

IMPROVING GALTUNG'S A-B-C TO A SCIENTIFIC THEORY OF ALL KINDS OF CONFLICTS¹

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ABSTRACT: With respect to past wisdom about conflict resolution, Galtung suggested an important innovation: according to him, a conflict is essentially composed by three aspects A-B-C, i.e. Assumptions, Behaviour and Contradiction. These aspects are here defined in a more accurate way so as to make them independent of one another. Three representative theories of micro, meso and macro conflicts respectively – i.e. Freud's theory of intimate conflicts, Marx's theory of social conflicts, and Clausewitz's theory of war conflicts – are interpreted through improved definitions of A, B and C, which moreover bring a new light to these theories; in particular, they emphasize the three actors in each kind of conflict. In sum, through A-B-C, one is capable to properly interpret conflicts at all social levels. A further suggestion of Galtung's was to summarize all possible motivations of the aspect A. Whereas he characterized these two dichotomies by means of only some interpersonal features, I characterize them in structural terms; i.e. the kind of life-goal (infinity) and the kind of organization of life (authoritative law or freedom). These dichotomies are traced back to Leibniz's two labyrinths of human mind. Remarkably, each of the aforementioned theories is based on choices on the two structural dichotomies which are the alternative ones to the choices that the dominant, violent theory of conflict resolution is based on at the corresponding levels. From the aforementioned theories, an alternative model of conflict resolution is obtained in a parallel way to what was obtained inside the set of all scientific theories. In this model, the alternative choice on the kind of organization implies the use of non-classical logic. In fact, all the above three theories rely on non-classical logic, manifested in the original texts by their use of doubly negated propositions. In particular, the word non-violence, by including two negated words, is recognised to be the proper word for characterizing the alternative conflict resolution. As an application of this general model of conflict resolution, a six-step

¹ This contribution improves the contents of the previous papers: "A paradigm shift in conflict resolution. War and peace from a history of science viewpoint", P. Koller, H. Puhl (Eds.): *Current Issues in Political Philosophy. 19th Int. Wittgenstein Symposium*, Kirchberg, 1996, pp. 106-114; "Non-violence as a science of conflict resolution", *Anuvibha Reporter*, Dec. 2000, 5, pp. 111-116; "The rational structure of the non-violent worldview", in G. Gasser et al. (Eds.): *Culture: Conflict – Analysis – Dialogue. 29th Int. Wittgenstein Symposium*, vol. 14, ALWS, Kirchberg, 2006, pp. 79-81; "Galtung's theory of conflict resolution and beyond", *Asteriskos*, no. 3 and 4 (2007), pp. 17-31; and "The birth of Non-violence as a Political Theory", *Gandhi Marg*, 29 no. 3, Oct.-Nov. 2007, pp. 275-295.

method for non-violently resolving conflicts at the interpersonal level – a level not considered by the above theories – is suggested.

KEYWORDS: Conflict resolution, Galtung's A-B-C, Two dichotomies, Alternative motivations, Doubly negated propositions, Non-violence, Theory of the interpersonal conflicts.

La millora del model A-B-C de Galtung envers una teoria científica per a tota mena de conflictes

RESUM: En relació a la saviesa anterior sobre la resolució de conflictes, Galtung va suggerir una innovació important; segons aquest autor, un conflicte està essencialment format de tres aspectes A-B-C, és a dir, Assumpcions, Conducta (*behaviour* en anglès) i Contradicció. Aquí definirem aquests tres aspectes de manera més acurada per tal de mostrar-los independents l'un de l'altre. Tres teories representatives dels conflictes micro, meso i macro, respectivament –és a dir, la teoria dels conflictes interns de Freud, la teoria dels conflictes socials de Marx, i la teoria dels conflictes bèl·lics de Clausewitz– s'interpreten a través de les definicions millorades d'A, B i C, que a més aporten nova llum a aquestes teories; en concret, emfatitzen els tres actors en cada mena de conflicte. En resum, a través del model A-B-C, podem interpretar millor els conflictes a tots els nivells socials. Un altre suggeriment de Galtung va ser el resum de totes les motivacions possibles de l'aspecte A. Mentre ell va caracteritzar aquestes dues dicotomies en termes de només algunes propietats interpersonals, aquí les caracteritzarem en termes estructurals; és a dir, el tipus d'objectiu vital (l'infinít) i el tipus d'organització vital (lleï autoritària o llibertat). Aquestes dicotomies s'originen en els dos laberints de la ment humana de Leibniz. Notablement, cadascuna de les teories mencionades es basa en les eleccions sobre les dues dicotomies estructurals que són alternatives a les eleccions en què es basa la teoria dominant i violenta de la resolució de conflictes als nivells corresponents. De les teories mencionades, s'obté un model alternatiu de resolució de conflictes de manera paral·lela al que es va obtenir dins el conjunt de totes les teories científiques. En aquest model, l'elecció alternativa sobre el tipus d'organització comporta l'ús de la lògica no clàssica. De fet, les tres teories mencionades se sustenten sobre la lògica no clàssica, manifestada en els textos originals a través de l'ús de proposicions amb doble negació. En concret, la paraula no violència, en incloure dues paraules negatives, es reconeix com la paraula apropiada per caracteritzar la resolució alternativa de conflictes. Com a aplicació d'aquest model general de la resolució de conflictes, se suggerix un mètode de sis passos per a la resolució no violenta de conflictes a nivell interpersonal –un nivell que no es considera en les tres teories mencionades.

PARAULES CLAU: Resolució de conflictes, model A-B-C de Galtung, dues dicotomies, motivacions alternatives, proposicions amb doble negació, no violència, teoria dels conflictes interpersonals.

1. The notion of a conflict and its useful limitations

Many scholars are distrustful of the notion of “conflict” because its content is too wide; it ranges from intimate conflicts –e.g. dilemmas– to conflicts at interpersonal, social, international and civilization levels. No other notion claims to cover so complete a generality, apart from intentionally indefinite words such as the word “thing” is.

Nevertheless, one may accept the lesson coming from the introduction of the word “set” in the most accurate field of human thinking, Mathematics. Also a set refers to all mathematical notions. Its inventor, Cantor, admitted that it is so general a notion to allow even for contradictions. However, these contradictions have been avoided by the introduction of some constraints on its use (see e.g. Russell’s type theory²).

By learning the lesson coming from this intellectual experience, as a first constraint to the notion of conflict, I limit it at the aim to achieve a resolution; hence, rather than conflicts, I will deal with *conflict resolutions*.

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I suggest a second constraint concerning the method of resolution. In the case we allow violence, there is no limitation to the means and outcomes of the conflict; indeed, even the brutal suppression of the adversary and also the suppression of the conflict itself are allowed; hence, the number of resolution tools is infinite, and hence it results to be as indefinite to our reason. In such a case, no theorizing on conflict resolution is possible – and actually useful, since the conflict is easily resolved by practical tools; e.g. recall Alexander the Great cutting the Gordian knot by means of the sword. Instead, it is well known that necessity is the mother of invention; even more this dictum is true when one tackles a conflict without making use of tools allowing to suppress the conflict itself.

In sum, I suggest the limitation to resolve the conflict without arriving to suppress the adversary. In the language of game theory,³ we abandon the zero-sum games; they represent a totally asymmetric victory, as it occurs in the animal kingdom. Instead, conflicts in the human kingdom are usually resolved in a different way, which

² For an introduction to such a subject see e.g. H. Meschkowsky: *Evolution of Mathematical Thought*, Holden-Day, San Francisco, 1965, and M. Kline: *The Loss of Certainty*, Oxford U. P., Oxford, 1980.

³ For a clever introduction to game theory, see A. Rapoport: *Strategy and Conscience*, Harper, New York, 1964.

may be interpreted by a variety of non-zero-sum games; these games also include resolutions of a non-violent kind, according to which both opponents win.

In my opinion, the most relevant suggestions for theorizing on conflict resolution (hereafter, CR) have been suggested by the theorists sharing a non-violent attitude. Both Tolstoy and Gandhi⁴ started this theorization under the ethical imperatives of their respective religions, reformed in their basic tenets; hence they theorized conflicts in *subjective* terms. In the seventies, Gene Sharp made a Herculean effort to collect historical and sociological evidence of all non-violent actions effectively performed inside whatever conflicts; he obtained almost innumerable kinds of such actions (actually, 198). As a consequence, he suggested an *objective* representation of a non-violent CR.⁵ In the same years, Galtung introduced some theoretical notions –we will see them in the next section– which started a *structural*⁶ theory of a non-violent conflict resolution.⁷

Rather than choosing a preferred theorist –in other terms, preferring a CR interpretation in either subjective or objective or structural terms–, it is necessary to improve, in my opinion, the structural suggestions so as to include and jointly integrate the previous suggestions in view to formulate *a general theory of non-violent conflict resolution*.

I will show that Galtung's structural suggestions represent a first step towards a complete theory of non-violent CR. By exploiting also a structural parallelism with the theories of the "hard" science, I will offer seven improvements for Galtung's suggestions.

2. A first suggestion of Galtung's of a structural nature: A conflict as an A-B-C

Galtung first succeeded to offer a non-tautological definition of conflict. His definition includes three mutually interacting aspects at the same time. I temporarily define them as Assumptions, Behav-

⁴ L. Tolstoy: *The Kingdom of God Is Within You* (orig. 1894) several editions on internet. M.K. Gandhi: *All Men are Brothers. Life and Thoughts of Mahatma Gandhi As Told In His Own Works*, Unesco, Geneva, 1969.

