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GROUP PERFORMANCE AND GROUP PRODUCTIVITY: THE CASE OF PROCESS LOSS IN A VARIETY OF TASKS

"Which is more productive, groups or individuals?" This particular question seems to be the starting point of a long-term discussion and dissent in the field of group dynamics concerning the superiority of groups or individuals in group performance and productivity, that has began almost simultaneously with the establishment of social psychology and it is nowadays progressing. The present paper aims to offer an integrated review of the relative litterature by achieving, mainly, two goals. The first one is to offer a critical presentation and discussion of the relative theoretical aspects and research findings that have been suggested. The second one, and more important, is to show the progress of research in this field, the changes that occurred in its orientation and also the transformation of the rationale and of the factors that determine the final result of group performance and productivity, as it is agitated and transformed through the complex net of group dynamics.

M. Shaw (1932) made one of the earliest and the most systematic attempts to answer this question. By examining the ability of four-person groups in solving a series of intellectual puzzles, such as the "three husbands and three wives" or the "three missionaries and the three cannibals" puzzle, Shaw suggested that groups perform better than individuals because groups have some unique advantages such as a higher possibility to catch one another's errors and reject incorrect solutions. (Baron, Kerr, Miller, 1992). Shaw used in her experiments what Lorge et al. (1958) called a eureka task. In suck kinds of tasks there is always an objectively correct answer and as soon as this solution is proposed, it should be clear at once, or probably after a short validity check, that it is indeed correct. Shaw's findings combined what was already proposed in the research field of group performance and obtained a pattern that was also appli-

cable in production, learning and memory tasks. In this way it was influential for the direction of research, which in the following decades tend to hold the position that groups were more productive, with a higher quality product in comparison to that of individuals. But when the performance of the most capable members or of statisticized groups was examined, the results seemed to be a little different. (Brown, 1988). That was what Ringelmann (1913) had pointed out quite early with his well known "pulling the rope" experiments. Ringelmann found that the combined product of a group was higher than the performance of individuals on their own, but the combined product of individuals was equal only to 75 % of their actual potential product. (Kravitz & Martin, 1986). Thus, the general idea that seemed to rule research and tended to consider groups as more effective and individuals as more efficient, can be considered correct under certain preconditions, because it did not seem to take into account the complexity and diversity of the tasks or various methodological issues that interfere and transform the ratio and the processes concerning the group and the individual performance and productivity. (Baron, Kerr, Miller, 1992).

Steiner's typology of tasks: Co-ordination and motivation process losses in simple tasks

In 1972, I. Steiner attempted to take a step forward on group performance research by examining different and deeper aspects of group productivity. More specifically, what Steiner tried to identify were the processes and the factors that determine the productivity of a group. According to his theory of group process and productivity, how well a group or an individual performs a task depends primarily on three factors-elements: Task demands, that encompass all the task features required to perform a task, resources, that include all the relevant knowledge, abilities, skills or tools possesed by the individual or the group attempting to solve the problem, and process, that is the individual or collective actions of the people who have been assigned a task. (Steiner, 1972). Steiner's perspective supports the view that if a group's resources and the demands of its task are known, then the group's maximum possible level of productivity can be estimated. This is the potential productivity of the group that according to Steiner's pessimistic point of view, it is rather impossible to be reached because of the group's failure to perform in the most produ-

