A SOCIO-PHYSICAL APPROACH TO TAKING DECISIONS IN SOCIAL CONFLICTS. 2nd PART: SOCIO-PHYSICAL MODELS IN NEGOTIATING AND IN PROMOTING "ROŞIA MONTANĂ" PROJECT

Ioana-Roxana Chişleag[1], Radu Chişleag[2]

[1]University "Politehnica", Bucharest, Romania
e-mail[1,2]: chisleag@gmail.com

In order to model the negotiation processes occurring between the partners to a contract (e.g. in a joint venture), and promotion by the partners of the project that is the object of the agreement, and in monitoring these processes of negotiation and promotion, it is useful to make use of the Dimensional Analysis (DA) of the respective processes, through the following Postulates: of Inertia (PI), of Proportional Action (PP), of Action and Reaction (PAR) and of Superposition of Social Forces (PSSA), as well as models of Experimental Data Processing (EDP).

To begin with, there will be considered that two partners of the contract are involved in the negotiation process considered, the buyer and the seller of the goods or services for which the agreement is concluded, in our case, the exploitation of gold-and-silver ore at Roşia Montană.

In negotiating a contract or in finding a solution, it is to start from the different positions of the two partners to the contract, who try to promote their conflicting interests, and then, gradually, the two positions are altered through negotiation and compromise, until equilibrium is reached, at a common, intermediate position, resulting from the negotiations, which corresponds to the equality of the resultant forces, that of action and that of reaction. The final situation is recorded in the contract(s) (the general agreement, or the partial agreements, for example, on: licensing, pricing, environmental protection), which are signed by the partners and bind them in order to implement the project in question, during its life: debut, implementation, up toits completion and the liquidation of all the consequences of the project in time.

As a rule, many other forces besides the main forces, forces which overlap the main forces (PSSA), are involved in achieving the equality of the active and reactive main forces (PAR).

Such influence forces could be: the estimated earnings, the risks taken, the resources used, the lobbying actions, the actions of buying agents who will act (legally or not) against the force opposing the agent's employer, media intervention, the intervention of politicians having bearings at various levels of decision, the rules of the auction, the constitutional framework, the legal provisions, party interest groups, collegial interests, local interests, the accountability and immunities regime, costs of environment protection (natural, human, cultural, historical environments), cost of anti-terrorism, anti-subversion or anti-sabotage protection etc.

We may consider the partners to the Agreement, the Company (abbreviated as C) and the State (abbreviated as S), as opponents or adversaries in the meaning used in sports, and also in terms of the Postulate of Action and Reaction: opponents have opposing interests in matters of "zero sum" that are negotiated between them (as well as certain interests to third parties, with different weights for each part).

In the interval where nothing is changed in the agreement on the project, and no further action, not provided in the agreement in force, occur, according to the first postulate, that of "inertia"[1] (PI), the project follows the course agreed on (*status quo antem*).

The evolution established by the agreement is also maintained if the additional actions of the partners on the project, stipulated in new agreements, are correlated, being equal and contrary, thus not altering the equillibrium and the progress of the project (PAR)[2].

If, in the course of the implementation of the Project, additional unequal actions coming from the two opponents (C and S, the Contracting Parties) occur, diversifying (PSSA), increasing or decreasing the forces involved in generating the partners' respective actions under the contract, the project may change its course, and a new resultant force is involved, which can possibly be determinative, a force that applies to the project, which determines the sense, direction and magnitude of the acceleration or rate of project change, in keeping with the Postulate of Proportionality[3] (PP).

Socio-physics models can be very useful to the parties, auditors and objective assessors of the agreement in question, the investigators etc. Being general, the models introduced in the paper are useful in many other conflict situations involving decentralization, regionalization, subsidiarity, local autonomy, positive or negative discrimination of social groups etc.

