Contract Law and the Governance of Inter-Firm Technology Partnerships – An Analysis of Different Modes of Partnering and Their Contractual Implications*

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ABSTRACT This paper studies some major legal implications of inter-firm technology partnering through equity joint ventures, non-equity partnerships, and licensing contracts. These different partnerships are placed within the classical and relational contracting perspectives, while also considering intellectual property rights issues. Samples of contracts of partnerships in bioscience, fine chemicals, biotechnology and biopharmaceuticals are analysed, in detail, with reference to the distribution of property rights, major contractual clauses, and measures for conflict resolution. Equity joint ventures and non-equity partnerships are found to largely follow a relational contracting perspective, while licensing contracts are governed by a classical contracting perspective.

INTRODUCTION
Over a decade ago, when Ronald Coase delivered his 1991 Nobel Prize lecture in Stockholm, he noticed, amongst other things, a strong need for economists[1] to develop a much more detailed understanding of the actual process of contracting between companies in a ‘real-world setting’ (Coase, 1992). Many years earlier, Coase had already paid attention to the important role of contracts and inter-firm relationships in his seminal paper on ‘The nature of the firm’ (Coase, 1937). This paper follows Coase’s suggestion and as such it is part of the growing body of literature that studies, in detail, the legal and organizational ramifications of inter-firm contracting. In that context, we study three major forms of inter-firm partnering, i.e. equity joint ventures, non-equity partnerships, and licensing contracts. We will concentrate on a specific group of inter-firm partnerships for which technology development or technology sharing is a crucial element in the agreement. Not only have these technology agreements become a major category of inter-firm partnering (Hagedoorn, 2002), the specific nature of the develop-
ment, sharing, or transfer of technology through these agreements also creates some interesting intellectual property rights issues for inter-firm contractual arrangements.

Earlier work by Ring and van de Ven (1992) and Williamson (1985, 1991, 1996) discussed some general perspectives on contract law in the context of the types of transactions between companies and their specific mode of governance and organization.\(^{[2]}\) Hierarchies appear to follow relational contractual governance, market transactions coincide primarily with classical contract law, and a broad group of inter-firm arrangements (hybrids) are expected to be regulated by relational governance (Williamson, 1991, 1996). Other contributions that consider the general association between types of transaction and mode of governance indicate that equity joint ventures are to be seen as quasi-hierarchical organizational structures, non-equity inter-firm partnerships are contractual hybrids, while licensing contracts largely reflect market transactions (Contractor and Lorange, 2002; Narula, 2001).

We will take the next step and analyse in greater detail the different perspectives on contract law, describe various incentive schemes, and discuss specific transactional characteristics that play a role in equity joint ventures, non-equity partnerships and licensing contracts. Compared to some recent studies (Kalnins and Mayer, 2004; Mayer and Argyres, 2004; Parkhe, 1993; Poppo and Zenger, 2002; Reuer and Ariño, 2002; Sampson, 2004), which are still somewhat more general in nature, our analysis aims at presenting an in-depth and detailed, qualitative analysis of the interaction of contract law and different modes of technology partnering. As such this paper follows some recent contributions to this journal that study the interaction between organizational and legal implications of inter-firm relationships (Barthélemy and Quélin, 2006; Harrison, 2004; Hennart, 2006; Ring, 1997; Wright and Lockett, 2003).

Our contribution will clarify the degree to which different modes of inter-firm technology partnering are governed by either a classical or a more relational contracting perspective. From a theoretical perspective, we argue that inter-firm technology partnerships organized through equity joint ventures and non-equity partnerships will largely follow a relational contracting perspective. This relational perspective is expected to play little or no role in licensing contracts which are primarily governed by a classical contracting perspective. As these different perspectives can be linked to the actual legal interpretation and the use of a variety of contractual clauses, we will also be able to interpret how these clauses are applied in different contractual settings and whether the content and scope of these different clauses and provisions demonstrate subtle differences according to the actual mode of technology partnerships for which they are incorporated in concrete contracts. As such this will enable us to present a fine-grained analysis of different modes of technology partnering, based on a theoretical understanding of different contractual perspectives and the actual legal implications of these perspectives on the contractual clauses in different inter-firm technology partnerships.

In the following section, we will first briefly discuss some of the major differences between the classical and the relational contracting perspective. This is followed by a section in which these perspectives are projected on relevant contractual provisions for various partnerships. In the next section, the role of different perspectives on contract law will be examined further for three major categories of inter-firm technology partnering: equity joint ventures, non-equity partnerships, and licensing contracts. This is followed
by a detailed analysis of a small set of actual contracts for equity joint ventures, non-equity partnerships, and licensing. We continue with a discussion of our findings in the context of the distribution of property rights and the relevant contractual provisions such as adaptation clauses, damage measures, warranties, and dispute resolution. The final section presents the conclusions with some directions for further research.

DIFFERENT PERSPECTIVES ON CONTRACT LAW

Legal scholars, predominantly in common law jurisdictions, have written extensively about the diverse depictions of contract law (Atiyah, 1989; Friedman, 1973; Gordley, 1991; Horwitz, 1977; Nassar, 1995; Wightman, 1996), which have been applied by business scholars to explore the content and scope of different governance structures and contracting practices (Ring and van de Ven, 1992; Williamson, 1985, 1996). In general, legal scholars in both the USA and UK have distinguished between classical contract law, dominant in the first three quarters of the 19th century, and neoclassical contract law and more recently relational contract theory, which have slowly replaced classical contract law from the late 19th century onwards (Atiyah, 1989; Eisenberg, 2001; Friedman, 1973; Horwitz, 1977). The exact content and relevance of these doctrines is, however, subject to debate (see Eisenberg, 2000; Feinman, 1990; Gordley, 1991; Macneil, 2000; Wightman, 1996). Given these unclear demarcations, we will concentrate on two broad, apparently polar, contracting perspectives, namely a ‘classical contracting perspective’ and a ‘relational contract perspective’ (Eisenberg, 2000; Macneil, 1978). This classification into perspectives enables us to extract the relevant characterizing principles from each depiction of contract law, classical and relational. As such, we are able to abstract from the particular jurisdiction, in this case common law, in which classical and relational contract law have originally developed. The current classification then, makes it possible to apply these ‘perspectives’ to different types of technology partnerships and contracts, regardless of the applicable legal regime, namely common or civil law.

The classical contracting perspective supports the discrete market form of organization (Macneil, 1978; Williamson, 1991). In that context, the identity of parties is irrelevant and transactions occur entirely separate from all other past, present and future transactions (Foss et al., 2000; Williamson, 1991, 1996). Freedom of contract constitutes the basis of market exchange and is enforced by a laissez-faire policy envisioning the sanctity of contracts (Friedman, 1973; Nassar, 1995). The freedom of contract emphasizes the fact that the mere consent or will of the parties is sufficient to create content obligations and justify enforceability (Atiyah, 1979; Nassar, 1995; Wightman, 1996). Contracts are regarded as risk allocation mechanisms, which incorporate all relevant contingencies and obligations, i.e. a contract is considered to be a clear-cut and ‘complete’ agreement (Ring and van de Ven, 1992; Triantis, 2000). The adaptation of a contract to accommodate a change of circumstances is considered to impede the sanctity of contracts (Nassar, 1995). The classical contracting perspective can also be characterized by the following legal recommendations: account for as much of the subject matter of the contract as possible; avoid open-ended agreements; restrict the sources used to define the content of the agreement, i.e. formal documents are preferred over informal
communication; limit the amount of contractual remedies available to parties; and court enforcement is the preferred method of dispute resolution (Macneil, 1978).