ctive way possible. This notion exactly, can be described accurately by the following equation: Actual Productivity = Potential Productivity — Process Loss. (Wilke & Van Knippenberg, 1996). Steiner focuses on task demands, which, both with process loss, can be thought as the crucial points of his theory. Task demands can be viewed as the rules or "permitted processes" under which the task must be performed, and the tasks "prescribed processes" that determine the optimal way of combining member attributions. (Kerr, Bruun, 1983) Thus, having the nature of the task, as a basic criterion, Steiner proposed a task classification or taxonomy, which can be explained in three levels. On a first level tasks can be divided between divisible and unitary. Divisible is those tasks that can be subdivided into subtasks each of which may be performed by a different individual. Unitary is those tasks that are holistic and their accomplishment is an all or none affair. Moreover, according to the quality or the quantity of the performance, tasks could be viewed as maximising, where success is thought as a function of how much or how rapidly something is done (i.e. a tug-of war task) or optimising, where tasks make success a function of achieving some correct or optimal solution (i.e. husbands and wives puzzle). (Baron, Kerr, Miller, 1992). Finally, on a third leved four types of unitary tasks can be defined: Disjunctive tasks, where the group must choose one answer of a single- the most capable- member, i.e the husbands and wives problem. Conjunctive tasks, where the group's level of productivity should be that of the least capable member, i.e. a mountain climbing team can not go faster that its slowest member. Additive tasks, where the group product is the sum of group member contributions, i.e. a tug-of-war task. Discretionary tasks, where group members are free to choose how they will accomplish the task, i.e. a music band. (Steiner, 1972; Brown, 1988). Steiner's taxonomy of tasks is very important, not only because it allows us to make predictions about group performance, but mainly because it makes it easier to identify the process loss that is quite possible to occur in each one of these tasks. In particular, two are the main sources of process loss: Co-ordination losses that occur when group members fail to combine their efforts optimally, and motivation losses that occur when group members fail to achieve an optimal level of motivation. (Wilke & Van Knippenberg, 1996).

In most tasks, co-ordination and motivation losses can occur simultaneously (e.g. Wilke & Van Knippenberg, 1996). But in some

cases co-ordination losses are considered as the majority of losses, while in other cases of tasks motivation losses are considered as the major source of losses. (e.g. Baron, Kerr, Miller, 1992). The most characteristic co-ordination losses are related to group member characteristics, productivity blocking, and the size of the group.

In order to identify the process loss that is related to group member characteristics, the well known "horse trader problem" can be considered. Accoeding to Steiner's taxonomy this is a unitary, optimising and disjunctive task, which means that the only pre-condition for this problem to be solved is that should be one solver in the group. Surprisingly, it has been found that groups that contained one solver did not manage to solve the problem. One possible explanation is that the solver had low status in the group and he was not willing to present his solution. This notion could lead us to another relative explanation. The solver had little confidence to his abilities and felt insecure to demonstrate his opinion to the other group members. There is also a third possibility: although the solution was presented, it was under-valued by the rest of the group, either because of their low ability to identify the correctness of the particular solution or of the low status of the solver. (Stroebe & Diehl, 1994).

Another, more important, kind of co-ordination loss is production blocking, that usually occurs in brainstorming tasks. Brainstorming is a method introduced by Osborn (1957) for developing creative ideas, arguing that it would double the number of ideas generated by more conventional methods. The central idea in brainstorming is the generalisation of as many ideas as possible, without any concern for their quality. Individuals should say anything that comes to mind and combine and improve ideas from others, without criticising anything. But in a meta-analytic study of 22 brainstorming experiments conducted by Mullen, Johnson & Sallas (1991), it was found that in 18 of the 22 experiments the productivity of nominal groups was superior in comparison to real groups. In real brainstorming groups there is a rule of etiquette that only one group member may speak at a time. Therefore, being probably prohibited from verbalising their ideas at the time when they occur, group members might forget them or suppress them because they seem less relevant or less original at a later time. Group members may also be unable to think of further ideas during the waiting time either due to the limitations of short - term memory or because the exposure to the ideas of others is distracting and interferes with the group mem-

ber's own thinking. Additionally, the production blocking could be due to the fact that individuals in real groups have less time available to deliberate their ideas in comparison to individuals in nominal groups. (Diehl & Stroebe, 1987: Stroebe & Diehl, 1994).