Even if it they are not informed by the opponent, having noted a change in the course of the project (a deviation from the *status quo antem*), the interested party, the partner to the agreement or the external evaluator of the project, a third party, the media, can conclude that a new force is acting, a force not stipulated in the contract, and, applying PP, after the vector evaluation of the intervening force, the direction, sense and magnitude of the change observed in the field, may determine a number of characteristics of the force applied and the generator of the action – the opponent, for the partner,

[1] The first law of Newton, the law of **inertia**: "*All bodies remain at rest or in uniform rectilinear motion as long as other forces do not act on them, or as long as the sum of the forces acting on them is zero.*" $\boldsymbol{F = 0}$ >>$\boldsymbol{v = v_0}$= *constant. If the resultant force be zero, a body maintain a constant speed*. This law of inertia is known in social life as the postulate of inertia – **"status quo antem".**

[2] **P III**, **PAR** – the model is based on Newton's third law, the law of **action and reaction**, "*When a body A exerts on another body B a total force* $\boldsymbol{F_{A,B}}$ *(called the active force), the second body B always exerts on the first body a total force* $\boldsymbol{F_{B,A} = -F_{A,B}}$*, (called reaction force) of the same size and in the same direction (co-linear), but in the opposite sense.*"

[3] Newton's second law, the principle of **proportionality or of proportional action**: $\boldsymbol{F=m*a}$, "For systems of constant mass, the acceleration produced by a resultant force is proportional to that force in magnitude and acting in the same direction and sense as the direction and sense of the acting force".

respectively – the party that violated the agreement, for the external assessor.

This new force, which was not stipulated in the contract, may be due to the direct action of one of the two partners to the agreement (identified as C or S), the action of an agent of one of the partners, a third human party (T), an external entity (accident, unforeseen action from the environment); PP can indicate on which side the party agent or the outside entity had intervened.

COMPLEXITY OF NEGOTIATION AND PROMOTION PROCESSES

The negotiation process in social life is not a simple, one-dimensional process, but rather a complex, multi-dimensional one (DA), involving many components: financial aspects, material resources, protection of the natural environment, protection of secondary resources, protection of historical heritage, finding an alternative way for sustainable development, economic propaganda, political propaganda, nationalistic propaganda, environmentalist propaganda, so that it is necessary to consider that there are multiple simultaneous ways of competing actions, which can modify, with specific and total costs, and with different effects, the negotiation of an agreement, the final agreement, the dynamic stability of the evolution of compliance with the provisions of an agreement, the effects subsequent to the termination of the agreement.

In such situations, models based on the Principle of Superposition of Social Actions can be used– a principle which derives from the principle of superposition of forces in physics[4].

The magnitudes that enter the socio-physical equations introduced must be defined so that (DA) the dimensions that characterize them are fundamental and be able to assume descriptions that are comparable not only qualitatively, but also quantitatively (by using the same sistem of units), when comparing the relevant costs.

AGENTS OF THE PARTNERS

The agent that promotes the interests of a partner can be legitimate or not, paid to make lobby, or bribed. The agent acting for a partner can be a double agent, who simultaneously acts also as a representative of the opponent of the partner he/she represents or even a triple (multiple) agent representing (a) third party (ies). The representative of a partner can act as representative of the opposing partner, not being informed or being misinformed, being incompetent or corrupt, and thus acting to the detriment of the partner that he/she is officially representing, that is in opposite direction from what may be assumed from his/her affiliation or commitment.

In social phenomena, the owners do not interact directly with each other, but rather in a mediated manner, through their representatives – for example, private shareholders are acting, through a registered company, on the stock exchange, and the public shareholders (citizens) through public bodies (company, trust, department, ministry, government, etc.) who are their representatives, and it is these representatives who negotiate, sign and conclude the contract on behalf of the shareholders. The violations of the social action-reaction equilibrium may occur, not only between the representatives of the two partners, who negotiate, decide and implement, but also between the owners (shareholders) of the two opposite sides, between owners and their representatives of the same party, or between the owner and the representatives of the owner of the opposing party.

Third parties can influence the interaction of the two partners, of the two groups of shareholders, and thus influence the agreement between them, in a direct or a mediated manner, through their representatives or agents.

RECOGNIZING THE AFFILIATION OF AN AGENT

The affiliation of the agent of a party can be recognized (by applying PAR) through the direction and purpose or sense of his/her action, because, for example as an agent of party C, he/she can, in order to convince the opponent S, underline and exaggerate the possible loss of party C, which he/she is representing, while exaggerating the possible gain of opponent S, if the contract or its modification by negotiation could be done as C wants, and threatens that C, the party that he/she actually (and secretly) represents, will gain at the expense of the losses of opponent S (which he/she greatly exaggerates) if S did not respond to requests by C. And the other way round, for the other side.

