1. INTRODUCTION

1.1 The analytical benchmark

As said, the author will frequently confront his analytical proposals with what ET usually accepts as its didactic standards. To illustrate this referential wisdom, it may be of value to briefly sketch how *social choice and behavior* is conceptualized in the elemental economics of the Firm.

Basic or intermediary text-books of microeconomics establish the Firm by its Owner's choice represented as a solution to a maximization problem:

max $\psi\ (K, L, Q)$

s.t.: ***max 1***

$Q \leq a_f.f^0\ (K, L)$

$K, L \geq 0$

where:

$\psi\ (K, L, Q)$ is the Firm's profit $\psi = (p_Q.Q - p_K.K - p_L.L)$ assumed to be the (direct) utility function of the Firm's Owner,

K, L, Q are *endogenous* (choice) variables – capital, labor and output, respectively, whose combination (K, L, Q) will be called a *situation* of the Firm's Owner,

$\vec{p} = (p_K, p_L, p_Q)$ are prices of K, L and Q,

$Q^{max} = a_f.f^0\ (K, L)$ is a production function that associates to a given combination of inputs K and L a maximally attainable magnitude Q^{max} of the Firm's output Q.

Coefficient a_f will be – for simplicity – the only indicator of the Firm's technological efficiency. Prices p_K, p_L, p_Q and efficiency a_f will be taken as *exogenous* (environmental) variables by which the Firm's *environment* is constituted. We will also say that, a combination $(p_K, p_L, p_Q; a_f)$ constitutes a *state* of the Firm, whereas the *endogenous* (choice) variables (K, L, Q) represent the above established *situation*.

The structure of ***max 1*** can be also interpreted so that the *societal* driving forces of production are constituted by the Firm's Owner's:

sphere of interests	or a set of feasible (variant, attainable, affordable) *situations (K, L, Q)*,
preferences	or value judgments according to which the variants can be evaluated by the Firm's Owner.

In sum, if the Firm is defined by ***max 1*** the only thing that its hypothetical Owner prefers is a profit and the only constraint to this objectives rests in the Firm's technological capacity. In other words, the Owner will select as his-her optimal situation the combination *(K*, L*, Q*)* in which he-she will maximize the Firm's profit.

By a so-called demand-supply function

$$(K^*, L^*, Q^*) = \mathbf{ds}\ (p_K, p_L, p_Q, a_f)$$

is then represented how the optimum depends on the developments in the Firm's *environment* – how the Firm's optimal situation will be affected by its actual state.

1.2 Demand-supply vs. legal norm and business rule

1.2.1 IF-THEN representation

As the first step towards our methodological proposals, we will re-write – purely formally – the above exercises in microeconomics as follows:

A production function will be put as a *technological* IF-THEN rule:

IF:	*(K, L)*,	***IT 1***
THEN:	Q^{max} can be produced "at most".	

Similarly, the *societal* driving forces of production will be represented by a *behavioral* IF-THEN rule:

IF:	***max 1***,	***IT 2a***
THEN:	$(K^*, L^*, Q^*) = \mathbf{ds}\ (p_K, p_L, p_Q, a_f)$.	

Graphically, the two rules are represented by the input-output schemes in (a) and (b) of Fig. 1, respectively. The element denoted *JOIN* is added so far only with the aim to prepare the reader for the formalism by which production is represented in BPM. Later we will show that by logic gates such *JOIN* and *SPLIT* will be constituted particular "organizational patterns" of the Firm's production process.