⁵ G. Sharp: *The Politics of Non-violent Action*, Porter Sargent, Boston, 1973.

⁶ For instance, a mouse and a whale are very different animals in both their dimensions and their shapes; yet from a scientific point of view they share the same basic feature, to be mammalians.

⁷ J. Galtung (1996): *Peace by peaceful means*, Pluto, London, 1996, §. 2.1.2.

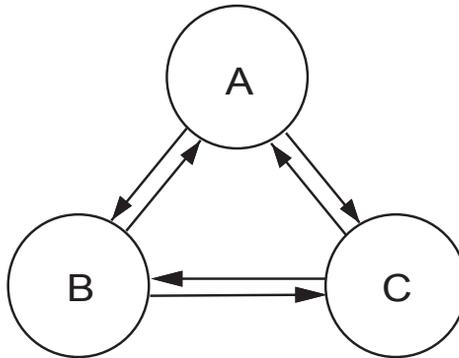


Fig. 1: Galtung's definition of conflict

ious and Conflict. They can be pictured as three vertices of a triangle (Fig. 1).

Galtung's definition of conflict as a triad A-B-C means that:

- 1) In the case of a violent resolution, the traditional approach – motivated by a monist view of life– does not want to pay the cost of considering the complexity of the three aspects of a conflict. Indeed, the monist conception of a CR (to appeal or compel to either Unity or Truth or Justice) urges to quickly force the resolution of a conflict in order to achieve a pre-established unity. Also a dualistic conception of a conflict (e.g. proletariat/capitalism, minor/major⁸) usually leads to a final result of a monist kind, even through the final elimination of the opposition (if not the opponent). Actually the traditional attitude of the monist or dualistic kinds understands the process of CR as a way to force the opponent to enter in a pre-established path. Galtung's definition constitutes a decisive intellectual step ahead. It affirms that a conflict does not pertain to either a monist or a dualist conception of life, because it is an A-B-C.
- 2) A conflict, when suitably tackled in its entirety, i.e. by embracing all its three aspects, is a plain affair, similar to learning the ABC in a primary school.

⁸ See e.g. P. Patfoort: *Uprooting Violence: Building Nonviolence*. Cobblsmith, Freeport MA, 1995.

- 3) Galtung's suggestion differs from the common visions on conflicts as it requires a more complex understanding than the usual one; it concerns three aspects co-existing inside an idea (conflict). This suggestion was a consequence of his non-violent attitude which cares for not only facts and feelings pertaining to the two opponents, but also for their basic motivations to solve their conflict.⁹ Indeed, before moving towards a resolution, a non-violent attitude completes the description of the situation by adding the intimate motivations.
- 4) A process of non-violent CR is suggested by taking in account Assumptions, Behaviour and Contradiction, all to be suitably combined together. This innovation overcomes the rationality of the violent attitude which, in order to rationally justify its final resolution of the conflict, has to appeal to only one of the three previous aspects; indeed, in a violent conflict, each of these aspects is enough to justify the suppression of the opponent, who is charged to be guilty as he either has committed evil actions (B), or is threatening the security of others' lives (C), or has incompatible assumptions with those of the winner (A). On the other hand, a consensual CR cannot be achieved by only clever assumptions (A), only good actions and benevolent words (B), and even less only best feelings.
- 5) In order to obtain a resolution constituting a victory for both parties, the three aspects have to be all considered as mutually interacting. Even two of the three aspects are not enough, as is shown by considering the following strategies: *i*) to free one's own feelings in order to denounce the most easily remembered facts; *ii*) to be moved by an emotional viewpoint in the aim of either justifying or rejecting objective facts; *iii*) to appeal to one's own assumptions which are covered by strong emotions, as military people do when they go to war; *iv*) to judge from some high principles the facts performed by the two opponents during the conflict.

⁹ At a methodological level, his innovation was illustrated by J. Galtung: *Theory and Methods of Social Research*, Universitetsforlaget, Oslo, 1967, presenting social science as a triad, i.e. Observations, Theory and Values; the third element constituting his innovation, as Assumptions do in CR.

3. First improvement: new definitions for Galtung's A, B and C

Unfortunately, a few times Galtung offered definitions of the nature of the notions A, B and C: he indifferently called them "aspects", "elements", "dimensions". In addition, he offered a few definitions of their contents which turn out to be not the same in his different writings.¹⁰

I want to suggest more accurate definitions of Galtung's A, B and C. I call them *aspects* of a conflict.

About their contents, I quote Galtung's definitions of A, B and C from the aforementioned book; then I add my modifications.

A: "*Assumptions (cognitions)... attitudes, (emotions)*". Really, these words mix ethical issues (i.e. assumptions, attitudes) with some issues (i.e. cognitions, emotions) belonging to a psychological domain.

My definition is the following one: A corresponds to *Assumptions*.

C: Galtung understands the "Content" as "a contradiction... involving... a goal".

Galtung's word "contradiction" characterizes the conflict through emotional issues belonging to the subjective domain; it represents an incompatibility phenomenon at "the theoretical, inferred, sub-conscious level". Yet, he adds the notion of "goal", apparently linked to the motivations.

My definition: C corresponds to the emotional contradiction.

B: Galtung understands the "Behaviour" or the "Facts" as constituting the "*Behaviour*" or the "*Facts*", constituting the "manifest, empirical, observed level" of the conflict.

My definition is substantially the same: B corresponds to *the objective domain of the facts related to a conflict*.

¹⁰ J. Galtung: *Peace...*, op. cit. Even in his last book on conflict resolution – which seems to be the decisive one for completing his long reflection on this subject (J. Galtung: *A Theory of Conflict. Overcoming Violence*, Transcend U. P., Kolofon, Geneva, 2010, pp. 27-28)–, he defines A-B-C in a different way: "A and B are party-oriented, C is goal-oriented. Our definitions pick up all three interpretations and could also be written: **Conflict= Attitude +Behaviour + Contradiction**. The goals are in A, the pursuit is in B, the actor is A+B, and the incompatibility in C. The opening definition links them with C as the *root* conflict in B, and A and B are *meta*-conflicts, metastases. This definition opens for A, B and C *orientations* in conflict for A, B and C *phases* in conflict dynamics and A, B and C *approaches* to conflict resolution. And indeed for A, B and C *mistakes* that distort conflict research, theory and practice." In fn. 17 p. 268 a "very short" definition preserves two aspects only, C ("incompatible") and A ("goals"). Then, it is even more shortened in "contradiction in general", i.e. C only.

My 1st improvement: From Galtung's inaccurate definitions I retain the characteristic features of A-B-C as follows: A corresponds to the structural assumptions, B to the objective behaviour, and C to the experiencing of a subjective contradiction.

This is a first result about the structural representation of conflicts; it attributes the same basic structure of three aspects to all conflicts.

4. Second improvement: From the three aspects to the three representations of a conflict. How they overcome the traditional wisdom on conflict resolution

Here I illustrate Galtung's suggestion in terms that in my opinion are more sharply defined. It is well-known that in a conflict each opponent illustrates the dispute by means of *an objective representation of his conflict*, i.e. those hard facts that he would present to a Court or write in a report on the conflict; for example, bad actions, offensive behaviour, use of negative tools or weapons, etc. Let us consider these objective aspects as representing Galtung's B.

The most clever analysts of a conflict add to this common, spontaneous representation, a *subjective representation* of the conflict, concerning the personal, subjective feelings and evaluations; in other words, this representation synthesises by means of subjective elements –i.e. intuitive ideas, slogans, emotions– all subjective facts involved in a conflict. Let us consider these subjective elements as representing Galtung's C.

The emphasis on A as an essential aspect of a conflict is in my opinion a major contribution of Galtung's. In fact, this third aspect, by representing the basic attitude of a person involved in a conflict, plays a decisive role for obtaining both a consensual CR and a correct theorization of CR. As a fact, the word "Assumptions" includes in a simple, although in a highly synthetic way, the philosophical, intellectual, ethical and religious issues motivating an opponent; it also includes his basic needs, which many scholars consider as the only important assumptions to be taken into account. It is apparent that, owing to the high relevance of the aspect A for a successful solution of a conflict, this motivational aspect of the conflict matters as much as the objective one and the subjective one.

Also the past institutional wisdom on the kind of CR which does not suppress or oppress the opponent is less comprehensive than Galtung's definition. The following table shows that some social institutions consider only one aspect of a conflict; some others only two; with none considering a conflict in its entirety. This table shows

**Table 1: THE MEANS OF CONFLICT RESOLUTIONS
AND THEIR REPRESENTATIONS ACCORDING
TO TRADITIONAL SOCIAL INSTITUTIONS**

SOCIAL INSTITUTIONS	REPRESENTATION OF A CONFLICT THROUGH	ASPECTS OF A CONFLICT		
		A	B	C
Religion, Psychology	Feelings	-	-	⊕
Traditional political ideologies	Systems of Thought	⊕	-	-
Sociology	Social Behaviours	-	⊕	-
History	Reports upon past events from an outside viewpoint	⊕	⊕	-
Roman Law, Court	Application of fixed laws to facts	-	⊕	⊕
Lineup in Court	Overt debate on a quarrel	⊕	⊕	-

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the impressive improvement of Galtung's suggestion with respect to past theoretical efforts of the social institutions built in order to solve conflicts (Table 1).

My 2nd improvement: In the new version of A-B-C, each of them originates a specific representation of the conflict at issue: *motivational*, *objective* and *subjective* representations.

