

## WORKGROUPS IN ORGANIZATIONS: A BASIC TOOL TO MANAGE INCREASING UNCERTAINTY AND AMBIGUITY

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*El mundo del trabajo y de las organizaciones ha sufrido una transformación fundamental en los últimos años: hay mucha más incertidumbre. La respuesta organizativa a dicha incertidumbre ha sido la de diseñar organizaciones más complejas fundamentadas en el trabajo en equipo. Pero no todas las tareas requieren del trabajo en equipo ni todos los grupos de trabajo son auténticos equipos. En este trabajo repasaremos las investigaciones que venimos realizando para clarificar cómo entender operativamente la incertidumbre de las tareas que ha de hacer el equipo, el nivel de desarrollo que pueden alcanzar los equipos de trabajo y cómo el ajuste entre uno y otro (a mayor incertidumbre en las tareas más necesario su abordaje en equipos) es determinante en la efectividad que dichos equipos consiguen. Ofrecemos también guías para la intervención profesional si el objetivo es diseñar y dirigir equipos de trabajo eficaces.*

**Palabras clave:** equipos de trabajo, enfoque sociotécnico, incertidumbre de tareas, nivel de desarrollo grupal, ajuste incertidumbre-complejidad.

*The world of work and organizations has undergone a radical transformation in recent years: nowadays there is much more uncertainty. The organizational response has been to design more sophisticated organizations based on teams. But not all tasks require teamwork and not all workgroups are really teams. In this paper, we review the research we have been doing to understand task group uncertainty, the level of group development that teams can achieve and how the adjustment between these two aspects (the larger task uncertainty is, the more necessary a team approach becomes) is central to team effectiveness. We also offer guidelines for professional intervention in order to design and manage effective work teams.*

**Key word:** workgroups, teams, socio-technical model, task uncertainty, level of group development, uncertainty-complexity fit.

**T**he Faculty of Psychology at the University of Barcelona has the privilege of being one of the training and research centers with the longest history within Spanish psychology. The core subject "The Psychology of Groups" began to be taught at this Faculty in 1986 (being one of the first places where this occurred) and, also, a postgraduate program specialized in the subject matter (Master in Group Analysis and Management) which develops essential competencies for group management, has been imparted for the last 22 years. Both achievements are due to the perseverance and work of Pilar González, a retired/emeritus professor at the University of Barcelona. González herself published diverse important manuals regarding the subject (e.g., González, 1995, 1997; González and Vendrell, 1987), which have served for training numerous group researchers and professionals in the main theoretical frameworks present in the field (field theory, cognitivism, psychoanalysis, behaviorism and systemic), as well as in their most outstanding processes (leadership, norms,

cohesion, conformity, polarization, social identity, etc.).

As was to be expected, all this development of group psychology has led its application to the organizational sphere becoming one of the fields of greatest interest and activity. In 1996, González had already written a text about this subject (with Silva and Cornejo, 1996) offering readers numerous tools if they were interested in the training and development of efficient work teams; and Silva and Quijano (1997) elaborated a specific chapter on groups in organizations in one of the previously mentioned manuals.

The legacy of this momentum has reached our days through people who are dedicated to research, teaching, as well as intervention in the area. In the first case, the work by professor Roca, whose doctoral thesis focused on the theme of *groupality* (or the level of group development, which we will see later) in educational settings stands out (Roca, 1996), in which she has continued to work along with other fields related to this area. In the intervention area, the theses by Poblete (2000), who has also worked on the groupality concept in work teams, and Redorta (2002), with its applications to the field of conflict management and mediation, stand

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out. González personally supervised all these theses. In addition, the previously mentioned master continues to train group conductors, now under the supervision of professors José Manuel Cornejo and María Palacín, generating tens of intervention projects that have been carried out throughout all these years. The areas of application have been diverse, such as *out-door* training, the implementation of total quality systems, skill training programs, effectiveness assessment, etc.