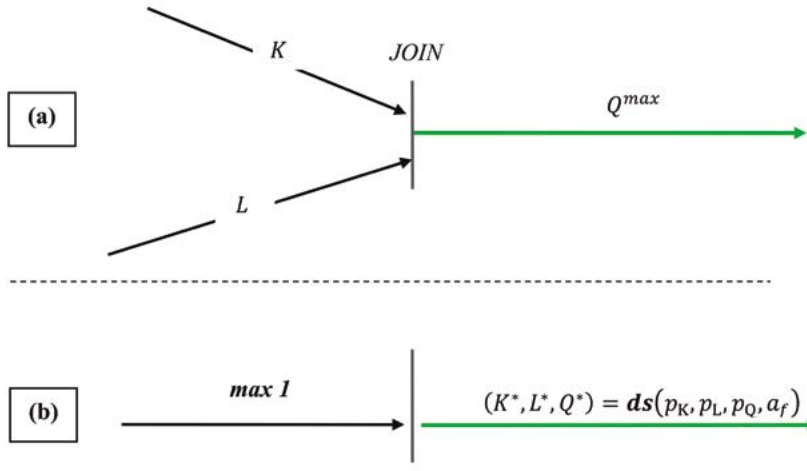

Fig. 1

1.2.2 Domain and range

Our preparatory work will continue so that we will rewrite the demand--supply function $(K^*, L^*, Q^*) = \mathbf{ds}\ (p_K, p_L, p_Q, a_f)$ into a mapping from the *domain* $\langle p_K, p_L, p_Q, a_f \rangle$ to the *range* of respective optima $\langle K^*, L^*, Q^* \rangle$ as follows:

[ds: $\langle p_K, p_L, p_Q, a_f \rangle \rightarrow \langle K^*, L^*, Q^* \rangle$]	***ds 1***

Its graphical representation is in Fig. 2:

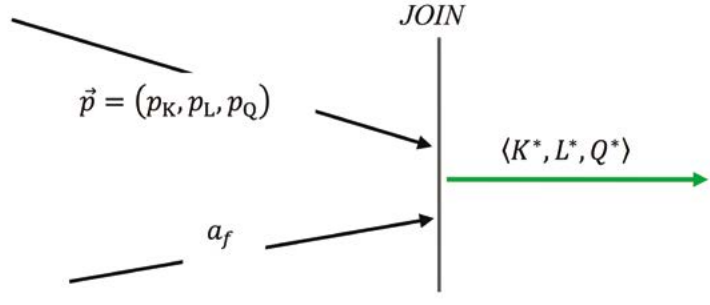

Fig. 2

Trivially, then, the picture can be read as:

IF:	(p_K, p_L, p_Q, a_f),	***IT 2b***
THEN:	(K^*, L^*, Q^*).	

Formula ***ds 1*** is firstly more correct – mathematically, so to speak – than the text-book demand/supply function $(K^*, L^*, Q^*) = \mathbf{ds}\ (p_K, p_L, p_Q, a_f)$. However, at this stage of the argument our emphasis will be only that the notion of a *domain* demonstrates explicitly, that the mapping ***ds 1*** is defined (exists) for only such combinations of prices and efficiency that fall into the set $\langle \vec{p}, a_f \rangle$.

The case when the *present* Firm "stays still" because its *future* behavior is not defined will be later confronted with other circumstances under which an agent "does not move" from his-her actual situation.

1.2.3 Conditions and tasks

In ordinary language the behavioral rule ***IT 2b*** can be read as follows:

IF:	an agent "falls" into a particular *state*,
THEN:	his-her behavior will be prescribed correspondingly.

This – so far only intuitive – terminology is another step towards our first methodological bridge between the canonized concept of a demand-supply and the following seemingly different concepts of LS and BPM where:

- the notion of a *legal norm* is in LS established in the general structure of a *hypothesis* and *disposition* (the third part being a sanction),
- the term *business rule* is applied in BPM in the basically identical sense.

The structure of a legal norm (business rule) can be read so that IF a given state of the world occurs *(hypothesis)*, THEN somebody can be made obliged to do something *(disposition)*. In plain terms, the IF-component can be seen as a *condition* (legal or business) and the THEN-component can be called an obligation, duty, plan, objective, … or a *task* as we will refer to it in this BOOK.

Let us stress that for the moment all that we wanted to uncover was the unexpected *formal* affinity between the concepts of a demand-supply and legal norm (business rule).

1.3 Natural vs. artificial language

1.3.1 IT-parlance

The bridge-building ambitions necessarily bring forward terminological problems. With respect to the above discussion we should launch a systematic search for a term that would comprise phenomena as – seemingly – diverse a "demand-supply" and "legal norm".

Before we set for this linguistic mission, the author should admit that he belongs to scholars who regard a so-called natural language as essentially useless for the sake of a serious analysis, including that of social choice and behavior. Among many other deficiencies, it simply does not contain large enough supply of words so as to differentiate social contexts in the manner that would be both consistent and nice.

As demonstrated, already for notions as "ordinary" as "interests and preferences" we have rather used a highly artificial language of microeconomics. Apart from this, we will introduce terminology whose roots mostly lie in the author's – highly adventurous – attempts to translate legal documents into a structuralized language applicable by IT-technology.

