Informal Contract Enforcement:

Lessons from Medieval Trade [1]

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Exchange fosters economic efficiency by enabling the reallocation of endowment and products, increasing specialization and motivating innovations. For efficiency enhancing exchange to take place, the parties to the exchange have to be able to *ex ante* commit not to breach a contract *ex post*. They must commit to respect the property rights generated by their contractual arrangement. Hence, contract enforcement institutions which enable such commitment determine the discrepancy between the set of optimal exchange relations and that of feasible exchange relations. Formal contract enforcement institutions, that is, the legal system and the private order institutions that evolve in the shadow of the law, often enable such commitment (Williamson 1985). Yet, the ability of formal institutions to support exchange is limited due to asymmetric information and the boundaries of the state's jurisdictional power. Thus, the discrepancy between the sets of optimal and feasible exchange relations in an economy is also determined by the nature of the available informal contract enforcement institutions, namely, institutions that enable commitment in the absence of a legal system with authority over (all) those parties to the exchange who can gain from breaching the contract.

The importance of informal contract enforcement institutions (henceforth ICEIs) is well reflected by the large extent to which exchange in pre-modern, modern, developed and undeveloped economies takes place outside the domain of the legal system. (For a survey, see Greif 1997a.) Macaulay (1963), for example, found that among businessmen in Wisconsin "many, if not most, exchanges reflect no [contractual] planning or only a minimal amount of it" (p. 60). A survey of 224 randomly selected Kenyan manufacturing firms found that 58 percent of them borrowed from informal sources without legal contracts or collateral (Fafchamps and others 1993). In Russia, despite the lack of an appropriate legal system prior to (and after) its market reform, informal exchange had been extensive (Greif and Kandel 1995).

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What are the origin, nature, and implications of a society's ICEIs? This paper advances the following perspective regarding ICEIs. They emerge spontaneously as a response to efficiency enhancing opportunities. Yet, they are a product of the larger economic, cultural, social and political processes of which they are an integral part. Cultural, social and political factors impact ICEIs by coordinating actions and expectations, determining the availability of information, influencing the ability to initiate collective action, determining the ability to use coercive power in the pursuit of economic ends and influencing the existing set of formal contract enforcement institutions. At the same time, existing ICEIs can reinforce the social structures and cultural features which led to their emergence, and influence processes of formal and informal institutional innovations and change. In short, although ICEIs reflect and impact economic needs and outcomes their particularities and implications reflect their inter-relations with the broader organization of society (Greif 1994). They shape the cultural and social aspects of the relevant society as well as its formal institutions. Thus, they are not necessarily "optimal" in the sense that they can support the exchange relations required to bring an economy to the (constrained) pareto frontier, given the economy's enforcement technology, endowments, preferences, and production technology. Furthermore, ICEIs exhibit path dependence (David, 1988) in being incapable of evolving significantly away from the forms and functions shaped by their historical origins. Consequently, they may have a lasting economic impact.

This paper substantiates these points by briefly presenting and elaborating on several private order institutions which facilitated exchange during the Late Medieval Commercial Revolution)) the developmental epoch stretching from the eleventh to the fourteenth centuries, which witnessed the re-emergence of Mediterranean and European long-distance trade after an extended period of decline. This place and period lends itself to an examination of the role of ICEIs in facilitating exchange, since the emergence of long distance commerce depended on the mitigation of contractual problems despite the absence of appropriate legal enforcement provided by the state. Furthermore, the nature, origin and implications of ICEIs during this period have recently been the subject of several studies which advanced a new methodology for their investigation. It combines explicit game theoretical models and detailed, micro level historical analysis (Greif 1997c).

Common to all these studies is a reliance on the game theoretical formulation of the idea that when contractual relations are expected to be repeated, a reputation mechanism can provide the basis for informal contract enforcement among self-interested individuals. Conditioning future exchange on past conduct creates a linkage between past conduct and the future utility stream. If the long term cost of losing future gains from exchange is higher than the short run gains from a breach, one acquires a reputation for honesty: he can credibly commit *ex ante* not to breach a contract *ex post*.

To identify the ICEI which governs a particular exchange it is thus necessary to examine theoretically and empirically how the linkage between past conduct and the future utility stream is created. It requires identifying the exact nature of the sanctions which would be imposed following a breach of contract, how the appropriate information is obtained and disseminated, who applies the sanctions, how the sanctioners learn or decide what sanctions to apply, why they do not shirk from their duty, and why the offenders do not flee to avoid sanctions. Once this identification takes place, the examination of the ICEIS can be further advanced to study their origin and implications and inter-relations with various economic, social and political features.