The relational contracting perspective is modelled upon the assumption that contracts are incomplete (Scott, 2003). Models of incomplete contracting assume that in a complex world, characterized by asset specificity, measurement difficulties and uncertainty, transaction costs impede the writing of elaborate contracts (Brousseau and Glachant, 2002; Harrison, 2004; Poppo and Zenger, 2002; Ring and van de Ven, 1992; Williamson, 1985, 1991). More specifically, bounded rationality and verification and information constraints increase transaction costs and thus make it impossible to efficiently allocate parties’ obligations across all future contingencies contractually (Ayres and Gertner, 1992; Masten, 1996; Williamson, 1996, 1991). Such incompleteness raises the risk of contractual hazards and thus reinforces the need for (in)formal contractual safeguards that aim to realign the incentives and interests of parties. With the recognition that contracts are to some degree incomplete, flexibility plays an important role for the governance of contractual relationships.

The relational contracting perspective supports these incomplete contracts as it replaces discreteness and presentation by relational norms (Bonn, 1972; Eisenberg, 2000; Williamson, 1985). Such norms may be explicitly expressed in the contract through the incorporation of vague terms such as ‘best efforts’ and ‘reasonableness’, or through mechanisms which facilitate continuity and promote efficient adaptation, such as revision clauses, the doctrine of excuse, internal dispute resolution agreements and arbitration (Eisenberg, 2000; Scott, 2003; Speidel, 2000). Furthermore, various scholars use the term relational governance to refer to norms such as reputation and trust that act to enhance cooperation between parties. It is important to note that under the relational contracting perspective the contract is regarded as a risk sharing mechanism, as opposed to a risk allocation mechanism under the classical approach (Speidel, 2000).

CONTRACTUAL CLAUSES

It is generally acknowledged that the environment within which technology partnerships are negotiated is complex. The partnerships generally involve asset specific investments and they are characterized by uncertainty, raising the risk of contractual exchange (Gulati, 1995). As indicated in the introduction, previous studies have predominantly investigated the way in which (intellectual) property and control rights, payment schemes and contract duration are able to mitigate exchange hazards and induce efficient contract structures. Whilst the foregoing constructs have been held to effectuate cooperative behaviour in the long run, scholars have recently acknowledged that as the risk of opportunistic behaviour augments there is a greater need for contractual safeguards. Such provisions, specifying the consequences of breach and termination, as well as dispute resolution processes have become increasingly important (Dyer, 1997; Poppo and Zenger, 2002; Reuer and Ariño, 2002). Building upon these prior literatures, that discuss the relevance of particular clauses for understanding contracts in the context of technology partnering, we will analyse revision clauses, hardship and force majeure clauses, damage measures, warranties and dispute resolution mechanisms in the light of classical and relational contracting perspectives.
Revision Clauses

In complex environments, revision clauses can mitigate the effect of unforeseen contingencies, as they impose a general duty on the revision of a contract (Perillo, 1998). Under a revision clause, parties are expected to initiate and pursue good faith negotiations and the advantaged party generally has a duty to accept an equitable adjustment (Eisenberg, 2000). A revision clause, for example, may pertain to *force majeure* and hardship clauses, and will stipulate that parties are obliged to review the situation and attempt to accommodate the unforeseen change of circumstances before deciding upon termination. The incorporation of revision clauses clearly falls within the domain of the relational contracting perspective. Under the classical contracting perspective, a closed contract is sanctioned and final and a revision clause would set aside the discreteness inherent to the classical approach. The fact that revision clauses do not impose well-defined obligations on the parties to the contract, will suffice to render them invalid and unenforceable (Nassar, 1995).

Hardship and *Force Majeure* Clauses

The implementation of hardship or *force majeure* clauses indicates that parties are willing to accommodate the relationship to an unforeseen change of circumstances in order to intercept the harmful effects of such unforeseen contingencies (Perillo, 1998). Under the classical approach, the principle of *pacta sunt servanda* plays a primary role; the final goal is performance of the contract even if this has become burdensome to one of the parties. Although parties will attempt to ex ante identify and efficiently allocate all future risks, bounded rationality, verification and information constraints impede complete ex ante allocation. In the case of a disruptive event, not accounted for in the contract, parties intend to let the loss lie where it falls, and in general, the classical contracting perspective will thus not provide for adjustment. A relationship involving specific investments, however, increases the costs related with premature termination. Nassar (1995) argues that in that context, adjustment will be preferred even under the classical contracting perspective. The situations in which performance is excused will be limited to truly disruptive external events, which are both unforeseeable, unavoidable and render performance absolutely impossible (Doudko, 2001; Perillo, 1998), e.g. wars, revolution (*force majeure*). The legal consequence of *force majeure* is either termination or suspension of the relationship. In case of termination each party must carry its own risk, which often means that the debtor bears the consequences of termination. In some cases, the parties might be compensated for the performance already rendered (restitution interest), dependent on the duration of the event.

The relational contracting approach is focused on the continued relation between parties and clauses calling for termination of the relationship in the light of unforeseen circumstances are essentially discrete in nature. Relational elements may be added to such clauses by stipulating parties to use ‘best efforts’ in remedying the cause: initiate negotiations and attempt to accommodate the changes instead of direct termination; pursue equitable remedies. Under the relational contracting perspective performance does not have to be completely impossible, but may be excused as soon as performance
becomes onerous (Perillo, 1998), e.g. economic, financial, legal or technological factors that cause serious adverse consequences to a contracting party (Nassar, 1995). The legal consequences of hardship may range from excusing performance to renegotiating and adjusting contractual rights and obligations in order to accommodate for the change (Doudko, 2001). In case of termination, parties may be compensated for costs already incurred (reliance interest) and/or performance already rendered (restitution interest).

**Damage Measures**

Termination rights and the associated damages act to reinforce cooperative behaviour. In case of breach of contract,[12] the main question that arises – after it has been decided which party should bear the risk of the debtor’s inability to perform – is to what extent damages should be awarded. According to the classical perspective, parties voluntarily assume liability through a promise or an agreement, losses lie where they fall (Feinman, 1990). Furthermore, the dominant principle of *pacta sunt servanda* requires performance – actual or hypothetical – to take place and damages are assigned accordingly (Macneil, 1978). The classical contracting perspective thus complies well with the doctrine of expectation damages, which places the ‘injured’ party in the same position as it would have been in, had the contract been fulfilled (Feinman, 1990). The classical approach will in principle fail to recognize consequential damages – damages incurred to other protected interests of the party – as it will only allow for compensation of losses that follow immediately and directly from non-performance.

