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Chapter 9

Information and Information Technologies in Conflict Management

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Abstract

This paper analyzes information and modern information technologies as applied in different organizational environment and considers the content and peculiarities of conflict management process based on implementation of communicative scenarios. Currently, the need for escalated organizational transformations has become imminent, taking into account the intensifying development of the differentiated information society, which requires properly interactive and transparent policy-making. Correct understanding of information and effective implementation of information technologies is a rational attempt to harmonize the modern organizational environment reducing the level of conflict and improving efficiency indexes.

Keywords: information technologies, conflict management, IT innovations, strategy, communication

1. Introduction

Evidently, policy-making process in contemporary organizations takes place in conditions of uncertainty, flux, unpredictability and variation. It means that the analysis of policy design and implementation requires clear understanding of a multi-agent system affected by various internal and external communications. The policy-making approach and the underlying policy process need instruments that help to control potential risks preventing their turning into destructive dangers for organization environment. In that case, conflict management plays a significant role in decision-making process and cannot be ignored for deeper understanding of efficient strategy formulation in modern organizations.

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Many books, thesis papers and articles have already dealt with negative points of conflicts at a workplace. Surprisingly enough, that is not the end of it. Having conflicts at a workplace appears to bring benefits as well. Morozov in his article dealing with conflicts at a workplace [1] classified the gain of them into seven main categories. And let us dwell a little bit on them. The first one is that conflicts help people adapt and integrate into the organization better. The second one is that they relieve the inner tension and in the long run make the working environment more balanced. The third one shows that conflicts indicate a changing balance of power within the organization. The fourth is that conflict brings to the surface deeply hidden objections, dissatisfaction and mistakes. The fifth is that a conflict may provoke a solution that would not happen otherwise. This kind of solution may be very dramatic and unusual, not to say unexpected. The sixth is that conflicts stimulate organizational processes. And finally, the seventh one clearly shows that after facing a conflict, the group actually becomes more efficient as a nation at war does. People sort of stand together to solve the problem and it certainly promotes cooperation and team spirit. Needless to say, it only works in case the conflicts are successfully settled and not suppressed.

Organization environment may be considered from various scientific viewpoints, for example, sociological, economic, political, psychological, cognitive, semiotic, etc. However, the processes of globalization, high industrialization, scientific and technical advance (which caused significant transformation of modern civilizations in twentieth and twenty-first centuries) led to the appearance of new aspects in understanding of management process. In the near future, modern enterprises will primarily need informational and communication development; therefore, actors are required to work more efficiently in order to transform the current habitual non-transparent administration methods. Despite the formal structural development of modern organizations, the need for escalated transformations has become imminent, taking into account the intensifying development of the differentiated information society, which requires proper interactive and transparent policies implemented wherever. Strategic models in administrative process are rationalized attempts to understand how it is possible to avoid common disruptions, accelerate the development of the entire variety of the organization structure, and, most importantly, come to social, economic and political modernization. In the current organization environment, the study of conflict management as an intellectual product is intended to analyze the significance of various factors of the behavior of subjects for the purpose of creating universal patterns of reproduction and positive transformation of organization realm based on the implementation of communication and information technologies.

Currently, dramatic information flow has affected almost all spheres of life. It is attended by the development of new communicative structures and processes, profound changes in the social communicative environment and communicative nature of organizational reality, and reconsideration of the role of information technologies in global development. This prompts the need for a new paradigm and methodology of studying information and communication as an autonomous objects of study that perform specific functions in conflict management process. Transformation of the socio-cultural, political and economic reality during the last 20–30 years has significantly shifted our understanding of the effectiveness of the managerial process. These changes are mostly described using the methodology of post-industrialism with the help of such terms as: technological revolution, network society, information

economy, globalization, characterized by growing instability and the disintegration of social systems, unpredictability and the extreme complexity of economic processes, social identity problems, confusion and the exceptional diversity of cultural currents.

In these conditions, the key component of an effective conflict management process is communication ability or communication success. By "communicative efficiency" in conflict management, we will understand the function of minimizing transaction costs, considered here in a broader sense, as the costs of ensuring unimpeded communications in the process of social and economic exchanges, as it was presented by Kurochkin [2].

The proposed approach to the conceptualization of the concept of communicative efficiency and, therefore, drawing four types of information technologies is based on the following methodological assumptions: (1) Communicative conflict management efficiency consists of minimizing uncertainty at all levels of the organization management, offering clear "rules of the game" for all counter parties and closely controlling their execution. (2) Communicative efficiency directly depends on the coordination potential of the organizational core, as well as the ability of the preventive conflict resolution. (3) The main way to enhance the coordination potential of the corporation is by introducing the development and implementation of institutionalized practices that clarify the social and economic interactions of actors, as well as ensuring fairness of interactions and, as a consequence, preventing and eliminating conflicts. The basic theoretical foundations of this approach are the concept of communicative action and the theory of agreements in institutional economics.

The concept of communicative action, developed by Habermas [3], proceeds from a new interpretation of the very act of communication: not as an indirect transfer of information from subject A to subject B, but as an equitable discursive dialog, during which both sides should strive to achieve a rational consensus. An important addition to the theory of communicative action in evaluating the effectiveness of conflict management process is the idea of the plurality in value orders structuring communication of people, which found the most complete reflection in the works of French neo-institutionalists, representatives of the theory of agreements: Theveno, Boltyanski, Favorot, Kyapello etc. [4].