The paper proceeds as follows. The first section briefly presents several ICEIs. The second section examines the inter-relations between them and the cultural, social and political aspects of the relevant societies. The third section examines the efficiency and path dependence of these institutions. Due to space limitation, these sections neither present the methodology utilized to link the game theoretical and historical analyses nor delineate the relevant evidence. The methodological approach is discussed in Greif (1997c) while the relevant historical evidence is provided in the works cited below.

I. Informal Contract Enforcement Institutions

1. Institutions which Governed the Relations between Rulers and Alien Merchants

As discussed in Greif, Milgrom and Weingast (1994), since the political units during the Late Medieval period were relatively small, spatial specialization in production required trade across political boundaries. But a difficulty arose: having a local monopoly over coercive power, any medieval ruler faced the temptation to abuse alien merchants who frequented his realm and their property. Without an institution which enabled the ruler to commit *ex ante* to secure their rights, alien merchants were not likely to frequent that ruler's territory, thereby depriving its population, the ruler, and the merchants of the benefits of trade.

Since trade relationships were expected to repeat, one may conjecture that an ICEI based on a bilateral reputation mechanism (in which a merchant whose rights were abused ceased trading), or based on an uncoordinated multilateral reputation mechanism (in which a subgroup larger than the one that was abused ceased trading), could surmount this commitment problem. The Folk theorem of repeated game theory suggests that since these mechanisms created an *ex ante* linkage between past conduct and the future income stream, a ruler who highly valued future income could credibly commit himself *ex ante* not to abuse merchants' rights *ex post*.

Yet, although each of the mechanisms above can support some level of trade, neither can support the *efficient level of trade*. The bilateral reputation mechanism fails because, at the efficient level of trade, the value of future trade of the "*marginal*" traders to the ruler is zero, and hence the ruler is tempted to abuse their rights. In a world fraught with information asymmetries, slow communication and plausibly different interpretations of facts, the multilateral reputation mechanism is prone to fail for similar reasons.

Theoretically, to overcome the ruler's commitment problem at the efficient level of trade an organization that *coordinates* traders' responses is required. When coordination is achieved, the threat by *all* the merchants to cease trading if *any* merchant were to be abused enables the ruler to commit) given that the merchants' threat of retaliation is credible. Unfortunately, however, the threat is not credible: it entails a complete boycott during which trade would shrink below the level at which, for example, a bilateral reputation mechanism is effective. Hence some traders would renegotiate with the ruler to resume trading. This impedes the coordinating organization's ability to surmount the commitment problem by reducing the penalty threatened to be imposed on the ruler. Thus to support the efficient level of trade, a multilateral reputation mechanism must be supplemented by an organization with the ability to coordinate responses <u>and</u> to ensure traders' *compliance* with boycott decisions. The traders must have some mechanism which makes the threat of collective action credible.

Historical evidence indicates that during the Commercial Revolution an institution with these attributes) the *merchant guild*) emerged and supported trade expansion and market integration. Merchant guilds exhibited a range of administrative forms) from a subdivision of city administration, such as that of the Italian city-states, to an inter-city organization, such as the German Hansa. Yet their functions were the same: to ensure the coordination and internal enforcement required to make the threat of collective action credible. (Note that the argument does not relate to craft guilds.)

The German Hansa is perhaps one of the best examples of a guild's contribution to fostering trade expansion. For historical reasons, membership in the basic organizational unit that coordinated the activities of German merchants abroad ! the *Kontor* ! was not conditional on residency in one particular town. Any German merchant who arrived in a non-German city could join the local *Kontor*. Hence, a *Kontor* could coordinate the responses of the German merchants in disputes with the town, but it lacked the ability to enforce sanctions against its members.

In 1252, a *Kontor* of German merchants obtained extensive trading privileges from the city of Bruges (Flanders), which was the main trading center of Northern Europe at that time. Despite promises to the contrary, the property rights of alien merchants in Bruges were continually abused. An embargo imposed by all alien merchants on Bruges from 1280 to 1282 secured the property rights of the Italian and Spanish traders, but failed to secure the German traders' rights. The relatively large and well-organized political units of the Italian and Spanish merchants furnished them with a state-provided mechanism to supplement the self-enforcing relations between them and Bruges by making their threat of future trade embargoes credible. In contrast, because the *Kontor* encompassed only the German merchants actually present in Bruges) rather than all the potential German traders who might want to trade during a boycott) its threat of sanctions against Bruges was not credible.