Finally, a great number of studies have indicated the direct association of the size of the group to co-ordination losses. Ringelmann's experiment is a typical example. In this experiment it was clear that, although group performance increased with group size, the ratio of increase was negatively accelerated. When another person was added to the group the total power was increased, but it was far away from the level of the group's potential power. If we consider group size effect in terms of Steiner's taxonomy we will understand that the magnitude of the effect is related to the nature of the task. Probably, the increase in the number of group members will help the group to organise itself in a better and possibly more productive way, in a disjunctive task, but it will possibly create co-operation problems in a conjunctive or in a discretionary task, where the elaborate subdivision of subtasks and sub-responsibilities might produce greater coacting problems. (Kerr, Bruun, 1981). Additionally, it could be argued, as Steiner also suggests, that group size could be responsible for the increase of motivation losses as well, in a variety of task settings. One of the most typical motivation losses that occur in group settings is what Latane et al. (1979) called social loafing. This particular kind of motivation loss refers to an inverse relationship between group size and member motivation, in other words a decrease of individual effort due to the social presence of other persons. Mainly, it is a problem that arises for certain group tasks, primarily additives, where all the members of the group should combine their contributions to produce a single group product. Therefore, the less identifiable is one's efforts, the most possible is to reduce his efforts knowing that the anonymity will hide the fact that he is not trying as hard as others, since there is no personal profit in this task. And as group size increases it becomes more difficult for the process loss to be attributed to a particular member. (Latane, Williams and Harkins, 1979: Harkins, 1987). Additionally, Harkins and Jackson(1985) suggested that even if the member contribution to the group product can be identified, group members will still loaf if they believe that their own performance can not be evaluated. (Harkins and Jackson, 1985).

Another kind of motivation loss, relative to the concept of social loafing is the so called free riding effect, that is to benefit from the task efforts of other group members. When group members see their efforts as dispensable for the group's success, and when these efforts are costly, they tend to avoid exerting themselves on the group's behalf. Kerr and Bruun (1983) found that high ability group members worked harder under disjunctive tasks than under conjunctive tasks, and they indicated that group motivation declined as group size increased, for disjunctive and conjunctive tasks, even when every member's contribution was identifiable. (Kerr, 1983; Kerr & Bruun, 1983). Moreover, there is a strong possibility for the free riding effect to result in another kind of motivation loss; the "sucker effect". When a person contributes to the group goal and realises that other group members have contributed significantly less, but they have been profited the same because of his higher contribution, he finds it aversive to "play the sucker" and instead reduces his own efforts and, consequently, contributions to the group. (Orbell and Dawes, 1981; Wilke and Van Knippenberg, 1996). At this point two particular matters seems that should be pointed out. First, the mechanisms showed to underline the free riding effect should be distinguished from those that underline social loafing. Although both processes link social conditions to the instrumentality of task effort, they seem to be concerned with somewhat different outcomes. That is, reductions of effort have a less direct impact on the chances of group success when free riding is possible, while when social loafing occurs reductions of effort have a less direct impact on the chances of receiving salient personal and social evaluations. (Baron, Kerr, Miller, 1992). Second, it could be claimed that all three kinds of motivation loss discussed above include a kind of social dilemma in which each individual will receive a higher payoff for a socially defecting choice, for example if exerts no effort, regardless of what others do, but all individuals are better off if all co-operate than if all defect. (Kerr & Bruun, 1983).

Up to this point the dynamics that take place within a group in a group performance context have been addressed. Also the kinds of process loss tahat could turn up in different kinds of tasks have been discussed, having as a rule Steiner's taxonomy as well as the main idea of his theory, which suggests that if task demands and group member's resources are known the performance and the level of group productivity can be predicted. Up to this point the different kinds of

tasks that have been illustrated had to do with cases in which there was usually a correct answer and the factors that allow or not a group to reach this answer, or in a more general manner, to reach the potential level of a certain kind of productivity were examined. But what happens in cases of tasks where there does not seem to be an objectively verifiable answer or unequivocal optimum performance, which is affected by the concurrence of co-ordination and motivation process loss? In this case it seems that things become more complicated and, as R. Brown (1988) quite accurately points out, the question concerns group's or individual's superiority become of secondary importance and the question concerning the relationhip between individual opinions and the consensual view exppressed by the group comes to the front. (e.g. Brown, 1988, p. 142).

