview of NIE, its origins, assumptions and contexts, together with notes on incentive structures, analytical narratives and Bourdieu's forms of capital. Drawing partly from archaeological data and partly from the accounts of contemporary observers, especially in the East, we construct a framework with specific concepts based on NIE that we argue helps to adapt it to the field of Viking studies. Our observations are summarized in the conclusion, which is intended to act as a springboard for future research. Clearly, these ideas have the potential to be worked through more extensively in specific arenas of Viking economics, such as voyaging behaviour, trading networks, the social logistics of trading hubs and settlements (so-called winter camps) and military capacity, amongst others.

### New institutional economic theory

Institutional theory, or more precisely new institutional economic (NIE) theory, provides a toolbox for structuring the study of complex, collective economic organization. This economic variant of 'institutional theory' differs in some crucial aspects from how the same label is used in political science and sociology. The word 'new' also differentiates it from the original 'institutional theory' in economics, which was formulated by Thorstein Veblen in the late 19th century (Dugger 1990). Basically, NIE assumes that an agent's behaviour is subject to many sorts of rules (labelled 'institutions') in society, which are formal as well as informal, and that the choices by agents to follow, break or change those rules are dependent on the potential payoff. The cost of challenging or breaking the rules is similarly dependent on the likelihood of being caught and punished for transgressing these norms, as well as the nature of the punishment itself. This makes the monitoring of agents' conduct and the enforcement of these rules (labelled 'enforcement mechanisms') crucial for the following of them. On a macro level, NIE assumes that rules are instigated to facilitate economic organization by decreasing insecurity in transactions, and thus, if well designed, this institutional framework – the institutions and the enforcement mechanisms – will contribute to increased economic efficiency (for a guide to NIE, see Eggertsson 1990; North 1990, 1993).

NIE is rooted in what is arguably the most dominant theoretical school in economics (at least in studies at the individual agent level, or micro level) since the late 19th century – neoclassical economic theory. The NIE framework, however, has evolved as a response to some of the key criticisms against the absence of context in the neoclassical school of thought. On the micro level, neoclassical economic theory assumes that an economy consists of instrumentally rational and fully informed individual agents. Thus, there is no social fabric, such as history, memory, traditions, beliefs, relations to other agents or even any kind of legal system, influencing the choices of these agents. All transactions are also one-shot games in the form of 'on the spot' transactions on the market between these anonymous agents, meaning that there is no time dimension and consequently no risk. One of the main illustrations of the shortcomings of neoclassical theory in explaining economic reality is the fact that, in accordance with its assumptions, there would be no need for any means of payment at all. In a frictionless world where agents have full information, transactions between different goods and services would be made directly on the basis of relative prices without using any means of payments. This shortcoming in understanding basic driving forces for human behaviour has made it problematic to use neoclassical theory in other fields such as history, political science and sociology. Economists have not been unaware of the fact that economic activity in the real world is far from frictionless, and that individual agents are seldom fully informed, as is assumed in this standard neoclassical theory. Within the history of

economic thought before neoclassical economy arose, a lot of effort was devoted to dealing with issues of frictions in relation to trade and production, taxation, contracts, the implications of rules of different kinds, information problems, etc. (cf. Boisguilbert (1966), Cantillon (1997 [1755]), Oresme (1990 [1355]), Hume (1987 [1777]), Magnusson (2004), Ögren (2016), Wennerlind 2005; 2008, to name a few). Such criticism has been voiced also within neoclassical economics and has helped to develop the theory further, not least with NIE.

One of the concepts deriving from this criticism is the transaction costs theory developed by Ronald Coase (1937), which became one of the ways to explain why it could be economically more beneficial to plan and coordinate economic activity within a collective entity – for instance, a company – than to make each necessary transaction individually on an open market (as assumed in neoclassical economic theory). Transaction costs represent the summary of all costs that arise owing to the insecurity involved in market transaction, but which are omitted in neoclassical microeconomic theory owing to the assumption of full information; it combines search and bargaining costs, contractual costs and all kinds of costs related to decreasing the insecurity within transactions when agents do not possess full information, insurance costs or other costs arising owing to insecurity, etc. One field where the transaction cost approach was developed is within economic history. Naturally, the study of complex economic organizations and economic activity over time was not possible without the explanatory power of context.<sup>3</sup>