Another embargo by the German merchants, from 1307 to 1309, was required to force Bruges to respect their property rights. Its successful conclusion enabled the commerce between Flanders and Germany to flourish and expand for the next 50 years. What had changed between 1280 and 1307 was the ability of the German towns to coordinate their responses and enforce their embargo decisions on each other. A milestone occurred in 1284 when merchants from the city of Bremen refused to cooperate in an embargo against Norway, and the other German towns excluded Bremen's merchants from all German *Kontore*. The German towns had achieved the coordination needed to exclude one of their members from the economic rent generated by their common activities. The ability to exclude, in turn, was used to make their decisions self-enforcing.

The importance of the German towns' ability to impose their decision on their own traders to strengthen the operation of a multilateral reputation mechanism is seen clearly when their relations with Bruges were strained. The war between England the France around the middle of the fourteenth century increased the cost to Bruges of securing the German traders' property and lives. Increasing the level of protection required the Hansa to enhance its ability to impose a trade embargo on Bruges and to demonstrate this ability. In 1356 the German Hansa held its first *Diet* (assembly of representatives from all the Hansa's towns), and its authority over the *Kontor* of Bruges was declared. The enhanced ability of political units to exercise their coercive power over their merchants fostered the operation of the institution that governed the relations between these merchants and Bruges. In the Hanseatic embargo against Bruges in 1358, it was announced that any disobedience, whether by a town or an individual, was to be punished by perpetual exclusion from the Hansa. Bruges attempted to defeat the embargo by offering trade privileges to individual cities, including both non-Hanseatic ones like Kampen and a Hanseatic one, Cologne, but only the non-Hanseatic cities accepted Bruges's terms. The embargo proved to be a success and, in 1360, Bruges came to terms with the Hansa.

2. Institutions which Governed the Relations between Merchants and Overseas Agents

During the Commercial Revolution market expansion and integration were facilitated by the employment of ***overseas*** *agents* who enabled merchants to reduce the cost of long-distance trade by saving the time and risk of travelling, diversifying sales, and so forth. The contribution of agency relations to reducing the cost of trade, and hence to fostering market integration, has been recognized in the context of many pre-modern trading systems. For agency relations to promote efficiency, however, overseas agents had to have control over a merchant's capital abroad, enabling them to act opportunistically and expropriate that capital. Hence in the absence of institutions limiting opportunism, merchants would not hire agents.

But such institutions did come into existence: the institution which governed agency relations among the Maghribi traders, who operated in the Muslim Mediterranean during the eleventh century, is a striking case-in-point (Greif 1989, 1993). Agency relations among the Maghribis were governed by an economic institution that can be referred to as a *coalition*) a nonanonymous institution based on a multilateral reputation mechanism. The Maghribis employed each other as agents, and all of them retaliated against any agent who had cheated a coalition member. Their social and commercial network provided the information required to detect and announce cheating, and the multilateral punishment was self-enforcing since what kept an agent honest in his dealings with a specific merchant was the fear of losing the rent stream available to him from his future dealings with <u>all</u> the Maghribis. Hence if it was expected that a specific agent would not be hired in the future, he did not stand to lose the value of future relations with the

Maghribis if he was caught cheating. Therefore, to keep such an agent honest, a Maghribi merchant had to provide him with a rent much higher than the one which would have kept an alternative agent honest. The merchant had to pay this unusually high rent in order to make the future value of their relations high enough to induce the agent to be honest in the absence of collective punishment. Since that implied a reduction in the merchant's own profit, each merchant was induced to hire only agents who were expected to be hired by others, making collective punishment self-enforcing.

Collective punishment enhanced efficiency and profitability relative to bilateral punishment, since it enabled the employment of agents even when the relations between a specific merchant and agent pair were not expected to recur. The resulting additional gains from cooperation, the value of the information flows and the expectations concerning future hiring ensured the "closedness" of the coalition. That is, Maghribis were motivated to hire and to be hired only by other Maghribis, and non-Maghribis were discouraged from hiring Maghribis.

Besides traders from the Muslim world, Italian traders were very active in Mediterranean trade, particularly during and after the twelfth century. These traders also benefitted from institutions which governed agency relations, but, in contrast to the coalition, agency relations among Genoese traders were governed by a Patron system based on a bilateral reputation mechanism facilitated by state enforcement (Greif, 1994). In other words, among the Genoese an agent was induced to be honest fearing that his relations with a particular merchant (who could have represented a family or even a clan) would be terminated if he were not. Furthermore, the legal system contributed to inducing honesty by providing contract registration facilities in many trade centers, specifying a minimum rate of return in case accounts were not furnished and holding an agent's property and family hostage until the agent's return.

3. Institutions which Governed Relations Among Merchants with Limited Information

Market formation and integration during the Commercial Revolution required the appropriate governance for exchange relations characterized by separation in time or space between the *quid* and the *quo*. Credit markets, insurance markets and markets for future delivery could not be sustained otherwise. Yet, the separation between the *quid* and the *quo* made opportunistic behavior possible. While local courts could enforce property rights generated in spot exchange or among members of the same community, they were unable, by themselves, to provide the contract enforcement required for exchange characterized by separation between the *quid* and the *quo* among merchants from different localities.