Apart from the scope of damages to be awarded, the question arises how the precise amount of expectation damages is to be determined. The fact that parties under the classical approach attempt to specify all rights and obligations ex ante, complies well with the doctrine of liquidated damages, which refers to contractual ex ante damage specification. Liquidated damages are static and their application depends entirely on the circumstances existing at the time of contract formation, whilst later events are deemed irrelevant (Eisenberg, 2001).

In contrast to classical theory, the relational contracting perspective is based upon the premise of risk-sharing instead of ex ante risk allocation; damages must be both reasonable and fair (Nassar, 1995). In the case of asset specific investments, parties must be compensated for the sunk costs thereof if the investments have not been covered by income from performance (Speidel, 2000). Accordingly, parties are compensated for performance already rendered (restitution interest) and/or costs incurred prior to the breach (reliance interest). Reliance damages and restitution will place a party in the position it would have been in, had there been no contract in the first place. In the light of the foregoing it becomes evident that the relational contracting perspective does not comply well with the doctrine of expectation damages.

**Warranties**[13]

A warranty in a contract between companies may be characterized as an information mechanism that mitigates the hazards associated with problems of asymmetric information regarding the characteristics of parties or their product quality (Courville and
The implementation of warranties incites parties to correctly display all relevant rights and obligations. The enforcement of warranties through the legal system reduces warranty commitments to credible signals; the firm presenting a warranty has to be aware of the resulting costs if the warranty is based on misrepresentation (Wehrt, 2000). Warranties are often enforced by indemnifications. An indemnity is a promise by one party to take responsibility for the loss the other party will suffer as a result of the first party’s breach of its warranties.

In general, warranties comply with the classical contracting perspective, i.e. warranties act as an ex ante risk allocation mechanism. A warranty indicates that a party is willing to guarantee a certain state of affairs and consequently carry the risk of misrepresentation. On the other hand, warranties concerning the characteristics of a party may be employed under the relational contracting perspective while the exact identity of parties is of substantial importance in such long-term partnerships.

**Dispute Resolution Mechanisms**

Two main categories of dispute resolution may be distinguished: internal dispute resolution and third party dispute resolution such as arbitration, mediation and litigation. In the context of internal dispute resolution an attempt is made to resolve the dispute without reference to a third-party; goodwill and cooperation thus play a significant role. A common type of third-party dispute resolution is arbitration, under which a dispute is submitted to an arbitrator who will make a binding decision (Bonn, 1972). Arbitration procedures can be tailored to the parties’ needs and parties often feel that arbitration is faster, less expensive and more efficient than litigation (Bonn, 1972; Williamson, 1985, 1996). Both internal dispute resolution and arbitration comply well with the relational contracting perspective as these mechanisms take into account the general context of the partnership, the identity of parties and their relationship, and pursue fair and equitable solutions (Bonn, 1972; Speidel, 2000).

Under the classical contracting perspective, the relationship is of secondary importance and parties prefer an effective resolution with an assignment of damages over a ‘fair’ resolution of the conflict (Macneil, 1978). Litigation complies with this classical approach as courts strictly apply applicable law; they might pay less attention to the context of the relationship and they will often take the written terms of the contract as an approximation of parties’ intentions. Macaulay (1963) and others have observed that even in a classical setting, contract execution by companies is often less formal and not necessarily frequently relied upon. However, we expect that litigation is both relevant and crucial in the context of inter-firm partnerships where intellectual property rights protection and control over resources are of vital interest to companies (see also Rothaermel and Deeds, 2004).

**TECHNOLOGY PARTNERSHIP MODES AND CONTRACT LAW**

**Equity Joint Ventures**

Equity joint ventures are quasi-hierarchical in nature (Gulati, 1995) as the new venture embodies the creation of a hierarchy structure, namely common governance of the joint
venture by the parent companies, which remain legally and economically independent of each other. The legal form of governance which supplants these common ownership structures is the contractual agreement embodying the creation of the joint venture.

The (reciprocal) contribution of specific assets and consequently the share participation of each parent company in an equity joint venture, will serve as credible commitments (Klein, 1996; Klein et al., 1995; Teece, 1992). More specifically, property rights are able to \textit{ex ante} allocate risks inherent to, for example, R&D projects undertaken within the equity joint venture (Killing, 1988). If all partners contribute assets that are of significant importance to the relationship, it is expected that shareholding should occur on an equal basis in order to induce optimal investment decisions. Equity participation may mitigate contractual hazards, but it also creates additional monitoring rights and administrative controls, inducing potential principal–agent conflicts as joint venture ownership accrues to different parent companies, whilst the management resides with the equity joint venture. This means that incentives have to be aligned, not only between the owners themselves, but also between management and owners.

Due to the investments in specific assets and the uncertainty concerning the outcome of R&D projects or other innovative efforts, we contemplate that equity joint ventures will be governed by a relational contracting perspective that complements the ‘safeguards’ that are provided for by the distribution of property rights. Relational contracting can create the flexibility necessary to mitigate the negative effects of unforeseen contingencies and ensure long-run collaboration and mutual forbearance (Williamson, 1985, 1991, 1996). Furthermore, we argue that equity joint ventures refer to internal dispute resolution mechanisms and include adaptation clauses construed in the light of a relational contracting perspective.

\textbf{Non-Equity Partnerships}

Non-equity partnerships are ‘pure hybrid forms’ (Gulati, 1995; Williamson, 1985, 1991) which do not include the creation of a new venture (Hagedoorn, 1990; Killing, 1988; Wolf, 1995). Property rights and profit allocation schemes do not ensue from shareholdings and residual rights of control are thus not automatically accounted for (Root, 1988). The division of property rights derives solely from the formal contract, which must specifically allocate these rights. We stipulate that the lack of a \textit{de facto} common ownership structure in a complex environment incites parties to resort to a substantial range of other contractual safeguards.

The norms eminent to the classical contracting perspective do not seem to provide for the flexibility needed to create and prolong mutual forbearance in these long-term partnerships. Relational contracting, on the other hand, attributes considerable attention not only to the initial agreement, but also to the relationship as it evolves between parties. Non-equity partnerships are thus expected to be governed by a relational contracting perspective. In this context, these partnerships will stipulate that property rights and research outcomes are shared on an equal basis, and damage measures must be reasonable and fair. In addition, revision clauses and \textit{force majeure}, extending to include hardship, will need to be incorporated into the contract. Moreover, disputes will be resolved internally, with arbitration acting as a last resort.
Licensing Contracts

Licensing contracts involve the transfer of intellectual property protected by law, usually in the form of a patent (see, e.g. Bessy and Brousseau, 1998; Fox, 1992; Hagedoorn, 1990). Unlike equity joint ventures and non-equity partnerships, licensing contracts are unilateral in nature. They entail the one-way flow of technical information from the licensor to the licensee in return for some compensation. In principle, a licensing contract complies with a market transaction, the identity of parties is of secondary importance, the transaction does not involve reciprocal investments, and information exchange is minimal (except at the initial stage). Licensing contracts do not entail long-term research cooperation, but are based on the static relationship between parties, as each party independently attempts to pursue profit maximization. Because cooperation is less important, contracts will be based on risk allocation instead of risk sharing, which corresponds to the classical contracting perspective. More specifically, licensing contracts are expected: to contain no general revision clauses, to excuse performance only when this has become absolutely impossible, to stipulate liquidated damages which cover only the expectation interest, to use warranties to ex ante allocate certain risks, and to refer disputes to court. Therefore, the classical contracting perspective will in general apply to licensing contracts.\[15\]

Concerning ex ante property rights allocation, the licensor holds all property rights and thereby residual rights of control with respect to the transferred knowledge. Unless explicitly specified in the contract, the licensee usually owns all property rights to the product or process that may result from the use of the patent.\[16\] Whilst property rights are clearly defined and they guarantee the licensor a certain return on investment, contracts remain characterized by considerable information and verification constraints. The licensor faces a relatively low degree of ex ante uncertainty due to intellectual property protection, whilst the licensee is confronted with an informational disadvantage regarding the true value of the asset. Moreover, the fact that a licensing contract involves both the transfer of codified knowledge (the patent) and tacit knowledge (the instructions), gives rise to double moral hazard. Upon receipt of the patent fee, the licensor can forego to foreclose all necessary instructions, whilst the licensee may fail to complete payment upon receipt of the full instructions (Arora, 1995; Arora and Fosfuri, 2002).