Based on works of such researchers in the field of communication and conflict studies as Burton, Karpenko and others, we will carry out the analysis of specific features of the conflict and reveal how rejection of information influences its development. Methods of conflict studies are mostly based on the theory of activity. According to it, the activity of the subject (a) is motivated by certain needs and interests and (b) is aimed at some items (things, money, knowledge, status, etc.) that he needs. But in the process of this activity, the subject is forced to enter into relations with other people. As a result, he himself unwillingly (or wishing) is in conflict with other actors.

2. Conflict analysis: causes, background, escalation and peculiarities

If we investigate the following assumption in more detail, we should suppose that, first of all, there is no doubt that conflict management process depends on a number of value-related, epistemological, organizational and social elements as a sequential exchange of information

and opinions that connects all groups of individuals in a dynamic system in space and time which requires comprehensive analysis. In addition to this, the process of creating favorable opportunities for information exchange between actors in the organization is based on the implementation of certain modeled processes and programs.

Roethlisberger, one of the founders of the "human relations" school, once remarked [5] that an organization is not only a means to fulfill economic goals but also it is an organization of people, in which they strive to achieve their dreams and aspirations. This definitely highlights the fact that in a situation where there is a strong urge to achieve personal goals, there is competition and that means the lack of resources, and that, in its turn, leads to contradictions.

Lewis Coser pronounces the following [6] "The decision-makers are engaged in maintaining and, if possible, strengthening the organizational structures through and in which they exercise power and influence. Whatever conflicts occur within these structures, will appear to them to be dysfunctional. Firmly wedded to the existing order by interest and sentiment, the decision-maker tends to view departures from this order as the result of psychological malfunctioning, and to explain conflict behavior as the consequence of such psychological factors. He will therefore be more likely to concern himself with 'tensions' or with 'stresses' and 'strains' than with those aspects of conflict behavior that might indicate pressures for changing basic institutional arrangements. Also, decision-makers are more likely to consider the dysfunctions of conflict for the total structure, without giving attention to the functions of conflict for particular groups or strata within it".

Tjosvold rightly states [7] that "just working, managing and living in any organization automatically means being in conflict". The problem of conflict management in social and political organizations has been covered in many different works by various authors. They all treat an organization as a complex body, that includes not only individuals, with all their moral sets of values, statuses and interests, but also different social institutions, whose goal is to take the best place in organizational structure, to change the existing order and the relationship order in this organization. Although the individual aspects of political communications have been the subject matter of many studies, there is still a definite lack of topical conceptual proposals that would make it possible to analyze all the aspects of the investigated phenomenon, its specifics and trends in the current conditions. In the case of communication interactions with the naturally inherent elements and characteristics of social communication, we may refer to human factors that distort the perception of communicated messages. Negentropy or negative entropy refers to the case when, in spite of all of the distortions and missing information, an incomplete/distorted message is understood by the receiver due to his discerning ability. All the above mentioned also leads to all kinds of tension, that in its turn evolves into conflicts.

Investigating theoretical framework of organizational communicative scenarios, the Dutch researchers Bordewijk and Kaam [7] derived a four-term logical matrix of models of alternative kinds of information flow. The first model is called the broadcasting (allocution) model: it is typical non-reversible communication, propagation of information from one person (center) to many others at the same time. The second model is the dialog model of direct communication of individuals without a center and intermediaries. This model makes it possible to choose the time, place and subject of information exchange. The third model is the consulting

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model, where an individual at the periphery of a communication sends selective requests for information to a large data-storage center. The fourth model is the registration model, which is the opposite of the previous model. In this model, the center asks for and receives information from a peripheral source, processes the data that is received and forms a uniform narrative that is transmitted to the individual. Moreover, the center has more control over information traffic than the individual at the periphery of the communication network. However, we have to admit that the presented models make it possible to view the formal process of using information in communication process rather as some trade and practical activity than consider potential patterns of conflict resolution.

For the reason that, while dealing with conflict any person is bound to make a decision (including an ethical one) more reflectory than reflexively, one has to take into consideration the fact that there are obstacles such as social and individual typical reactions in the way of researching and professional interference into social conflicts. These reactions clearly display the level of consciousness and the extent of consciousness in reflexive thinking of an individual. Let us take a moment to present the most important ones.

Conflict phobia is a fear of any conflict at all. Some people believe that all conflicts are equally dangerous, and the person who demonstrates a conflict-oriented type of behavior should be isolated from human society. These kind of people tend to overload the situation with their own speculations and they end up making the problem roughly the size of an elephant in doing this.

People who tend to perceive conflicts inadequately. They are also in the habit of seeing a conflict where there is none at all, but unlike the previous category, they are not afraid of conflicts. They start to actively fight for what they consider right, but that actually has no relation to what is really happening. These sort of people are predisposed to turn any conflict into a situation of either victory or defeat.

People are inclined to ignore the conflict altogether. They seem to be totally unaware of it even being the very eye of it. By sort of wearing, specially devised blinkers, they do not realize that minor unimportant conflicts will sooner or later grow into unruly overwhelming processes featuring definitely destructive quality.

Shainov has a very interesting idea of comparing work-related conflicts to a fire [8]. They both possess two very similar features: first, it is easier to prevent one then to deal with one when it is already in process; second, the later one starts to fight it, the harder it is to put an end to it. For example, if the problem originated as a confrontation of two individuals and was not resolved, it could eventually lead to the whole organization splitting into two war parties. To form conflict resolution ability, one is supposed to overcome two opposing complexes of defensive conflict behavior: conflict avoiding and conflict pursuing.