The more systematic study of how transaction costs were dealt with led to the formulation of NIE. More precisely, it originated from the puzzle of economic divergence between economies. In economics and economic history the assumption has been, and still is, that there is a strong causality going from technological advances to economic growth. Basically, the idea is that growth in productivity is a result of technological development. This is also in line with neoclassical economic theory, where it is assumed that production is made at the optimum level of any given technology, since there are no transaction costs or bottlenecks of any kind in production. At the aggregated level, over time there is also a clear relationship between technological advances and productivity expressed in terms of economic growth – hence this link between technology and economic growth seems undisputable. However, a related question is: given that technological advances have historically been difficult to protect and monopolize, how is it that some economies flourish while others do not, also over the long term? As stated by North in his seminal article ‘Sources of Productivity Change in Ocean Shipping, 1600–1850’:

‘Yet in a world where technological advances are at least nominally free, differences in making efficient use of the state of knowledge must account for the widely disparate experiences of national economies. While the relative importance of the other factors making possible the efficient use of technology is extremely difficult to isolate on a macroeconomic level, it may be more amenable to measurement on a microeconomic level. This essay presents evidence on sources of productivity change in ocean shipping from 1600 to 1850, its objective being to identify as precisely as possible those sources of productivity usually lumped into the general category of technological change. The conclusion which emerges from this study is that a decline in piracy and an improvement in economic organization account for most of the productivity change observed.’

North 1968, 953

The answer to the riddle of different productivity was, thus, how transaction costs were dealt with, basically that technology can be made more or less economically efficient by avoiding these as much as possible. Access to potential markets, decreasing risk, protection of property rights and economic organization (coordination) between agents were of fundamental importance in making efficient use of these technological advances. This insight brings the economic organization, the context in which transactions are made, into focus for economic efficiency. Social factors, such as the design of the legal system as part of the economic organization, which in neoclassical

theory is assumed not to have any economic impact, here become pivotal for an efficient economy. This also underlines why changing such economic organization may spur economic payoff. It is from these observations that NIE developed its theoretical framework as a way to understand exactly why certain modes of economic organization developed and changed, and why some were more successful than others. This theoretical toolbox has been used to understand how long-distance trade and credit relations were developed and entertained; the emergence and presence of powerful merchant guilds; the role of fairs; the balancing of power between sovereign rulers, local elites and merchant guilds (Greif 1993, 2002, 2006; Greif, Milgrom and Weingast 1994); and so on – all from the basic assumption of agents' economic rationality bounded by the institutional framework. In the same way, the relative economic and political success of the late iron age Scandinavians can probably not be attributed solely to their access to raw materials and technology. Of more importance were their organizational skills, of which we may get a clearer picture through the lens of NIE.

### ***NIE, incentive structures, game theory and forms of capital***

Douglas C. North (1990) made a famous sports analogy in explaining NIE, where the 'institutional framework' is the rules of the game and the referee, the 'agents' (individuals) are the players, and the teams (the collectives) are labelled 'organizations'. Consequently, when 'agents' team up into any kind of collective body (a firm, a merchant guild, a Viking fleet, a government, etc.), it is an 'organization'.

The assumption that social context is codified in the institutional framework implies that incentive structures will guide the behaviour of economic agents, as they are rational in the bounded sense. This means that we can decipher the institutional framework, and how it developed, through the use of game theory.<sup>4</sup> For every choice by agents, for instance, to obey or to fight, we can assume that their decision was guided by the payoff in relation to the perceived risk of loss. This risk of loss was to a very large degree influenced also by the social context at the moment when the agent made their decision, not least owing to the existence of the above mentioned enforcement mechanism. The viability of such an enforcement mechanism rests on the difference between a 'credible' versus a 'non-credible' threat. Clearly, in the case of the latter, as a rational economic agent the individual will not succumb to the threat and will not hesitate to break the rule if it pays off to do so. A credible threat not only implies that there is a sufficiently strong punishment for deviating from the rule, but it also presupposes a means of monitoring the conduct of the economic agents. An important effect of such an institutional system is that if the enforcement mechanism is efficient, it does not need to be imposed – the mere threat of doing so is sufficient.

