A THEORY OF OBLIGATION RELATIONSHIP:
Towards the Economic and Legal Approach to Bargaining

Dr. Dušan TŘÍSKA, FSP/CD-F, Klimentská 1, 110 15 Praha 1, dtriska@fsp.cz

Paper prepared for the Adam Smith Seminar, Hamburg University, November 9, 2004

TABLE OF CONTENTS

1. METHODOLOGY

1.1 Introduction

1.1.1 An exchange of acts and obligations

Contractual Digital Floor ("CD-F") refers here to the methodology focusing on frontiers of economic and legal approaches to contracts. In pursuing the objective, CD-F strictly differentiates between exchanges of:

- acts, e.g., deliveries of goods, services, cash, etc and

- obligations, i.e. promises to deliver the above goods, …

We assume that while economists primarily deal with the former, lawyers rather focus on the latter.

1.1.2 Contract components

To begin with, our contract CON is conceptualized as a contractual triangle consisting of its horizontal and two vertical components (see Fig. 1), where:

CP   represents the contract in the narrow sense (the „contractual product")

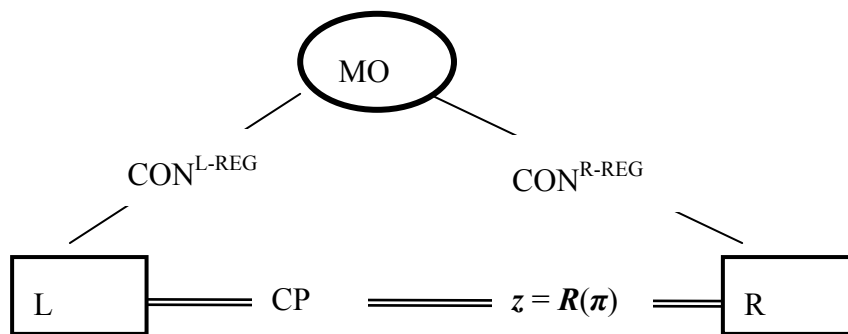CON^{REG} define the rules according to which a communication about CP may proceed

Fig. 1

The aim of the communication, as regulated by the two vertical components CON^{L-REG}, CON^{R-REG}, is to bring up various developments in the CP, its so-called transitions. This "contractual communication" is what may be elsewhere referred to as bargaining.

1.2 Horizontal component

1.2.1 The correspondence of enforceability

The following elements are introduced as to define CP:

L and R   are the contracting parties of the CP

$z = R(\pi)$ is the correspondence, where

         π are factors affecting the enforceability of the obligation z

         R is the operator determining, whether and in what particular terms must be z fulfilled with respect to actual values of π

         z is the obligation represented by such parameters as a magnitude of what is to be delivered - q^{z}

1.2.2 Illustration

In order to illustrate, let CP be an insurance product (policy). From the many correspondences of the above type, let us present here the one where:

π are parameters of the actual damage ("insurance event"), e.g. its magnitude q^{π},

R represents the multiplication by the coefficient *0.8*

q^{z} is the magnitude of the benefit (compensation) to be paid by the insurer.

The correspondence concerned is then put as

$$q^{z} = 0.8 \times q^{\pi}$$

or, in words, the beneficiary is to be paid 80% of the proven damage.

Real world $z = R(\pi)$ is, of course, way off from this simplicity. Elsewhere we show that it is this complexity that asks for an extensive IT support – such as that provided by CD-F, as a company of which the author is a chairman.

1.3 Vertical components

1.3.1 An ORDER

A development/transition of CP will be denoted as

$$CP^{o} \rightarrow CP^{*}$$

where

CP^{o} is the initial formula

CP^{*} is the target formula

With the objective to bring up $CP^{o} \rightarrow CP^{*}$, the agents L and R exchange their respective L- and R-orders. The term ORDER is thus used here as to represent a will (proposal, requirement, etc.) of this or that contracting party.

For example: At stock exchanges, the sell- and buy-ORDERs mediate the mutual intentions of the participants to form a contract, in particular a contract for the sale and purchase of certain commercial papers.