An undercover agent of a party, for example C, may even be the representative (evaluator, negotiator, and decision-maker) of the party S.

Representatives of the parties of a contract, C and S, can also be agents of a third party T, who is supposedly nonpartisan, but more often than not is a "smart guy", a third party who would benefit (as a possible go-between) from both sides, to the detriment of both initial partners, who are mutual opponents when it comes to making a profit, yet partners in the damage generated by the third party.

Judging by the criticism the agents express, the solutions they propose, the approaches they use, the actions they undertake to change the contract or the very legal framework to allow the modification of the contract they want, the affiliation of the initiators of the modification can be easily determined, by analyzing, in a careful and well-correlated manner, the sense of the changes proposed, thus estimating in whose favour, and which opponent (and partner in the project) will benefit from the changes proposed and obtained and eventually, how large be the benefit.

NGOs, and even bodies of the state power[5], or representatives of foreign states or of international organizations, can act as corporate agents of one of the parties, who can go as far as arranging diversions in important moments.

The press, or the media in general, who say they are "neutral", conducting "unbiased" debates, but actually acting as agents of one party, are relatively easy to recognize by the dissymmetry of the advertisements they publish as to the options described, even though these advertisements are not directly paid by one of the opponents, but rather via NGOs, for example, NGOs which are funded by the interested party.

[4] **PSF** "*If several forces are exerting on a body at the same time, each force produces its own acceleration independently of the presence of the other forces, and the resultant acceleration is the vector sum of the individual accelerations*". $\sum_{i=1}^{n} \vec{F}_i = m\vec{a}$

[5] According to the opinion stated before the Special Parliamentary Commission by a minister initiator of the draft law on Rosia Montana Project, "the Romanian state is vulnerable only if the project is not implemented". Who's agent be him?

Because, sometimes, the State, when it is the sole owner of a resource (e.g., mineral resources), is the only entity entitled, by the agency of an organ of the executive branch of power of the state, to conclude an agreement (of exploration or exploitation, for example), it is necessary that the arbitrator should be external to the two partners, i.e. to be a body independent of the contracting executive at the level where the State is a party, or as the case may be, even independent of the executive, i.e., and internal legislative or judicial body, or an international authority, competent in Romania, which could be competent to act as a neutral arbitrator.

LIABILITY OF THE REPRESENTATIVES OF THE PARTNERS

The representatives of the contract partners are remunerated at the expense of the public or private shareholders, and in keeping with the PAR, they are answerable for their actions and decisions to the shareholders, who pay their salaries just to be represented by them.

The wages (or compensation) paid to the management executives of the exploiting company are public. They range between CAD$ ~700,000 and a few thousand $, a year. Their material liability is regulated by the Rules of the Toronto Stock Exchange and the shareholders agreement.

The wages of the representatives of the public shareholders in Romania are seldom published and, moreover, their material liability is not completely known.

As far as the Romanian partner is concerned, various ways to alter, mitigate, pass over liability of representatives have been attempted, and are still being attempted:

- Concluding the initial agreement at the lowest decision level possible, for example – that of the enterprise.
- Delegation of signature right at a lower fevel and pressure on the subordinated people by hierarchical blackmail for committing an illegal, act as required.
- Passing it over horizontally, between state bodies, in various stages of negotiation – between departments, or between ministries, when different ministerial responsibility is in place.
- Sending a contract that is prejudicial to the State for approval (e.g. Rompetrol, Roşia Montană), vertically, up to competent entities who are protected by immunity – Parliament, President of the country, and possibly even submitted to a referendum voted by the sovereign people.
- Imposing terms, by law or other regulations, which exclude a possible activity alternative to that stipulated in the contract, which would disadvantage the Company.

One of the solutions at all levels, in which representatives of the two partners (opponents) are protected from their own shareholders and third parties for their actions and create their leeway in future, unmonitored by shareholders or third parties, is **classifying the agreement** (and, of course, the negotiations), the representatives being thus defended against third parties, but also against the shareholders of the respective party, whom they actually represent, and who, not having access to information, having no knowledge of the real facts, can easily be misled about the meaning of the subsequent actions of their representatives of their actions, declared as being in the interest of the shareholders they represent, and not, as it actually frequently happens in actual fact, purely in the interest of those representatives, who are possibly easy to corrupt directly by the opponent, or by that's visible or undercover agent, who can sometimes be found even among the representatives of the injured party.