If conflict avoiding predominates, then this type of person is most afraid to "lose his/her face" and hence the person is scared of facing any contradictions and the discussions that may follow. For example, the manager would rather avoid either interfering into a difficult situation or discussing essential problems as he would rather "weather the storm" hoping it would "blow off" eventually. Part of conflict scare is also communication that lacks feedback and a personal point of view and this sort of communication could be best described as unsure and vague.

If pursuing a conflict prevails, then all the contradictions, whether being imaginary or real, provoke ego-centric reaction and striving to aggressively defend one's own ego from imaginary and real threats. In case any real working problems arise, a manager with a conflict pursuing complex can easily start blaming other people, could use threats and would rather manipulate other people's a sense of guilt. While discussing the situation, the manager would perceive any disagreement or a rush word as a threat to his/her own status, he/she then would use cruel irony and sarcasm, and so with his/her own reactions would ease the dynamic tension in the conflict, and eventually shift from discussing the problem itself to personal opposition.

Conflict resolution ability is an alternative to these two extremes in ego-centric behavior and is expressed through a set of motivational, cognitive, emotional, will-power, behavioral and communicative characteristics: either perceiving a wide range of conflict manifestations: emotions, images, words, actions "both in yourself and other people" as soon and as clear as possible, without either intensified taking all the necessary measures to promote non-escalation; or assertive communication that is aimed at explaining and expressing one's own point of view, clearing all the discrepancies and holding discussions; judging one's own personal potential in conflict resolution clearly and readiness to turn to third parties for help, if necessary.

Organizational conflict is defined in modern literature is not just any conflict of interests that happens within the organization but also the one that is caused by breaking rules of behavior or sets of values, that happens due to contradictions of formal organizational standards and the real behavior of the people within that group that is aimed at fulfilling the interests of the parties involved on the basis of opposition. These types of conflicts are tightly connected with the organization itself and its working conditions.

The most widely spread reason of conflicts is inequality because of the position in imperatively coordinated associations in which some people manage and rule, while the others have to submit and follow the commands and orders. Conflicts are defined by people's consciousness, contradiction in personal and public values, difference in expectations, practical intentions and actions and misunderstanding each other's actions; conflicts are also caused by all sorts of misapprehensions, logical mistakes and a wide range of semantic difficulties in conducting communication, either lack or distortion of information. Incompatibility in the claims of the parties involved, while having to deal with restricted means, could be called a universal source of conflicts. A conflict is a clash and confrontation of individuals and groups that is characterized by inflicting mutual damage that is aimed at protecting one's real and/or imaginary interests.

Conflict at a workplace as Antsupov and Shipilov remarked [9] has four basic functions: first, it balances personal, group and company interests. Sometimes it strengthens the bonds between employees as they unite against one common problem or one common opponent; second, they indicate that something is wrong within the staff; third, they promote innovations and creativity, as conflicts help the company to develop economically, socially and spiritually; fourth, they change the climate within the organization, encouraging trust, respect and authority.

All the participants in these types of conflict could be roughly divided into three groups that include: (1) a boss and an employee, (2) two employees and (3) groups. The first is actually the mostly wide spread, constituting about 53% of the total number of organizational conflicts. As

for the second type, it has a very peculiar distinction. Employees tend to have more disagreements if they are quite close at a career ladder. The farther they are at a job hierarchy, the less likely they are to come into conflict.

Work-related conflicts are also gender oriented more than it could be evident at a glance. Women tend to have more conflicts over personal matters at work, such as choosing vacation time or customizing a workspace, whereas men are more inclined to disagree over work matters, such as dividing the workload. There are other peculiarities that mark organizational conflicts. For example, competitiveness that is inherent to most jobs can become a very bad stimulant, while resolving conflicts at a work place. Also, some conflicts at a work place are not actually job-related but are essentially personal ones that are just masked. This makes them harder to pinpoint and resolve.

Organizational conflicts actually present a big problem. It may prove to be more serious than it seems at a glance. Studies have shown that the factor that has more effect on job efficiency is the person's mood and it in its turn is mostly affected by relations with other people. It turns out, that healthy working environment is the key to a company's prosperity as a whole. Dorofeev estimated that up to 20% of the working time management spends solving conflicts at a workplace [10].

3. Conflict triggering issues

Viewing conflict resolution from a practical standpoint, it looks viable to break all the reasons that cause conflicts into five main categories. Understanding this will definitely help the mediator to promptly find a way to resolve the conflict most efficiently. Lincoln in [11], defined the following attributes: structural factors that exist intrinsically, despite our wishes and capabilities and those could not be changed within a conflict: (1) values, (2) relations (directives, stereotypes), (3) behavioral reactions, (4) information-related incentives, that is, the information that kindled the conflict. The way particularly, these factors influence the conflict and what exact role they play in it constitutes the essence of the present analysis. In various socio-humanitarian discourses, a conflict issue is essential and integral. Society is mostly treated not as a static and stable condition but as an ever-going process, infinite flow of events that consists of not some stable conditions but rather endless conflicts and tension.