1.3.2 Market organizer

It is our further fundamental thesis in Fig. 1 that L- and R-orders are processed by an agent MO (market organizer) functionally distinct from L and R.

A nice example of MO is a stock exchange – such as NYSE, NASDAQ … However, MO need not be expressly institutionalized. For example, insurers mostly act not only as the party of CP, but also as the corresponding MO. Hence, the same person who is to pay the benefit is also in charge of the investigations whether and how the insurance event occurred.

This way or another, every MO provides his services as a fulfillment of specific obligations inscribed in:

$CON^{L\text{-}REG}$ i.e. the contract between MO and L

$CON^{R\text{-}REG}$ i.e. is the contract between MO and R

1.3.3 Recursion

A contract CON is defined in Fig. 1 as

$$CON = (CP, (CON^{L\text{-}REG}, CON^{R\text{-}REG}))$$

where for the vertical contracts CON^{REG} the same analysis as for CON should be applied – see Fig. 2. Further on, the same analysis is to be applies for $CON^{L-REGreg}$, etc.
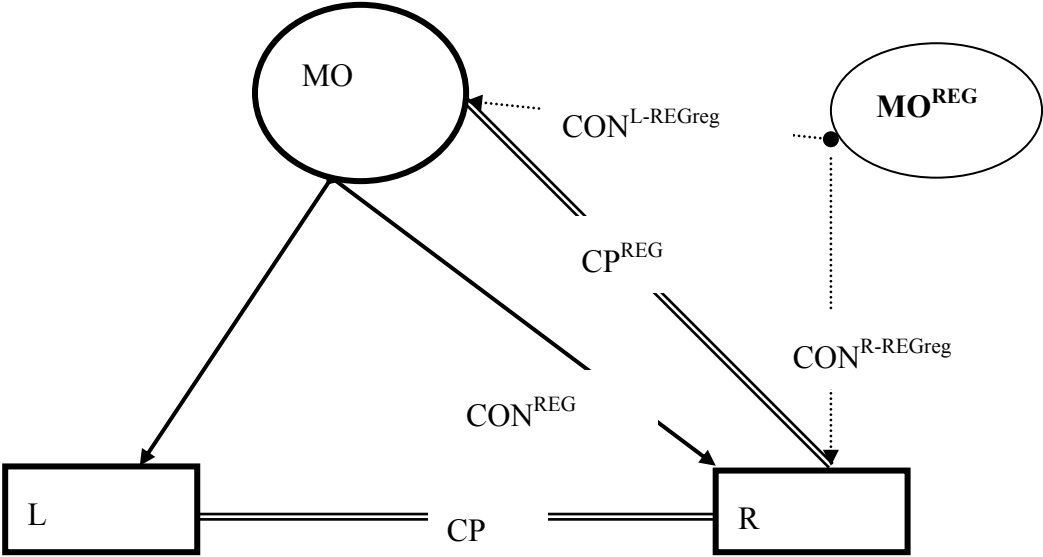

Fig. 2

The infinite recursion thus established is left here to considerations of the kind reader.

1.4 This analysis

In what follows the methodological concepts of the CD-F are applied as to suggest how the legal scholarship may contribute to better understanding of the otherwise fully economic notions as:

- bargaining power,
- supply and demand,
- transaction costs.

2. BARGAINING POWER

2.1 Introduction

2.1.1 Obligation relationship

Standard contractual product CP naturally consists in many obligations of both of the parties L, R. Every such obligation z represents a bi-lateral relationship between two agents referred to as (see Fig. 3):

- debtor (obligor, beneficiary agent BA^z, promisor) and
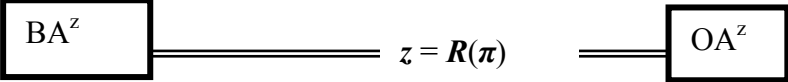- creditor (obligee, obligatory agent OA^z, promisee).