It is easy to add to the calculus of possible payoff versus risk of loss a number of features that are not directly linked to material wealth, such as a person's standing in society, or what a Bourdieusian sociologist would label 'social capital'. In fact, such non-materialistic incentives were probably very strong driving forces in a society where being part of an organization (or a collective) that can help to protect the agent's interest might be the difference between life and death, as in Viking age Scandinavia (see below).<sup>5</sup>

This institutional framework to decrease insecurity in intrapersonal economic activity must have come into being somewhere, shaped by persons unknown. The fact that some agent and/or (on the macro level) an organization manages to create, change and or reproduce the institutional framework implies that power relations are at the core of NIE, as well. NIE is thus a field that combines economics and political science through structured analysis on how power relations were solved so as to allow for peaceful production and exchange and also to account for why peaceful exchange was not always the choice. This is the basis of the 'analytical narratives' school, which not only applies NIE but also adds formal game theoretical analysis and has been used to study all kinds of economic organization in pre-modern as well as modern societies (see Bates

et al. 1998, 2000; Greif 2006; North and Weingast 1989). At its heart lies a puzzle concerning the use and abuse of ‘state’ power in political science, though it is possible to replace the concept of the ‘state’ with any ruler in ancient history:

‘The simplest economic view of the state as an institution that enforces contracts and property rights and provides public goods poses a dilemma: A state with sufficient coercive power to do these things also has the power to withhold protection or confiscate private wealth undermining the foundations of the market economy.’

Greif, Milgrom and Weingast 1994, 745–6

A key aspect of our application of these theories to Viking economics is the necessity to avoid a kind of deterministic thinking, which would place contemporary actors and agents as mere cogs in a predictive machine of transactional behaviour in the markets and mercantile waterways of the diaspora. We have no illusions that the complexities of the Viking Age can be easily reduced in this way. This is not to oppose the economic idea that social order and organization may well be a product of unfettered rational agents, who freely choose to create and follow certain rules and hierarchies because it is in their own interest to do so – a kind of ‘spontaneous social order’ – such as would be the case with the division of labour in a free society (Hayek 1948) or the aforementioned move from pre-state to state conditions (Olson 1993).

What NIE adds to the idea of the spontaneous social order is, first and foremost, that it builds on the fact that certain rules to uphold social order must be codified in some way, for example, orally and through the agency of material culture, and, furthermore, that these rules are enforced if broken. In this case, social order not only spontaneously emerges between equally strong agents, but it is also a result of power relations, the existence and importance of which is empirically supported for most societies.

We can now turn to a series of short, outline case studies from the Viking diaspora to explore how these ideas may be implemented in practice, functioning as a proof of concept for the application of NIE to the study of late iron age Scandinavian social and economic systems. At this introductory level, we isolate four social arenas in which we may find material or textual reflections of these otherwise invisible economic behaviours:

- Institutions and enforcement, in this paper illustrated especially by the context of oath-taking
- The importance of collective identity
- Jurisdictions, both static and mobile
- Balance of power – trade, taxation and violence

These four arenas have not been selected by chance but instead serve to construct the NIE framework, which provides a coherent context for analysing these behaviours in combination. We begin with the institutional system, that is, formal and informal rules and enforcement of these rules, that guided agents’ behaviour. Concerning this element – institutions and enforcement – there is also the role of religion, not considered further here but one of the most important carriers and reproducers of the institutional framework. Collective identity is the cornerstone for understanding how the institutional system could be designed in relation to belonging (or not belonging) to a certain group of individuals, explaining why it would be rational to monitor and punish wrongdoers both within and outside of this collective identity. The jurisdictions element represents the combination of the institutional system and the collective identity. This explains why a certain collective, or members thereof, follows certain institutions wherever it or they go. This is also why we discuss the concept of mobile jurisdictions. Finally, balance of power explains why certain actions by certain collectives (or members of) in relation to other collectives (or members of) are rational at a given point in time.



## NIE and the Viking phenomenon

### *Institutions and enforcement in an oral setting*

The societies of Viking age Scandinavia were primarily oral cultures, though this is not to say that they were illiterate. There is abundant evidence for the use of runic scripts, in everyday contexts as well as on the famous memorial stones, but it is nonetheless clear that literacy played a fundamentally different role in the North than its counterpart in the book-based learning of Christian Europe (Hedenstierna-Jonson 2010; Price 2020, 15f, 188–95). Although the later runestone inscriptions demonstrably had functions relating to the documentation of inheritance claims (Sawyer 2000, ch.3), it is equally certain that general record-keeping was a matter of memory. As above, this applied not least to the laws (Zachrisson 2017; Scheel 2020), which seem to have also left a mark in Eddic poetry; the orally coded institutional framework not only bounded the conduct of the general populace but also that of the elites, even kings (Riisøy 2020).