5. Third improvement: Freud's, Marx's and Clausewitz's theories interpreted by means of A-B-C. The three actors playing each of their conflicts

In order to verify that the new definition of A, B and C can start a general theory of CR, let us interpret by means of them the most celebrated theories of CR suggested by previous authors, i.e. Freud's theory about interior conflicts, Marx's theory about social (class) conflicts, and Clausewitz's theory about military conflicts. They constitute the most representative conflict theories at the micro, meso and macro social levels, respectively.

Freud's psychoanalytic theory

Let us remark that Freud's psychoanalysis suggested a method of CR in opposition to the violent kinds of resolution practised at his time and also subsequently, i.e. containment measures of a mentally ill person, electroshocks and drugs altering the deep bases of his personality. Surely, such violent measures cannot suggest anything of the intimate dynamics of a person. In Freud's theory, the resolution of a conflict is pursued by merging the conflict inside a positive human relation, i.e. dialogue, and inside this dialogue, by favouring a transfer Patient-Analyst. In other terms, Freud's theory appears as an essentially non-violent theory of CR for intimate conflicts.

Freud's psychoanalysis about interior conflicts implicitly suggested the same three aspects of Galtung's. Indeed, Freud's work can be represented by means of the theoretical scheme in Figure 2, where each aspect of A, B and C is described by a different writing of Freud's; his separated illustration of each aspect shows the traditional difficulty in understanding three aspects inside a single idea, conflict.

The motivational representation of a person's inner conflict, A, is described by Freud's methodological writings, which summarized his innumerable analyses of the illnesses of his patients; while the objective representation, B, is given by his description of the lapsus, the only acts objectively manifesting inner compulsions; the subjective representation of the conflict is given first of all by his book *The Interpretation of Dreams*, since the patient's dreams may reveal his intimate experience (Fig. 2).

FREUD's theory of intimate conflicts: The representations

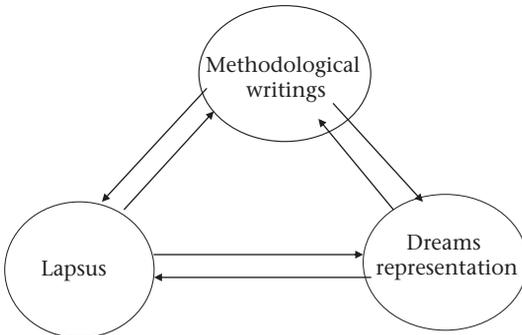


Fig. 2: Freud's three representations of the interior conflict

FREUD's theory of intimate conflicts: The actors

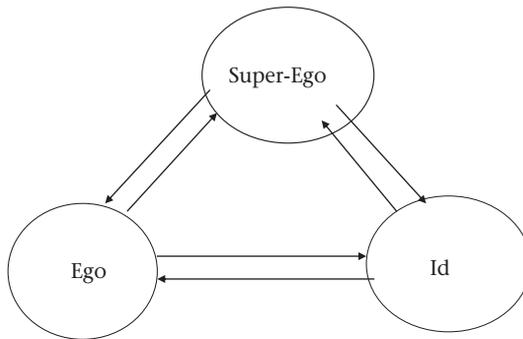


Fig. 3. Freud's three actors of the interior conflict

The previous three representations of the interior conflict constitute Freud's deep conception of a personality.

The case of Freud's theory leads us to discover that also the number of actors of an intimate conflict is three and they also correspond to Galtung's A-B-C. Indeed, the main result of Freud's theory was to recognize inside each personality three independent actors, by him baptized as Id, Ego and Super-Ego; the assumptions A are manifestly the ideal values of the Super-Ego; whereas the Ego manages the objective behaviour B; and the Id is the permanent source of contradictions, C (Fig. 3).

Yet, these three actors are not, of course, three persons, but only cultural creations for fixing our ideas in accurate terms; indeed, their interaction is enlightening the inner dynamics of human life. One can say that the Super-Ego enters in an intimate conflict by imposing its Assumptions; it projects its principles without any settlement with the answers given by the reality, except to suspend these principles when facing a negative reaction. The Ego practices its capability of mediating between Super-Ego principles and Id compulsions manifested through both fancies and dreams during sleep. Ego's failures are manifested by lapsus and mistakes.

Whereas the Id is constitutionally incapable to organize any vision of the entire conflict and even less of the external reality, the Super-Ego represents the conflict through what may be included by the applications of its principles. It is the Ego that is capable to achieve a rational re-construction of both the inside and outside situations, and hence also of a conflict, which –as Galtung suggests–, has to

include the above three representations. In sum, not all actors are capable to rationalize the intimate conflict.

Marx's theory of social conflict

In the history of society, the traditional conceptions for the resolution of social conflicts all allowed the recourse to violent methods, even the suppression of the adversary. Yet, the conflict inside a factory constituted an exception, since the capitalist had to avoid the suppression of his adversary, the Proletariat, otherwise he would have to terminate his production of goods, and hence his earnings. Hence, the factory was the first social space where conflicts had to be solved without suppressing the weaker opponent. On the other hand, the workers fought the capitalist by means of strikes, whose first result was self-sufferance (i.e. lack of salary) and second result was only a soft boycott of capitalist's interests.

Marx's theory certainly constituted some understanding of social conflicts which was much more satisfactory than that of bourgeois ideology. In the latter, the notion of a conflict is pictured through no more than interpersonal relationships; it is conceived through ethical stereotypes (rebels, evil-minded persons, etc.); hence, class conflict is viewed in terms of a mere resistance of some workers to the growth of the capital.

According to Marx, the class conflict will be resolved by progressing in the history of mankind to the next, unavoidable stage, characterized by the Proletariat's conquest of social power. This historical process will be accomplished by the working class by, first of all, achieving full consciousness of historical and social processes, hence a non-violent historical process. Marx's slogan "Workers of the World, unite!" asked not for an immediate rebellion or the constitution of an army, but for the growth of the Proletariat's awareness of the historical revolution, which, by propagating itself from a State to another, will change the history of mankind. This historical change will not necessarily occur in a violent manner. In fact, Marx, Engels and even Lenin never excluded the democratic resolution of the conflict, where the word "democratic" means a soft historical change by means of e.g. political elections.

In sum, the resolution of the conflict in a factory elicited an approximately non-violent way to solve a social conflict. Unfortunately none of the previous leaders knew the historical novelty of Gandhi's methods and techniques to resolve mass conflicts, e.g. civil disobedience. This ignorance was partly compensated in sev-

MARX' theory of social conflicts: The representations

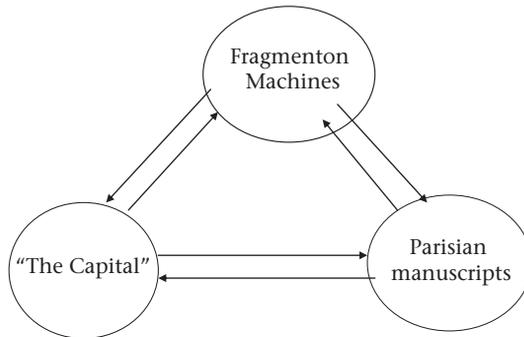


Fig. 4: Marx's three representations of social conflict

eral Western countries by the birth of trade unions, discovering in an experiential way new techniques and new methods of struggle, all of a non-violent kind.

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Also Marx described the three aspects of the social conflict by means of three different kinds of writings. *The Fragment on Machines* constituted an attempt to analyse inside the perspective of a very advanced technological development what the Capital laws will be in the future. Through *The Capital*, Marx attempted to describe the objective historical dynamics of a society managed by the bourgeoisie. *The Parisian Manuscripts* represented the Proletariat's experience of the social contradictions, i.e. its subjectively suffering the structural oppression caused by the Capital mediated by the Bourgeoisie (Fig. 4).

Also Marx's theory of social conflict presents three (social) actors; they are specific for this case of conflict: Capital, Bourgeoisie and Proletariat. They correspond to A, B and C; the Capital's rule, leading the history of mankind, corresponds to A; the social contradictions suffered by the Proletarians owing to the social structure managed by the bourgeoisie corresponds to C; B correspond to the Bourgeoisie's application of capital laws to society, in particular to workers. The mutual interactions of these three actors generate the conflict-dynamics of the entire society (Fig. 5).

However, Marx's theory remained incomplete. He had no time to specify the social processes by which the Proletariat's awareness may grow, as well as to detail the historical change in social power. In addition, Marx emphasised the conflict inside a factory so much to

MARX' theory of social conflicts: The actors

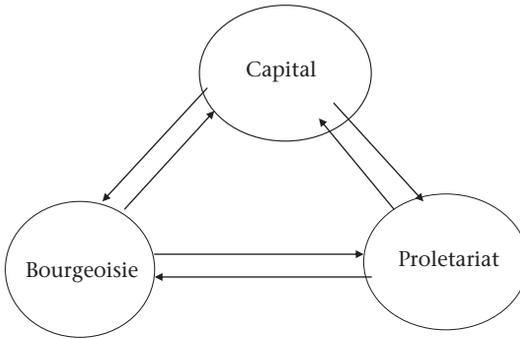


Fig. 5: Marx's three actors of social conflict

consider all other kinds of conflicts as depending from this one. No surprise if the Marxist movement on one hand ignored the personal conflicts by appealing to the obligations deriving from class struggle and, on the other hand, it was unable to adequately react to the conflict among nations, e.g. WW1; and later, being the Marxist theorists unable to enlarge the received theory to include the international relationships, the victorious Russian revolution confined the new historical advancement to one country only.