Laughlin's taxonomy of tasks: A theoretical-psychological approach of process loss in complex kinds of tasks

A quite plausible answer to this riddle seems to originate from Laughlin (1980), who, in the context of a social combination approach, has suggested a different taxonomy of tasks. Laughlin sets out with the notion that almost every problem solving or decision-making group should reach a level of consensus among group members to define a group choice, which is called the group's decision rule. (Baron, Kerr, Miller, 1992). From this standpoint, a great number of group problem solving and decision making tasks can be thought as falling at different points along a continuum from purely intellective to purely judgemental tasks. Intellective tasks are problems or decisions for which a demonstrable correct answer exists, which means that the achievement of this correct answer is the criterion of succesful group performance. In contrast judgemental tasks are evaluative, behavioural or aesthetic judgements that do not have a demonstrably correct answer, which means that the achievement of consensus and collective decision is the criterion of successful group performance. (Laughlin & Ellis, 1986; Stasser & Stewart, 1992). Thus, in an attempt to parallel Steiner's basic idea, that if task demands and member resources are konwn then the level of group productivity can be predicted, it could be claimed that Laughlim suggests that if the preferences of group member's concerning a certain task are identifiable, then the final preference of the entire group can be predicted. (e.g. Baron, Kerr, Miller, 1992) This notion seems like a challenge that J.

Davis Social Decision Scheme theory can quite successfully brave out. More specifically, a social decision scheme can be thought as "a probabilistic rule that specifies the likelihood that a group will reach any particular decision, given that it begins discussion with any particular distribution of member opinion". (Kerr, 1992, p. 69). Respectively, from a theoretical perspective that means that the model assumes how much possible it is that group members having initial preferences for a certain choice will reach a group solution when they follow a certain social decision scheme. (Wilke & Van Knippenberg, 1996). Nine different social decision schemes have been distinguished (e.g. Laughlin, 1980). Among them the "majority wins", the "truth wins" the "truth-supported wins" and the "equipropability" are considered as the most prominent (e.g. Kerr, 1992; Hewstone, Stroebe, Stephenson, 1996; Stasser, Kerr & Bray, 1982). The majority wins scheme assumes that the group choice should be similar to the initial preferences of the majority in the group. This decision scheme is followed in judgemental tasks, such as jury decision making. The truth wins scheme predicts that the group's choice should be similar to the initial preference of one group member or a minority of group members. This scheme appears to work rather well for intellectual tasks, such as eureka problems. Truth-supported wins scheme assumes that a correct group member should be supported by at least one other correct member for the group to be correct. Finally, the equipropability scheme holds that any group choice is possible when initially there is at least one member that supports that choice. This scheme is followed in tasks for which it is almost impossible to come up with a correct group solution. (Wilke & Van Knippenberg, 1996).

But in a number of cases these predictions do not come true, because groups choose other alternatives than which were predicted. Thus, groups fail to achieve, in terms of Steiner's perspective, their potentially highest level of achievement. That means that a kind of process loss occurs that is responsible for the constricted productivity of the group. This process loss could plausibly be attributed to several factors that interfere in the process of a group decision.

More specifically, it has been proved through reserch that group members tend to hold different opinions on a certain matter before and after group discussion. What is more interesting is that group members have the tendency to choose opinions that are more extreme in comparison to the opinions that they held before discussion. This is the well-known "risky shift" phenomenon. When individuals

feel that they are part of a group they feel that they can rely on the other group members, that the responsibility of the final choice is diffused and that the fear of failure is reduced, as it is shared. Thus, they tend to exert more extreme and surprising opinions, giving the impression that their true choices were suppressed because of social norms and values and the anonymity that group membership provides had, in a way, released them. So, as a consequence their choices tend to differ from their first preferences and to be directed to the one or the other pole of pre-discussion preferences. (Dion, Baron & Miller, 1978). The affect that the risky shift could have on the form of a group's decision rule lead us to a deeper examination of the dynamics that developed into a group, and the ability to transform the decision in which the group was expected to end up, reducing at the same time the possibilities of the group to choose the best solution or answer from a set of alternatives.