The conflict issue is one that could be described as a key question in social perception and it requires appropriate knowledge with a wide range of applicable resources that would enable to reasonably interpret the logic that predominates social processes and can produce relevant apparatus for immediate correction and managing these processes. It is clear that the role and importance of information in social conflict dynamics is essentially a troubled area that becomes the center of a discussion, concerning defining the limits and forms of socially acceptable conception that has long become more than just academical. Eco once opened his mouth to say that [12] "in the immediate future the entirety of our society is bound to split into or maybe it has already done so- two groups: those who only watch TV and thus get ready-made images and conceptions about the world affairs without any right to critically

select the information they get; and those who look at the computer screen, this group is capable of selecting and processing information. So starts the division of cultures that has already existed since the Middle Ages: those who were able to read manuscripts and so could critically assess religious, philosophical and scientific issues; and those who were brought up in churches via images that were previously chosen and processed for them."

Finally, it is of extreme importance to comprehend how the area of conflict expands due to the impact of informational influence concerning the issue of information safety and carrying out state policy in communication management area. We believe that the theoretical approaches to conflict studies that already exist require serious supplements and improvement.

Conflict is not just a simple phenomenon possessing particular traits that indicate some extent of deviation from a regular series of events that defines human behavior. As an attributive property of society, conflict has as its ultimate foundation and source not certain feelings and emotions that distort human relations but rather the relations themselves (and in terms of a systemic approach it means its social structure), in whose institutional foundations its subjects hold more or less meaningful positions.

Ashirov [13] stated that any organization develops only in case it works on the improvement of the already existing relations within the company. One of the key aspects of it is preventing and resolving any conflicts that may arise. If conflict resolution is focused on the conflict itself and not on the underlying issues that brought it, then there could be a shift of values, in case of which parties pay more attention to winning the conflict, than to resolving the issue. In case of a conflict in a workplace, one of the factors that make the situation even worse, is the fact that people involved in the conflict see themselves as a part of the group, thus removing from taking any personal responsibility and instead following the lead. One of the key strategies in resolving conflicts at a workplace is realizing that even opposing parties share some interests and aspirations and in this area lays the solution. All the participants have to understand that the solution would not mean just victory for one party and total defeat for the other one.

As a starting point for one aspect in the consideration of the special nature that defines any conflict, we have chosen the toolkit developed by Luhmann. This choice is explained by the fact that his communication theory combined many elements with different approaches to the understanding of conflict. As was noted by Cooley [11], the study of the information system in society is still one of the best ways of understanding social and value changes.

In developing the theory of self-referential systems, Luhmann made the following statement: a system is something that can distinguish itself from the outside environment and render this borderline. Society constantly makes a distinction between itself and the outside environment; it is this distinction that provides the society with the right to be called a system. According to this notion, he considers communications and not people and their actions the as the elements of the social system.

In this way, society as a system consists of various distinctions (communications) than in due course lead to other distinctions. Power, truth, money (property), law, religion, art and love constitute communicative codes. As Luhmann clearly shows, communication essentially means distinction between information, messages and understanding. It is impossible

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to communicate without all these three elements being united. This approach provides a different perspective to understanding the secrets of conflict. This is not just a tribute to another, this time "communicative" trend in fashion, which considers communication as one of the fundamental properties of sociality. Hence as our starting point we take a famous remark by Gilyarevskii [14] that information is the actual meaning that a person attributes to this particular data according to the rules of its presentation that is inherent to this particular person. Luhmann goes on to support a very similar conception that political communication is not just a multi-level system of information circulating around but above all, it is the meaningful context of a political process. We should also keep in mind that communication has its indispensable components, which are communicative relations (delivering the meaning) and communicative acts (delivering information via technology).

Luhmann coordinate system, which in the communicative categories fixes the role of conflict in social evolution, makes it possible to explain a basic approach using a unified theoretical foundation: the causes of conflict lie in the area of any interaction, thus reflecting distinguishing features if this particular interaction, in which case the degree of interdependence and mutual obligations is higher than of "common values" or "social contract".

The key conclusion speaking about studying conflicts is the notion that by utilizing the conflict potential and society's tolerance to conflicts (or declaring it in a different way, due to refusal to externalize all conflicts as it was typical for segmentary societies) social systems require instability, otherwise they will fossilize, while through strengthening of the potential of conflicts and tolerance to conflicts in society" [15] accumulation and acceleration of social evolution occurs.

According to Luhmann in Ref. [16], potential conflict is an attribute feature and a natural state of all social systems. The degree of actualization in the conflict potential may vary and basically depends on the degree of differentiation within the system and the stage of its evolution. The conflict itself, in its turn, is a source of the communicative evolution in the society. Conflicts in legislative societies are neither suppressed nor avoided; each citizen is provided with an appropriate form of communication in order to evade its violent resolution.

This analysis allows Luhmann to allocate several criteria to the communicative features of a conflict: (1) a conflict is an attribution of independence to the contradiction in communication; (2) a conflict only takes place in a situation when anticipation of communication is present, while the opposing party, on the other hand, transmits total denial of communication [14]. Thus, conflict is a consequence of inadequate ("negative") communicative responses to challenges and deviations from these challenges; (3) a conflict is clearly separated from the contradictions which are either suggested or watched. Conflict is not actually an interruption or termination of communication but is in fact its continuation in some particular form. Conflicts lend themselves to the continuation in communication and maintain its openness, including the use of denial. Logically, unfolding the complex and multi-valued definition of a conflict, Luhmann draws our attention to its parasitic nature and forms its conceptual core, that a conflict is a negative form of interaction. A conflict as a negative form of interaction is a set of forced actions that definitely possess an affirmative-negative character. Negative interaction which is characterized by parties acting at cross purposes is observed when one of the parties seeks to neutralize the counteracting subject or a group of subjects.