Yet the historical records indicate that exchange relations characterized by separation between the *quid* and the *quo* were frequently established among individuals from different localities during the Commercial Revolution. Such inter-community exchange relations contributed greatly to trade expansion during the Commercial Revolution. The "take-off [of the Commercial Revolution] was fueled not by a massive input of cash, but by a closer collaboration of people using [commercial] credit" (Lopez 1976: 72). What institutions governed these contractual arrangements?

Milgrom, North and Weingast (1990) have maintained that contract enforceability over time at the Champagne Fairs was achieved by a Law Merchant System, in which the court was used to supplement a multilateral reputation mechanism. In particular, they present the following theoretical analysis. Suppose that each pair of traders is matched only once and each trader knows only his own experience. Since the fairs' court lacked the ability to enforce judgment once a trader left the fairs, assume that the court is capable only of verifying past actions and keeping records of traders who cheated in the past. Acquiring information and appealing to the court is costly for each merchant. Despite these costs, symmetric sequential equilibrium exists in which cheating does not occur and merchants are induced to provide the court with the information required to support cooperation. It is the court's ability to activate a multilateral reputation mechanism by controlling information that provides the appropriate incentives. Hence a local court can ensure contract enforcement through time even if it can not use coercive power against cheaters.

The historical records indicate that another ICEI was operating which supported exchange among traders from various localities, despite the absence of a legal system with jurisdiction over these localities (Greif 1997b). This institution took advantage of intra-community (formal and informal) contract enforcement institutions and the large extent to which community affiliation during the medieval period was common knowledge. By placing the future trade of all the members of his community as a bond, an alien was able to commit, for example, to repay a debt despite the lender's inability to locate and sue him.

Specifically, the lender's local court (as well as other courts) held all members of a community responsible for the default of any member. They were held responsible in the sense that following a default by one community member, the lender's court implemented a strategy which called for confiscating the goods of any member of the defaulter's community present in its jurisdiction. The goods were confiscated until the loss was recovered or the defaulters' community advanced compensation for the default. A community was thereby provided with the incentive to employ its intra-community contract enforcement institution to *ex post* punish one who defaulted in inter-community exchange. Since this was known *ex ante*, a lender could commit to *ex post* repay his debt. Hence, the Community Responsibility System enabled inter-community impersonal exchange relations characterized by separation over time and space.

Once this situation is modeled as a repeated, imperfect monitoring game the analysis reveals the rationale for various patterns of behavior reflected in the historical records. Modeling the situation as one of imperfect monitoring seems appropriate since the historical records indicate that at times the courts of different communities disagreed about whether a breach of contract had indeed occurred. Among other insights, the model indicates that in the equilibrium which sustains exchange, a finite period of retaliation would follow disagreement among courts. During a period of retaliation inter-community trade ceased, and each community's court confiscated the goods of the members of the other community. While such retaliation periods are costly, the model indicates that they were unavoidable: had the communities been expected not to retaliate, they would have provided dis-incentives to the courts to reveal their private information about cheating even when there was no genuine disagreement. This, however, would have motivated borrowers to breach their contractual obligations. Hence, the model provides a rationale for behavior that was considered "barbaric" by an earlier generation of historians.

This section briefly presented several ICEIs which governed various exchange relations during the Commercial Revolution. By providing the contract enforcement required to enable commitment, institutions such as the Merchant Guild, the Coalition and the Community Responsibility System enabled exchange and the emergence, operation and integration of markets.

II. INFORMAL CONTRACT ENFORCEMENT AND THE ORGANIZATION OF SOCIETY

The above ICEIs were a response to efficiency enhancing opportunities but their origins and natures reflect more than economic factors; each of them was embedded in a broader cultural, social and political context. They were part of the organization of society: the inter-related web of complementary economic, legal, political, social and moral features which is the essence of a society's nature. It is within this broader context that one has to comprehend the origin, nature, change and implications of ICEIs. To further substantiate this assertion, this section briefly elaborates on some of the inter-relations between cultural traits, social features, political factors and the above ICEIs.

1. **Cultural Factors**

The origin, nature and implications of the distinct institutions which governed agency relations among the Maghribi and Genoese traders illustrates the relations between cultural factors and ICEIs (Greif 1994). A main distinction between the Coalition and the Patron System relates to expectations off-the-path-of-play, namely, in situations which do not transpire. Only among the Maghribis were there the expectations for a collective punishment to be inflicted on an agent who cheated. While a game theoretical analysis of agency relations indicates that each set of expectations is self-enforcing, cultural factors (as well as the social factors discussed below) determine which expectations will prevail in each group.