Fig. 3

Parties L and R thus exchangeably are in both roles – of a debtor and creditor within the contract CP.

2.1.2 Obligation states

From among all possible developments in the CP we will focus on those in the "states" of the obligation z.

It is our thesis (extensively tested!) that a development of every z may be fully described by the following three states (see Fig. 4):

$z(0)$ *conceptualized*

$z(+1)$ *inscribed* (as it emerges in the contract formed)

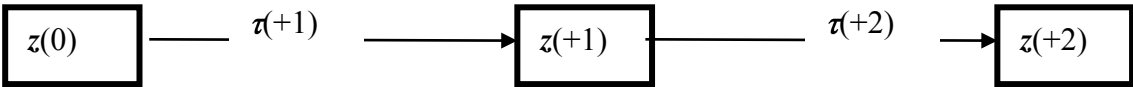$z(+2)$ *activated* (as enforced by the corresponding ORDER of the creditor)

Fig. 4

Consequently, only two transitions $\tau(+1)$ and $\tau(+2)$ need be analyzed. Given the topic of bargaining, it should be of our interest that:

- while $\tau(+1)$ is consensual (non-enforceable),

- transition $\tau(+2)$ may be uni-laterally enforced.

2.2 Consensual transition of a contract

2.2.1 Inscription ORDERS

Let us begin with the *inscription* of z, i.e. $\tau(+1) \equiv z(0) \rightarrow z(+1)$.

Typically, such $\tau(+1)$ will be included in the contract formation denoted here as

$$CP(0) \rightarrow CP(+1)$$

and presented as an outcome of the respective L(+1)-order and R(+1)-order. Put differently, within CP(0) $\rightarrow$ CP(+1) all elements of the CP are *inscribed*, not only z.

For demonstrative purposes, however, let us admit to the analysis such $\tau(+1)$, that is the addition of one more z to the already existing contract CP, or the outcome of, e.g.:

BA^z(+1)-order   representing the creditor's proposal (requirement) to add z to the CP

OA^z(+1)-order   representing the debtor's acceptance of the proposal

2.2.2 Mutual consent

Transition $\tau(+1)$ is likely to be "a voluntary outcome of a free will of both parties". Put alternatively; $\tau(+1)$ is consensual in the sense that it needs an express agreement of both parties; it cannot be uni-laterally enforced, as a rule.

The parties are here "equally powerful" as to the legal aspect of their communication. Of course, their powers may be different in other aspects, such as political weight and social position, knowledge/information etc.

Further we express this legal equality so, that if <u>L(+1)-</u> and <u>R(+1)-order</u> are valid, they are always "justified".

2.3 Enforceable transition of a contract

Entirely different than $\tau(+1)$ is the *activation* of z, i.e.

$$\tau(+2) \equiv z(+1) \rightarrow z(+2)$$

2.3.1 Activation ORDERS

As an example, let CP be an insurance policy and $\tau(+2)$ an outcome be established by:

<u>BA^z(+2)-order</u>   representing the client's proposal (requirement, claim) for the benefit (compensation) - on the grounds that the damage, insurance event occurred

<u>OA^z(+2)-order</u>   representing the insurer's re-action, e.g., his "objections" to the claim

Apparently, BA^z and OA^z are here "differently powerful" and we express their legal inequality so, that

<u>BA^z(+2)-</u> and <u>OA^z(+2)-order</u> are justified under different conditions

2.3.2 Power constraints

The inequality will be formally presented so that the correspondence $z = \boldsymbol{R(\pi)}$ be put as

$$\boldsymbol{R(\pi)} = (R^{BA}(\pi^{BA}); R^{OA}(\pi^{OA}))$$

where R^{BA} and R^{OA} represent respective

conditions of justifiability of <u>BA^z(+2)-</u> and <u>OA^z(+2)-order</u>

Put alternatively, the conditions are the constraints to the bargaining power of BA^z and OA^z, respectively. The conditions/constraints are, as a rule, differently taught.