Later, this original definition is supplemented and developed using the following suppositions: first, conflicts do not only put the potential of socio-political deviations to the test but also lead to behavioral integration within the participants; second, noting the "disturbing influence" of conflicts on the social system, Luhmann articulates their special properties, such as the easiness with which it all comes out of control; third, suppression of conflicts by using violence, that is, "extremely burdensome suppression that leads to suppressing conflicts, is a vital characteristic of early societies". With increasing social complexity, development of political domination and the emergence of legitimate force to suppress illegitimate violence, which is able to affirm its own type of communication, it becomes "possible to achieve a greater number of conflicts and greater peace options at the same time", while simultaneously increasing the deviation in various communication proposals and removing the burden of possible conflicts that arise from this deviation; fourth, as a fundamental social fact, Luhmann describes the possibility of allowing conflicts while de-emphasizing them through social regulation or third-party influence; fifth, while the complexity of social systems increases, it is concurrently accompanied by differentiation in the causes and topics of conflicts, which are increasingly searching for new issues. All the while, although the structural mechanism of conflict initiation does not present a "solvable problem", the system is able to bear conflicts since differentiation of their causes helps one to identify deep structural foundations in society that lead to outbreaks of new conflicts.

The seriousness of the problems touched upon by Luhmann lies in the fact that the present analysis gives one reasonable grounds to construe that if actors, while having no communication between themselves, make predictable decisions within the rigid framework of rules in the game of their own design, they do not actually need social interactions. Accordingly, the problem of social order is not so much a problem of political power as rather a problem of socialization [17].

Zaitzev in [18] remarked that one can clearly see the correlation between the group's maturity and efficiency and the types of conflicts that prevail there. Highly developed companies with strong group identity are characterized by having professional conflicts that on the other hand mostly suffer from personal conflicts. He also stated, that Russian business culture, unlike the typical American and European ones which were defined by Hofstede in 1980, possesses six unique features that define it. They are strong ideology, definiteness, highly developed hierarchy, collective mind overtaking individual one, sociality (social stability and protection) and own views concerning the future.

In today's information society, the information transmission process is mediated by the mass media, as direct interaction between the sender and the addressee is virtually impossible. Luhmann considers in [19] that something must be new and deviating to become one of important assumptions that determine whether some object becomes information. Moreover, this selection principle is essentially the conflict itself. The system faces a choice whether to continue creating new meanings, continue communication or cease to exist at all. The social system can successfully function only through communication. So the negative assessment is not just an evaluation of the entire world but of a specific system. The communicative system can continue to show its ability to communicate only on the basis of ongoing

communication. However, communication may still be misinterpreted or may be rejected altogether. Does this mean surrender? According to Luhmann, no, as there is still a powerful mechanism that ensures the continued existence of society even in case of misunderstanding and rejection. Society provides a self-control mechanism in which the process of communication refers to itself and engages in communication about its own difficulties, reorganizing itself through conflict.

Burton, who believes that [20] "communication is a characteristic of any relationship. In human relations, communication streams typically include messages and established interactions. Communication takes place even in the absence of messages and interaction" established the dependence in the use of communication in relationships of either cooperation or conflict on the content and understanding of its content, uses the concept of "effective communication", understanding it as the following: intentional transmission of information; obtaining and interpreting information in the exact way which it was intended during transmission; and including information into the forming and changing of values, interests and goals.

The effectiveness of communication depends on: whether the information is intentional or unintentional; the transfer purpose: accurate or misleading information; and the accuracy in the interpretation of information.

Each and every of the above-mentioned characteristics depends on the type of communication (verbal or visual, direct or indirect) and the circumstances that accompany it (its transmission being conveyed either in the conditions of fear or security, awareness or prejudices).

Burton concludes that there is a close correlation between conflict and ineffective communication. He correctly believes that: first, information does not always harmonize relations in behavioral systems, because people resort to communication both in conflict occurrences and peaceful relationships; second, there may arise communication antipathies, in case the flow of any other messages and interactions is blocked, that in its due course affects the behavior and opinions of people; third, conflict stems from inefficient communication; fourth, the first step in the study of conflict and its resolution is the establishment of effective communication; fifth, conflict resolution must include the need for controlled communication (raising its level to transform relationships of competition and rivalry into the search for common values); sixth, the process of conflict resolution primarily consists of confirming that information has been obtained exactly. It seems worthwhile to consider a general model that describes the way political communication takes place. The formula of this model is to answer the following questions: Who communicates? What is being communicated? Which channel is used? Who is it communicated to? What is the final result?

The general model of communication in that case looks like this: the communicator (the author of the message); the message (information); communication channel (message transfer means); the recipient (the message addressee); and the impact achieved (communication efficiency). Thus, to resolve social conflicts, society requires a constant increase in the number of information channels and their capacity, as "words and labels that we use define and create our social world" [20]. In this sense, social information should be treated as the key concept in the analyzing conflicts.