By classifying documents, one can hide, from one's own shareholders and from third parties, the real reasons of some amendments to the contract generated, required or imposed by the adversary.

In considering the balance between rights and obligations, important roles are played by the law of public servants' liability, the law of ministerial responsibility and the Constitution.

Since, under the Constitution, deputies and senators are elected directly by the people, they enjoy immunity for their actions as members of Parliament – vote, political statements etc. Because MPs cannot be punished, there are attempts at transferring some decisions, which would clearly violate public interests and should be made by the executive – at various levels, by the latter, upwards in the hierarchy, and even to the legislative, in different ways.

Since the legislative cannot decide on an individual contract proposed to become a law (DA), an initial individual contract is changed so that it becomes and emergency ordinance or directly a draft law, which could appear to open access to any candidate as a contractor, while also including in the text of the document one or more clauses dedicated to the interested company, which would exclude other contractors from the outset.

Since an agreement is not a public rule that can be adopted by a legislative body, attempts are made at establishing a rule or a standard, apparently of general applicability, but in fact allowing to conclude such agreements (for Roşia Montană, for non-renewable resources) with a sole bidder selected beforehand, for example by imposing restrictions of minimum scale, restrictions of technological monopoly etc., which are contrary to the present and future historical national interests.

For example, the content of noble metals in the final product, defined in the Roşia Montană project as "boullion doré", cannot be detected by the Romanian customs authorities, and the detection device may only be approved internationally if the annual amount of the product being inspected exceeds 10 tonnes of fine gold, an amount which is virtually less possible to achieve through the Project. Therefore, the legal premise is created that the noble metals in the final product cannot be checked when exported for refining, very much as the numerous samples sent for detailed analysis abroad have not been checked as the noble metals content be concerned.

This method of breaking free competition by dedicated clauses in the legal frame is taken over from the auctions at lower level, where dedicated clauses are commonly included, and those who make the bidding rules often elude their liability for the content of the regulation in question, which vitiates free competition among bidders, *ab initio.*

EFFICIENCY OF THE AGENT OF A PARTNER

The efficiency of an action by the agent of a partner can be defined as *the ratio between the gain expected by the partner, accruing from that activity of the agent / total price (including taxes and brokerage) paid so that the agent performs that action in favour of that partner*, legally or through or corruption.

For example, knowing the gain through amplification (leverage, gearing) that is usual for bribery, in the given social context, it may be possible to get indications to determine the size of bribery, in addition to its direction. Conversely, learning the amount of bribery one can estimate the estimated illicit gain of the bribing party (in Romanian actual context up

to hundred times the bribery value). From the Postulate of Action and Reaction we can determine the intensity of the action that is to be undertaken by the partner who is adversely affected by the modification observed, which is generated by the action of the opponent, so that a new agreement be concluded, through which the actions of the two negotiating partners, the opponents, could be re-balanced, so as to have the resultant reaction force equal to the resultant action force (PAR), and the, now stable, system might subsequently evolve to reach a new state of equilibrium.

In most cases, each partner acts by means of multiple forces (PSSA). For instance, evaluating the specific cost of each type of action involved in reaching the agreement (although this may sometimes be very difficult) and the relative weight of each action, a party to the negotiations may greatly increase the absolute magnitude of an action that is cheap, e.g. aggressive media propaganda, decisions of local decision-makers, and by so, changing the resultant of the forces and having total costs that are much lower than if a different kind of action be used, on account of the huge differences between specific costs – for example, between the total cost of propaganda (e.g., money paid to support the false idea that the technology applied is safe rather than cheap and outdated, being banned, or about to be banned, world-wide) - a cheap one, and the cost that would have go into the effective protection of the natural environment, the conservation of secondary resources while extracting the main resource, and the historical cultural heritage environment - a huge one.