An important dimension of this was the swearing of oaths, often as a matter of public performance, incorporating the use of objects such as rings and swords, special stones, structures and even horses (e.g. Riisøy 2016, 141; Scheel 2020). In these traditions, the oath and the rituals surrounding it replaced the signature of a written contract, and it is in these mechanisms that we can locate the enforcement codes of the kinds of economic environments envisaged above. Their power is aptly conveyed by the Eddic poem *Völuspá* (str.26), in the voice of a dead sorceress awakened by Óðinn to foretell the future: ‘oaths paid for oaths,/the vows and sworn pledges,/all the words of weight’<sup>6</sup> (Dronke 1997, 14).

Not only did these oaths have to be made in front of witnesses, but they were usually also performed at specific places vested with political, legal and religious importance, most notably in cultic buildings (Sundqvist 2016) and the popular assembly known as the ‘thing’ [Old Norse (ON) *þing*; Sanmark 2014, 2017]. Important contracts, such as peace treaties, were also made legal by oath swearing – as in the truce between the Rūs and the ‘Greeks’ from Constantinople in 907, according to the *Russian Primary Chronicle* (Stein-Wilkeshuis 2002). Indeed, a form of oath-taking may even lie at the heart of at least one major group of Scandinavians that operated in the east, the so-called Varangian Guard in Constantinople, the emperor’s personal protectors. It has been argued that their name derives from the Old Norse *vár* (cf. the modern English ‘vow’), meaning ‘oath’ or ‘to place confidence in something’, and thus, the members of the Guard were those who had sworn loyalty to the Byzantine throne (Blöndal 1978, 4).

Oath-taking occurs in numerous Old Norse texts, ranging from Eddic poems to works such as the Icelandic *Landnámabók*, the ‘Book of Settlements’, which in turn influenced several family sagas; oaths are also enshrined in the law codes (the written sources are fully referenced in Lárusson 1980; see also the relevant entries in Simek 1993, 238–9). Although no oath-taking formulae have survived from the pre-Christian period, they have echoes in later texts that seem to preserve similar rhythms in their description of truce agreements. These are found in the *Heiðarvíga saga* (33), the *Grettis saga* (72) and especially in the *Grágás* law codes (K114), and there are other examples that invoke the names of Norse gods such as Freyr and Njörðr together with an unspecified *almáttki áss*, ‘an almighty Aesir’, variously argued to be Óðinn, Þórr or Ullr (e.g. in *Landnámabók* H268 and *Óláfs saga Tryggvasonar en mesta* 201). Perhaps the most dramatic and detailed formula, and among the oldest, comes from the Eddic poem *Völundakviða* (str. 33) when the eponymous smith bargains for his safety by demanding his captor swear ‘First you must swear to me/every oath/by the side of the ship/and by the rim of the shield,/by the withers of the horse/and by the edge of the sword’.<sup>7</sup>

The oaths themselves were sworn not only in special places but on special things. The record of the Byzantine truce mentioned above tells how ‘the parties bound themselves by oath, and whereas Emperors Leo and Alexander “kissed the cross”, the Rus, according to their religion, “swore by their weapons”’ (Riisøy 2016, 142). However, the most common oath-bearing object was a ring, sometimes made of precious metal such as gold but more often of iron (the sources are

summarized by Magoun 1949; Kabell 1975; Simek 1993, 266, 312; Orchard 2011). In Eddic poetry, Óðinn swears a (false) ring oath, a *baugeið*, in *Hávamál* (str.110), and an oath is sworn on Ullr's Ring in *Atlakviða* (str.30). Among the sagas, less reliable sources though they are, ring oaths and temple rings are mentioned in *Eyrbyggja saga* (4, 16), *Droplaugarsonar saga* (6), *Kjalnesinga saga* (2), *Víga-Glúms saga* (25) and *Þórðar saga hreðu* (94). In *Óláfs saga Tryggvasonar* (33), the gifting of a gold ring similarly serves to cement a pledge of friendship. A unique contemporary source comes from outside Scandinavia, when the *Anglo-Saxon Chronicle* for A.D. 876 records a peace agreement between Alfred of Wessex and a Viking 'raiding army' who 'swore him oaths on the sacred ring' – an act of great significance that had apparently not been performed as part of any previous negotiations with the English (Swanton 1996, 75).