The information that is false, distorted, excessive or untimely is closely connected with the wrong understanding and interpretation of the facts and events that are present at the conflict. Information could be clearly perceived or distorted depending on the fact whether it was perceived as "friendly" or "alien"; according to Shainov in [8], people tend to trust and admit the information that came from friendly hands and misinterpret and omit the information originating from suspicious sources. The parties involved into a conflict, always come to it with a ready conception of what is right or wrong about the events concerned. They never bother to consider the possibility that they could be wrong and should double-check. Their expectations are always negative and never include letting the opposing party have its say. They establish their own behavior accordingly, never doubting that the other party shares the same views. The next step involves setting into motion the mechanism that should confirm the hypothesis stated, that in its turn ignores the information that does not follow the pattern, thus confirming the "evil design" that was already attributed to the opposing party, which solely aims at hurting the interests of the contender. That brings us to the notion that actually the information itself is most widely spread reason for conflicts breaking out. It essentially is the "most sensitive" indicator of the conflict escalation. In any given conflict it becomes the first factor that shapes hostility and mistrust. It happens at the very beginning, at the stage when behavioral change occurs, the information instantly starts to be adjusted, distorted and withheld. So, what particular information leads to a conflict fueling? It is the sort of information that is perfectly acceptable for one party and is totally unacceptable for the other.

Rozanova points out in [21] an evident some somewhat underplayed idea, that as many conflicts occur while the person is seriously unhappy, this hinders his ability to think clearly thus making the situation even worse for both parties.

The Russian expert in conflict resolution Karpenko [22] summarizing the studies of Lincoln, structured the most common information-related problems that contribute to creating a conflict. He stated them as the following: incomplete and inaccurate facts, including issues related to the concept of why the problem originated in the first place and the history of the conflict; irrelevant facts/sets of facts; unwanted disclosure of information that could offend the values of one of the parties, violate privacy and leave unpleasant memories; underestimation of facts and their implications; suspicion of the deliberate information concealment; involuntary misinformation; experts, witnesses, sources of information or data being unreliable, including controversial results of appraisals and issues concerning new unproven technologies, as well as inaccurate translations and media reports; rumors; arbitrary interpretation of language.

Another interesting case in point was that mentioned by Shainov in [8]. He remarked that more women than men actually admit having conflicts at work. He attributed it to the fact that women tend to be more emotional and sometimes over-dramatize. A series of surveys that attracted the author's attention indicated that younger people tend to be more involved into conflicts. It could be more than just getting older makes one wiser. Shainov remarked that this fact could be specific for our country where the older generation that was brought up and educated during the USSR era was encouraged to comply with the system and strongly commanded not to challenge it.

Making attempts to examine the above-mentioned problems, it became possible to develop a more or less adequate and efficient theoretical solution formulating the criteria for the applicability

of information in the development of strategic models, which is represented as follows: (1) Coherence is the ability of actors in the organizational environment to use internal communication lines between hierarchical structures, institutions and sectors with success when preparing and making key decisions; (2) Competence is the level of rational evaluation and understanding of the meaning of information; (3) Loyalty is the ability of actors in the information environment to form an idea about the greatest acceptability of their proper activities in comparison with other players and about modification of information in the social context by transaction of values and mindsets; (4) Efficiency is an instrumental evaluation indicator of the efficiency of decisions that are made on the basis of information and the implementation of results in the organizational environment. This functional environment is exactly where it becomes possible to reformulate the issue of information relevance in the context of analyzing strategies of conflict management.

4. Crucial strategies in conflict prevention and resolution: Information technologies

When we consider the means by which information affects efforts to overcome organizational conflicts, we must use such techniques as the extrapolation of trends, prediction of changes, control by weak signals, selection of central strategic positions and the grading of strategic tasks. It is thus evident that the role of information in strategies of conflict resolution is confined to the maximum focus on opportunities, not on tasks. In the context of organizational environment, it is appropriate to pay particular attention to ideal projective structures. It has already been noted that one of the essential tasks of strategic modeling is to obtain and propagate timely factual information, both within the network and from the external part of the organizational environment. Without this information, the integral process of administration can be treated merely as a subjective opinion. In terms of management, information processes need ordering via the formation of a special corporate culture based on procedures for the treatment of information, that is, information acquisition, intelligent information processing and the use of information to carry out an entire corporate strategy. Thus, organization will avoid previous mistakes or repeated invention of long-tested methods of administration.

Along with the importance of understanding the differences in the axiological aspects of participants in communicative processes as one of the causes of the emergence of conflicts, it is necessary to recognize that the main catalyst for organizational tension is the unsatisfactory information exchange. In that sense, we will examine mediation as the key technology for conflict resolution and implementation of IT programs as the essential technologies harmonizing communicative processes based on the most productive use of information.

While considering scenarios of conflict management, one should focus on analysis of IT programs for computerized automation of communication processes as it was presented by Maltseva [23]. By adopting information technologies, information is retrieved from its abstract storage area, processed and returned in a new form; as a result, entire administrative discourses can be gradually modified minimizing emergence of organizational conflicts. This allows to consider several types of information technologies that are thought to be efficient when applied to reduce advanced development risks in communicative field.

All in all, technologies which are normally implemented in contemporary organizations can be divided into programs intended to search for and make efficient decisions; resource management service programs; programs to arrange internal structural operations of institutions and encourage cross information exchange among different internal bodies and their relationships with economic, research and engineering partners; specialized software for on-line use, Big Data, etc.