The efficiency of the action of the agent of a partner in a centralized structure depends on:

- The hierarchical level the action takes place at, the efficiency increasing with the hierarchical level, for example, the agent of partner C, acting in the decision structure of S, situated at a superior level in S, can cause issuing a binding decision to be carried out at lower levels to S (for example, oral "indications", possibly sanctioning the subordinate staff, in case of disobedience)
- The moment of the action (a provision is more effective than a corrective, or last-minute, intervention),
- By bribing decision-makers situated in as high places as possible, who should be opinion leaders, and be publicly visible and appear easy to identify as supporters of Part C, in order to increase the value of the shares purchased on the stock by people forewarned of the upcoming public interventions,
- The relative price of the intervention on the legal or illegal lobbying market,
- The connection with various organized (multi-power) groups of interests, for example, colleague groups (peer groups).

Also, effective actions are the following:

- Accreditation of a contract term, possibly non-existent legally, through subsequent legal acts [6],
- Classification of the law, which refers (even if only in the annex) to secret or top secret documents,
- When the substantive law cannot be changed conveniently, one can have recourse to amending the procedure so as to favour one party,
- Creating judicial precedents,
- Issuance of another law, which could be invoked in a possible "fraud to the law" case.

One can also use the drafting of dedicated laws, which could allow fraud to the law in the interest of one party, by creating deliberately caused conflicts.

Legally (DA), the draft law should not provide public rights transferred to a private entity (e.g. the right to expropriate land).

Another source of profit, e.g. for party C, is when party S, situated at a higher hierarchical level, is still negotiating with the party S (itself) at a lower level, subordinate to the higher party S, when S is at the same time a minority shareholder in the project, also being partner to the contract and the creator of the normative framework, which is created to regulate the agreement (for instance, the State is both an arbitrator and a minority shareholder to RMGC, striving to create advantages for the contracting parties, that is, specifically for the majority shareholder, against the State itself).

The models and methods presented so far are useful for the investigators who try to find the illegal or undercover agents of the parties in the negotiation, and especially those opposing the State.

THE AUCTION

The auction is an instrument that should ensure fair competition in the process of attributing the implementation of a project (EDP), so that the party offering the project is sure to benefit from the most advantageous offer in point of both total price (which should be minimum), and protection (maximum), which should also be convenient to those who bid for the attribution of the project.

In accordance with the position or the capacity of the organizers, auctions may assume several forms (that can be found in the Roşia Montană project):

- Tenders for the sale of goods,
- Tenders for purchase of goods, facilities and award of operations of construction and assembly.

When the owners are disseminated and act indirectly, through their representatives, bidding or attending the auction by making decisions, PAR suggests that these representatives can also act in opposition to their public or private shareholders, and try to obtain personal gain at all stages of a project by:

- Preparing and conducting an auction, in drafting the specifications so as to include conditions achievable only by a particular tenderer, who secured the protection of the representative of the opposing party. Of course, depending on the relative importance of the project and the amounts paid to the agent of the tendering party acting to the detriment of the party that they represent, the level of the conditions that occur in the specifications can be raised to higher levels, as far as issuing (sometimes in advance, and, at other times, during or after the approval of the auction) ministerial instructions, instructions for enforcing the law, amending an existing law, amending several existing laws, a new law allowing the selection of the winner *ab initio*, and even amending the Constitution[7], to create advantages to the participant preferred.

The highest efficiency will be reached when the regulatory framework is changed or planned with a preferential destination, stipulating conditions that can be met only by one candidate, who is the preferred candidate (Part C) to enable the

[6] concerning the license holder, the license content, f. e.

[7] *"**One way to solve the problems associated with mining (in Romania) is the reform of mineral rights**"* (n.m.: that is, amending Art. 136 of the Constitution), Walter Russell Mead (interview, 10/13/2013), acting as agent for companies interested in extracting non-renewable mineral resources (gold, shale gas, etc) in Romania, heavily popularized by the media in Romania, during the debates in the Special Roșia Montană Parliamentary Committee.

auction or the modification of the agreement, and thus eliminate competition, or even a comparative evaluation, before a decision by party S. So, rules and standards can be modified, such as: the specific rules for the auction, regulations for auctions of the same type, the ministerial rule, an Emergency Ordinance, existing legal provisions, by a new law, going as far as amending the Constitution, for example, in order to change the property regime of mineral resources[7],

- Attributing the project, which was apparently bidden in a correct manner, before achieving the condition of advertising compliance.