At this point it would be better to consider one of the most typical examples of a decision making group, that is a jury decision group. Usually, jurors try to reach a level of consensus, whether it is a unanimity rule or a simple majority rule, to decide if someone is guilty or not guilty. But it has been found that in cases where the decision rule is not a clear majority rule, jurors tend to choose the not guilty alternative, although they probably believe that this is not the best choice, just because they fear that in a case of faulty judgement they would have destroyed an individual's life. (That is the leniency bias effect). (Davis, 1960). Moreover, it has been found that despite the fact of an assumed positive correlation between the size of the juror's group and group effectivity, the possible theoretical difference due to 6 in contrast to 12 members in conviction rates might be as small as 8% in the region of maximum possible differences. In addition, it has been found that there were no significant differences in both 6 and 12 person juries, when operating under both unanimity and a 2/3-majority rule. (Davis, 1992). Besides that, the individual differences among the body of the jurors should be considered. It is possible that among the people that compose a juror group some of them will be more talkative, more active, more confident in their initial opinion, with higher status and strong persuasive abilities. On the other hand, others will be less obstinate, less confident and stable about their personal opinion and more possible to be influenced and change their preference during group deliberation. Exactly this change in preferences may be crucial to the final choice of

the group, that would resulted in an unpredicted decision, probably inferior compared to the highest potential solution that the group would have ended up with. (Stasser, Kerr, Davis, 1989).

The last notion of opinion change and of a possible influence of a group member's opinion during group discussion bring us to another quite important aspect of possible "process loss" associated with the processes of social influence that take place in the group. It is a fact that individuals tend to prefer, or more generally are influenced and finally conform to the opinion of the majority. This choice or tendency seems to fulfil two basic needs of individuals. First, they feel secure that they hold an opinion that is accepted by a great part of the people which surround them and second they feel superior because they hold the "right" point of view, which is definitely right as it is shared by the majority. In particular, in the case of decision making, if we also consider the fact that when individuals are trying to make a common decision they experience a strong stress to reach a consensus no matter what, in order to achieve the basic group goal, and to reduce at the same time the fear of failure, we can easily understand that the work of the majority is not difficult. Indeed, Davis et al. (1975) have provided similar findings. Larger factions mean greater deliberation time and more persuasive informational and normative influence, in order to have greater power to entice or coerce conformity to its expectations. Thus, the majority's opinion (usually a 2/3 majority or more) is highly likely to be the group's final decision, whether it is right or wrong. Of course, there is also the possibility of minority influence, that by exhibiting behaviour consistency and by pushing things to a resolution it mght cause changes that will reverse the possible predictions about the group's final decision, leading to extreme choises, that might comprise danger for the group's level of productivity. (Nemeth, 1992; Stasser, Kerr & Davis, 1989).

In addition, it could be argued that the role that a group leader would play could influence the potential productivity of a group. Two kinds of leaders can be distinguished: the most favourable person or socio-emotional leader and the most able or task leader. The former will serve to minimise the unrealised productivity by reducing the tensions that might undermine the quality of group relation, while the latter will bolster the group's potential productivity by mobilising as many as possible of the resources of the group. From this point of view it would be thought that a task leader would be

more suitable to increase the group productivity. But in both cases of leadership style it seems that it is necessary as the member of the group that will organise the group's efforts in order for co-ordination losses to be reduced and simultaneously for motivation losses to be declined by persuading the group members that he will not take decisions on his own, a fact that will prevent them from minimising their efforts. On the other hand it is possible, the installation of a leader to be superfluous and rather negative if the leader fails to have the situational control, that depends on the quality of the relations between the leader and the group's members, on the leaders ability to control and guide the group's efforts and on the leader's faith in the accomplishment of the task. In other words, if the leader will be insufficient to come up with certain demands that this particular group position requires. (Hollander & Julian, 1978; also see for a review Wilke & Van Knippenberg, 1996).