Cultural factors among the Maghribis made expectations for a collective punishment a focal point. The Maghribis were *mustarbin*, that is, non-Muslims, who adopted the values of the Muslim society. Among these values was the view that they were members of the same *umma*. This term, although translated as "nation," is derived from the word *umm* meaning "mother," reflecting the basic value of mutual responsibility among the members of that society Further, *umma*'s members shared the fundamental duty not only to practice good, but also to ensure that others did not practice sin. In addition, the Maghribis were part of the Jewish community, within which it was a prominent idea that "all Israel is responsible for every member." In contrast, Genoa's cultural environment did not make collective punishment a focal point. The Genoese traders were part of the feudal world in which bilateral patronage relations prevailed. Furthermore, Christianity during that period placed the individual rather than his social group at the center of its theology, advancing the creation of a new society based on the individual.

While these cultural aspects of the two societies made a distinct expectation focal points, their concrete embodiment in particular ICEIs transformed these expectations into cultural beliefs: ideas and thoughts common to several individuals which govern interaction) between these people, and between them, their gods and other groups) and which differ from knowledge in that they are not empirically discovered or analytically proven. In other words, the expectations which crystallized with respect to a particular game became part of the 'view of the world' of members of these societies, and thus provided the basis for extrapolating behavior in situations that had not been encountered before. As such, they impacted outcomes following exogenous change in the rules of the game and provided incentives for particular trajectories of organizational change. Hence, they directed the evolution of the organization of society by influencing institutional change, organizational innovations, social structure and the formation of values and identities. (Greif 1994.)

With respect to organizational change, for example, the "collectivist" cultural beliefs associated with the operation of the coalition and the "individualistic" cultural beliefs had profound and lasting implications. Theoretically, the individualistic cultural beliefs of the Genoese, but not the Maghribis' collectivist cultural beliefs, provided an incentive to establish a "firm" through which the wealth of several merchants was aggregated. Such a firm did not prevail among either the Genoese or the Maghribis when they began operating as traders. Yet, it was the Genoese, but not the Maghribis, who adopted the family firm during the thirteenth century (Greif 1996a, 1996b). Individualist cultural beliefs, but not collectivist cultural beliefs, also provided incentives to use a bill of lading. Indeed, the first historical evidence for its use in Europe is from late medieval Genoa. In sharp contrast, the Maghribis, although familiar with the bill of lading, did not utilize it. Hence, distinct ICEIs led to and reinforced distinct cultural features, which, in turn, directed these two groups along separate paths of organizational development. The importance of distinct cultural beliefs to the evolution of a society's organization is further exemplified below through the examination of their implications on other formal organizations and social structures.

2. Social Features

By directing available information and specifying social identities, a society's social features impact the set of feasible ICEIs. At the same time, ICEIs and their implications impact the evolving nature of these social features. In some case they re-enforce them while in others undermine them. Social structures and ICEIs thus shape and are being shaped by each other.

The emergence of the Maghribi traders coalition reflects a particular social structure. The Maghribis were the descendants of Jewish traders who, during the tenth century, had left the increasingly politically insecure surroundings of Baghdad and emigrated to North Africa. By coordinating expectations and providing a social network to transmit information, immigration made initiating a collective punishment possible while, as discussed above, cultural factors made it a focal point. In contrast, the social environment within which agency relations were initially established among the Genoese forestalled, rather than encouraged, the formation of a coalition. Toward the end of the twelfth century, the number of Genoese active in trade rose dramatically, while Genoa experienced a demographic expansion despite a high mortality rate. This demographic and social setting did not support the stable social networks required for the development of a coalition based on collective punishment.

While the initial social setting within which agency relations were organized among the Maghribis and Genoese impacted their ICEIs, these distinct ICEIs influenced the nature and evolution of the associated social structures. For example, the details of collective punishment among the Maghribis were such that they implied that one's investment in trade enhanced his ability to commit to being honest while serving as an agent. Merchants, therefore, were motivated to hire other merchants who also invested in trade as agents, thereby determining the social characterization of the Maghribis. One does not observe the existence of two separate "classes" among them -- an agents' class and a merchants' class. Socially, the Maghribi traders group was an homogenous group of middle class traders and each of them operated as a merchant and as an agent at the same time. This was not the case among the Genoese traders, however. The lack of collective punishment implied that one's investment in trade diminished his ability to commit to being honest while serving as an agent. This determined the social characterization of Genoese traders among whom one can recognize two distinct sub-groups, that of the merchants and that of the agents. In the long run, these social characterizations impacted economic mobility and wealth distribution (Greif 1994).