Examining the field of conflict resolution based on management of information, we will draw our attention to four types of technologies supporting formation of effective communicative scenarios and preventing organizational conflicts. The first type of programs, those that make up the structure of the strategic information model, is interpreted as a decision-support system (DSS). DSS programs provide a set of theme-based blocks that are composed individually for each organization. Each particular block is an area for potential decision-making. These programs are efficiently integrated in various organizations and have a standard set of blocks: local intra-organization area (HR decisions, financial analytics, restructuring of subdivisions, anti-crisis arrangements, etc.), key large-scale projects and the marketing and representational area of the activities of organization. All the blocks utilize different methods, whose range depends on the processing complexity of the program and, therefore, the direct cost of its development. Let us consider the specifics of the basic methods used in DSS programs. First of all, these include search tools. DSS programs must be developed in such a way as to contain as detailed information as possible to support the formal part of decision-making. In this context, we include a branch database of legislative decrees and the system of test cases, scientific and theoretical support of decision-making, access to permanently updated global news blocks, etc. Second, a significant role is played by mathematical forecasting of various processes, as well as methods for scenario or simulation modeling; this makes it possible to reject a huge number of variants that are not adequate for particular cases without excessive test costs. Finally, the most innovative and efficient measure is to use interactive consulting techniques in decision-making; this makes it possible to obtain advice by a broad range of highly skilled specialists within the shortest time, including scientists, political strategists, economists, lawyers, etc. from around the world. The list of these specialists is formed for every new DSS program in advance. The sphere of decision-making bears the maximum conflict potential, so simplifying the analysis of information in the formulation of policies significantly reduces the frequency of conflicts.

The second type of program that forms information model matrix is intended for resource accounting and distribution. These are referred to as resource management systems (RMSs); they have been in use for more than 20 years in the structural business units of most transnational corporations, especially in power engineering. RMS programs can enable institutions to control resources on a continuous basis. The list of these resources is entered in the program as required by a customer. In the case of implementation in organizations, we consider it topical to make certain additions to standard RMSs, along with the mathematical evaluation of financial resources that are expended and received. Firstly, this is human-resource accounting via the formation of a database of the employees of organization with detailed personal records, including expertise, achievements, range of functions, work results, etc. This saves much time in strategic task grading, as well as in choosing a candidate who will

be responsible for implementing particular decisions. Secondly, the area of administration requires accounting for private corporate investments in state projects, which will make it possible over time to identify trends and reliable lines for cooperation. Thirdly, modern information technologies make it possible to use powerful tools for the budgeting of innovative technologies; as a result, it becomes possible to work out a plan of the expected input of resources and continue to plan by modeling possible areas of their use. These areas will be proposed to administrative bodies in the form of charts and diagrams by the RSS program itself, which carries out complex accounting of the resource potential of organization, as well as the fields for and efficiency of its application. These programs maximally disregard the extent to which the human factor interferes in the financial and resource sectors, which reduces the level of conflict in the organization.

The third type of information programs encourages development of integrative exchanges among the substructures of organization. We will conventionally call this type of program an information-sharing system (ISS). It is based on the creation of enormous data servers that are connected to a single system. Each server is a combination of dominants (information blocks) ordered according to size, which can be of strategic significance for partners. An ISS platform may contain variable databases that are open for exchange, analysis of adopted laws and transmission of their gradual materialization as if it were on-line (i.e., in continued update mode) on different subjects for the purpose of objective evaluation of reality and sharing experiences, as well as means of observation and control over the activities of partners in particular joint arrangements (e.g., when a project is overseen by several departments and the work of each largely determines the efficiency of the others). Moreover, it is not infrequent that bodies and departments find it difficult to find information about each other's operations; even documentary acts are sometimes documented only on paper, which makes the organizational process unstable and slows decision-making procedures. It is thus quite obvious that specialized ISS programs can make humans activities considerably more structured and move it from individual to system-based action. It contributes to the harmonization of the climate in the team, the elimination of duplicate operations and as a result reduces the level of conflict global processes [24].

The fourth type of program platforms is intended to ensure the up-to-date information for organization. Essentially, this context serves to consider traditional virtual programs (as intended for use on data servers or standard web resources which allow individuals to be involved in the decision-making process receiving timely detailed information on-line). These programs are at the heart of a huge number of concepts based on the primary role of information in processes. Being installed on a personal computer they allow the user to continuously monitor any information in the environment that he or she is interested in. As an example, these include programs that are intended to provide transparent consideration and adoption of laws (a Law Analysis System or LAS); the programs that are intended to promptly deliver information on changes in the value of stocks of corporations and to make forecasts based on measuring variations in their value (Stock Holder System or SHS), base for legal entities, etc. Such programs increase the effectiveness of the decision-making process (especially in the rapidly changing environment), which facilitates the organizational process and reduces the conflict potential within the organization.