REVIEW OF TECHNOLOGY PARTNERSHIP CONTRACTS

Methods

In order to exemplify our understanding of different modes of inter-firm technology partnering and their contractual setting, we present a detailed, qualitative analysis of concrete contracts for different technology partnerships, i.e. equity joint ventures, non-equity partnerships, and licensing. We will review two samples of contracts for each mode of inter-firm technology partnering. In the following we will summarize the content of these contracts, concentrating on property rights, major contractual clauses, and measures for conflict resolution, as discussed in the above, but we will also provide
a large number of direct quotes from these contracts that illustrate how companies write such contracts.

Based on information from the MERIT-CATI database on technology partnerships (Hagedoorn, 2002) and the sources of these contracts (see below), these six sample contracts can be understood as exemplary for the partnerships established in the high-tech industries mentioned below. Moreover, some extensive and detailed discussions with corporate lawyers and legal counsel involved in these contracts revealed that these contracts are to be seen as representative for contracts made in the high-tech industrial context that surrounds the three modes of technology partnering discussed in this paper. This in-depth review complements prior literature through its detailed analysis of the content of contractual provisions (adaptation clauses, such as revision and force majeure/hardship clauses, damage measures, warranties, dispute resolution) and relevant property rights issues.

In order to get this in-depth understanding of these contractual provisions and relevant property rights issues, we not only studied the actual contracts but we also interviewed corporate lawyers and legal counsel involved in the drafting of each of these technology partnerships. Each of these interviews took several hours; in that context we discussed both general legal issues such as the preferred jurisdiction in case of litigation, the level of detail that is needed in each of these contracts, intellectual property rights issues, and specific provisions in these contracts. In addition to corporate lawyers and legal counsel involved in drafting these technology partnership contracts, we also interviewed corporate lawyers and legal counsel in four other high-tech companies, mainly in advanced electronics, and an international legal firm that specializes in technology partnering in biotechnology and pharmaceuticals.

All six partnerships and their contracts refer to companies in bioscience, fine chemicals, biotechnology and biopharmaceuticals. These industries are characterized by rapid technological developments and a high degree of intellectual property rights protection. In these specific high-tech industries, relational contract theory will provide parties with the flexibility needed to adapt their contract to the constantly changing environment. Some of these partnerships fall under a common law regime; others are subject to a civil law regime. The two cases of non-equity partnerships entail the collaboration between Orchid Biocomputer Inc. and Affymetrix Inc., both from the USA, and the partnership between ImClone Systems Inc. from the USA and Boehringer Ingelheim Pharma KG (BI Pharma KG) from Germany. Orchid Biocomputer is a provider of services and products for profiling genetic uniqueness, whereas Affymetrix develops technologies for analysing and managing complex genetic information for use in biomedical research. ImClone Systems is a biopharmaceutical company engaged in the development of biologic medicines and BI Pharma KG produces pharmaceuticals, chemicals and biopharmaceuticals. The two cases of licensing contracts and the two cases of contracts for the equity joint ventures were provided by DSM, a Dutch chemical company. The contracts for the non-equity partnerships were extracted from the FindLaw.com internet database on inter-firm partnership contracts. The FindLaw.com internet database is freely accessible and powered by Thomson; it contains information on more than 7000 deals, including over 1000 inter-firm partnerships.
The Equity Joint Ventures

The contracts for the equity joint ventures indicate a common ownership structure (shareholdings) and income, profits and losses are allocated accordingly. The joint ventures are controlled by a board of directors, but day-to-day operations are run by general managers, one appointed by each party. Shareholdings correspond to voting rights and structural decisions, e.g. decisions relating to an increase or reduction in the venture’s share capital, the dissolution of the venture, and the issuance of new shares, require approval not only of the parties, but are subject to complex majority voting procedures. As typically stated in such contracts, such decisions may ‘... require the approval by the parties before being presented to the general meeting and when presented to the general meeting require affirmative votes of shareholders and their proxies representing not less than three-fourths (3/4) of all votes which all shareholders are entitled to cast thereat and at a subsequent general meeting of shareholders affirmative votes of not less than three-fourths (3/4) of all votes which all shareholders are entitled to cast thereat’.

Parties must use their ‘best efforts’ to cooperate and to prevent any conflict of interest arising. Clauses that are found to be invalid, illegal or unenforceable are open to negotiations. In that case, the contract may stipulate that the ‘... parties shall promptly meet and negotiate substitute provisions of equivalent economic impact for those rendered invalid, illegal or unenforceable ...’. Also, the equity joint ventures are established for an indefinite period, unless dissolved or terminated sooner. Each partner has the right to withdraw from the equity joint venture, but will need prior consent of the other party(s) if it decides to do so before the x-th anniversary of each venture. Upon the x-th anniversary of each equity joint venture, parties may sell their shares under the condition that the other party is offered a ‘right of first refusal’.

The contracts state several grounds for termination: the unanimous consent of parties to dissolve the joint venture, the decision of parties not to fulfil the capital requirements for the joint venture, the sale or disposition of all the assets of the venture, the occurrence of an event of default, or a force majeure exceeding 365 consecutive calendar days. An event of default is, for example, ‘... considered to have occurred if either party: ... fails to perform or violates any of the material terms or conditions of (the) agreement or of the associated agreement, and continues such failure or violation for sixty (60) calendar days after it has been given notice by the non-defaulting party ...’. The force majeure condition refers to a delay in performance or non-performance in whole or in part caused by the circumstances reasonably beyond the control of the affected party. In one of the sample contracts it is typically stated that this includes, ‘... but is not limited to: acts of God, fire, flood, war, accident, explosion, breakdowns, or labour trouble; embargoes or other import or export restrictions; shortage of or inability to obtain energy, equipment, transportation, (the inputs for making the product), or good faith compliance with any regulation, direction or request (whether valid or invalid) made by any governmental authority or person ...’.