The inter-relations between the initial social characterizations of the Maghribis and the Genoese and the distinct cultural beliefs associated with their ICEIs also influenced other social features of these groups. Specifically, following various military and political changes in the Mediterranean, both groups had the opportunity to expand their trade to areas previously inaccessible to them. Commercially, both groups responded similarly and expanded their trade from Spain to Constantinople. Socially, however, their responses differed: the Genoese responded in an "integrated" manner while the Maghribis responded in a "segregated" manner. The Maghribis expanded their trade by employing other Maghribis, who emigrated from North Africa as agents, rather than employing Jewish or non-Jewish local merchants. For generations the descendants of Maghribis continued to cooperate with the descendants of other Maghribis. The Genoese also responded to the new opportunities by emigrating abroad, and agency relations among them prevailed. Yet, although the historical sources are biased toward reflecting agency relations among Genoese, they nevertheless clearly indicate the establishment of agency relations between Genoese and non-Genoese.

The rationale behind the different responses of the Maghribis and the Genoese to the same exogenous change in the rules of the game is clear once one considers the relations between cultural beliefs and equilibrium selection. Agency relations among the Maghribis were governed by the expectations for collective punishment within the coalition. Yet, since agency relations were not established with a non-coalition prior to the point in time in which such relations became feasible, there was uncertainty about whether collective punishment would be relevant in agency relations with non-coalition members. After all, the existing cultural beliefs implied that merchants would continue to hire only agents who were coalition members. Hence, it led to the "closedness" of the coalition: since agency relations within the coalition were more profitable even when less efficient, the Maghribis were motivated to hire and to be hired only by other Maghribis. For similar reasons non-Maghribis were discouraged from hiring Maghribis. Such closedness did not prevail among the Genoese, however. Without expectations for collective punishment, the same uncertainty about it in agency relations with non-Genoese did not influence the profitability of hiring an agent. Hence, Genoese merchants were motivated to hire non-Genoese agents whenever such agency relations were efficient. (Greif 1994, 1996a).

This symbiosis between social structures and the nature of the associated economic institution is well reflected in the later history of Maghribi traders. The Maghribi traders retained their separate identity within the Jewish communities as long as they were active in long-distance trade. During the second half of twelfth century, however, they were forced by the Muslim rulers of Egypt to abandon that trade. At that point, as far as we know, they integrated completely within the Jewish communities and vanished from the stage of history. In other words, as long as the Maghribis traded, the nature of the economic institution that governed agency relations contributed to maintaining their social entity.

The Community Responsibility System (henceforth CRS) reflects that the operation of an ICEI may crucially depend on the extent to which social affiliations are common knowledge. Under the late medieval CRS, unless a lender knew the community affiliation of a borrower, lending could not have taken place since no punishment could have been imposed on the borrower in a case of default. In other words, a particular feature of the late medieval society - merchants' affiliations with particular communities and the large extent to which these affiliations were common knowledge - enabled the operation of an ICEI. At the same time, the CRS reflects that ICEIs may undermine the social feature of the society on which it is based. The same processes that the CRS fostered - processes through which trade expanded and merchants' communities grew in size, number, and economic and social heterogeneity - reduced the economic efficiency and the intra-community political viability of the CRS over time. This had occurred since the economic impact of the CRS segmented communities and made it relatively easy to falsify, and difficult to verify, one's community affiliation.

3. **Political Factors and Formal Organization**

ICEIs are also inter-related with political factors and formal organizations. Formal organizations influence the feasible set of ICEIs, political factors influence the ability to alter them, and the nature of available ICEIs impacts the demand for formal contract enforcement institutions.

Examination of the timing of the emergence of merchant gilds in various localities in Europe indicates that it was determined by political and social factors. For example, the major Italian city states grew large because of political and social events around the Mediterranean. Italian trade expanded since each city functioned as a merchant gild, and its size implied that its traders were not "marginal." Although the potential gains from trade in the Baltic Sea were substantial as well, that region's settlement process resulted in small towns which could not assure the safety of their traders abroad. Only after a long process of institutional evolution were these towns incorporated into an intercity merchant gild, the German Hansa, which enabled Baltic trade to prosper. If all these small cities had been part of a unified political regime, this long period of institutional evolution would not have been required. (Greif 1992.) The history of the German Hansa presented above also illustrates the complementary nature of the relations between formal and informal means for contract enforcement. The relations between the German towns, members of the Hansa and non-member political units were informal. The relations between any individual German merchant and the Hansa, however, were based on a formal institution - the legal authority of the town in which he dwelled.