2.3.3 Power of the creditor

Let us begin with the component $R^{BA}(\pi^{BA})$, i.e. the justifiability of <u>BA^z(+2)-order</u> - the client's claim. Suppose that the meaning of the correspondence is that the damage:

- must occur to Mr. Black and exactly at 17.44, November 9, 2004,

- must be caused by the younger sister of his wife.

Hence if the actual values of π^{BA} represent other times and-or persons, the correspondence $R^{BA}(\pi^{BA})$ will produce the outcome that

a benefit is not justified

Apparently, the condition concerned is rather tough; the probability that it will be fulfilled is rather low. Low is therefore also the power of the client, as the creditor BA^z. Economically speaking, low is the value of client's position in the contract CP and low should be the price (the premium) he is to pay for it.

2.3.4 Power of the debtor

2.3.4.1 Debtor's choice

Analogously, the insurer's power is given by the component $R^{OA}(\pi^{OA})$. Its toughness indicates how easily may the insurer enforce his objections - his <u>OA^z(+2)-order</u>. Put alternatively, $R^{BA}(\pi^{BA})$ **offers** to the insurer (as a debtor) a certain arsenal of justifiable objections. It is then up to him to decide whether and which of the justifiable objections he will raise.

Generalizing then, the contract CP in the case above provides not only the creditor but

> also the debtor with a choice - whether and how to defend himself

i.e. re-act to the creditor's claim (proposal, requirement).

2.3.4.2 *Illustration*

Suppose an insurance policy CP, according to which the insurer **may**, if he decides so, liberate himself by an objection that

> the aggrieved agent had more than 3,5 ‰ of alcohol in his blood

Two comments may be of value here:

- we should not confuse this condition of the debtor's $\underline{OA^z(+2)\text{-order}}$ with cases when a formally identical condition is imposed on the creditor's $\underline{BA^z(+2)\text{-order}}$,

- the obvious toughness of the condition indicates relative weakness of the defensive power of the insurer is.

2.4 The notion of bargaining

2.4.1 Contract formation

Recall that CP(0) $\rightarrow$ CP(+1) is to represent that a contract CP is being formed as a joint outcome of $\underline{L(+1)\text{-}}$ and $\underline{R(+1)\text{-order}}$, given the two orders "match".

As already emphasized, lawyers feel it necessity to distinguish which of the two counter-orders is a proposal, or re-action. The simplest case of matching can then be described so that "the proposal is fully accepted by the re-action".

By contrast, if the re-action does not match in the above sense, it may be viewed as:

- an express refusal, or even

- a counter-proposal, i.e., a new proposal submitted by the counter-party.

A series of such counter-proposals for contract formation (concluded by the final acceptance) is then often conceived of as bargaining in economics.

2.4.2 Other transitions

Apparently, in the consensual transition CP(0) $\rightarrow$ CP(+1), any of $\underline{L(+1)\text{-}}$ and $\underline{R(+1)\text{-order}}$ may become a justified proposal, or counter-proposal. Generally both L and R are entitled to propose the contract formation.

Contrariwise, the bargaining illustrated by $\underline{BA^z(+2)\text{-}}$ and $\underline{OA^z(+2)\text{-order}}$ has the following specifics:

- only $\underline{BA^z(+2)\text{-order}}$ may become a justified proposal (requirement), as the debtor has "no right" to *activate* his own obligation,

- if the two counter-orders do not match, the re-action $\underline{OA^z(+2)\text{-order}}$ cannot be conceived of as a counter-proposal (counter-requirement).

2.4.3 A choice to submit an ORDER

2.4.3.1 *A free will*

For demonstrative purposes, let us suppose that in the above enforceable transition $z(+1) \rightarrow z(+2)$ the conditions of justifiability are fulfilled for both $\underline{BA^z(+2)\text{-}}$ and $\underline{OA^z(+2)\text{-order}}$, should they be submitted. For example, let it be a general knowledge that the damage occurred and

the aggrieved agent was drunk.