All this has an important archaeological reflection in finds of the rings themselves, which by their specific form may also record aspects of the formulae used in the oaths sworn on them. The 'temple rings' of the elites are known from sites commensurate with that status, such as Uppåkra (Larsson and Lenntorp 2004, 25–9), Gamla Uppsala (Frölund, Ljungkvist and Kjellberg 2017, 66–7) and the famous Forsa ring (Brink 1996), but there are also many more mundane examples known from dozens of sites all over Scandinavia. These 'amulet rings' have never been systematically published and take varying forms (including 'Þórr's-hammer rings'), but they are sometimes found deposited in great quantities in specific areas of cultic precincts. These, in turn, vary from smaller sites of this nature, apparently serving a local community (e.g. Lilla Ullevi in Uppland, Sweden; see Bäck et al. 2008) or in discrete zones of the larger centres (e.g. at Gamla Uppsala; see Beronius Jörpeland et al. 2017, 189–208, 237–52). One could also pursue the possibility that many or even the majority of these 'amulet rings' form the documentation of oaths, or perhaps promises, made to gods or other powers and signified through the formal offering of the object at a site of numinous significance (Ögren et al. forthcoming). Given the specificity of some of the oath formulae above, such as that from *Völundakviða*, it may even be that the items by which the oath is sworn (a ship, a shield, a sword, etc.) are visually represented on individual rings; a ready comparison may also be made with the forms of dedicatory or propitiatory objects left at Greek temples, for example.

In the combined written and material evidence of the ring oath as a consistent custom and practice, across the diaspora from the Russian rivers to the North Atlantic, we may thus have secure examples of the institutionalized codes and enforcement mechanisms that could have been activated in the context of economic transactions.

### **The importance of the collective identity**

One of the keys to understanding economic organization in history, especially outside the specific social order of the individual, is the importance of collective identities. Unlike in economic theory when each agent is an individual, the collective that the agent belongs to is of fundamental importance for the institutional framework. When an agent enters into exchange with agents from another social order, they are identified with the group – the collective – to which they belong. The collective provides the individual with a certain identity, and each of its members is assumed to follow a certain set of rules that is typical for this collective. Examples of such collectives in historical research include medieval merchant guilds and larger cartels such as the Hanseatic League (Greif, Milgrom and Weingast 1994) and the Maghribi traders (Greif 1993).

The fact that, during the Viking Age, regions tended to be known by the name of the people living there is also a case in point, in that it was important to know which 'collective' was in control of different areas – and by extension who to hold accountable and which rules applied there. Stefan Brink has pointed out that there was a strong connection between the 'people', the 'land' and 'law' (Brink 2008b, 2008c), something that is represented tangibly in the form of the so-called Forsa ring from Hälsingland, Sweden. This object, first recorded during the 16th century as hanging on the door of the parish church at Forsa, features a ninth-century inscription that details fines



payable for those who failed to maintain a pre-Christian cult and assembly site. According to Brink (2008b, 29), this law would have been locally applicable to the people of Hälsingland, implying that different regions would have possessed their own law codes (as in medieval times).

There was, and still is, a strong connection between any collective identity and material culture. The power of material markers in the formation of coherent ingroup identities can be seen not only among the individual groups (such as the armed retinues or *lið* that were sworn to a warlord; see Raffield *et al.* 2015) but also regional populations and even broadly at the level of the groups that would later come to define themselves as ‘Danes’ and ‘Swedes’ (see e.g. Arrhenius 2007; Vedeler 2018). The ability of individuals to identify each other first and foremost by a common collective identity would have saved huge amounts of transaction costs in a period when information was extremely expensive. Knowing which collective identity the individual belonged to would already reveal information to act on in any kind of exchange crossing over jurisdictions. These collective identities could be signalled in numerous ways, for example, through dress or the wearing of specific types of ornamentation. It is also important to consider less tangible signals of collective identification, which included the use of specific forms of speech and dialects, movements and actions, or possession of certain knowledge known only to ingroup members (Price 2014). It has also been argued that displays of religiosity and participation in group-specific ritual acts can signal an individual’s commitment to certain values, and thereby enable them to establish and enhance their credibility with strangers (see e.g. Henrich 2009; Purzycki and Sosis 2009).