The history of the CRS illustrates the extent to which political factors and formal organization influence the ability to alter ICEIs. In the second half of the thirteenth century attempts were made in England, France, and Italy to abolish the CRS. Yet, the extent to which communities could have replaced this ICEI with an alternative formal institution based on a legal system depended on their political environment. The kings of England and France were able to provide traders with a legal procedure enabling relatively fast and cheap contract enforcement based on individual legal responsibility. This, however, was not the case in politically fragmented Italy. Due to a lack of central authority, the repeated attempts of the Italian city-states to abolish the CRS failed. In the absence of a third party - a king - able to provide a legal system whose decisions did not reflect the community's self-interest, the Italian city-states could not adopt the institutions implemented in France and England. (Greif 1997b.)

While the above discussion indicates that political factors impacted the ability to abolish ICEIs, it is also true that ICEIs impacted society's formal institutions. Consider, for example, the Maghribis and the Genoese. Among the Maghribis, agency relations were governed by an institution based on self-enforcing, collective, economic punishment, and supported by the closedness of the coalition and an ingroup social communication network. In such a "collectivist society" the enforcement required to support collective actions and facilitate exchange could be achieved without "formal") legal or political) organizations which specialized in communication and enforcement. In contrast, among the Genoese agency relations were governed by an institution based on bilateral punishment which reduced the benefit of informal communication. Such an "individualistic" society had a relatively low level of informal economic enforcement over its members. Hence to support collective actions and facilitate exchange, it needed to develop formal) legal and political) enforcement organizations. (Greif 1994.)

Indeed, the Genoese developed formal organizations to support collective actions and exchange, whereas the Maghribis abandoned them. During the twelfth century the Genoese quit entering contracts with a handshake and developed an extensive legal system for registering and enforcing contracts. This system supplemented the operation of the patron system, as agents were legally required to provide merchants with verifiable accounts regarding their expenses and revenues. An agent who failed to submit such an account was legally obliged to provide a minimum return on the merchants' investment. Furthermore, the customary contract law which governed the relations between Genoese traders was codified as permanent courts were established. In contrast, despite the existence of a well-developed Jewish communal court system, the Maghribis entered contracts informally, used an informal code of conduct to govern exchange and attempted to resolve disputes informally.

The emergence of the family firm and the adoption of the bill of lading, discussed above, also reflect the impact of distinct ICEIs on organizational development. The development is further reflected, for example, in the formation of merchant guilds in these two societies. Among the Maghribis compliance with embargo decisions was assured through informal means. After the Muslim ruler of Sicily abused the rights of some Maghribi traders, they responded by imposing, circa 1050, an embargo on Sicily. This embargo was organized informally, although the Maghribis could have utilized the Jewish court system or the formal Jewish communal organization. In contrast, among the Genoese the city of Genoa itself functioned as a formal enforcement organization to ensure compliance with collective actions. After the city authorities declared that a certain area was a *devetum*, that is, prohibited for trade, any merchant who was found in that location was subject to legal prosecution.

III. INSTITUTIONAL EFFICIENCY, CHANGE AND PATH DEPENDENCE

ICEIs enhanced efficiency during the Commercial Revolution. This doesn't necessarily imply, however, that they were optimal in the sense of enabling exhaustion of all the gains from trade that were feasible given that period's production, information and contract enforcement technology. As a matter of fact, the above discussion of the processes that molded these non-market institutions suggests that they were not optimal.

For example, an analysis of the Law Merchant suggests that the centrality of the Fairs of Champagne in European trade reflects economies of scale in the operation of a multilateral reputation mechanism. If this is the case, the geographical distribution of much of the European trade of the period reflects the historical process that led to the emergence of that institution at that specific time and place. As theoretical studies of path dependence indicate, this process need not be optimal.

The institutions that governed agency relations do not seem to have been optimal either. The Maghribis' coalition and the patron system were different institutions linked to specific historical, political, and social processes of which they were integral parts. These processes, rather than merely economic efficiency, determined the nature of these institutions and the timing of their emergence and disappearance. Indeed, the evolution of these institutions and the details of their operations suggests that neither of them could have supported the set of optimal exchange relations. Among the Maghribis, the extent of agency relations was limited by the coalition's size, which had been determined by immigration and cultural beliefs. The historical evidence indeed indicates that the Maghribis did not establish efficient relations with non-Maghribis, preferring more profitable but less efficient agency relations among themselves. This deficiency could have been remedied by an appropriate coordinating organization but none emerged. (Greif 1993.)

Was the institutional infrastructure provided by the above ICEIs converging to an optimal one? Was it inducing organizational or technological innovations which were growth enhancing? The historical and theoretical analyses indicate that it was not. Rather, this institutional infrastructure was path dependent in the sense that its capacity to change was constrained by its own history. Examination of the sources, manifestations, and implications of this path dependence reinforces further the conclusion regarding the non-optimality of the period's institutional structures.