Influenced by this context, we have continued to be interested in groups and work groups with a double objective: 1) to improve our knowledge of the functioning of these, and 2) to develop useful tools for their assessment that will allow us to guide subsequent interventions. In this regard, the HSA model (Human System Audit; ASH: Auditoría del Sistema Humano) is well known, that as a group of organizational assessment tools we have been developing since 1997 (cfr. Quijano, 2006; Quijano and Navarro, 1999). Within the HSA, we have paid special attention to different key constructs for, in our opinion, understanding work team functioning: the level of group development, task uncertainty and group effectiveness. Before describing in detail how we understand these concepts, describing the measurement tools we have created and discussing the main studies we have or are carrying out, let us present the team model we have in mind as a theoretical framework of all this work.

### A MODEL FOR THE UNDERSTANDING OF WORK TEAMS

The work we have been carrying out in our organizations has been increasing in uncertainty and ambiguity during the last few years. Polyvalence, temporal pressure, virtuality, high unpredictability in the work environment, new ways of understanding authority, the apparition of network structures, the importance of knowledge as a key factor in numerous businesses, the necessity of having diverse skills, the advantage of the existence of skills distributed within a team, etc. have all posed new work requirements that organizations have had to face in order to achieve their objectives. In response to these circumstances, organizations have emphasized group work and have designed organizational structures based on overlapping teams generated for multiple purposes (Gil, Alcover and Peiró, 2005; Kozlowski and Bell, 2003; Marks, Mathieu, Alonso, DeChurch and Panzer, 2005). Group work, collaborative work or networking (which are not necessarily the same, but that emphasize the need of

a collective approach to the task as opposed to the classic design of individualized work) are necessary in numerous organizations and also increasingly more common are the initiatives for their implementation.

In our opinion, three key aspects should be attended to simultaneously in order to design successful work teams: the tasks that will be entrusted to the team, the human processes that inevitably will happen inside the team, and the results achieved by the team (results relating to both the tasks and the processes). There is feedback between tasks, processes and results, as will be argued later on. This way of conceiving work teams has a long tradition and has currently taken the form in the differentiation by Salas, Goodwin and Burkehay (2009) between *taskwork* and *teamwork* as determinants of team effectiveness.

Tasks entrusted to teams must have certain characteristics because not all tasks equally require team work, and, as is well known, if tasks do not require coordinated interaction, it is difficult to perform them as a group as this implies a series of additional efforts to be added to the individual work itself (for example, having to meet for diverse purposes such as designing the job, distributing it, assessing the degree of goal achievement, etc.). According to what we have been studying, tasks require group work when said tasks are interdependent and when they present medium or high levels of uncertainty (later we will describe both aspects in more detail).

Now, when we design tasks that require team work, this does not guarantee that a group of people will really form a group, and even less, an authentic work team. The level of group development is a concept that includes the idea of to what extent a group is a group, as we know that not all groups are groups equally as not all have been able to develop as such (using a very popular example, any sport specialist and any not-too-passionate fan would agree that in the 2009-2010 Spanish soccer league, Barça was more of a team than Madrid). The level of group development is one of those key processes that is produced in every work group and that should be attended to in the design of effective teams. Along with it, other social processes such as the potency beliefs, leadership, coordination levels, and others, are key. We have paid attention to some of these in our research, as we will see later.