Naturally, any individual could uphold several non-competing collective identities at the same time. These might have included ties to kinship groups and families, a specific village community, a warband or a trading partnership comprising individuals of disparate origins (Raffield 2020). These nested identities may have been deployed only in specific contexts, as may have been the case with the warriors present at the trading town of Birka in the Mälaren Valley of Sweden, whose use of distinctly ‘eastern’ forms of martial equipment – including lamellar armour and archery gear – emphasized ties to the Russian river systems and the peoples of the Eurasian Steppe (Hedenstierna-Jonson 2006; Hedenstierna-Jonson and Holmquist-Olausson 2006).

The role of the collective identity is not only to signal to external agents that are interested in engaging in economic exchange that the agent follows a certain code of conduct. Belonging to a collective also means that the agents take on its responsibilities as well. Consequently, the members of the collective will not accept without qualification all kinds of behaviour by their fellow members. This not only helps to reduce the chances that individual members of a group will seek to cheat their comrades; it also makes it costly for other members if one agent violates the rules in the name of the whole collective. Thus, there are strong incentives for the members of the collective not only to monitor but also to punish those members who do not honour their commitments towards both the group and to other collectives. Thus, there is an inbuilt credible enforcement mechanism towards the collectives’ own members. The taking of oaths and the performance of ritual actions invoking supernatural powers may have played a central role in this by acting as a public display of commitment to codes of conduct, thereby facilitating the development of cooperative relationships within and between groups (see e.g. Watson-Jones and Legare 2016; Rossano 2020).

Conversely, the collective will help to secure and pursue the interest of its members. It will punish wrongdoers and help the individual agent to impose the rules, making threats of enforcement credible. Several historical episodes also show how such collectives as the Hanseatic League and the Maghribi traders enforced their institutional framework on other collectives, in cases when their members were the victims of frauds, robberies and similar at the hands of these other collectives (Greif 1993; Greif, Milgrom and Weingast 1994). In some cases, these collectives managed to create enclaves or territories in foreign kingdoms that were recognized as following their own institutional framework – that is, in a territory which was controlled by another ruler and, thus, followed another institutional framework. Examples of these might include the Hanseatic League’s establishments of *kontor* in some foreign harbours (as in Bergen in Norway) or entire

port cities (as at Visby on the Baltic island of Gotland). The Viking diaspora, which led to the establishment of new settlements of various kinds (including the cofounding of what would become important cities such as Dublin, Novgorod and Kiev), may have followed a similar pattern. It is possible that individuals living and trading in these locales possessed links to or identified with various mercantile groups, leading to the creation of more solid, cooperative networks that could be accessed at different nodal centres.

### ***Jurisdictions and mobile jurisdictions***

In these cases when we see competing collectives, we are actually analyzing power relations between them. We can assume that no ruler and no collective would voluntarily give away parts of their territory to be governed by another ruler, and thus by another collective. In relation to the analysis of such competing collectives, we also assume that each of them is bringing their own institutional framework, their own specific set of rules and enforcement mechanisms. One way to compare these institutional frameworks is by adopting the idea of jurisdictions. Any agent that enters into another jurisdiction is forced to follow its laws, but if the agent is powerful enough, they can force their jurisdiction on the counterpart. Naturally, this will not happen in the case of an isolated individual, but it can happen in the case of a strong collective that can enforce its rules. As we will see below, there are plenty of historical examples where different jurisdictions met and their power relations changed.