The emergence of merchant guilds in the Latin world entailed the consolidation of political and legal entities which shaped and constrained later institutional and commercial development. In particular, the emerging German Hansa was a new political entity aimed at preserving the property rights of German merchants. Although its establishment enabled Northern European trade to flourish, once organized, its concern was not efficiency but profitability. In its constant effort to preserve trade rights and supremacy, the Hansa crushed the advances of other traders' groups without considering their comparative efficiencies. In 1368, for example, the King of Sweden provided the German Hansa with control over the autumn fairs of Skania (the southern province of Sweden). Before then English merchants were selling west-European cloth at these fairs and using the proceeds to purchase herring and salt. The English merchants were able to compete successfully with Hanseatic merchants, who were also importing west-European cloth to that area. In February, 1370, a Hanseatic diet ruled that English, Welsh and Scottish merchants would no longer be allowed to engage in such trade. The complaints of the English King, Edward III, were to no avail. Distributional considerations took precedence over efficiency. (Greif 1992)

The sources of path dependence in institutions which governed agency relations are much more complex. Cultural beliefs, as have been discussed above, directed institutional path dependence by providing distinct incentives for organizational innovations. The relative efficiency of these separate organizations, in turn, depended on the economic environment. Yet, since cultural beliefs are uncoordinated expectations, a society lacking the appropriate cultural beliefs would be unable to take advantage of the superior organizations. Similarly, the dependence of the Maghribi traders' coalition on uncoordinated collective punishment by merchants located at different trade centers implied another source for path dependence. For the threat of collective punishment to be credible, "cheating" must have been defined in a manner that ensured collective response. If some merchants considered specific actions to constitute "cheating" but others held a different opinion, the effectiveness of the collective threat would have been undermined. To mitigate this problem, the Maghribis employed a set of cultural rules of behavior which specified how an agent should act to be considered honest in circumstances not mentioned in the merchant's instructions. These rules were shared by all the Maghribi traders and served as a default contract between agents and merchants. This set of rules promoted efficiency by providing a coordination device necessary for the functioning of the coalition, economizing on negotiating cost and enabling flexibility in establishing agency relations. Yet, in the absence of any mechanism able to coordinate changes, this set of rules among the Maghribis was a source of rigidity and path dependence. It imposed rigidity on the system because its process of adjustment was impeded by agents' concerns regarding what others would be thinking about their actions rather than what the outcome of their actions would be. (Greif 1993).

The above short discussion illustrates that ICEIs during the Commercial Revolution suggests that they exhibited path-dependence and were not necessarily converging to optimal institutions. They gave rise to political units which employed their coercive power to affect distribution at efficiency cost, and even the self-enforcing institutions were based on expectations that, in the absence of coordinating mechanisms, impeded efficient adaptations. Furthermore, various institutions and their associated cultural beliefs provided a separate impetus to the introduction of different organizations, leading to institutional path dependence. (Greif 1994, 1996b.) Hence, different societies, even when encountering similar organizational problems, can be "locked in" to different trajectories of institutional development, each of which will have distinct economic implications in various possible situations.

IV. **CONCLUSIONS**

Adam Smith's intellectual heritage includes the view that much of the institutional framework provided by the state and aimed at directing the economy can be replaced by the "invisible hand" generated by the uncoordinated interactions among self-interested individuals. Menger (1963) has further advanced this view to claim that such interactions provided the basis for all social institutions, including contract enforcement institutions. Some have taken this view to mean that informal contract institutions emerge spontaneously to advance exchange. They provide an efficient, welfare maximizing enforcement that pareto dominates the enforcement provided by the state. (E.g., Benson 1989, Ellickson 1991, Cotter 1997.)

The study of informal contract enforcement institutions during the late medieval period challenges this view. It provides support to other studies of ICEIs which concluded that efficient institutions would not necessarily be forthcoming. (De Soto 1989, Putnam 1993.) Its contribution to this line of argument is not limited to additional case studies. By combining explicit game theoretical analysis and detailed historical examination, it is able to present a comparative study of institutions over time and space which reveals their underlying rationale and their complementary nature with other aspects of society.

Understanding the functioning of economies and processes of economic growth and stagnation in various societies requires an examination of their nexus of contract enforcement institutions. In particular, it requires comprehending the inter-relations between cultural factors, endogenous social features, formal organizations, political factors and ICEIs. It demands an understanding of how a society's ICEIs inter-related with the other features of that society's organization, thereby influencing its economic performance and institutional changes.

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