Finally, the results achieved by a team would be the third key element on which to focus as they produce a basic feedback to the team functioning as such. Results with respect to what? Well, on the one hand, in relation to the

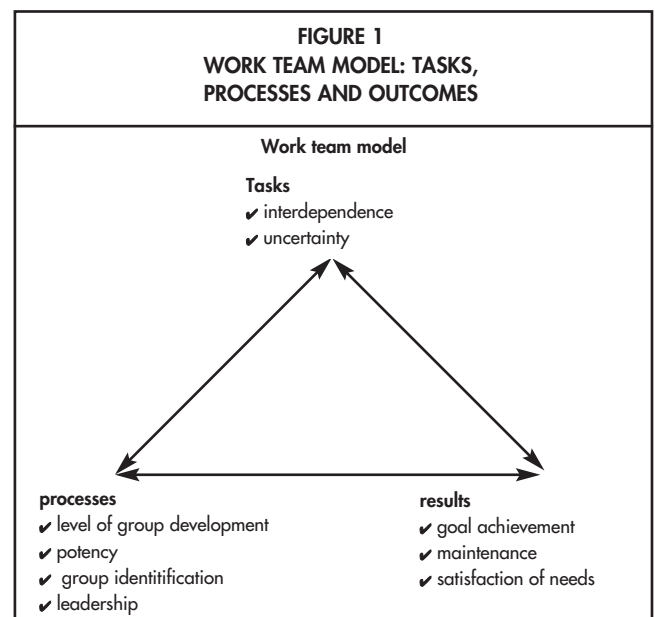
tasks to be performed and the goals to be achieved, and, on the other hand, the social processes themselves which have been generated in the group during team work (for example, whether maintaining necessities of the group itself have been fulfilled or whether the individual necessities of members have been attended to). Subsequently, we will describe in more detail how said team outcomes may be approached.

Figure 1 shows a useful graphic representation of the team work model that we have briefly brought forward and that we will next describe in detail paying special attention to the following aspects: 1) how each one of these concepts can be operatively understood, 2) how these can be assessed, and 3) what orientations they offer for intervention in the design of successful teams. As we have pointed out, and will insist on next, the design of work teams requires attending to the three elements mentioned simultaneously: tasks, processes and results.

**GROUP TASKS: WHICH TASKS REQUIRE TEAM WORK?**

As we were saying, we have identified two task-related aspects whose values determine, in order to be achieved successfully, the greater or lesser exigency to be performed in a group. These are: 1) their uncertainty, and 2) their interdependence. Task uncertainty refers to the “the existence of unclear connections or links between what the group must do (work) and the result it will achieve from this work (results)” (Navarro, Díez, Gómez, Meneses and Quijano, 2008: 263). In 2008, we developed a theoretical model that incorporated the proposals made by different authors to date, the MITAG or the group task uncertainty model. We also created a questionnaire-type tool for its evaluation considering the following as its main theoretical dimensions: goal clarity, process clarity, multiple requirements, familiarity, choice between multiple forms and demand conflict. In this first empirical study (Navarro et al., 2008) working with 164 participants who belonged to 34 work groups from 3 different organizations (a hotel, a public administration and training groups at a university), a first factorial solution was obtained that indicated that there were four main empirical dimensions useful for the understanding of task uncertainty. In an extension of the initial sample with three new organizations (a hotel, and two companies in the health system) in which the tool was applied to 99 workers belonging to 24 different teams, the presence of these empirical dimensions was confirmed (Ferràs, 2009). These are: clarity, novelty, diversity and conflict.

Clarity refers to the knowledge of team members regarding what they must achieve (goals) and how they can achieve them (processes). It would be a dimension that reflects the existence of a shared mental representation of the goals to be achieved and how to achieve them. It also emphasizes how important it is for the performance of the team task to establish with a certain clarity what the group is expected to attain, that the group members manage this information, and what the necessary processes are in order to achieve this. Diversity makes reference to the quantity and variety of tasks the work group has to perform. It emphasizes diverse information procedures that group members must perform in the execution of their tasks in order to achieve them efficiently. Novelty refers to those task characteristics that make the group not know which is the best way to perform it and, in addition, that members have to choose among different alternative procedures based on a subjective efficiency criteria. It would be related to task familiarity or previous experience of the group with the task: novel tasks are those with low familiarity and vice versa. It may seem that novelty is closely related to clarity, however, we must take into account that, for example, there may be tasks that a group performs with a certain frequency, and therefore are not new, but that are not very clear to team members insofar as they feel a great deal of uncertainty about the results that will be obtained. Lastly, task conflict refers to the possible incompatibilities regarding tasks that are presented to the group, whether it is due to discrepancies among different tasks or within



one same task, as performing a task efficiently can mean not attending to other tasks the group must also perform.