When a joint venture’s affairs are wound up, due to the occurrence of an event of termination, the assets and equity of the venture are divided in proportion to each party’s equity ownership. As stated in these contracts, in the ‘... event of default, the non-
defaulting party may choose to purchase... the equity ownership of the defaulting party... and continue the business of the venture... or dissolve the venture... without prejudice to its rights to recover from the defaulting party all costs, damages and expenses... incurred and/or suffered by the non-defaulting party in connection with the event of default...'. In that case, the defaulting party is not relieved of any liability it may have to the other party and/or the joint venture which liability arose to or on account of such termination.

The contracts also provide for warranties and accompanying indemnities concerning the duly establishment and existence of the parties and their authority, legal rights and power to execute and perform the agreement. Disputes are to be settled internally, through negotiation and conciliation procedures. If it is not possible to resolve the dispute within 60 days, parties must resort to arbitration. In any case, a party is not liable to the other party or its affiliates for any consequential damages suffered or incurred by that party or its affiliates.

The Non-Equity Partnerships

Both non-equity partnerships are project-based collaborations. The parties agree to act collaboratively and shall use their commercially ‘reasonable efforts’ to fulfil their respective obligations. Project managers, appointed by both parties, are responsible for inter-firm communications. The partnerships are coordinated by a collaboration management committee, composed of two or more representatives of each party.

Under both partnerships, each party retains ownership of its contributed technology, of which it ‘... shall have sole and exclusive ownership of all right, title and interest’. For the partnership for which the contract is governed by California State law, a party making an improvement to the contributed technology of the other party during the collaboration, is obliged to transfer the rights relating to the improvements to the party with initial ownership. In addition, the latter contract stipulates that each party shall own an undivided one-half interest in all ‘joint technology’. Under US patent law, joint ownership implies that each party is free to utilize his/her interest in virtually any manner without consent of the co-owner, unless parties specify otherwise in a written agreement. The preferred solution is to assign all rights to one single party, who will then own the patent and control how it is used. While the parties to the foregoing contract have chosen joint ownership, they have restricted the co-ownership to the creation of ‘joint technology’. In addition, the clause seems in line with the current increase of joint patenting in the US biotechnological and pharmaceutical industry (Hagedoorn, 2003). The contract governed by German law stipulates that the property rights that solely cover the ‘product’, arising out of the joint efforts, shall accrue to party A; whilst all other emergent intellectual property rights shall accrue to party B; the latter must grant party A a non-exclusive, royalty-free, worldwide license for use to the ‘product’. Under German law, in absence of any agreement which states otherwise, the principles of the ‘Bruchteilsgemeinschaft’ (section 741 and following of the German Civil Code) will apply and legal entities will share an undivided interest in the patent that is created. Although this seems similar to US law, the manner in which the parties may use the patent without
the other party’s consent is somewhat restricted. However, parties usually provide for a
different allocation of rights through a written agreement, of which this contract is an
illustration.

The partnerships are of a fixed duration, i.e. performance of the last required service
automatically terminates the agreement, but either party may request an extension of
one year. Actual termination of the partnership can be effectuated by a force majeure event
(see previous section for the formulation of the clause) or through the impossibility to
perform due to scientific or technical reasons. Parties may attempt to resolve the problem
through negotiations during a 30 day period; if negotiations fail, ‘ . . . either party may
terminate (the) agreement effective upon written notice . . .’. The terminating party must
pay the other party an amount in damages ‘ . . . equal to all expenses reasonably incurred
by . . . [the other party] . . . prior to such termination . . . and for a period of 8 (eight)
weeks thereafter . . .’. Breach of a material provision of the agreement and bankruptcy of
either party gives parties the right to terminate the partnership, whilst taking into account
a period of 30 days for the other party to remedy the breach. During this 30 day period,
neither party shall be relieved of any obligations.

Force majeure allows performance to be excused and extended for the period of delay or
the period of inability to perform, if a party has used its best efforts to avoid the
occurrence of such an event. The contracts explicitly stipulate that ‘ . . . neither party
shall incur any liability or compensation obligation for any damages, . . . losses or
expenses of any kind suffered or incurred by the other . . . arising from or incident to any
termination of (the partnership) by such party that complies with the terms of the
agreement whether or not such party is aware of any such damage, loss or expenses’.

The contracts also include warranty and indemnity clauses regarding the existence,
authority, legal rights and power of each of the parties to execute and perform the
agreement. In addition, the contracts relate breach of a warranty to termination, as
‘ . . . each party shall be entitled (but not required) to terminate this agreement . . . in the
event that . . . the other party shall have breached a covenant, representation or war-
ranty made in this agreement . . .’.

Disputes are resolved internally by senior officers or project managers. If the conflict
cannot be resolved within 30 days, the dispute will be referred to a mediator, and
thereafter to an arbitrator for ‘ . . . final and binding arbitration . . .’. Arbitrators are not
allowed to award punitive or other multiple damages to any of the parties. However,
disputes concerning the validity or scope of patents ‘ . . . shall be set aside by the arbitra-
tor(s) and shall not be decided by them . . .’; these matters will be subject to litigation.

Furthermore, if any provision of these contracts is held to be invalid or unenforceable,
all other provisions shall continue in full force and effect. Parties must attempt to
substitute the respective term by a provision that pursues the economic and legal goal of
the unenforceable term to the greatest extent.

The Licensing Contracts

Both licensing contracts incorporate a complex payment scheme consisting of ‘ . . . a
non-refundable initial licensing fee . . .’, a type of lump sum, that is to be paid shortly
after the conclusion of the licensing contract, and ‘...non-refundable annual minimum...’ royalties based upon a percentage of the net sales of the licensed product.

The licensee is obliged to take ‘reasonable efforts’ to exploit the license and may be asked for a progress report. The licensing contracts also stipulate that ‘... any improvement to the licensed patents shall be the property of the party inventing such improvement. Any improvement to the ... system itself as patented in the licensed patents shall be the property of licensor and shall be licensed to licensee under the terms and conditions of this agreement’.

The terms of the licensing contracts extend to the last-to-expire valid claim to a licensed patent. However, the licensor can decide to dispose of the patent beforehand, under the condition that the licensee is offered the ‘first right of refusal’. Taking into account a certain notice period, the licensee may terminate the agreement at all times, also if the licensor fails to enforce the patents or if patents are held to be invalid. The licensor may terminate the licensing contract if the licensee infringes the license or has not used its ‘reasonable best efforts’ to exploit the license. Each party has the right to terminate the contract when the other party ‘...materially breaches a material provision of (the) agreement and has failed to cure, failed to commence with remedial action and the diligent prosecution of the same, or failed to demonstrate the non-existence of the breach within thirty (30) days of receipt from the other party of a written notice and demand to cure such breach ...’.

The termination does not affect the rights of parties arising prior to the termination and does not relieve parties of any obligation or liability or rescind any actions or payments by parties that have accrued prior to the termination. The occurrence of wars, riots, insurrections, serious labour disputes, floods, fires, explosions, or other natural disasters which render performance impossible or unfeasible, temporarily excuse performance, but automatically effectuate termination if performance is prevented for three or six consecutive months.

One of the licensing contracts contains a (partial) warranty concerning the rights of the licensor and the status and maintenance of the patent and subsequently an indemnification. The warranty does not cover the ‘...merchantability or fitness for a particular purpose (or) warranty as to the enforceability or scope of any licensed patent or licensed technology ...’. The second licensing contract does not provide for any warranties. In both cases, the licensee assumes the entire risk concerning both licensed and application products. The licensor is not liable for any claims made by the licensee, or claims that arise out of the contract or any actions taken there under.