Admittedly, then, the further presented *IT-parlance* will include terms and phrases that can be easily disgraced as rather dogmatic, inappropriate or simply ugly. The following two examples should illustrate the scope and scale of the problem.

1.3.2 Example 1: A person in different roles

IT-parlance should primarily take hold of the common wisdom of namely LS, that a given person often performs a number of different roles so as to behave as different agents. Hence, in our *IT-parlance* and agent will be identified:

- firstly by name so as to identify him-her as a particular person and
- only then by the person's corresponding role.

To illustrate the resultant *childlike* language of the BOOK, a woman named Mary will be differentiated as

Mary-the Producer, Mary-the Driver, Mary-the Policewoman etc.

Ugly and grammatically incorrect as this language may be, one of its objectives is to demonstrate that the "same" Mary will be allowed to inter-act with – as if – herself.

For dramatic effect, we may let Mary-the Policewoman stop and arrest Mary-the Driver for drunken driving. Less anecdotic will then be our much deeper analysis of a *present* Mary who will transfer some of her wealth to herself in the role of a *future* Mary.

1.3.3 Example 2: An order as a carrier of will

Another prominent representative of our *IT-parlance* is the term *order* by which we will understand what would be elsewhere

a vote, claim, proposal, offer, acceptance, motion, objection,
(third party) action, (plaintiff's) complaint

Hence the term *order* will hereinafter stand for any articulation (expression, display) of an agent's will. We will say that an agent communicates by way of *submitting* or even exchanging orders. Various prefixes will then be applied so as to differentiate, e.g.

SELL-order, BUY-order, BEN-order, DEF-order, MAN-order, …

Prefixes SELL and BUY clearly refer to the communication on a stock-exchange and hence also demonstrate that some of the routines of this kind of a *market--organizer* have extensively inspired content and terminology of this BOOK.

Due to this prominent position of the term *order*, we will attempt to avoid usages such as "an order of performances", "a warning is in order", "law and order", "in order to" etc.

1.3.4 The evil of professional jargons

To conclude this linguistic section, we may add that it is a commonplace for LS and BPM – and not only for them – to attach a new term to a whatever phenomenon whenever it appears to be "somehow different". The opposite and highly recommendable approach can be well illustrated by the remarkable achievements of ET once it managed to accept the notion of a *price* as a common denominator for phenomena so seemingly diverse as, e.g., *interest rate*, *wage*, *rent* and *premium*.

However, one thing is the academic search for common denominators and entirely different thing is the self-interest of a professional community. We will certainly not be the first who will complain that also LS and BPM often use their jargon only to hide the genuine limits to their *know-how*.

1.4 Associated notes

Returning to the artificial language of standard micro-economics, the following two notes will concern (a) representation of the Firm and (b) one of the many essential questions to be raised.

1.4.1 Profit function

For the sake of further analysis, ***IT 2b*** will be sometime reformulated with the help of a formula

$$\psi^* = (p_Q.Q^* - (p_K.K^* + p_L.L^*)) \equiv \vartheta\ (p_K, p_L, p_Q, a_f)$$

where ψ^* is an optimal profit obtained by substituting optimal values (K^*, L^*, Q^*) into the formula for an ordinary (direct) profit.

As a result, ***ds 1*** can be replaced with a so called *profit function*:

$[\vartheta: \langle p_K, p_L, p_Q, a_f \rangle \rightarrow \langle \psi^* \rangle]$	***pf 1***

or the rule:

IF:	(p_K, p_L, p_Q, a_f),	***IT 2c***
THEN:	the optimal profit will be ψ^*.	

In words, the two monetary representations show how the *optimal* profit ψ^* of the Firm's Owner will respond to the changes in his-her environment.

1.4.2 Integrability problem

Returning to the rule ***IT 2a*** it can be somewhat generalized so that

IF:	an agent's interests and preferences are given,
THEN:	we may calculate out the respective behavior.

Then, it may be of value to remind the reader of the inverse text-book question:

IF:	an agent's behavior (action, performance, …) is given,
THEN:	what are his-her interests and preferences?

The inverse relationship is mostly discussed as a so-called *integrability problem* or the classic question "What does the agent maximize?".

2. MAJOR THESES

The following Theses *A*, *B* and *C* could be as well characterized as *Three Contributions of Legal Scholarship to Economic Theory*.