The global measure of uncertainty will be obtained using the following equation:  $\text{Uncertainty Level} = ((\text{Novelty} + \text{Diversity} + \text{Conflict}) - (\text{Clarity})) / 4$

To sum up, the uncertainty of the tasks to be performed by the work group includes the degree to which said tasks are not clear to the members, are novel, diverse and show incompatibility or conflict among them. Having said this, one of the essential premises we hold is that when tasks have medium or high levels of uncertainty, team work becomes necessary. On the contrary, when faced with tasks with scarce uncertainty (clear tasks, repetitive, hardly diverse and compatible with each other) team work does not become necessary. Why? Well, because as a group we have the necessary resources to face diverse, ambiguous, new and incompatible tasks. Among all the team members, there is a greater quantity and variety of knowledge and skills for coping with diverse tasks. In groups, social support phenomena take place, a key aspect for managing the anxiety generated by ambiguous and incompatible tasks, for example. Working as a team, members also generate shared meanings, forms of explicit comprehension or implicitly agreed on, which are the key to coping with the new (Weick, 1995).

With respect to task interdependence, it makes reference to the direction of the work flux, which makes team members interact, to a greater or lesser degree, with one another in order to successfully perform a task. Following the works by Van de Ven and Ferry (1980), we believe that it is useful to distinguish among four levels of task interdependence: minimum, sequential, reciprocal, and network (see Table 2 for an extended explanation about each one). The tool we have created for the assessment of task interdependence is not Likert-type, as are the rest of the tools we are presenting, but rather in this case, group members are asked to make an estimation of the percentage of time they are working according to each type of interdependence.

The global measure of interdependence can be later extracted with the following formula:

$\text{Interdependence level} = (\text{Minimum} * 0) + (\text{Sequential} * 0.3) + (\text{Reciprocal} * 0.6) + (\text{Network} * 1)$

In the different team assessments we have performed to date (with 4050 participants, 428 teams belonging to 8 organizations), we have verified two aspects: first, that the assessment tool we used (very similar to that proposed by Van de Ven and Ferry, 1980) generates

problems as participants perceive it as difficult to answer, especially when the questionnaire is used as a self-administered application. To mitigate this fact, we have carried out applications where a consultant explains in person how to answer this tool. Second, when we utilize this application, the rates of agreement among group members are greater (this is expected as the interpretations of the proposed demand are homogenized) and there is a clearer relationship with some group processes that we will later explain (for example, with the level of group development or the degree of team identification).

In short, the interdependence of the tasks group members must perform offers us some meaningful information in order to know which tasks require group work. In our opinion, group work is especially required when task interdependence is reciprocal or maximally networked. Considered along with the uncertainty level, it provides key information with a view to designing team tasks. This is of important value given that the literature is filled with proposals for designing teams focused on the human processes that must be attended to, regardless of the technical aspect present in any of the proposals (Kozlowski and Bell, 2003). Perhaps due to the professional deformation that comes from psychology (the main discipline interested in groups and teams), there is a tendency to overestimate the importance of psychological processes in groups, forgetting that tasks and goals to be achieved are other essential elements without which we would not have a complete comprehension of team functioning. This standpoint is simple to defend: if we take the task, the organizational order, or the self-proposed goals away from the team, we would simply not have a team; we would have a social group, an informal group, but we would not have a team.