These licensing agreements also state that each party ‘...shall bear its own costs and expenses in relation to the negotiation, preparation, execution and implementation ...’ of the contract. Disputes shall be tried in court and ‘...the prevailing party shall be entitled to reasonable attorney’s fees in addition to costs and necessary disbursements ...’.

With respect to severability, the contracts state that if provisions are found to be contrary to the law, the law prevails and the provision is only affected to the extent necessary to bring it within applicable law, not affecting the remaining provisions.
DISCUSSION

The review of the different partnerships illuminates several major differences in the interpretation of contracts referring to dissimilarities between the classical contracting perspective and the relational contracting perspective. Similar types of contractual clauses, such as dispute resolution clauses, adaptation clauses, and damage clauses are employed for the various forms of inter-firm technology partnering. However, it turns out that these clauses are given a different content and thus have divergent effects for distinct forms of partnership. Also, property rights seem to play a manifest role by inducing credible commitments in order to mitigate opportunistic behaviour. Table I provides an overview of the three modes of inter-firm technology partnerships, their contractual clauses and property rights.

Distribution of Property Rights

The role of property rights is most prevalent in the case of equity joint ventures as the distribution of equity ownership drives the division of gains and losses. According to property rights theory (Klein, 1996; Klein et al., 1995), an equal dispersion of property rights induces optimal investment decisions and mitigates opportunistic behaviour. Additional provisions however, reinforce the allocation of property rights: parties may not withdraw from the venture before a certain period of time, shares may only be sold subject to a ‘first right of refusal’ and decisions affecting the structure of the venture can only be taken by affirmative majority vote. Apparently, the mere ex ante allocation of property rights does not suffice to create credible commitments.

Property rights also play an important role in non-equity partnerships, which lack a common equity ownership structure. The contracts explicitly refer to the division of property rights: parties retain ownership of self-developed and contributed technology and subsequently either share equally or divide the property rights to jointly developed technology. In licensing contracts, property rights play a less prominent role in securing cooperation and generally the licensor holds all property rights to the codified and transferable knowledge.

Companies that we interviewed stressed that equity joint ventures may be preferred over non-equity partnerships when parties seek to limit the financial risks involved, as equity joint ventures entail a common ownership structure and thus a clear definition of property rights. However, this specific form of collaboration is not always necessary, and increasingly, the preferred form for research collaborations is a non-equity partnership in particular when collaboration is short-term and project-based. Companies also indicated that they prefer non-equity partnerships when the (intellectual) property rights are clearly granted to the party which makes the discovery or the improvement to a technology. In general the companies and legal counsel stated that it is very important for parties to manage their rights to the outcome of the collaborative project and clearly define in the contract who will hold the rights to the research results. Often ownership and use of the results are defined through the grant of an intellectual property right to one of the parties and a license to the other party.
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<th><strong>Equity joint ventures</strong></th>
<th><strong>Non-equity partnerships</strong></th>
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Revision Clauses

The equity joint ventures and non-equity partnerships do not explicitly provide for general revision clauses. However, it may be asserted that both the equity joint ventures and the non-equity partnerships have, to a certain extent, integrated a duty to revise or (re)negotiate in several other clauses. Both types of partnership allow for negotiations in case of severability; the ‘new’ and enforceable clause must pursue the economic and legal goals of the prior unenforceable term to the greatest extent. Whilst one might characterize this ability to (re)negotiate as a type of ‘revision’, it offers no real flexibility as severability as such already forces parties to adjust the specific clause under penalty of severance.

In contrast to the equity joint ventures and the non-equity partnerships, the licensing contracts adhere to a classical contracting approach and lack the possibility to negotiate an optimal replacement clause in case of severability.

The non-equity partnerships have also attached a ‘revision clause’ to the occurrence of a supervening event. Upon the occurrence of such an event, parties must start negotiations and termination of the partnership is restricted to the case in which negotiations and subsequently accommodation of the contract fail.

Adaptation Clauses: Force Majeure and Hardship

The equity joint ventures, non-equity partnerships and licensing contracts all foresee in an adaptation or force majeure clause. However, the extent to which supervening events excuse performance differs under the classical and relational contracting perspective. According to the classical contracting perspective, performance must be absolutely impossible and either suspend or terminate parties’ obligations. The relational contracting perspective, on the other hand, extends force majeure events to include economic impossibility, i.e. hardship, whereas legal consequences are not restricted to direct termination but may range from excusing performance to adjustment. Indeed, the different partnerships seem to follow either a classical or relational approach. The licensing contracts only excuse performance if specifically identified events render performance absolutely impossible, during which the obligations of the party are suspended. However, the consecutive duration of the events for a relatively short period, may concede in termination of the partnership; there is no room for negotiations which may mitigate the effects of the supervening events.

The equity joint ventures and non-equity partnerships adhere to a relational approach, whilst the force majeure clause extends to include hardship. Both types of partnership provide for a ‘best efforts’ revision clause in order to resolve or accommodate the effects of supervening events. Under the equity joint ventures, termination may only be invoked if the event has lasted and obstructed performance for 365 consecutive days, a much longer period than the three months stated in the licensing contracts. This indicates that parties attempt to prevent termination as long as possible.

During the interviews it became clear that many companies often apply force majeure and hardship clauses as so called boilerplates.[20] These boilerplate clauses are not a completely standard type of clause but drafted for the particular type of relationship.

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Licensing contracts as well as non-equity partnerships incorporate boilerplates, but the type of boilerplate may vary. As a licensing contract is clearly of a different contractual nature when compared with a non-equity partnership, one can find both somewhat similar but also very different boilerplate clauses in these different inter-firm partnerships.

**Damages**

The three types of partnership attach different consequences to breach of the contract. In the context of the equity joint ventures, termination related to a *force majeure* event implies that the affairs of the venture are ‘wound up’ and assets and equity of the venture are dispersed in proportion to each party’s equity ownership. In principle, parties are not liable and they are assured of a reimbursement of part of their investments. The foregoing complies with a relational contracting perspective as termination is governed by a restitution interest and parties are willing to share the risks.

Breach and termination of the contract due to default has different implications: the non-defaulting party is awarded damages incurred due to the event of default and the defaulting party is not relieved of any liabilities that have risen due to termination. The non-equity partnerships extend the assignment of damages to include all expenses incurred by the non-defaulting party eight weeks after the termination has taken effect. The non-equity partnerships both include the designation of ‘reasonable’ consequential damages in relation to an event of default, but explicitly forbid the assignment of punitive and multiple damages, that are often over-compensatory and that do not coincide with the view of relational contracting. The equity joint ventures, however, explicitly state that a party is not liable for any consequential damages suffered by the other party.

The equity joint ventures and non-equity partnerships are generally based upon the notion of reliance and restitution interest, and the damages awarded thus comply with the relational contracting perspective: parties are merely compensated for performance already rendered (restitution), or costs already incurred (reliance).