2.1 Thesis *A*: Designer vs. Designee

So far we uncovered the *formal* affinity between the concept of a demand-supply and the notion of a legal norm (business rule). Now we will claim that they all are products of a concrete, real-world agent – a so-called Designer.

2.1.1 Example

For the sake of illustration, let us consider two natural persons John and Mary whose roles will be – purely formally – characterized as

John-the Designer and Mary-the Designee

Let the empirical meaning of the two roles be – highly intuitively – specified as follows:

John — as a father of two children "feels obliged" to cover costs of their university studies and hence, "under this social pressure", considers variant strategies how to fulfill his task,

Mary — is an Owner of a shoe-making Firm who is selected by John as his best (optimal) strategy how to procure the necessary finance.

In other words, John – as a Designer – believes that he is "entitled" to design conditions under which Mary will have to – in his favor – launch her profit-making activity.

2.1.2 The thesis

We will argue that the relationship between a Designer and his-her Designee (Designees) constitutes the common denominator of the variety of social contexts dealt with in this BOOK. Thesis *A* in fact primarily states that the pair of agents

Designer and Designee

is the core of any societal phenomenon.

Should we smooth down the relatively harsh statement, we could say that the BOOK will confine to phenomena that can be derived from the above relationship between Designers and their Designees.

In the methodological sense we could also understand Thesis *A* as a proposal to approach any societal phenomenon so that its Designer and Designee will be uncovered. Exactly this we will be doing throughout the BOOK so as to substantiate the thesis in a variety of social contexts.

2.1.3 Operational unit

Invoking the above example and in the analogy with the already discussed demand-supply function ***ds 1***, we will further claim that Mary, as any other Designee indeed, will be always designed in a universal form of a behavioral IF-THEN rule, namely the mapping:

$$[m: \langle \vec{m} \rangle) \rightarrow \langle \vec{T}_m \rangle]$$

where:

- by the IF-component $\vec{m} = (m_1, m_2, ...)$ are designed conditions under which
- the THEN-component $\vec{T}_m$ can be prescribed as Mary's task.

For thus established IF-THEN rule we will coin the term *operational unit* or, for short, OP-UN. Doubtless, the terms "Designee" and "OP-UN" will be then taken as synonyms.

2.1.4 Designer's choice

As said, John-the Designer seeks to select his best strategy how to fulfill his task. In what follows the strategy will be denoted as str^* where the asterisk is the text-book mark of an optimum. By definition, then, str^* is a solution to the respective maximization problem:

$$\textbf{max}\ U\ (str) \qquad\qquad \boldsymbol{MAX_J}$$
$$\text{s.t.: } str \in [str(0) = \{str_1, str_2, \ldots, str_N\}]$$

where:

$str(0)$	is John's sphere of interests constituted by N variant *strategies* $\{str_1, str_2, \ldots, str_N\}$ how to finance his task,
$U(str)$	is John's utility function that represents his preferences over the set of variants.

Hence the objective of this BOOK can be also characterized as a search for an operational form of $\boldsymbol{MAX_J}$ and str^* – under this or that social arrangement.

2.1.5 Associated notes

1) The above example about John and Mary-the Shoe-maker illustrates the case when John's optimal strategy *str** consists in only one Designee – only one operational unit. Later, various patterns of *multi-unit* strategies will be corroborated in depth.
2) For the moment we leave aside not only *multi-unit* strategies but also the social setting under which a strategy *str** is designed collectively by an *n*-member organization.
3) In theory, John may design anybody into the role of a Designee. Yet, any such design can be efficient if only John is "somehow" superior to the agent under his design. As said, John "*must*" be "somehow" entitled to "impose tasks" upon his Designees.
4) Both components (IF and THEN) of an operational unit may consist in whatever John-the Designer may believe to enforce. To illustrate, the conditions designed by an IF-component may involve – apart from prices and technological efficiency – also diagnoses of injuries, trends in a climate change, human rights abuses, infidelity of women, juvenile criminality, … Apparently, all such events may be designed as (deliberate, negligent or unintentional) outcomes of particular behavior of particular agents.

2.2 Thesis *B*: Task vs. behavior

Thesis *B* will now address expressly what Thesis *A* contained only impliedly, namely that a Designer never designs factual behavior of a Designee but only his-her task. LS will then immediately remind us that a task may enter different stages of its development and that its content in every stage is likely to be of a complex structure.

2.2.1 Task vs. operational unit

We shall begin with one more confusion that may result from a reckless usage of the natural language. Our warning will stress that the very notion of a *task* can have a "non-empty" empirical meaning only in association with conditions under which the task can be prescribed.