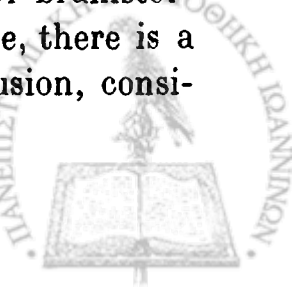
Last but not least, another source of process loss is the information sharing effect. Groups are considered to have an informational advantage to make better decisions than individuals acting along, because they can choose from a higher and more diverse pool of information to form their best final solution. While this potential advantage seems obvious, the results of several studies (Stasser & Titus, 1985; Stasser, Taylor & Hanna, 1989) have shown that groups generally fail to pool effectively an amount of available information equal to their potential pooling ability. This is a consequence of the group's members tendency to prefer shared (i.e. information that is known and can be recalled by all the members of the group), than unshared information (i.e. information that only one posses and it is unknown by the rest of the group). This tendency can be explained as follows: On the one hand group members feel anxious to reach a consensus and unshared information poses the danger of greater deliberation time, that will probably result to disagreement and confusion. On the other hand, group members afraid not to fail in reaching a solution an in this way and unshared information since it can not be recalled and evaluated equally by all group members, might affect negatively the group's final choice. It seems that group members are biased somehow with informational alternatives. But their persistence in commonly known information might reduce the productivity of the group; groups do not tend to explore superior alternatives than those that they already share, but also in the case that they will identified it they are very cautious and less willing to adopt

or even sufficiently discuss this information. Thus, they prefer to decide by choosing one of the commonly shared pieces of information, although they probably know that this choice might reduce the group level of productivity, as they do not choose an unshared, but apparently, superior alternative. (Stasser, 1992; Gigone & Hastie, 1993).

What can easily be concluded from the foregoing discussion is that process loss is not only indissolubly associated, but also possesses a ruling position in any case of group performance. The complexity and comprehensiveness of the concept of process loss is really impressive. Not only does it affect the productivity level of every kind of group performance, but also the process loss as a theoretical framework seems to have a quite complicated structure. In a way, process loss could be viewed as a net that consists of various factors that cause it and at the same time they are all associated to each other, just like the one is a consequence of the other. Moreover, the foregoing discussion points out another significant aspect of process loss. It seems that the key-point to group productivity loss is related to the nature of the task. That is that, in more simple kinds of tasks (i.e. a eureka problem) where there is an objectively correct answer, process loss would be predicted more easily given that, depending on the task, co-ordination or motivation losses stand out. But in more difficult and complicated kinds of tasks, where there is no objectively verifiable correct answer, the simultaneous occurrence and consequent influence of a number of sources of process loss, seems like a result of the task's complexity itself.

It could be claimed that this particular fact can be demonstrated by another fact, which is that in the relevant literature the forms of intervention that are suggested, in order for a process gain to occur, refer to tasks that can characterised as simple and to typical factors that cause the one or the other kind of process loss. More specifically, the possibility of process gain has been suggested in the case of social loafing (e.g. Harkins, 1987) or in the cases of free riding and production blocking in brainstorming groups. (e.g. Stroebe & Diehl, 1994), but not in cases of decision making groups, possibly because this particular task concerns subjective judgements.

In addition, there are two other matters related to the research on group productivity that should be pointed out. First, despite the fact that research has demonstrated the ineffectiveness of brainstorming as a highly productive method of group performance, there is a tendency in people from different domains to hold an illusion, consi-



dering this method as a quite productive one, and surely more productive than individuals working on their own. (e.g. Stroebe, Diehl, Abakoumkin, 1992). Second, it could be claimed that in a way several of the factors that interfere in process loss in complicated tasks, such as decision making, are parts of the so called "groupthink" effect. (e.g. Brown, 1988). This specific effect it seems quite interesting as an attempt of integration of the factors that cause process loss mostly in cases of complex group tasks.