The licensing contracts do not explicitly provide for the assignment of damages. The contracts merely stipulate that termination in general does not relieve parties of any obligations, liabilities, rescission of any actions or payments that parties have accrued prior to termination. The contracts allocate all risks with the licensee and explicitly exclude liability of the licensor regarding any claims made by the licensee. Furthermore, each party carries its own enforcement costs. Whilst no clear damage measures have been foreseen, one might assert that these terms indicate a classical approach to damages. Indeed, the contracts seem to allocate risks ex ante and let each party carry its own losses. The licensor is responsible for the licensed patent and the licensee for the exploitation.

**Warranties**

Both the equity joint ventures and non-equity partnerships provide standard term warranties and accompanying indemnities concerning the characteristics of the parties. In addition, one of the non-equity partnerships relates breach of a warranty with the
right to termination. The incorporation of warranties indicates that even in equity joint ventures and non-equity partnerships, parties are willing to allocate certain risks ex ante. The risk allocation does not relate to (unforeseen) future contingencies, but merely confirms companies’ ability to become a duly established party to the partnership. The duly establishment of parties and legal rights to enter into the partnership are understood to be essential in an agreement, which entails long-term cooperation.

Contrary to our expectations (see the section on licensing contracts, p. 350), warranties do not seem to be part of the standard contractual licensing terms. In the event that a warranty is incorporated, it is limited to the valid registration and ownership of property rights. The foregoing seems to indicate, and this was also confirmed during the interviews with companies, that parties to licensing contracts take the characteristics of the party to be of marginal importance compared to the object of the contract, namely the patent. Given the limited warranties, parties are assumed to contract at their own risk and consequently must bear the losses. This complies with the classical contracting perspective under which the characteristics of parties are of subordinate importance. Another possible explanation might be the fact that the licensor in essence holds a monopoly position with regard to the patented technology. The licensor has no incentive to take on certain risks, by means of guarantees, which would normally accrue to the licensee. The licensor’s guarantees are thus limited to the bare minimum: the valid registration and ownership of the property rights. This makes sense, as risks pertaining to exploitation of the license are understood to be part of the normal business risks. A warranty covering the content and value of the patent might (partially) mitigate the informational disadvantage of the licensee regarding the true value of the patent. However, such a warranty would deprive the licensor of its informational advantage. The licensee is thus actually placed in a ‘take-or-leave-it’ position, where it is obliged to carry most of the risks inherent to the agreement or forgo the opportunity to contract.

Dispute Settlement

The relational contracting perspective favours internal and private dispute resolution over court enforcement. Especially in equity joint ventures and non-equity partnerships, the cooperation of parties is of foremost importance, as specific assets accrue most value within the particular relationship. It is therefore not surprising that the equity joint ventures and non-equity partnerships that we reviewed incorporate private enforcement clauses, where internal dispute resolution is followed by arbitration and mediation; litigation is not even mentioned.

Licensing contracts attach less value to the prolongation of the specific relationship, whilst patents may easily be allocated to another use. Subsequently, the reviewed licensing contracts stipulate court adjudication. This clearly complies with the classical contracting perspective: a court will assign damages and interpret the contract according to the law and in a way the court deems reasonable.

Companies we interviewed stated that several internal dispute resolution mechanisms are provided for in joint venture contracts and non-equity partnerships, such as bringing the dispute before an R&D committee with members of both parties, or bringing the dispute before the CEOs of the partners. When these amicable settlements do not have

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an effect, parties will refer to third party dispute resolution through external arbitration. When no agreement can be reached via internal dispute resolution or later through external arbitration, disputes are finally referred to the court. While in the first place an attempt is made to resolve all disputes internally, an arbitration clause is merely incorporated into the contract to leave the option of arbitration open when a resolution cannot be reached through amicable settlements.

Companies and legal counsel that we interviewed experience litigation as more formal compared to arbitration. Arbitration has several advantages over litigation: the arbitration procedure is confidential, the arbitrator can take a closer look at the content of the contract, the relationship between parties itself is also taken into account, an arbitrator is usually chosen for his/her technical expertise, an arbitrator is not bound by the strict application of legal rules or case law. Also, arbitration is perceived as being quicker and more cost effective than litigation.

As stated by one of the companies: ‘In general, our first preference is to solve all disputes internally, through amicable settlements, and then through arbitration. In international agreements, where parties are often unfamiliar with each other’s legal system, we prefer arbitration over litigation. The choice for arbitration over litigation also depends on the type of agreement. For example, disputes in light of non-equity partnerships often relate to the content or scope of the collaboration, while licensing contracts often involve patent infringements or disputes relating to payment schemes. In the case of a scope or content conflict we will emphasize the need to settle the dispute internally. In addition, in common law jurisdictions, where the discovery procedure plays a role, we find that litigation is a good option in case of a patent infringement in the context of licensing contracts, when we know that the infringing party possesses valuable information.’

**CONCLUSIONS**

Different general perspectives on contract law indicate either a continuum from a classical to relational contracting perspective (Macneil, 1978) or a more orthogonal setting for both perspectives (Ring and van de Ven, 1992). Our findings suggest that different modes of inter-firm technology partnering are first and foremost governed by either a classical or a more relational contracting perspective (see also Table I). As we expected, inter-firm technology partnerships that are organized through equity joint ventures and non-equity partnerships largely follow a relational contracting perspective. The relational approach appears to play little or no role in licensing contracts which seem to be almost exclusively governed by a classical contracting perspective.

The relational contracting perspective is associated with the general understanding that contracts are to some extent incomplete from a social, economic and organizational point of view (Lorenz, 1999; Macaulay, 1963; Macneil, 1978; Williamson, 1996). This is particularly relevant in the context of the exchange or creation of new technology, where the commitment of parties is crucial. Relational contract theory acknowledges that the contract is an element in a joint effort of parties that is not of a short-term nature but that focuses on the further development of the relationship where flexibility and adjustment
can reduce the incentives for opportunistic behaviour. In addition, the allocation of property rights can act as credible commitments that create investment incentives and stimulate mutual forbearance.

Although most of our findings are largely in line with our expectations (see also Table I), there are also a number of interesting surprises. Minor surprises refer to licensing contracts that do not contain extensive warranties and the clear division of property rights in the non-equity partnership contracts even though these partnerships do not entail a de facto common ownership structure. More substantial surprises were found in the contracts for equity joint ventures and non-equity partnerships that also include elaborate appendices with project plans, explicit task and responsibility description, and association agreements. In our opinion, this stresses the relational perspective of equity joint ventures but in particular of non-equity partnerships even further as such a package of various appendices places the actual collaboration and the interrelationship of the partners in the realm of the contract itself. We also found that the time perspective for the joint ventures was set at a far distance as the contracts do not allow parties to withdraw before a particular anniversary of the venture (in practice ten years). This stresses how much companies can place their long-term relationship at the centre of the agreement (Eisenberg, 2000; Speidel, 2000).

Also, by their nature, equity joint ventures and non-equity partnerships require flexibility in contractual provisions. Many obligations involve necessarily ambiguous commitments or agreements regarding the future direction of the relationship. In other words, we expected a number of revision clauses: however, this was not the case. Explicit revision clauses were not incorporated in the agreements, revision was merely integrated in other clauses such as force majeure, hardship and severability.