5. Conclusions

For a variety of reasons Russia turned a blind eye to the area of conflicts that happen in organizations for many years. Not until 1989 had the Russian legislation included an article concerning conflict resolution at a workplace. Since that time conflict resolution became an essential issue that touched upon many areas of science. The analyzed peculiarities of information and information technologies in conflict management clearly prove that the main problems of organizational development have to do rather with excessive information treated in a very perfunctory manner, which determines the subjective perception of communication in general. Finally, the most global property of intelligent innovations unfolds in the communicative field of administration, where information resources are produced that require further storage, reformatting and transmission to contiguous environments in expectation of feedback. As a result of this pattern, the analysis of the range of innovative information technologies as well as the search for efficient communicative scenarios becomes an inevitable part of management process. The adoption of the indicated technologies in conflict preventing and resolution is intended to harmonize processes by combining its ethical aspect with efficiency rating increase. It is therefore quite obvious that the timely implementation of innovative information and technological models harmonizes administration process by endowing it with consistency and rationality, optimizing the decision-making process, coordinating operations of non-overlapping sectors in organizations, optimizing the use of the resource base and developing interactive tools wanted for. That brings us to the conclusion that in order to successfully eliminate the informational ingredient of the conflict, one should get to the source of information and thoroughly check the reliability and sufficiency of the information. Analysis of the communicative conceptual optics of considering the specifics of conflict shows that its causes to lie in the area of information exchange, in which each of the communication partners seems meaningful for the other and is affected by the other. Conflict, as a resource of communicative evolution of the society, exists only when rejection of information is communicated in response to an expectation. Conflict occurs as a result of negative communicative responses to challenges. Conflict is the result of ineffective communication; the first step in resolving conflict is to establish effective controlled communication.

Analysis of the information problems that contribute to conflict initiation and affect information perception in a conflict shows that conflict is perceived as a type of situation that concerns an individual only personally. We reached the conclusion that the information about a particular conflict often describes existing stereotypes of public consciousness rather than reality. Understanding of this fact allows to create efficient strategic models and, as a result, to harmonize information management process.

In the light of the dynamism and complexity of modern communications, their great dependence on knowledge and the verified commercialization of informational innovations for economic growth, the strengthening of the general influence of innovations on all branches of human life, the organizational structure should be changed toward greater horizontally oriented networks, flexibility and adaptability. Ideally, information management is a multifunctional decision-making system that determines the strategy, forms the normative basis

for the regulation of innovation activities, ensuring a continuous process of foresight, policy development, implementation, monitoring and evaluation. The multi-functionality of the decision-making system corresponds to the modern model of the formation of efficient organizational systems on a network basis with clear patterns of conflict management and conflict resolution.

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References

[1] Morozov A. Organizational and Workplace Conflicts in Social Conflict Studies. Moscow: Academy; 2002. 336 p

[2] Kurochkin A. Communicative Efficiency: Conceptualization of the Concept and Perspectives of Use in the Theory and Practice of Public Administration. Vol. 4. Moscow: Man, Community, Management; 2013. 92 p

[3] Habermas J. Faktizitt und Geltung. Frankfurt a; 1998. 405 p

[4] Theveno L. Organizational Complexity: Conventions of Coordination and Composition of Economic Formations. Moscow: ROSSPEN; 2004. 253 p

[5] Roethlisberger F. Management and Morale. Cambridge, Mass: Harvard University Press; 1941. 598 p

[6] Coser LA. The Functions of Social Conflict. London: Free Press; 1956. 319 p

[7] Rahim MA, editor. Theory and Research in Conflict Management. N.Y: Praeger; 1990. 251 p

[8] Shainov V. Managing Conflicts. Saint-Petersburg: Piter; 2014. 374 p

[9] Antsupov A, Shipilov A. Confliclogy. Moscow: Unity; 2000. 551 p

[10] Dorofeev V. Organizational Behavior. Pensa: Pensa University Publishing; 2004. 142 p

[11] Pursuit of Promises: The Practitioner's Course in Collaborative Negotiations and Cooperative Problem Solving, Washington. Yashon Island: National Center Associate, Inc.; 1995

[12] Eco U. From the Internet to Guttenberg: Text and hypertext. Excerpts from a public lecture at the Moscow State University, Novoe Lit. Obozr.; Moscow, 1998. 137 p

[13] Ashirov D. Organizational Behavior. Mozhaisk: Prospect Publishing House; 2006. 360 p

[14] Berelson B, Janowitz M. Reader in Public Opinion and Communication. Glencoe: Free Press; 1953. 178 p

[15] Luhmann N.Die Gesellschaft der Gesellschaft. Berlin: Suhrkamp Verlag; 1997, 491 p

[16] Luhmann N. Macht. Stuttgart: Enke; 1975. 280 p

[17] Luhmann N. Soziale Systeme: Grundriss einer Allgemeinen Theorie. Frankfurt am Main: Suhrkamp Verlag; 1984. 508 p

[18] Zaitzev A. Social conflict. Moscow: Academia; 2001. 464 p

[19] Luhmann N. Die Realitt der Massenmedien. 4th ed. VS Verlag for Sozialwissenschaften; 2009. 630 p

[20] Burton J. Conflict and Communication: The Use of Controlled Communication in International Relations. London: Alden Press; 1969. 385 p

[21] Rozanova V. Management Psychology. Moscow: CJSC Business school :Intel synthesis; 1999. 352 p

[22] Karpenko A. The structure of social conflict in the applied aspect. In: Karpenko A, Osinovskii A, editors. Mediatsiya: Uchebnik (Mediation: Textbook). St. Petersburg: Red. zh. Treteiskii sud.; Moscow: Statut; 2016. 420 p

[23] Maltseva D. Strategic Modeling in Politics (Monograph). St Petersburg: Russian Christian Humanitarian Academy; 2015. 160 p

[24] Maltseva D. Politics and innovation: Using IT technologies in political management of modern Russia. In: Pivovarov U, editor. Russia: The Tendencies and Perspectives of Growth. Moscow: Union RAN; 2015. 716 p. pp. 33-36