#### **SOCIAL PROCESSES THAT EMERGE IN WORK GROUPS: WHICH PROCESSES ARE GOOD INDICATORS THAT THE TEAM IS FUNCTIONING AS AN AUTHENTIC TEAM?**

There are numerous key processes that have been identified in the literature as indicators of good team functioning: norm generation, the apparition of differentiated roles, the emergence of leadership, group development, the generation of potency beliefs, the generation of the perception of identification with the group, the emergence of certain types of cognition (transactive memory, team mental models), etc. are some

of the most important and that agglutinate the greatest part of the literature. In our investigations we have focused on a few of these. Specifically and in a special manner, on the level of group development following the tradition in our department that we commented on at the beginning of this paper. Subsequently, we have included team potency and group identity as constructs related to the previous and with a view to being able to conduct validation studies. We are also currently interested in transformational and distributed leadership as it is a

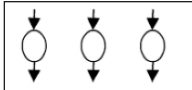
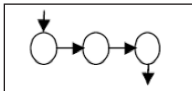
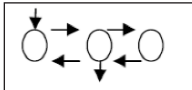
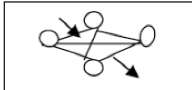
demand we have received from different organizations we have collaborated with. Let us examine each one in detail.

Not all groups are equal. As we often like to reiterate: between a group of people who are queuing to buy bread and a high-performance sports team, there are differences.

The LGD (level of group development) makes references to the degree to which a group of individuals behaves in such a way that it has developed a series of basic properties present in any human group. The greater the presence of these properties, the greater the level of development shown by the group is (Meneses, Ortega, Navarro and Quijano, 2008; Navarro, Meneses, Miralles, Moreno and Loureiro, under revision). And, what are these basic properties? Well, the ample literature that has focused on these phenomena under diverse denominations (*groupness, entitativity, groupality* or level of group development; see Meneses et al., 2008)

TABLE 1 TASK UNCERTAINTY: QUESTIONNAIRE ITEMS, EMPIRICAL DIMENSIONS FOUND AND RELIABILITY OF THE SCALES		
Items	Dimension	Cronbach's Alpha
1. We are very clear on what we must achieve with our work. 2. We frequently encounter new problems and situations in which we feel confused about the best way to work (inverse). 3. It becomes confusing to know what we must achieve with our work (inverse). 4. There are few doubts regarding how to do our job well. 5. We have clear and well-defined objectives. 6. There is clear knowledge regarding the processes required to achieve our goals.	Clarity	0.648 (p<.001)
1. To achieve our goals, we need to handle a lot of different information. 2. We have very diverse tasks that force us to manage multiple situations. 3. There is only one way of doing our work well (inverse).	Diversity	0.631 (p<.001)
1. There are several ways of doing our task well and we must choose the most efficient one. 2. Our task is performed automatically and almost without thinking (inverse). 3. Our job continuously poses new situations to which we must respond. 4. We attend few demands that are different and use simple information (inverse) 5. Part of our task consists of deciding, from among the possible ways of doing it, which is the best in each case. 6. Our job is monotonous (inverse).	Novelty	0.675 (p<.001)
1. In general, the different objectives demanded are usually compatible (inverse). 2. We often receive demands that are difficult to attend to at the same time. 3. Doing a task well often requires not attending to others.	Conflict	0.634 (p<.001)

Note: data corresponding to 4050 workers belonging to 428 teams of 8 different organizations.