Put still more accurately, what can make sense is only the above established operational unit as a whole. However, with the aim not to lose contact with LS-parlance, also we will often speak about "a task's stage and content" as if it represented the operational unit as a whole.

Given this license of speech, we will only remind the reader – from time to time – that a *task* is no more than a THEN-component of an OP-UN and as such, likewise the IF-component, has – in itself – no reasonable interpretation.

2.2.2 *Development*

Our Thesis *B* primarily states that a task's development (the development of the respective operational unit) consists in

a finite number of discrete and mutually exclusive stages

In this BOOK we will essentially confine to only three such stages denoted $M(1)$, $M(2)$, $M(3)$ in the following table for Mary-the Designee.

stage	**characteristic**
$M(1)$ *designed*	$M(1)$ is simply an abbreviated notation $M(1) \equiv [m\colon \langle \vec{m} \rangle) \rightarrow \langle \vec{T}_m \rangle]$
$M(2)$ *prescribed*	This stage is an outcome of a transition $M(1) \Rightarrow M(2)$. Depending on the particular state $\vec{m} = (m_1, m_2, \ldots)$, by $M(2)$ will be determined *who* will be to do *what*, *where* and *when*. Put differently, $M(2)$ is a specific *instance* (realization) of the set of potential outcomes designed by $M(1)$. Formally, $M(2)$ is obtained by substituting values of $\vec{m}$ into the mapping $[m\colon \langle \vec{m} \rangle) \rightarrow \langle \vec{T}_m \rangle]$. Whereas $M(1)$ has been read as an "IF-THEN" statement, the state $M(2)$ is a statement "BECAUSE-THEN".
$M(3)$ *completed*	The stage is an outcome of a transition $M(2) \Rightarrow M(3)$. Once in the stage $M(3)$ Mary loses any possibility to affect whether and in what particular form the prescription $M(2)$ will be fulfilled. Two mutually exclusive instances of $M(3)$ will be: $M(+3)$-*fulfilled* with the meaning that $M(3)$ is fully consistent with $M(2)$, or that the task is duly completed, $M(-3)$-*breached* when, by contrast, $M(3)$ is not consistent with $M(2)$.

In sum: $M(1)$ represents Mary in her designed stage, whereas $M(2)$ and $M(3)$ represent the same Mary but in "more mature" stages of her development.

2.2.3 *Content*

This BOOK is to a large extent also about the unmanageable complexity of the real-world. In the particular case of the mapping $[m\colon \langle \vec{m} \rangle) \rightarrow \langle \vec{T}_m \rangle]$ it may be enough to consider the following example of the stage $M(2)$-*prescribed*:

BECAUSE:	it rained in London for three days in a row and Mr. Strong (Mary's employee) is ill,
THEN:	another employee of Mary, namely Miss Weak will have to take a car "X" and deliver 15 pairs of shoes to the hands of Rock-the Receptionist of the British Parliament, on June 15th 2035, at 04.30 p.m.

In the BECAUSE-component of the prescription, "London" and "Mr. Strong" represent the particular form in which Mary's state has fallen into the domain $\langle \vec{m} \rangle$. The THEN-component of the example is to illustrate that Mary's task $\vec{T}_m$ has been designed as $\vec{T}_m = (K_m, L_m, \vec{Q}_m)$ where:

1) by $\langle L_m \rangle$ are designed potential Executors, e.g. Mary's employees,
2) the Executor may use only vehicles designed by $\langle K_m \rangle$,
3) the structure of the deliver is designed by $\vec{Q}_m = (Q_{a/m}, Q_{b/m}, Q_{c/m}, Q_{d/m})$, where:
   $Q_{a/m}$ is a specific kind of the delivery, e.g. shoes,
   $Q_{b/m}$ is a magnitude of the delivery,
   $Q_{c/m}$ is a place of the delivery,
   $Q_{d/m}$ is a time of the delivery.

2.2.4 Express vs. implied formulas

The above example clearly shows that operational units are in reality mostly designed by variables whose specific nature is often characterized as an *alpha--numeric vector string*.

The analytical unfriendliness of this kind of variables is more than obvious. Among others, they may allow for only primitive representations of the mapping $M(1) \equiv [m: \langle \vec{m} \rangle) \rightarrow \langle \vec{T}_m \rangle]$, e.g. that in the following table with the cumbersome enumeration of all the pairs of states and tasks that John decided to design as feasible.