Worse, even during Marx's life, his theory was reduced to a representation of the capitalist economy only; this is the well-known vulgar-economicistic theory inspiring the policy of Marxist movement under Engels' leadership.¹¹ As a consequence, the civil society was disregarded; Marx's theory was simplified as representing a conflict between two actors only, i.e. capitalism and proletariat; being the bourgeoisie conceived as a mere executor of capital laws. It resulted the usual dualist representation of a conflict, whose resolution was nothing else than the suppression of the other party. In this reduced version of Marx's theory, only a violent revolution was possible. By reiterating the dominant theory of CR, the Marxist movement depicted its historical overcoming of the bourgeoisie

¹¹ Since Marx did not complete the edition of even the first book of the several times announced *The Capital*, F. Engels wrote his economicistic version of Marx's theory in the well-known book: *Anti-Duehring*, 1878. In the preface, Engels claims the approval by Marx, but we know that at that time Marx's subsistence depended on Engel's donations.

according to the dominant attitude in CR, i.e. in the crude terms of a violent revolution suppressing the adversary.

Notice that each actor of Marx's theory of social conflict was represented by a corresponding specific group; the bourgeois class, the proletarian class and the capitalists. Each group had the capability of building a specific ideology from its own viewpoint corresponding to A, B and C. Each specific ideology resulted to be completely different from that of the other two. The Capitalists produced an elementary theory of history, almost ignoring conflicts; they saw first of all an unbounded growth of the Capital on itself; hence they considered the history of society as a mere context, where the Proletariat represented a merely refractory social group.

The other two social groups, Bourgeoisie and Proletariat, rationalized their conflict in two opposite ways. The Bourgeoisie opposed to the Proletariat the unavoidable tradition of both the freedom of property and the freedom of enterprise, i.e. the characteristic features of Capitalism. Being the Marxist theory degenerated in preparing a violent revolution, it originated a disruptive class conflict. In the history of the last century and half, this conflict was so acute and widespread that it eventually produced world-wide a contraposition considered by the Marxist movement as a global war parted in so many pieces as the States were. Then this internal war in each state grew up to a confrontation between two world blocks of States threatening a nuclear destruction of mankind. This conflict was the most terrible one in the history of mankind; in fact, it was first of all an ideological conflict which even opposed two kinds of logic, the classical and the so-called dialectical one.

Incidentally, let us notice that the kind of structural linkage between the above two theories achieves a theoretical goal pursued for a long time, i.e. it suggests a substantial connection between the two "revolutionary" theories of the 19th century.

Clausewitz's theory about military conflicts

Surprisingly, even wars may be interpreted by means of Galtung's suggestion, as the theorist of a war is motivated, rather than to win at all costs, to consider as his best victory that obtained either "without fighting on the field" (Tzun Szu), or by having "saved men" (Lazare Carnot), or by preserving the relationship with civil society, in particular the government's policy (Clausewitz).

Notice that most share the attitude to solve conflict by violent means; they are so much fascinated by Clausewitz's reference to the

explosion of violence on the field that they miss the rational actor, policy, so that they identify the commander's strategy aimed to tackle the conflict as a planning of dualistic confrontation with the enemy.

In fact, Clausewitz declared that his strategic thinking on war is characterized by a "fascinating trinity", i.e. chance, violence and politics. The following quotation illustrates the trinity which Clausewitz conceived in representing a war:

"What is a war?... War is more than a mere chameleon that slightly adapts its characteristics to the given case. As a complete phenomenon, its dominant tendencies always make war a fascinating trinity, composed of: 1) primordial violence, hatred, and enmity, which are to be regarded as a *blind natural force*; 2) its aspect of subordination, as an instrument of policy, which makes it subject to *pure reason*; and 3) the play of chance and probability, within which *the creative spirit is free to roam*."

They correspond to the previous three aspects of Galtung's definition of a conflict. The "violence" corresponds to the explosion of the contradiction (C); the "policy... subject to *pure reason*" corresponds to A; the capability to tackle "chance and probability" inside the mediation between the previous two aspects, as well as all other aspects of the context of a war, correspond to B (Fig. 6).

The following Clausewitz' period presents the three actors of a war:

The first of these three aspects concerns mainly the people; the second, the government; the third, the commander and his army.

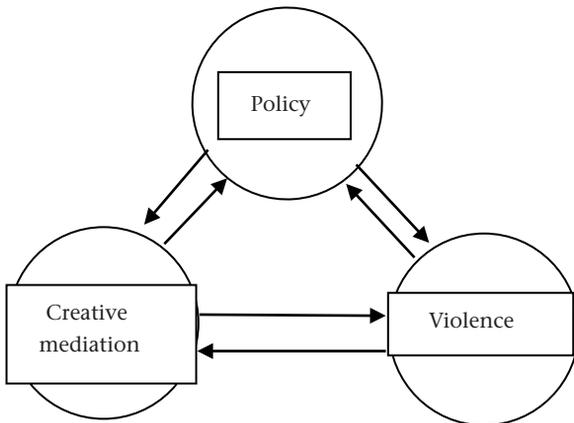


Fig. 6: The three representations of a war

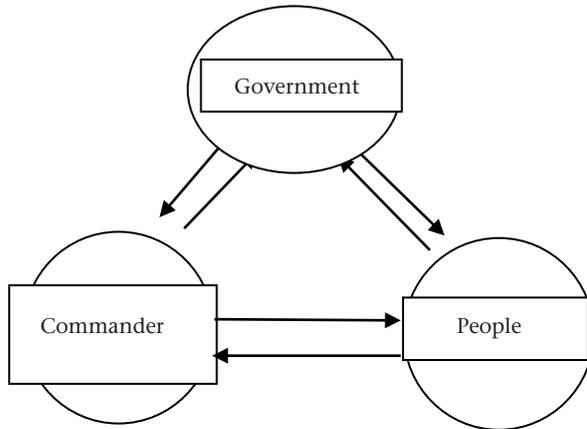


Fig. 7: The three actors supporting a war

72 The passions that are to be kindled in war must already be inherent in the people; the political aims are the business of government alone; and the scope that the play of courage and talent will enjoy in the realm of probability and chance depends on the particular character of the commander and the army. These three tendencies are like three different codes of law, deep-rooted in their subject and yet variable in their relationship to one another. A theory that ignores any one of them or seeks to fix an arbitrary relationship among them would conflict with reality to such an extent that for this reason alone it would be totally useless. The task, therefore, is to keep our theory [of war] floating among these three tendencies, as the pendulum floats among three points of attraction (Fig. 7).¹²

No better confirmation of previous exploration of the improved suggestion of Galtung's, i.e. a conflict as a triad A-B-C, could be imagined.

Notice the last proposition: it declares Clausewitz's purpose, i.e. he wants to tackle the trinity in its entirety, notwithstanding the three different viewpoints of the actors. This ambitious task resulted to be unsuccessful –the book is an amalgamation of separated maxims and reflections–; later, the exact content of his book resulted to be highly controversial.

¹² K. von Clausewitz: *On War*, Princeton U. P., Princeton, 1989, sect 1.1.28.

Let us remark how difficult it was for the Western culture to accept the above three theories. They were all born in the 19th century, but were appreciated in their respective intellectual areas not before a century after. In fact, each of them opposed to the dominant attitude of suppressing the adversary in a conflict.

The applications of Galtung's improved suggestion to the above three theories –ranging from the personal conflicts to the social and the interstate ones– is sufficient to prove that this suggestion appropriately covers all kinds of conflicts.

6. Fourth improvement: The Assumptions summarized by two dichotomies

A further crucial innovation of Galtung's was in 1974 his summarizing by means of *two dichotomies* the legion of motivations represented by A. One dichotomy concerns the choice between vertical interpersonal relationships and horizontal relationships; the other dichotomy being collective homogeneity and individual diversity.¹³ This innovation is of great importance since it radically changes the basic philosophical attitude, usually referring to a single idea, more or less widened or going to extremes, such as needs, causality, determinism, functionalism, etc.

But subsequently he dismissed this innovation; he preferred to attribute the A-B-C to each of the different levels of a contradiction, i.e. either latent or manifest, either superficial or deep, etc.¹⁴ I recuperate Galtung's intellectual structure of 1974; yet, whereas he defined the dichotomies in subjective or interpersonal terms only,¹⁵ I will define them in the structural terms of a conflict.¹⁶

¹³ J. Galtung: "Social structure and science structure", *International Journal of Critical Sociology*, (1974) I, 1, pp. 93-125. "Revised version" in: *Essays in Methodology*, Eijlers, Copenhagen, 1976, pp. 13-40.

¹⁴ J. Galtung: *Peace by Peaceful Means*, op. cit., Sect. 1.3; *Theory of Conflict*, op. cit., p. 75.

¹⁵ J. Galtung: *Ideology and Methodology*, Eijlers, Copenhagen, 1976, sect. 1.3.

¹⁶ Independently, I obtained two parallel dichotomies from an improvement of the two interpretative analyses of the history of science, i.e. from Koyré's *From the Closed World to the Infinite Universe*, U. Maryland P., Baltimore, 1959, and T.S. Kuhn: *The Structure of the Scientific Theories*, Chicago U. P., Chicago, 1969. In fact, both analyses deal with the conflicts between scientific theories or paradigms. See my paper: "What science for Peace?", *Gandhi Marg*, 7, 1986, 733-742; "Koyré, Kuhn and beyond", *10th Logic, Meth. Phil. Sci.*, Firenze, 1995, p. 320 (abstract); "The several categories suggested for the "new historiography of science": An interpretative analysis from a foundational viewpoint", *Epistemologia*, 24 (2001) 48-82.