TABLE 2 TASK INTERDEPENDENCE: POSSIBLE LEVELS	
1. Minimum interdependence 	<ul style="list-style-type: none"> <li>✓ Each member performs the complete task.</li> <li>✓ Members perform similar tasks.</li> <li>✓ Group outcome is the sum of the individual results.</li> </ul>
2. Sequential interdependence 	<ul style="list-style-type: none"> <li>✓ Each member performs different parts of the task following a pre-established order.</li> <li>✓ Members have different tasks and one needs the outcome of another in order to be able to perform his/her work.</li> <li>✓ Group outcome depends on the efficiency in each one of the steps.</li> </ul>
3. Reciprocal interdependence 	<ul style="list-style-type: none"> <li>✓ Each member performs part of the task and the result of one is needed by the other to do his/her job well and vice versa.</li> <li>✓ Members have different tasks according to their knowledge and skills.</li> <li>✓ Group outcome depends on each of its members and the coordination among them.</li> </ul>
4. Maximum network interdependence 	<ul style="list-style-type: none"> <li>✓ All members simultaneously collaborate in task performance.</li> <li>✓ The group has the freedom to self-organize in the way that is best for performing the task.</li> <li>✓ Group outcome depends on members diagnosing, solving problems and collaborating to complete the task efficiently.</li> </ul>

has proposed the following: 1) the interrelation among members, 2) the identification with the group 3) the coordination of behaviors, resources and technologies and 4) the orientation of members toward the achievement of team goals. A highly developed group would be that in which members have a high interrelation, strongly identify with the group, present high levels of coordination and are oriented toward the achievement of a shared objective. We would be, therefore, in the presence of a mature group whose functioning is complex if we were to compare it with a mere aggregate of workers.

Based on the identification of these properties for understanding to what extent a group is a group, we created a questionnaire-type tool for the assessment of this basic process. Originally, said tool had 15 items which after two factorial studies conducted (Study 1 with 385 workers, belonging to 80 groups in 9 different organizations; and Study 2 with 315 workers belonging to 51 work groups in a single organization; Navarro et al., under revision) were reduced to 8 items that measure in a one-dimensional and satisfactory manner this process (see Table 3).

This instrument has shown consistent results when applied in teams of diverse countries (Spain, Venezuela, and Brazil) and, in addition, has shown good values of convergent and discriminant validity with other group measures such as potency (Guzzo, Yost, Campbell and Shea, 1993), group identification (Hogg, Turner and Davidson, 1990) and the level of entitativity (Carpenter and Radhakrishnan, 2002).

As we previously anticipated, in the latest applications we have been developing, we have incorporated both team potency and group identification of members as another two key processes to consider. Regarding team potency, it makes reference to "the collective belief in the group that it can be effective" (Guzzo et al., 1993: 87). That is, beliefs the group as such holds that they will be capable of executing their tasks successfully. It therefore refers to a group cognition that is essential and determinant; for example, the motivation level the group displays in task performance. Guzzo et al. proposed a measurement scale that we have also utilized with satisfactory outcomes (see Table 3). On its part, group identification (a construct with an ample tradition since the formulation of the social identity theory by Tajfel and Turner, 1979) refers to the perception the member has of the link to the group in terms of group categorization

(identifying him/herself as a member), the awareness of the evaluation that this group receives and the pride derived from belonging to the group. In another way, work group identification refers to the degree in which the worker has incorporated belonging to the group into his/her own self-identity. For the assessment of this process, diverse tools have been proposed, with that by Hogg et al. (1990) being one of the most utilized and which we have also employed with good results (see Table 3). To sum up, high levels of group development, strong potency beliefs in their capacities (potency) and a strong identification of members with the group would be, in our opinion, three excellent indicators that the group is functioning as an authentic work group, as an authentic team. In the latest applications performed in different companies, we are adding transformational leadership to these fundamental processes (Bass, 1985). Given that they are recent applications, we cannot offer any statistical data on these.

However, there is ample literature confirming the effects of transformational leadership on both individual and, what we are interested in here, team performance (e.g. Bass, Avolio, Jung and Berson, 2003). For the assessment of transformational leadership, diverse tools have been proposed, being the *Multifactor Leadership Questionnaire* (Bass, 1985) one of the most utilized. Nevertheless, this instrument presents the inconvenience of being somewhat lengthy (20 items to measure transformational leadership) when we are interested in combining it with other measures. For this reason, and within the HSA team, we have developed and validated a shorter instrument. It is the HSA-TFL with 8 items for the assessment of transformational leadership considered unidimensionally and that has shown satisfactory convergent validity values with the MLQ when applied in diverse countries (Spain, Germany, Portugal, Poland, Great Britain and the United States) and criterion validity values, when considering extra effort, satisfaction, identification and organizational commitment (Berger, Yepes, Gómez-Benito, Quijano and Brodbeck, in preparation).