Observed state	**Prescribed task**
$\vec{m}^1$	$\vec{T}^{\,1}_{\mathrm{m}}$
$\vec{m}^2$	$\vec{T}^{\,2}_{\mathrm{m}}$
….	…
$\vec{m}^{\mathrm{i}}$	$\vec{T}^{\,\mathrm{i}}_{\mathrm{m}}$
…	…
Example: • rain in London for three days at leas • Mr. Strong is not available	Example: • Miss Weak • car "X" • 15 pairs of shoes • Rock-the Receptionist • June 15th 2035, 04.30 p.m
…	…

Whenever John may attempt to replace this primitive enumeration with a more sophisticated representation, he will – most probably – pay dearly for this comfort by a loss of content. A simple example will be a linear function, through which John will determine that, e.g., the longer will last the rain the further will be postponed the time of delivery. The obvious benefit would be that the

function provides – impliedly – an infinite number of potential prescriptions. The loss rests in that John had to sacrifice, e.g., his ambition to regulate the relationship between a particular Executor and place of delivery.

The highest price is then paid by Designers who simplify their outcome into a constant mapping by which the same task is prescribed in any feasible state of Mary's environment.

2.2.5 Task vs. condition

Our first warning stressed that, contrary to what the natural language may suggest, a task is no more than a THEN-component of an OP-UN and as such has in fact no reasonable interpretation. Another note of this kind will be that, in ordinary speech, we may read the OP-UN so that: Should the task $\vec{T}_m$ be prescribed, the state of Mary's environment "*must*" be feasible. Similarly, one can say that

$$\text{the state } \vec{m} \text{ "}must\text{" be from } \langle \vec{m} \rangle$$

By quotation marks in "*must*" we stress that the word *must* represents here a condition rather than a task. In particular, highly confusing may then become arrangements under which the condition requires that somebody, e.g., Richard must fulfill his task. Here, we will have to carefully differentiate between cases when:

- Richard must fulfill his task because he has been so designed (by John or some other Designer),
- Richard "*must*" fulfill his task because Mary herself has been so designed (by John).

Needless to stress that legal documents in particular can be perfectly unclear about which of the two fundamentally different *musts* has been meant.

2.3 Thesis *C*: Designee vs. Nominee

Strongly inspired by elemental LS, again, our last Thesis *C* will claim – somewhat mysteriously – that a Designee – as an agent – involves three agents, namely a Beneficiary, Defendant and Manager.

2.3.1 SP-representation of an operational unit

Put differently, Thesis *C* states that John's design of Mary involves nominations of the above triad of Nominees.

We may use the mapping $M(1) \equiv [m\text{: } \langle \vec{m} \rangle \rightarrow \langle \vec{T}_m \rangle]$ again and express Thesis *C* so that Mary's environment $\langle \vec{m} \rangle$ will consist in three separate sets of conditions $\langle \vec{m}_{\text{ben}} \rangle$, $\langle \vec{m}_{\text{def}} \rangle$ and $\langle \vec{m}_{\text{man}} \rangle$ by which specific requirements will be imposed upon the three Nominees.

Hence, Mary's design will be put as

$$M(1) \equiv [m: \langle\langle \vec{m}_{\text{ben}}\rangle, \langle \vec{m}_{\text{def}}\rangle, \langle \vec{m}_{\text{man}}\rangle\rangle \rightarrow \langle \vec{T}_m\rangle]$$

and read so that Mary can be prescribed her task $\vec{T}_m$ if and only if the behavior of a Beneficiary, Defendant and Manager is consistent with what is required by $\langle \vec{m}_{\text{ben}}\rangle$, $\langle \vec{m}_{\text{def}}\rangle$ and $\langle \vec{m}_{\text{man}}\rangle$, respectively.

For reasons to be explained later the formula $[m: \langle\langle \vec{m}_{\text{ben}}\rangle, \langle \vec{m}_{\text{def}}\rangle, \langle \vec{m}_{\text{man}}\rangle\rangle \rightarrow \langle \vec{T}_m\rangle]$ will be referred to as an SP-representation of the general mapping $M(1) \equiv [m: \langle \vec{m}\rangle \rightarrow \langle \vec{T}_m\rangle]$.