Galtung's dichotomies can be traced back to scientist-philosopher Leibniz's thinking. He stressed "two labyrinths" of the human mind; they concern

- The *infinity*: either *Actual Infinity* (AI) or *Potential Infinity* (PI),
- "either law or freedom".

They correspond (admittedly, in a somewhat vague way) to the above two dichotomies.

Leibniz was unable to decide whether his two labyrinths are solvable or not, either by an intellectual research or by an ethical act, as Galtung suggested; in this latter case they become dichotomies.

I understand the former of the two labyrinths of Leibniz's as a dichotomy representing the basic two aims of life, either to pursue a mythical, *Absolute Interest* (AI), or a *Personalistic Interest* (PI). Moreover, I understand the latter of Leibniz's labyrinths as a dichotomy on the Organization of life, either an *organization* governed by *Authoritative* leaders and/or laws (AO), or an organization of a group searching for a new method aimed to solve a *Problem* (PO). Again the correspondence with Galtung's dichotomies is somewhat vague, owing to the variety of subjective representations of a structural feature.

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In order to fix the structural meanings of the dichotomies, let us consider a well-known instance of a couple of choices on them, i.e. those representing the Military way to solve conflicts. It chooses the *Absolute Infinity* (AI) of an infinite race for achieving even more destructive weapons through the most advanced scientific research. Moreover, it chooses the authoritative organization of a staff-and-line chain of command for imposing a compulsory behaviour to the troops (AO).

My 4th improvement. I summarize all possible assumptions in A through the least number of them, yet by preserving their variety, in two; in addition, each of them is assumed to be a dichotomy. These two dichotomies introduce a basic structure of four possible couples of choices on them. In such a way each of the four possible couples of choices in the two dichotomies represents some minimal ethics, which is sufficient to tackle a conflict and moreover to plan the search for finding out its resolution.

These two dichotomies also apply to the intellectual level of the above theories. On one hand, the dominant conflict theories choose the *Absolute Infinity* (AI) of the infinite progress of the *Absolute Spirit*, leading the history of mankind in an almost deterministic

way. On the other hand, the previous three conflict theories all choose the Personalistic Infinite, i.e. they want to increase the Patient's life, the Proletariat's social power, and the number of survivors in combats (PI) respectively.¹⁷ On one hand, the dominant conflict theories choose the Authoritative Organization (AO, i.e. laws obtained by deduction from a priori principles); the previous three theories of CR –being all based on the problem of how to cure an interior conflict, how in the historical development of mankind the Proletariat will overcome capitalism, and how to link military fight with politics respectively–, developed as a search to find out a new method of resolution of the crucial problem, i.e. constituted as a Problem-based Organization (PO).

These dichotomies also apply to the scientific theories. This fact is not surprising, since the scientific theories may also be considered as aimed to solve conflicts, i.e. the cognitive ones with Nature and, more in general, reality. Philosopher-scientist Leibniz referred to infinity as it is experienced both in life and in mathematical thought, where he invented the greatest advancement of all times, the infinitesimal analysis. Even on his deathbed, he was still dubious whether the correct basis of his invention was the potential infinity (PI) or rather the actual infinity (AI). At present, there are two main kinds of mathematics, i.e. constructive mathematics relying on PI and classical mathematics relying on AI. About the organization of a theory, the deductive one has been well-known since the times of Euclidean geometry. This organization is commonly considered as the only one that is adequate for a systematic organization of a scientific theory. Instead, non-deductive organisation is easily recognised in the original texts of several scientific theories –mainly those written by Lobachevsky, S. Carnot and Einstein when he suggested both the relativity theory and a “heuristic” theory on quanta;¹⁸ i.e., the founders of the “revolutionary” theories in the “hard” science– respectively, the first non-Euclidean geometry, the first non-mechanical theory and the first non-classical theories in theoretical physics. These scientists wanted to solve a problem –how many parallel lines exist, what the best conversion of heat is in work, how to conciliate mechan-

¹⁷ Let us notice that the late Freud saw the Id as wavering between the two polarities of *eros* and *thanatos* (love and death); in such a way, he attributed to the Id the dichotomy on the Infinity, which actually pertains to the Super-ego.

¹⁸ A. Drago: “There exist two models of organization of a scientific theory”, *Atti della Fond. G. Ronchi*, 62 n. 6, 2007, 839-856.

ics with electromagnetism and how to describe light by means of discrete mathematics, respectively.

Notice that these two dichotomies concern not only the objective and structural levels, but also the subjective level, as expressed both by Galtung's and Leibniz's.

These remarks suggest that, by qualifying the aspect A of a conflict through the above two dichotomies, we are founding a *theory* of CR according to all three kinds of representations of a conflict.

7. Fifth improvement: What about a conflict with a violent adversary? Two models of conflict resolution

My main criticism to Galtung's suggestions is to have missed a crucial point of a theory of conflict resolution. Notice that only one kind of conflict is an intimate conflict; in each kind of conflict there are two opponents; he failed to specify what opponent the A-B-C triangle refers to. Each opponent experiences a contradiction; but surely each opponent experiences it in a different way. Hence, it is apparent that the notion of "contradiction" C has to be differently qualified in each one of the two opponents. Moreover, the opponents may have different, if not mutually divergent, assumptions. The behaviour B of each of the two parties is surely not the same as the other.

By having missed the reference of the structure A-B-C for each opponent, Galtung proceeds by multiplying the application of A-B-C to a series of elements of a conflict;¹⁹ yet, these applications of A-B-C may be a priori unbounded in number. In my opinion, to ignore this double content of each of the three aspects of a conflict obstructs a clear representation of a conflict both from the viewpoint of an outside observer, who cannot reduce his work by equating, or confusing, or mixing the different contents of each aspect pertaining to each opponent, and from the viewpoint of an opponent, who basically has to take in account his triplicate divergence with his opponent's attitude.

I conclude that, in order to obtain a well defined theory, it is necessary to attribute the three aspects A, B and C, to each opponent in a conflict. The result is a theory that is a bit more complex; by multiplying the three aspects of a conflict by two, the aspects to be taken into account are six.

¹⁹ See e.g. J. Galtung: *A Theory of Conflict*, op. cit., p. 75.

Being the two dichotomies basic, the two basic choices on them shape a *model of conflict resolution* (MoCR), in short a particular attitude about CR. We then have four possible models of conflict resolution. Each opponent represents the conflict in question through his three specific levels of awareness: the motivational, the emotional and the factual aspects of his MoCR, respectively.

The question now is what happens when the two opponents of a conflict pursue two different MoCRs. Let us consider the extreme situation of a confrontation between a non-violent person with a military person. Indeed, among the four MoCRs, two are the most relevant ones, i.e. *the military MoCR*, characterized by the choices *AI&AO* –a true paradigm in Kuhn's sense, owing to its strong influence on society– and *the non-violent MoCR*, characterised by the choices *PI&PO*.²⁰

From the beginning of this paper, we have considered the option between violence or non-violence, which can also be described as the dichotomy between an increase in destructive tools, to the point of becoming insensitive to humanity, and an improvement of the personal relationships. We have thus the dichotomy on the Infinity (it may be intended also as Interest).

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- The *interPersonal Infinity* (PI) of the non-violent method is an ever more personal involvement in the interpersonal relationships to convert the opponent; it is also an ever increasing work for educating people.
- The *Actual Infinity* of the infinite arms race, as in the Military case.

As a result of previous sections, we have also defined a dichotomy about the organisation of society. It is between:

- The *Authoritarian Organization* (AO) of the Military: staff and line, classical logic (i.e. friend or foe, either-or, all or none, deductive arguing from fixed principles).
- The *Problem-based Organization* (PO) of the non-violent theory: self-reliance, co-operative behaviour, attention to the ethical problems, non-classical logic (i.e. search for a third party, inductive arguing, not-not).

²⁰ M. Nagler: "Peace as a Paradigm Shift", *Bull. Atomic Sci.*, 37, Dec. 1981, pp. 49-52 cleverly paralleled the notion of paradigm in the history of science and the notion of paradigm in CR.

Manifestly, the two choices of violence and non-violence are mutually antithetic in nature in such an acute way that the corresponding two MoCRs become mutually “incommensurable” – by paralleling Kuhn’s terminology about conflicting scientific paradigms; in other terms, they do not have a common language a priori. The same occurs for the two choices on the other dichotomy. Thus, two MoCRs differing in their basic choices result to be mutually incommensurable.²¹

As a first consequence of this incommensurability phenomenon, their MoCRs are different in an essential and irremediable way. As a second consequence, there is no hope to achieve a historical era of passive peace; the reality is composed by essentially different MoCRs; non-violence differs from pacifism, according to which one hopes for an undifferentiated society as representing a peaceful society. As a third consequence, one may approach a conflict in four radically different ways; this number of different approaches shows the great difficulty that one faces when one wants to theorize on a conflict without taking into account this variety of MoCRs. As a fourth consequence, a conflict between two parties constitutes a serious problem when no one withdraws from his couple of choices defining his MoCR. As a fifth consequence, a conflict between two opponents referring to two different MoCRs is rooted in reality and in their minds at the same time. As a sixth consequence, in the case an opponent changes his basic choices, he experiences a personal revolution, i.e. an inner change in his personality, although his everyday life does not change much; this change is similar to what is called a process of conversion in religious terms.²²

As a specific effect of an incommensurability phenomenon, when a subjective notion –e.g. defence, co-operation, order, brotherhood, tools, human rights, authority, etc.– is shared by two MoCRs, it undergoes, owing to the antithetic nature of the two dichotomies,

²¹ A. Drago: “Incommensurability as a bound of hermeneutics in science”, in M. Fehér, O. Kiss, L. Ropolyi (Eds.): *Hermeneutics and Science*, Kluwer Acad. P., 1999, 135-155.