In the non-equity partnerships patent disputes were excluded from arbitration and made subject to litigation. This was not expected as non-equity partnerships are associated with ‘softer’ dispute resolution mechanisms such as arbitration and mediation. However, this option might be preferred as many countries recognize special patent judges and a court’s decision is open to appeal. In addition, the profits associated with a patent might outweigh the substantial costs associated with litigation. Furthermore, as some legal counsel have asserted, in such disputes valuable information may be gained from the other party due to the discovery procedure.

Finally, in the licensing contracts, the prevailing party is entitled to reasonable attorney’s fees in case of a dispute or litigation. This does not comply with the classical perspective that each party should bear his or her own costs. However, this type of cost allocation, when the losing party has to pay the expenses of the prevailing party, might be a way to refrain parties from initiating a procedure too easily.

Obviously, our research is only a small step on the long road leading to a more detailed understanding of what Ronald Coase described as the actual process of contracting between companies. The current contribution focuses on a limited number of modes of governance and their contractual setting found in a small number of sample contracts. However, our study is, to the best of our knowledge, also one of the first attempts to combine such a differentiated perspective on contract law with an in-depth and detailed analysis of different forms of inter-firm partnering considering their contractual clauses.
There are some obvious suggestions for further research, which follow more or less directly from the limitations that were indicated in the above. Our study clearly invites further study of legal and managerial implications of inter-firm technology partnerships based on larger samples of companies and contracts. Another suggestion is to study other forms of contracting, in particular inter-firm partnerships where technology is not of primary importance (e.g. marketing partnerships, customer–supplier relationships, outsourcing, co-production contracts). In addition to this, the analysis of a range of partnerships in other industries, with different regimes of intellectual property rights protection, can also improve our detailed understanding of the nature of inter-firm contracting. Future research would also benefit from a more in-depth understanding of the specific context in which the contracting and negotiation process takes place and the outcomes of these activities (the actual contracts), or when and how the parties to any of these contracts consider using any of the alternative partnerships as a means of governing their relationship. In this light, further research might analyse the effect of the applicable legal regime on contract design or choice of type of partnership. Finally, it would be interesting to indicate whether either common law or civil law jurisdictions are predominantly classically or relationally oriented.

NOTES

*The authors would like to thank participants at the British Academy of Management conference, Oxford, September 2005, and Peter Ring, Frank Rothaermel, Jan Smits, Oliver Williamson, JMS editor Mike Wright, and three anonymous reviewers for their helpful comments on earlier drafts of this paper.

[1] We assume that this need is not only relevant for economists but for all social scientists interested in the implications of inter-firm contracting.

[2] A broader social perspective on the social factors affecting contracting is offered by Bonn (1972). His contribution discusses the effects of social institutions, formal organizations and inter-organizational linkages on the use of contracts and contract law.

[3] We discuss these different approaches as perspectives because, given the primarily, private ordering nature of relational contracting, there is no relational contract law in the strict sense. See Harrison (2004) who discusses an interesting case where both the UK High Court and the Court of Appeal refused to legally enforce a relational contract between two companies, based on implied obligations and promises without a formal contract.

[4] As indicated by one of the reviewers, economic theory and some of its spill-over to the management literature, rely on other approaches than either a classical or a relational contracting perspective. In that context one has to think of the contributions related to incomplete contracting (see, e.g. Hart and Moore, 1999; Posner, 1986), and work on the so-called property rights theory of the firm (see, amongst others, Hart and Moore, 1990).

[5] Discrete must be understood as ‘as-if-discrete’ (Macneil, 2000), as almost every exchange is embedded in a minimal social context and truly discrete transactions are rare.

[6] Legal scholars and economic and management scholars seem to define the incompleteness of contracts differently. However, the definition as articulated in this paper is increasingly accepted, i.e. a contract is considered incomplete if the contract does not specify all future contingencies and/or the contract does not exploit all gains from trade.

[7] This differentiation into complete and incomplete contracting, that stresses the role of flexibility and adaptability to conflict, is somewhat similar to Peter Ring’s distinction between ‘state of contract’ and ‘state of union’ (Ring, 1997).

[8] The effect of these latter norms on partnerships has been subject to extensive research and does not pertain to the scope of this paper (Gulati, 1995; Macaulay, 1963; Parkhe, 1993; Poppo and Zenger, 2002; Reuer and Ariño, 2002; Ring, 2002; Ring and van de Ven, 1992).

[9] Speidel (2000) gives an example of a contract in which a pricing mechanism designed to track the market rate for the transportation of ore allows parties to share the risk of a price change instead of allocating such a risk ex ante.
As indicated by one of the reviewers, it is also possible to consider inter-firm partnerships, in particular those outside the most research intensive high-tech sectors, in the context of non-specific public good aspects of technological knowledge that leads to property rights problems and associated transaction failures.

We realize that ‘hardship’ and ‘force majeure’ are general legal terms, which are subject to different interpretations in each national jurisdiction. We have, however, chosen this terminology in accordance with the international legal practice.

‘Breach of contract’ extends to include every case where performance rendered falls short of a promise in contract. We will not extensively discuss the difference between the case where the debtor is ‘innocent’ and at ‘fault’. We restrict our discussion to several types of damage measures in the light of classical and relational theory; a more extensive legal discussion of this subject, including various other remedies for breach of contract, is beyond the scope of this paper.

This section refers to warranties in the sense of guarantees, and should not be confused with the qualification of a warranty in Anglo-Saxon law as a non-essential term of the contract.

We are aware of the fact that there is a difference in contract interpretation between common and civil law courts; compared with civil law jurisdictions, common law jurisdictions attach more importance to the precise language/words of the written contract.

In this context, it is irrelevant whether companies are jointly engaged in licensing, joint ventures or other agreements. The coexistence of numerous agreements between partners will not affect the drafting style of the contract, while such contracts relate to different areas of research and are usually drafted by different departments within companies. We note that the foregoing does not apply to, for example, all licensing and option agreements which are sometimes specifically attached as appendix to a collaborative agreement and then constitute an integral part of that collaborative agreement.

As suggested by a reviewer, the question as to who owns know-how related to licenses may depend on the law of a particular jurisdiction.

However, it should be noted that, as indicated by one of the reviewers, additional research will be necessary to study the exact effects of contingencies such as repeated ties, general partnering experience, partner specific experience, and expertise with regard to different legal systems on the particular content of contract provisions.

Although we will make an attempt to be as specific as possible when it comes to citing specific clauses in contracts, we are limited by the non-disclosure agreements that we were asked to sign by some of the companies involved.

In total, we interviewed ten experts. Nine of them are in-company legal counsel, general legal counsel, senior legal counsel, or head of the department of intellectual property and standards of their respective companies; one expert is an associate of an international law firm and an expert on intellectual property and technology, responsible for negotiating and drafting technology agreements.

Boilerplate is defined as the ‘... language which is used commonly in documents having a definite meaning in the same context without variation; used to describe standard language in a legal document that is identical in instruments of a like nature ...’ (Black’s Law Dictionary, p. 175). With the boilerplate, firms attempt to enshrine in the contract the decisions of the applicable cases decided in court. They limit the direct application of statute or common law as a default rule.

REFERENCES


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