Nevertheless, the present paper does not seem to answer its initial question, that is, "which is more productive groups or individuduals". This particular weakness is caused by two reasons. The first one has to do with the fact that the discussion of such a complex and multi-dimensional issue, leads to other equally interesting questions that reveal different and quite challenging aspects of process loss, that might easily distract someone from its initial and specific interest. The second one is related to the complexity of the issue that points out the need for a more integrated theory that will come to certain conclusions combining all the factors that interfere in this matter. However, what it seems to be quite sure is that reserch concerning the performance and productivity of groups has a long way ahead, since the inbiriduals that compose the groups and the groups themselves are parts of a continuously and dynamically transforming medley, called society.

ΕΥΘΥΜΙΟΣ ΛΑΜΠΡΙΔΗΣ

ΕΠΙΔΟΣΗ ΚΑΙ ΠΑΡΑΓΩΓΙΚΟΤΗΤΑ ΤΗΣ ΟΜΑΔΑΣ: Η ΠΕΡΙΠΤΩΣΗ ΤΗΣ ΑΠΩΛΕΙΑΣ ΤΗΣ ΔΙΑΔΙΚΑΣΙΑΣ ΣΕ ΜΙΑ ΣΕΙΡΑ ΔΡΑΣΤΗΡΙΟΤΗΤΩΝ

ΠΕΡΙΛΗΨΗ

Το παρόν άρθρο διαπραγματεύεται την απώλεια της διαδικασίας (process loss) της παραγωγικότητας της ομάδας στο πλαίσιο της ομαδικής επίδοσης. Η συζήτηση που πραγματοποιείται μπορεί να χωριστεί σε δύο κύρια μέρη. Στο πρώτο μέρος, υιοθετείται ως γνώμονας ανάλυσης η θεωρία των ομαδικών διαδικασιών και της παραγωγικότητας του I. Steiner (1972). Επιχειρείται η συνοπτική παρουσίαση των βασικών θεωρητικών του θέσεων και στη συνέχεια η αναλυτική συζήτηση των κυριότερων πηγών της απώλειας της διαδικασίας σε μία σειρά από δραστηριότητες, σύμφωνα με το βασικό διαχωρισμό ανάμεσα στις απώλειες της συνεργασίας και τις απώλειες της κινητοποίησης. Στο δεύτερο μέρος, που εξετάζει τις δραστηριότητες εκείνες στις οποίες δεν υπάρχει μία αντικειμενικά σωστή απάντηση και τα δύο βασικά είδη απώλειας της διαδικασίας συμβαίνουν εξ ίσου, υιοθετείται μία διαφορετική προσέγγιση. Η απώλεια της διαδικασίας αντιμετωπίζεται υπό τους όρους της τυπολογικής ταξινόμησης των δραστηριοτήτων του Laughlin (1980) στο πλαίσιο μιας κοινωνικά συνδυασμένης προσέγγισης. Συγκεκριμένα, μετά την επισήμανση των κεντρικών εννοιών της θεωρίας του σχήματος της κοινωνικής απόφασης (Social Decision Scheme Theory) του J. Davis (1980) αναπτύσσεται μία περισσότερο θεωρητική - ψυχολογική παρά μηχανιστική συλλογιστική, προκειμένου να πραγματοποιηθεί μία εμβριθής ανασκόπηση των πηγών της απώλειας της διαδικασίας που εμπλέκονται σε τέτοιου είδους πολύπλοκες δραστηριότητες. Τέλος, επισημαίνονται κάποια γενικότερα συμπεράσματα και αξιοσημείωτες παρατηρήσεις που παρέχουν τη δυνατότητα ενός συνολικότερου προβληματισμού σχετικά με την προηγηθείσα ανάλυση των συνιστωσών του θέματος.

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