²² Let us consider an acute conflict between two opponents. Each opponent elicits the above three representations; hence, a conflict involves six different representations; moreover, each opponent may be either conscious or unconscious of each representation, namely $2^6 = 64$ issues; last, but not least, any opponent may change his attitude in the time of the conflict; that may lead to $2^2 = 4$ independent issues, which together with the previous ones amount to 256 different issues. At last one has to distinguish the three levels –micro, meso and macro–; the result is almost a thousand issues. Such a large number of issues shows the complexity of a conflict. No surprise if the scholars of CR present innumerable characteristic features of the conflicts. No surprise also if it was so difficult to achieve a general theory of CR.

a radical variation in meaning; the word is the same but in the two MoCRs the meanings are different. Hence, *incommensurability phenomena* effectively separate the different four MoCRs, two by two, through not only the different choices but also the different meanings of many notions. However, a patient and clever dialogue can build bridges to overcome the variations of meaning.

The following table summarizes the main features of the two more relevant MoCRs. The issue of non-classical logic will be illustrated in the following section (Table 2).

Table 2: THE TWO MAIN MODELS OF CONFLICT RESOLUTION

	A EFFECTIVE REPRESENTATION (the options shaping the solution)	C SUBJECTIVE REPRESENTATION (intuitive ideas for subjective thinking)	B OBJECTIVE REPRESENTATION (what textbooks present)
Military MoCR (the dominant one = a paradigm)	Abstract Increase in weapons (AI) Authoritative Organization (AO)	Scientific strategy, security strength, to be first, authority, hierarchy, deterrence, enemy, traitor, "Scientification of security and suppression of emotional drives"	Destructive tools Compulsory behavior Analytical mind Hierarchical society Classical logic (either A or not-A)
Non-violent MoCR	Increase in Personal relations (PI) Organization for solving a universal Problem by means of a solidarity movement (PO)	Brotherhood, empathy, equality, community, co-operation, non-violence, pluralism, democracy, "Democratization of defence and extinguishing violence"	Non-violent techniques Human people's rights Community, co-operation Holistic mind Dialectical logic (not-not-A is not equivalent to A)
Time span	some centuries	some generations	one generation
<i>Legend: MoCR = Model or Conflict Resolution.</i>			

About the subjective representation, the two propositions between commas summarize the plethora of subjective terms that one can list for each actor.²³ F. Fornari characterised the philosophies of the two MoCRs, represented by a military man and a conscientious objector – by means of two mottos: “Mors tua, vita mea” (Your death, my life) and “Mors mea, vita nostra” (My death, our life).²⁴

In a first approximation, these two MoCRs may be applied to a great number of conflicts, provided that one is capable to assimilate the attitudes of the two opponents to the “military” attitude and the “non-violent” one, respectively.²⁵

5th improvement: There are four MoCRs, which are mutually incommensurable. The non-violent one and the military one are the most important ones.

8. Sixth improvement: Two alternative ways of arguing about conflict resolution

Several scholars reduce the motivations –which concern even a deep level of a personality– to material issues; i.e. they understand the motivations of both parties in terms of basic needs only. Surely, the choice to deal with only basic needs simplifies the representation of a conflict; one obtains the theoretical advantage of referring to objective issues, belonging to an almost closed domain that may be described in almost mechanical terms so that one can calculate on them by deduction from some hypotheses. This choice leads to follow the deductive method (OA) expressed by a calculation of what one considers a need, even an unbounded one; in sum according to a specific couple of choices on the two dichotomies: AI and AO.

This philosophy parallels the current behaviour of the juridical institutions, which calculate the degree of seriousness of a committed illegal act and then calculate the correspondent degree of the

²³ These two propositions parallel the propositions suggested by Koyré for summarizing the two scientific attitudes in conflict during the birth of modern science. A. Koyré: *From the Closed World to the Infinite Universe*, U. Maryland P., Baltimore, 1957. “Interpretazione delle frasi caratteristiche di Koyré e loro estensione alla storia della fisica dell’ottocento”, in C. Vinti (ed.): *Alexandre Koyré. L’avventura intellettuale*, ESI, Napoli, 1994, 657-691.

²⁴ F. Fornari: *Psychoanalysis of War* (orig. 1966), Anchor Press/Doubleday, Norwell, MA, 1974.

²⁵ The well-known prisoner’s dilemma presents a conflict between an egocentric attitude and a cooperative attitude. See A. Rapoport: *Strategy and Consciousness*, op. cit., ch. I.

punishment. This formal way to tackle a conflict parallels a mathematical calculation, where all questions are decided according to Leibniz's motto, which would represent the best method for the resolutions of all conflicts: "*Calculemus!*", i.e. science before ethics (and hence, before a personal involvement). A popular game, chess, represents this kind of CR.

Yet, Leibniz suggested this method as not more than an ideal one. Moreover, Goedel's results deny it: no scientific theory (of conflict too) is consistent and complete. Furthermore, we saw in Table 1 of sect. 2 that a Court takes in account little more than one out the three aspects of a conflict. All that leads to the conclusion that the above mentioned reduction of assumptions to needs constitutes an amputation of an adequate theory of CR.

The wisdom of the pacifist Leibniz was another one. From his personal attempts to conciliate different states and different religions, all unsuccessful, he learnt that no calculation is sufficient to conciliate two radical opponents. Indeed, two centuries after, Leibniz's reconciliation practice –relying on ethics rather than calculations– was renewed at the highest levels by a non-Western man, Gandhi, who obtained glorious successes. By resolving several conflicts, he successfully started a radical change in both his religion and his society, and he promoted a successful revolution for India's liberation from the British rule.

His success leads us to consider a crucial innovation of his ethical action for solving conflicts.

Gandhi's revolution was bravely based upon a word: "non-violence" which is odd with respect to Western culture. It is not a positive word. For a comparison, recall that Christianity relies upon the word "love", Liberalism upon "freedom", Socialism upon "justice", etc. Hence, this word "non-violence" represents a great novelty in the dominant thinking of the Western tradition.

Let us scrutinize it. It is not a negative word, as the initial word "**non**" suggests, because "**violence**" is a negative word too; hence, the word joining the above two is a double negation.²⁶ In addition, it cannot be equated to a corresponding positive word, such as love, benevolence, care, etc. (unsuccessfully Gandhi tried to substitute *Satyagraha* for it), because it does not represent a thing, an idea, a feeling, but a method that one chooses to follow without establish-

²⁶ Here, and in the following I underline the two negative words of a doubly negated proposition in order to facilitate the reader recognizing it.

ing nothing more than a prohibition: **no** to **violence**. In sum, the word “**non-violence**” is a double negation without a corresponding positive word. The same holds true for the word “**non-killing**”.

Notice that also a Court sometimes states a double negation: “**Not guilty**”, i.e. “**No** conclusive evidence of **guilt has been obtained**”; this proposition does not mean “He did not commit an illegal act”; i.e. this proposition is not equivalent to the corresponding affirmative one, since the latter proposition lacks empirical evidence (DNP). In this case, it is not true that “two negations affirm”, as people usually say; rather the logical double negation law fails.

In the last century the mathematical logicians obtained a crucial result about logic, understood in the most general sense. They stated that the double negation law constitutes the best borderline between classical logic and almost all kinds of non-classical logic; when this law fails, the logic is a non-classical one, first of all, the intuitionist one.²⁷ In other words, we have to take in account a dichotomy in the foundations of logic: in *Classical logic* $\neg\neg A = A$ holds true: “Two negations affirm”; in *Non-classical logic* $\neg\neg A = A$ does not hold true: “Two negations do *not* affirm”. These two cases –of validity or failure of the double negation law– constitute the sharpest dichotomy possible.²⁸

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As a consequence, by itself the word “**non-violence**” leads to argue within a completely different logical world from the traditional Western one, which extensively and exclusively made use of classical logic. This fact substantiates the radical nature of the alternative introduced by the word “**non-violence**” into the conflict of Indian people with Western civilisation; it introduced a change even in the most abstract product of the collective mind, i.e. (mathematical) logic.

In the previous sect. 5, I emphasized the non-violent content of the above three theories. In order to inspect whether they share the

²⁷ D. Prawitz and P.-E. Malmnaass. “A survey of some connections between classical, intuitionistic and minimal logic”, in A. Schuette et al. (Eds.): *Contributions to Mathematical Logic*, North-Holland, Amsterdam, 1968, 215-230; M. Dummett: *Elements of Intuitionism*, Oxford U.P., Oxford, 1977.

²⁸ Let us notice that an old and rooted prejudice of English linguists prevents to apply this result to the analyzed texts and more in general scientific theories; according to this prejudice the use of double negations is a characteristic feature of primitive languages. See L.R. Horn (2001), “The Logic of Logical Double Negation” *Proc. Sophia Symposium on Negation*, Tokyo, U. of Sophia, 79-112. Instead, we will see that it is very important to analyze the original presentations of (scientific) theories through their DNPs. This analysis leads to recognize an alternative formal arguing and even the model of an alternative organisation of a scientific theory to the deductive one.

characteristic feature of the word **non-violence**, i.e. whether they make use of DNPs, I scrutinised a methodological paper of Freud's, the first book of Marx's *Capital* and Clausewitz's book, i.e. the original texts presenting their theories. In fact, in each one of them the DNPs result to be numerous.