2.3.2 A Beneficiary

It is a common wisdom in LS that every task is, by definition, always designed in *favor* of a particular agent – a Beneficiary. For concreteness, the Beneficiary "assigned" by John to Mary will be personified by a young man named Benjamin. Let us stress that Benjamin-the Beneficiary is, by definition, the only agent entitled to *demand* that Mary's task be prescribed and hence also fulfilled.

Benjamin's demand will be called

a BEN-order

and hence his role will then be characterized as his choice whether and in what form he will submit a BEN-order. As said, the BEN-order must satisfy conditions designed by the sub-domain $\langle \vec{m}_{\text{ben}}\rangle$. For the sake of our analysis, the conditions will be classified into:

- a trivial condition that Benjamin will ever decide to submit his BEN-order – that he will *not* decide NOT to submit the order,
- the the order's correctness and justifiability.

At this stage of our argument, the notions of an order's correctness vs. justifiability will have to be accepted only intuitively. Their analysis will be postponed for later as it will still require some more preparatory work, and in fact we can do without it at the moment.

For the moment we shall rather stress that – in this particular exposition – Benjamin is not the same person as John and that this fact is to demonstrate that John designs $M(1)$ in favor of a *third* agent, i.e. a person other than John or Mary. Put in LS-parlance, Benjamin is a *third party* Beneficiary.

In contrast, John may design $M(1)$ in his own favor – so that he himself will become the Beneficiary. Moreover, even Mary may be the Beneficiary who will, then, herself determine whether and in what form her own task should be prescribed.

In conclusion we will use the opportunity and claim that – given our bridge-building ambitions – we will take the roles of a Beneficiary and a so-called Plaintiff as of the same kind, in principle.

2.3.3 A Defendant

By a sub-domain $\langle \vec{m}_{\text{def}} \rangle$ are designed conditions under which an elderly gentleman, named Dave for illustration, will be entitled to submit

a DEF-order

with the aim to affect the outcome of Benjamin's BEN-order. Hence, Dave-the Defendant is, by definition, the only agent entitled to modify or even nullify what would be prescribed otherwise – should Dave decide NOT to submit his DEF-order.

The conditions $\langle \vec{m}_{\text{def}} \rangle$ will be, again, classified into:

- a trivial condition that Dave will ever decide to submit the DEF-order and
- the order's correctness and justifiability.

In LS this kind of a Defendant's "defense" is associated to topics such as *voidable act*, *defense*, *estoppel*, *statute of limitation*, *waiver* etc.

However, the gravest confusion may arise from that the aim of a DEF-order is *not* to raise "objections" against BEN-order's incorrectness and-or unjustifiability. As established here, DEF-order can have a sensible empirical meaning if only a BEN-order is ever submitted and as such is "perfectly" correct and justified.

2.3.4 A Manager

What remains is the obvious question who and how will validate the two counter-orders, who will determine that the BEN- and DEF-orders satisfy the above established conditions. For that matter, Thesis *C* states that, John-the Designer "must" – within $M(1)$ – also nominate the respective "referee", judge, intermediary, fact-finder, assessor, ….

In this BOOK the role will be called a Manager and mostly personified by a young lady named Manuela. In short, Manuela-the Manager will be, by nomination, entitled to issue the ultimate *verdict* about whether and in what particular form Mary's task will be prescribed.

In our IT-parlance the verdict will be referred to as a

MAN-order

and we will differentiate whether it is in the *affirmative* or *negative*.

By a *negative* MAN-order Manuela determines that Mary is to "remain where she is" – or, by far more accurately, to remain in her stage $M(1)$. As explained the MAN-order will be in the *negative* namely when Manuela determines that the respective BEN-order does not satisfy conditions $\langle \vec{m}_{\text{ben}} \rangle$ or has been "successfully" nullified by the DEF-order.

In the full analogy with other Nominees:

1) By $\langle \vec{m}_{\text{def}} \rangle$ are designed conditions under which Manuela-the Manager may produce her verdict. The conditions will be again classified into a trivial condition and conditions of correctness and justifiability.
2) Into the role of a Manager may be nominated whoever – not only Manuela as an *impartial third* agent, but also – Benjamin, Dave, John, Mary or all of them as a four-member organization.

To conclude we should – as in many other cases of our IT-parlance – admit that it may appear inadequate to coin the frequently used term Manager for this particular role of a Nominee. The rationale for this term will be seen later, once our concepts of an *ex ante* and *ad hoc* regulation will be introduced.