In the archaeological record, these jurisdictions can be manifested as ditches or ramparts enclosing trading sites, as seen, for example, at the emporia of Birka, Hedeby and Ribe (Croix 2015; Hedenstierna-Jonson 2016, 29; Kalmring 2016, 16). Today we often associate the concept of jurisdiction with a certain territory. As above, however, jurisdictions were historically also tied to a 'people', that is, a specific collective. When studying such a dynamic time as the Viking Age, it is the latter reading that makes sense – especially during the earlier period when trade networks developed and there was a thin line between trade, violence and even warfare (Sindbæk 2011; 2012). To disentangle this we should adopt the concept of mobile jurisdictions, that may or may not challenge the jurisdiction that already existed at a given place – depending on what the agents in the mobile jurisdiction saw as the most profitable action. An example of such a mobile jurisdiction is the Great Raiding Army and its temporary encampments established in England between A.D. 865 and 878 (Biddle and Kjølbye-Biddle 1992, 2001; Hadley and Richards 2016, 2021; McLeod 2014). Here we can assume that the agents within the fleet and/or camp had their own jurisdiction that differed from the jurisdiction outside of it. Given the complex organizational structures of such groups, which might have included numerous autonomous or semi-autonomous units operating for relatively short periods of time, it is possible that the camps themselves were divided into discrete zones or mini-jurisdictions in the same way that many medieval settlements featured 'quarters' inhabited primarily by groups originating from specific geographical regions. In this, the analogy of these camps as mobile polities or towns may well reflect the lived realities of life within these cosmopolitan locales (Williams 2013; Raffield 2016).

### ***Balance of power – trade, taxation and violence***

As assumed in public choice theory, taxation is an important indicator of power relations between different collectives, or more precisely, it is suggestive of which collective has the power to tax others. We can assume that no collective voluntarily paid taxes to local rulers if it was possible to avoid doing so. The Arabic sources<sup>8</sup> on their encounters with the Rūs are filled with accounts of how different collectives either paid or received taxes to and from other collectives.

To take one example, Ibn Khurradādhbih's account from c. A.D. 830 that includes the travel routes of the Rūs tells us not only how they moved but also that contacts between

the groups were well established and manifested as customs of behaviour, visible not least in taxation.

‘The Byzantine ruler levies a ten per cent duty on their merchandise. On their return they go by sea to Samkarsh, the city of the Jews, and from there make their way back to Slavic territory. They also follow another route, descending on the River Tanais (Don), the river of the Saqaliba, and passing by Khamlij, the capital of the Kazars, where the ruler of the country levies a ten per cent duty.’

Lunde and Stone 2012, 112

This tells us that the Rūs were allowed to travel through the jurisdictions of the Byzantines and Khazars, provided that they paid their taxes. We can assume that these jurisdictions were more powerful there, and at that point in time, than that of the Rūs. Because of this, it also tells us that the rulers of Byzantium and the Khazars had incentives to keep the trade with the Rūs going. Ibn Faḫḫlān provides a similar account of how the Rūs were taxed by the local ruler almost a century later in his report from A.D. 921–22:

‘The king of Saqaliba is required to pay a tax to the king of the Khazars. He gives a sable skin for each household in his kingdom. When a boat arrives in the land of the Saqaliba from Khazar territory, the king rides out and checks what is in each boat and levies a tithe on everything. When it is the Rūs or other races, who come with slaves, the king has the right to take for himself one head in ten.’

Lunde and Stone 2012, 44

In Ibn Faḫḫlān’s account we are also informed that the Rūs were allowed on arrival to build wooden houses on the shore, around which they were permitted to maintain their own rules of conduct, that is, their own jurisdiction – including the famous description of a Viking funeral. This may seem obvious but is far from a given, since one must ask what the local ruler gained from allowing the Rūs to not only trespass but also to import their jurisdiction into what should be that of the local ruler. In a one-shot game, the local rulers would certainly be better off by robbing the Rūs of all their merchandise and taking them as slaves (or killing them) rather than merely accepting ten percent of their goods. However, even in a repeated game, that is, during continuous trade over a longer time period, it is not at all certain that the rulers would be better off by allowing the Rūs to trade rather than attack them and steal their merchandise. As has been shown by Greif (1993) in his study on the Maghrib traders, the sanction of losing the trade of one collective could be marginal (close to zero) even if it was a case of repeated trade – this would depend on its frequency and the cost of replacing the lost trade with that of other collectives willing to provide similar goods, etc. Above all, it would depend on the cost for the local ruler if the collective that came to trade could enforce their jurisdiction by violence, for instance, making the ruler lose all trade through sieges, fear of attacks or similar tactics. We also know that the Vikings *did* deploy such strategies, including asking for ransoms and/or negotiating trade deals after attacks, such as in the case of Constantinople in A.D. 907, mentioned above. This treaty was even, after some enforcement, renewed and increased in scope four years later in A.D. 911, when it also included rules for compensation ‘to victims of injury, theft, and revenge’ (Riisøy 2016, 142). That is the same year as the Viking chieftain Rollo (Hrólfr) became ruler of Normandy after besieging Paris. There are even accounts of the Rūs making deals with local rulers not only to be allowed to pass certain check-points but also to be granted the right to attack the local inhabitants in return for sharing the profits, as in this account by Mas’ūdī in c. A.D. 913:

‘When the Rūs vessels reached the Khazar checkpoint that guards the entrance to the strait, they sent to ask the king for permission to cross his kingdom and make their way down the river of the Khazars and so enter the Khazar Sea (Caspian Sea), . . . [] The Rūs contracted to give the king half of anything they pillaged from the people along the shores of that sea. The ruler agreed to their request and they entered the strait and reached the mouth of the river (Don), . . . [] The Rūs spilled rivers of blood, seized women and children and property, raided and everywhere destroyed and burned.’

Lunde and Stone 2012, 144–5

Such enforcement strategies require considerable military strength, built on advanced economic organization; the more powerful the ruler of the opposing collective, the more strength needed. This position was built up over a long period of time and implies that the strategy of the Rūs mobile jurisdiction was successful and flexible in the way it could respond to developing challenges.

## Conclusions

We show that the study of late iron age Scandinavian society, especially that of the Viking period, has insights to gain from employing the theoretical framework within economics known as new institutional theory. This serves to visualize immaterial aspects of society such as its socio-economic organization. Employing this theoretical framework can provide new insights on crucial matters such as the role of religion, law, thing assemblies, oaths, and objects. It will also shed new light on economic organization by moving away from such archaic concepts as ‘gift-giving’ and provide new rationale to the possibilities of specialization, fiscal issues (payments in credit, kind, manpower and/or precious metals), political and economic hierarchies and, most notably, the existence of elaborated trading networks.

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## Notes

1 ‘Viking’ is of course a problematic term, but it is used here as conventional shorthand for the cultural and geographical context of the Scandinavian world in the period c. A.D. 750–1050; see Brink 2008a.

2 Public choice is a theoretical school within economics and political science that studies political developments from the basic assumptions of rational choice and self-interests as driving forces.

3 As mentioned above, Ronald Coase was the pioneer of this kind of transaction cost economics and would later also be part of founding the ‘Society for New Institutional Economics’ together with another key scholar within NIE, Douglas C. North (Bryan 2015). Coase received the *Sveriges Riksbank’s* prize in Economic Sciences in memory of Alfred Nobel in 1991, and North together with another important economic historian and pioneer within NIE, Robert Fogel, was awarded the same prize in 1993.

4 Game theory is the formal study of choices made by rational agents in a certain setting (context) and how these may yield different outcomes. The most famous game theoretical model is probably the ‘prisoner’s dilemma’, which, in short, demonstrates how the choices of two fully rational agents yields a subpar outcome for both, based on the assumption of limited information. However, this is just one basic example; there are several kinds of also evolutionary, or sequential games, that may explain certain developments as a result of a series of rational decisions given a certain setting (context) (see for example Arthur 1994).

5 However, we should also be clear that we are not fully incorporating Bourdieu’s economic sociology (or sociologies, see Swedberg 2011) in our conceptual framework. This (or these) theoretical school is far more profound and complex than his ‘forms of capital’ (Bourdieu 1986). For example, Bourdieu would hardly admit to *homo economicus* even in the world of bounded rationality. In his theoretical school, ‘symbolic capital’, together with the concepts of ‘habitus’ and ‘field’, explains hierarchical structures in societies and in smaller communities and how they are reproduced through the use of ‘symbolic violence’ (Ponton 1973; Lenoir 2016). Bourdieu’s criticism of economic theory is correct given that he refers to the most basic micro-theoretical foundation in neoclassical economics, which does not allow for the chronological factor in processes such as the accumulation of all sorts of capital (not merely in terms of material wealth). In fact, NIE is one theoretical way of avoiding such a simplistic view of economic activity, and it is given these assumptions in NIE and the use of game theoretical reasoning that we may be able to decipher social context, or at least some parts of it.

6 ON *Á gengoz eiðar/orð ok særi,mál ǫll meginlig,er á meðal vóro* (Völuspá 26, p.12).

7 ON *Eiða skaltu mér dðr/alla vinna,/at skips borði/ok at skialdar rðnd,/at mars bægi/ok at mækis egg* (Völundakviða 33, p.13).

8 For an extensive discussion on these sources, see Hraundal 2013.

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