The best instance is Freud's theory. In a celebrated methodological paper, he suggested to an analyst how to solve a patient's psychical conflict by starting to interpret the patient's dreams. The analyst obtains the key for recognising a patient's trauma by negating that negated proposition which the patient says when he is recalling a dream. When the Patient says: "I did **not** want to kill my mother", the Analyst has to add a negation: "It is **not** true that he did **not** want to kill his mother". The latter proposition is not equivalent to the corresponding affirmative proposition, since it lacks empirical evidence.²⁹

Furthermore, one can easily summarize Marx's theory through his essential DNPs. It relies on the methodological principle of "**negating the negation**".³⁰ Moreover, his characteristic propositions are the following DNPs: Capitalism is a social process of an **un-bounded** growth. It is **not** that the proletariat is a mere **commodity**. It is not true that the proletarian class **cannot overcome capitalism**.

Also Clausewitz's military strategy essentially relies on DNPs. In his opinion, the total war for "abating the enemy" (i.e. according to classical logic: win/lose) almost never occurs. Indeed, it is **bounded** by **non-military** factors, mainly the political one; this "real war" really occurs. Hence in Clausewitz's book the starting methodological principle of his theory is his celebrated proposition, in fact a DNP: "War is **nothing else than** politics through different

²⁹ S. Freud: "On Negation" (orig. 1925), http://www.valas.fr/IMG/pdf/Freud_Complete_Works.pdf, pp. 4128-4143. Actually Freud wrote: "(Patient:) 'It's not my mother.' We emend this to: 'So it is his mother.' In our interpretation, we take the liberty of disregarding the negation and of picking out the subject-matter alone of the association." I interpret this Freud's conclusion as a mistake, since he ignored non-classical logic; indeed, the entire paper explains that he does not disregard the Patient's negation, rather he adds a negation for obtaining the following methodological principle: "It is not true that it is not the mother". Indeed, after the quoted proposition, Freud elaborates on the subject of the mother not in a deductive way, but in an inductive way. A. Drago and E. Zerbino: "Sull'interpretazione metodologica del discorso freudiano", *Riv. Psicol., Neurol. e Psichiatria*, 57 (1996) 539-566.

³⁰ Marx wanted to argue through a new dialectical process. In fact, he was unsuccessful in his looking for a general dialectical method "turning up Hegel's dialectics in order to put it on its feet". However, his dialectical process was not bounded –as Hegel's is– to elaborate three versions –the affirmative, the negative and the doubly negated ones– of a same word or statement, but it is composed by chains of arguments.

means”;³¹ (Notice that he never wrote the corresponding affirmative proposition which is attributed to him by ignorance of his text: “War *is* politics through different means”.) His DNP means that the military strategist has to mainly manage the relationship politics/military and at last all depends on which relationship between the military and politics the strategist establishes.³²

As in Clausewitz’s text, also in the original text of each of the other two theories the sequence of DNPs is enough to preserve the logical thread of his theory. Manifestly, the failure of the double negation law is a common logical feature of the original writings illustrating these theories. We have to conclude that the above theories have been illustrated by means of a systematic use of DNPs.

This common feature implies that the systematic organisation of each of the above theories is different from the deductive one, which is developed according to classical logic by starting from few postulates-axioms (AO). It is easy to recognize that the validity of the double negation law –equivalent to the validity of the law of the excluded middle– is necessary to a deductive organization of a theory, otherwise each deduction remains dubious. Hence, this law manages an AO theory. Instead, in the case a theory aimed to solve a problem by looking for a new, still unknown method, the arguing has to remain open to innovations; hence, between the true and the false a third possibility has to be allowed and the law of the excluded middle –and equivalently, the double negation law– fails. In conclusion, the non-classical logic manages a PO theory.

Indeed, by sharing the same choice PO, all the three theories are essentially based on the use of DNPs of non-classical logic.

6th improvement: The aspect A of a MoCR includes a neat dichotomy about the kind of logic, which is linked to the dichotomy on the kind of organization.

³¹ K. von Clausewitz: “Warning” in *On War*, op. cit.

³² By recognising his logical method, some relevant results are obtained. First, his mass of cumbersome and rhapsodic aphorisms is clarified so that his whole illustration is summarised by means of a mere well-ordering of those DNPs concerning his main points. Second, in such a summarised illustration of the theory the core of his strategic theory is circumscribed in accurate terms. Third, Clausewitz’s illustration of the relationship between the two basic forms of a war, the “absolute war” and the “real war”, is formalised by means of the relationship between the affirmative classical logic and a non-classical logic of the DNPs. His managing two kinds of logic gives reason of the high degree of sophistication of Clausewitz’s thinking. A. Drago and F. Pezzullo: “Logica e strategia. Analisi della teoria di K. Von Clausewitz”, *Teoria Politica*, 16 (2000) 164-174.

This fact introduces –in agreement with a tolerant, non-violent attitude– a basic pluralism in the foundations of both the science and theory of CR. A remarkable result follows. Being also a logical conflict, a social conflict represents a more radical conflict than those considered in the literature. It is not a case that some years ago the category of “intractable” conflict was introduced.³³ In order to solve these conflicts one has to take in account that there is a bridge between classical logic and intuitionist logic; it is given by the “negative translation”, actually a suitable adjunction of double negations to each classical proposition in order to obtain the corresponding intuitionist one.³⁴ The inverse translation from the intuitionist logic to the classical logic –i.e. from a DNP to the corresponding affirmative proposition– essentially appeals to the principle of sufficient reason, i.e. a logical jump, not justified by any mechanical rule. Also in mathematical logic the incommensurability cannot be overcome.

9. Seventh improvement: The theory of non-violent resolution of the interpersonal conflict as an application of the previous theories

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Freud, Marx and Clausewitz produced their theories for specific reasons which were extraneous from the non-violent method of CR. By covering the intimate conflict, the social conflict and the mass military conflict, they all together did not cover a kind of conflict – that of the interpersonal level. Yet it is the most interesting one for a beginner wanting to both better understand and try to apply the new method of not suppressing the adversary. Even the non-violent teachers –Tolstoy, Gandhi, Lanza del Vasto, Galtung, etc.–, although in their lives they were capable to non-violently solve difficult conflicts, were unable to derive from their basic assumptions a theory of this kind of conflict.

³³ O. Ramsbotham, H. Miall, T. Woodhouse: *Contemporary Conflict Resolution*. Polity, London, 2011. For this reason most scholars try to simplify their task by selecting the conflicts without incommensurabilities. Instead, Western experience of great conflicts regards exactly such a case of conflict: Crusades, inter-Christians wars, French revolution motivated by the ideology of the human rights, WW2 motivated by a racist ideology.

³⁴ A. Troelstra, D. van Dalen: *Constructivism in Mathematics*, North-Holland, Amsterdam, 1988, pp. 56ff.

Actually, it was too hard to be rationalized, because there are three difficulties, a subjective, an objective and a structural one. 1) In such a kind of conflict there is no separation between the object of study and the scholar; the same person who theorizes unwarily inclines to identify himself with one of the two opponents. 2) In this kind of conflict the third actor, the civil law, is radically different from the other two actors, who are two persons; it is difficult to take into account the interaction between persons and formal law. 3) We saw in the previous sect. that the rationalization of also this kind of conflict had to discover the non-classical arguing, which is unknown in the common use of language; only Lanza del Vasto foresaw a new kind of logic, suitable for theorizing CR.³⁵

In the above we recognised this kind of logic and its corresponding organization of a theory (PO). Let us add a further feature of this specific arguing.

Each author of a PO theory offers arguments which eventually achieve a final *ad absurdum* proof, whose conclusion is a doubly negated predicate of a universal nature; it concerns the problem and the related problems that the theory wants to solve. In science, the best instance of this kind of proof is the celebrated *ad absurdum* proof of S. Carnot's –currently taught to first-year undergraduate students of scientific courses–; it concludes the new method for establishing the main result of thermodynamic theory (i.e. it suggests the highest efficiency function in heat/work conversions).

Both Marx and Clausewitz present this kind of logical proof through the keyword “otherwise” or a similar word.³⁶ In addition I recognized several DNPs and *ad absurdum* arguments in celebrated Gandhi's writings which suggested the non-violent way to resolve

³⁵ Lanza del Vasto: *La Trinité Spirituelle*, Denoël, Paris, 1971, p. 77-78: “... a *Novissimum Organon*, or Supreme Logic, the suitable logic for the Reconciliation Philosophy. Its basic law is that *the opposites, the contraries join together at infinity*. ... three centuries before Kant the ‘divine Cusanus’ laid its bases in a book titled *De Docta Ignorantia*. I am to give an instance of application of this method...”. Also in a subsequent paper (“Un, Deux, Trois” (orig. 1079-80), *Les Quatre Piliers de la Paix*, Rocher, Monaco, 1992, pp. 93-94) his vision of non-violent CR referred to Cusanus’ way of overcoming the contradiction of the opposites; through this logical process, Cusanus deliberately wanted to achieve a non-Aristotelian logic, where the law of the excluded middle fails. Already in 1929, E. Cassirer stated that Cusanus started a new kind of logic. See my paper: “Dialectics in Cusanus (1401-1464), Lanza del Vasto (1901-1981) and beyond”, *Epistemologia*, 33 (2010) 305-328.