Now we want to stress again that even under these circumstances:

- the client (as the creditor) may decide not to claim the damage, and if he does

- the insurer (as the debtor) may decide not to liberate himself.

As a digression we will only briefly comment that in the former case the debtor is enriched (unjustifiably?), while the latter case brings up similar enrichment of the creditor. Both cases bring forward nicely complicated legal problems as to the accounting of the two parties.

2.4.3.2 *Implicit regimes of bargaining*

The preceding discussion leads us to the topic of a "silent party" who decides not to propose (require) anything or re-act to delivered proposals.

Legal frame of the bargaining suggests here the following regimes:

a) proposal (requirement) has to be always submitted expressly,

b) re-action to the proposal need not be submitted expressly and the implicit regimes are typically set so that the silent addressee is supposed to:

- refuse the proposal for a consensual transition,

- accept the proposal for a enforceable transition.

Different implicit regimes, of course, strongly affect bargaining powers of the counter-parties.

3. REMAINING TOPICS

3.1 Supply and Demand

3.1.1 Economic approach

Economists describe the inter-action between L and R as a supply of and demand for goods and services. It is, e.g., a seller, insurer, land-lord, hospital, university … who supplies. The respective customer, client … is then on the demand side.

Thus defined roles may be misleading in its implicit asymmetry of the two parties, as the "supply" traditionally indicates the party more active in the market. However, as explained elsewhere, in the so-called centrally planned economy, it is the customer who takes up the initiative – "supplies" his cash to the market and searches for a would-be seller.

Let us only recall that lawyers rather speak in terms of proposals (requirements) and re-actions. Proposed, then, can be whatever: goods, money, obligations … whole contracts.

3.1.2 Contract formation

Let L(+1)-order be the proposal, i.e. let it be the party L who proposes the contract CP, or the transition CP(0) $\rightarrow$ CP(+1). By this L(+1)-order, the agent L, as an offeror:

- supplies a set of his obligations $\{z^L\}$ and

- demands for a set of counter-obligations $\{z^R\}$ of the prospective counter-party R.

As an illustration, let L be a seller, who thus promises as $\{z^L\}$ to deliver potatoes in June 2004 and oranges in January 2005 and who at the same time asks for $\{z^R\}$, i.e. money to be paid against each of the two deliveries.

3.1.3 Other transitions

As an example, let z^R, the obligation of the party R, be *activated* by:

$\underline{BA^{zR}(+2)\text{-order}}$ representing the proposal (requirement) of the party L as the creditor

$\underline{OA^{z}(+2)\text{-order}}$ representing the re-action of the party R as the debtor

Intuitively, one could say that the creditor BA^{zR} demands, while the debtor OA^{zR} will supply, given the "demand" is justified.

3.2 Transaction costs

The costs discussed here can be distinguished according to the type of a contract transition.

1) contract formation costs associated with:

    a) a search for a counter-party, i.e. an addressee of the proposal, preferably an agent willing to re-act, most preferably an agent prepared to accept the proposal,

    b) an agreement on the *inscribed* contract contents,

2) contract enforcement costs.

Put differently, the above transaction costs are generated by search, agreement and enforcement. For each of those operations may get the parties L and R a support from the respective MO in the form of a more or less elaborate service.

In explicit systems (such as NYSE) the organizer MO has a specific (vertical) contract CON^{REG} with both L and R and charges them a given fee for each specific service. In such systems the transaction costs are well structured. In NYSE, e.g., the buyer is aware what he pays for the shares and what is the price of the services provided by the Exchange.

4. SUMMARY

Some legal approaches to contracts are presented here as to inspire the economic models of bargaining. Therefore, exchanges of obligations are analyzed rather than exchanges of acts.

Bargaining between the parties L and R of the contract CP is presented namely as a communication between a creditor and debtor, bringing up developments in the respective obligation. The relative bargaining power of the two counter-parties is analyzed as and outcome of the so-called justifiability of their respective counter-ORDERs.

In addition, a specific approach to the economic notions of supply-demand and transaction costs is briefly touched upon.

                                                        ■