- Drafting the specifications, apparently not having in mind a particular bidder, but, such as to ensure the granting of the license in undemanding conditions to a go-between bidder, who does not appear as being protected by the specifications, and then,

- Transfer of the license, possibly free of charge, to an associate of the licensee, which has completely different interests,

- Transferring the negotiation of the project at horizontal levels (between enterprises, between trusts, between departments, between ministries), or even vertically, upwards (to boost immunity of the decision-maker), and possibly downwards (delegation etc.), in order to limit the material liability of the decision-maker and the existence of better and better-structured group relationships, which are easier to influence, aiming at masking the responsibility of the decision-makers. Transferring the decision downwards (by also invoking decentralization) is required, in terms of the law, by the strengthening of the central judiciary power, in Romania, as local decision-makers are convinced that they will be able to negociate more easily with the local judiciary bodies, because local groups of stakeholders are, locally, relatively much stronger than they are at the central level,

- **Involvement** of third parties – NGOs, "scientists", and even subsidiary bodies of the state(s) authorities – to intervene in order to ensure the promotion of the project, without any of interveners engaging their (material, administrative, criminal) liability for the damage subsequently generated by the dedicated intervention,

- Requirement by the law (rules, regulations) that the measurements and studies that are to be conducted by independent bodies should be provided and paid for by the very body concerned.

The function of auctions in international trade practice lies in turning to account the commodities that will not fall into the types commonly used in the stock exchange. That is why the goods auctioned should be viewed by the potential buyers, advisors, evaluators – but yet most of the Roşia Montană Project documents are classified.

As a form of commerce, auctions have the advantage that they can provide a large amount of offers, help to know the foreign market, and facilitate making an objective, cost-effective decision.

Limited or unlimited liability of contractors in a contract for the transfer of the license shall be governed by that contract, while the partners in the Roşia Montană project preferred limited liability, and sometimes they even failed to regulate liability by the contract.

Liability of directors, advisors and suppliers also depends on the rules that are established by the departments or ministries that control that responsibility or liability: in terms of decision-making in production; to the workers' safety; to the natural environment, the human, social, cultural and historical heritage milieu; currently, many responsibilities are unclear, secret or non-existent.

It happens that the possible parasites of the State be the very people who must act as antibodies.

Optimizing the auction in the Roşia Montană project, a joint venture, appears to be negative, and in this respect (PAR, PP, EDP) can be invoked: the contract was attributed before signing the license agreement, and even before launching the tendering; the license to exploit the Rosia Montana ore was given free of charge; the false idea was accredited that RMCG already has a valid exploitation license, license granting a monopolistic exploitation after an unregulated previous exploration, instead of ensuring competition after different explorations; allocation of equity shares that are inversely proportional to the financial strength of the parties; failure to regulate the responsibility by time horizons (deadlines) characteristic of the effects of the project, extending the company's benefits by disseminating the detriment to the State; failure to provide certain terms regarding compliance with the legal purchase requirements.

Noting the existing uncertainties in the negotiations and the promotion of the draft Law on the Roşia Montană Project, the Parliamentary Committee (at last) proposed defining the phrase "the Roşia Montană perimeter", by a narrative description of the territorial boundaries and annexing a map of that perimeter, and found that it cannot be determined with certainty, from the documents attached to the draft law, whether the formalities relating to declaring the public utility of the project were met, so the Committee does require the authorized institutions to clarify that issue.

At the end of the procedures, the Parliamentary Committee notified the Prosecutor General of Romania on the irregularities found[8].

The advantages of applying socio-physical models can be a handy instrument usable by investigation bodies, and then legal authorities, which could apply them fruitfully.

Acknowledgement

The authors thank to professors Gheorghe SĂVOIU and Ion IORGA-SIMĂN, the editors of ESMSJ and the organizers of EDEN I-VI workshops, who strongly encouraged them to develop the topics of the present work and especially to professor Constantin MANEA who kindly prepared the English version of this work intially addressing Romanian social activists, by providing them with objective, quantitative, socio-physics, simple models in approaching social conflicts, particularly on the Rosia Montana Project.

Ioana-Roxana Chişleag & Radu Chişleag

Bucharest, December 21, 2014

[8] The Roşia Montană project can be called "OMNISHAMBLES", a term which refers to a project that has failed completely due to a series of mistakes and failures. The term first appeared in a British skit series, and was recently included in dictionaries.