³⁶ E.g. K. Clausewitz: *On War*, op. cit., 1.1.23 and 2.8 vi b). Instead Freud, by having eliminated the double negation of the correct conclusion “It is not true that it is not the mother”, did not include the *ad absurdum* proofs of non-classical logic.

the main conflict of his society, i.e. the struggle for India's political independence from the British Rule.³⁷

The conclusion of this kind of arguing is manifested in the scientific theories only, since only they require a rigorous logical path. An author of a PO scientific theory, after having obtained the conclusive universal predicate, a DNP, changes it by implicitly appealing to the principle of sufficient reason; indeed, the evidence accumulated by previous non-classical arguments is evaluated by the author as sufficient for jumping to the affirmative corresponding proposition, to be then tested against experiments.

Now we are in the position of exploiting the past theoretical experience of CR for obtaining a new result, concerning the method of non-violent CR at interpersonal level.

Among all the above theories, Freud's illustrates a non-violent method for CR. This method includes four steps, to which I add three more steps suggested by the experience of scientific theories.³⁸

- i) **Deny** the **malevolence** of the Patient.
- ii) Pay attention to a Patient's crucial **negation**, in order to add one more **negation** to it, so that a DNP is obtained: It is **not** true that the Patient did **not** experience a trauma X.
- iii) Take this DNP as an adjunction to the Patient's situation, i.e. a guess on how to argue and interact with the Patient.
- iv) Reiterate the previous two steps in order to accumulate as much evidence as possible about the guess.
- v) Organize such evidence in order to obtain an *ad absurdum* proof concluding as follows: It is **impossible** that he did **not** experience the trauma X.
- vi) Appeal to the principle of sufficient reason for jumping from this DPN to the corresponding affirmative proposition: "The Patient experienced the trauma X".
- vii) Dialogue with the Patient on the basis of this proposition in order to deduce the way to establish a bridge between the Patient's Ego and Id about X.

³⁷ A. Drago: "Hind Swaraj: A birth of a new model of development", in Silby K. Joseph and B. Mohandaya (Eds.): "Reflections on Hind Swaraj", Inst. Gandhian Studies and Gandhi International, Wardha, 2011, pp. 73-143.

³⁸ Indeed, a PI and PO scientific theory is developed in a parallel way. See A. Drago: "Pluralism in Logic: The Square of Opposition, Leibniz's Principle of Sufficient Reason and Markov's principle", in J.-Y. Béziau and D. Jacquette (Eds.): *Around and Beyond the Square of Opposition*, Birkhauser, Basel 2012, pp. 175-189.

What is an adjunction? Exactly the same word “adjunction” occurs in the following scientific theories: L. Carnot’s mechanics (geometrical motions), L. Carnot’s geometry and strategy (displacements by insensible degrees), L. Carnot’s calculus (variables which are continuously changing; they are usually called infinitesimals), Galois’ theory of algebraic equations; and also some philosophies: Kant’s philosophy of a basic ethical act,³⁹ intended as an adjunction for overcoming the inaccessibility of the *noumenos* by our minds, Hegel’s *Aufhebung*, Capitini’s main step of a non-violent method for RC.⁴⁰ Also Galtung repeats the same word to illustrate his method for CR, called by him Transcend⁴¹ (English translation of *Aufhebung*), i.e. a process transcending the initial situation thanks to the addition of an adjunction.

This creative act may be further qualified by means of the theory of games. It considers four kinds of games: outburst game, imitation game, game under rules, gamble.⁴² In the interpersonal relationships, the above four kinds of games correspond to dialogue, an empathetic move, to appeal to the opponent’s interests, and to take advantage from casual events, respectively. For instance, in Freud’s psychoanalysis, the Patient plays both an outburst game (a dialog with the Analyst) and a game of the mimesis (transfer with the Analyst); on the other hand, the Analyst plays both the game of a dialogue and gamble (he catches the Patient’s negations). The two actors play different games, only the dialogue is a common game.

Inside an interpersonal conflict, the two actors are objectively similar; hence, the game has to be the same for both. The paralyzing situation induced by a threat has to be overcome by inviting the opponent to play a game, since notoriously a game is at the origin of each social institution; hence also the new interpersonal agree-

³⁹ I. Kant: “On the Saying: ‘This May be True in Theory, but it does not Apply in Practice’”, in Hans Reiss, Ed., *Kant: Political Writings*, Cambridge U. P., Cambridge, 1991. Also <https://hesperusisbosphorus.files.wordpress.com/2015/02/theory-and-practice.pdf>.

⁴⁰ Aldo Capitini, the first European non-violent person, put this point as the foundation of his philosophy of non-violence. “L’avvenire della dialettica”, *Rivista di Filosofia*, 1, 1959, 224-230.

⁴¹ J. Galtung: *Peace ...*, op. cit., sect. 3.5.

⁴² R. Caillouis: *Man, Play and Games* (orig. 1958), Free Press of Glencoe, New York 1961. I prefer Lanza del Vasto’s names of this classification (*Les Quatre Fléaux*, Denoël, Paris, pp. 45-47) because this author separates the four kinds of game in two couples of games which correspond to the two dichotomies; hence the four kinds of games correspond to the four MoCRs.

ment to be established in the social life is based on a specific game; the adjunction results to be an attempt to engage an opponent in playing a game.

More in general, the creativity in the interpersonal kind of CR mainly consists in choosing a first game and then in playing all possible games in order to accumulate as much evidence as possible to achieve an *ad absurdum* proof on the opponent's characteristic features –either his motivations, or his traumas, or his positive feelings.

We are now in the position to obtain as a particular result the application of Freud's improved method to the specific kind of conflict in the interpersonal relationships –not considered by the previous theories– when it is resolved according to a non-violent attitude:

- i) As the basic methodological principle, **deny** that the opponent is an **enemy**.
- ii) In the aim to interact with the opponent, transform the given conflict situation by adding an adjunction – e.g. an empathetic move, a surprising move, a voluntary sacrifice, etc., aimed to play a game.
- iii) Exploit the adjunction for inducing how to start to play games with the opponent.
- iv) Exploit the resulting interaction for obtaining an insight in the opponent's motivations.
- v) Reiterate the above two steps until obtaining an *ad absurdum* proof whose conclusion is a general proposition on the possible behaviours of the opponent (“It is **impossible** that the opponent will **not** agree on...”).
- vi) By appealing to the principle of sufficient reason, translate this proposition to its affirmative version, i.e. “The opponent is inclined to agree on...”
- vii) From it, derive the correct moves for achieving a conflict settlement.

The addition of a theory of CR of this kind of conflict completes an initial general theory of CR at all social levels.

Conclusions

It is two centuries that some European scholars –Freud, Marx and Clausewitz– led to enter in a theorization of (almost) non-violent

methods for CR. They introduced a triadic conception of the reality of conflicts and at last the entire reality.

Outside Europe, in the 20th century, the theory of an explicitly non-violent method of CR gradually grew from ethical positions (Tolstoy's, Gandhi's and M.L. King's as well) to philosophical world views such as those of Capitini and Lanza del Vasto, and to political theories such as those of Lanza del Vasto and Galtung, who started a structural thinking about society and political life.

As a matter of fact, the challenge to qualify non-violence in intellectual terms of a structural kind was a hard task. Indeed, Western civilisation led human reason, on one hand, to *conciliate* in an unitarian, organicistic scheme the various *scientific theories* on all kinds of reality, and on the other hand to maintain as an inescapable necessity (at least, in extreme circumstances) to *resolve social conflicts by severing persons, or even suppressing them*. On the contrary, the non-violent teachers –in particular, Gandhi– addressed human reason, on one hand, to consider as an inescapable ethical task to *conciliate conflicting persons*, by viewing all them inside an organicistic, global unity, constituting the only true reality; on the other hand, by means of the word non-violence he introduced a *basic intellectual dichotomy in the Western rationality –as first logic–, and hence a conflict inside science*. Recall that Gandhi stated that “non-violence is a science”, of course of an alternative kind to the dominant one.⁴³

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This change in attitude put into practice what Kant first proposed and Capitini then reiterated as his basic tenet. In fact, we are experiencing a paradigm shift in traditional rationality, i.e. a conversion of Western philosophical reason from the searching of the “noumenos” to an ethical attitude of giving a positive adjunction to the reality, i.e. non-violence. Remarkably, this introduction in structural terms of ethics into politics at last has overcome Machiavelli's ideology of separating ethics from politics.

As a conclusion, the word “non-violence” generated a new way of thinking –that through non-classical logic–, and changed human life in such a deep way to discover a new CR. All in the above confirms what Lanza del Vasto wrote half a century ago:

⁴³ I developed this suggestion by the papers: “When History of science suggests Non-violence”. *Int. J. Nonviolence*, 3 (1996-97), pp. 15-21; “A paradigm shift in conflict resolution: War and peace from a history of science viewpoint”, P. Koller, H. Puhl (Eds.): *Current Issues in Political Philosophy. 19th Int. Wittgenstein Symposium*, Kirchberg, 1996, pp. 106-114. “Non-violence as a science of conflict resolution”, *Anuvibha Reporter*, Dec. 2000, 5, pp. 111-116; “La Paix dans la Science”, *Alliage*, n.- 66 April 2010, 17-25.

“The two greatest discoveries of the Century are: Non-violence and the Atomic bomb.”⁴⁴

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⁴⁴ Lanza del Vasto: *Les quatre Fléaux*, op. cit. p. 293.