We are currently planning to explore the role of transformational leadership considered from the distributed viewpoint and to study whether the degree of distribution of this leadership style affects some of the group processes presented here in some way (such as the LGD and team outcomes).



**ACHIEVED RESULTS: WHAT TEAM OUTCOMES SHOULD WE PAY SPECIAL ATTENTION TO?**

The socio-technical approach we have discussed up to this point has equally emphasized technical (related to group task) as well as social elements (emergent cognitive processes). Thus, when we make reference to the results or how effective a team is, we must understandably take both elements into account. The literature on team effectiveness and performance, once again very ample, has been accustomed to incorporating this differentiation including the nuance that within social elements, it is convenient to separate between individuals and groups as social entities whose pursued results are going to differ.

This way, Hackman (1987) established a distinction between three key criteria which is still currently thriving: 1) productive results with respect to the tasks demanded, 2) group maintaining or capacity to continue working together, and 3) satisfaction of the needs of members. As McGrath and Argote (2001) hold, groups fulfill three basic functions: carrying out projects, satisfying members' necessities and establishing and maintaining the group.

A highly effective team would be, from this approach, that which has achieved high levels in the three criteria. A low level in some criteria would indicate that the team has not been as effective as it could have been. In fact, if the group does not manage to complete the tasks, the organization will not entrust this team with new tasks and will undoubtedly dissolve it. If the team is not capable of satisfying the group's own survival necessity (for example, shows problems in the management of the integration of new members, does not respect work hours neglecting timetables for beginning and ending team work, or poor handling of conflicts that inevitably take place; see Benítez, Munduate and Medina in this same issue), the group as a social unit will have little probability of long-term continuation. Lastly, if the team does not pay attention and manage to attend to individual needs (not necessarily congruent with those of all members), the members will simply cease to be interested in belonging to the team and will try to search for another where they will achieve this result. Definitively, being effective in team terms means being effective in these three areas.

For the assessment of effectiveness, both subjective and objective measures (in the case of task compliance) have been proposed. On our part, we have used a scale for the assessment of subjective effectiveness with results that we will show here for the first time. It is a questionnaire-type

instrument with 12 Likert-type items (1 = Strongly disagree, 5 = Strongly agree) with items making reference to the previous criteria. At the request of diverse organizations, we have added to this first scale a second scale referring to the internal service quality understood as the service evaluation that a group makes regarding another with which it has been related. This internal service quality scale can be used to compare the effectiveness self-evaluation made by a team in the previous scale, on the one hand, and the evaluation that the groups with whom the team relates make of this effectiveness, on the other. In other words, it incorporates a first external criterion with which to contrast the subjective perception of effectiveness.

**TABLE 3**  
**KEY GROUP PROCESSES: QUESTIONNAIRE ITEMS, STUDIED PROCESSES AND RELIABILITY OF THE SCALES**

Items	Process	Cronbach's Alpha
1. We have a usual way of functioning as a group. 2. We feel we are an important part of this group. 3. All members are consistently relating to one another. 4. Members feel committed to the achievement of the group objectives. 5. There is a low interrelation among all members (inverse). 6. We share the same work values. 7. We share tools, resources and information. 8. An essential task is to take care of our own development as a group.	Level of group development	0.704 (p<.001)
1. This group has confidence in itself 2. This group believes that it can be unusually good producing high quality work. 3. This group expects to be known as a high-performance team. 4. This group feels that it can solve any problem it may encounter. 5. This group believes that it can be very productive. 6. This group can achieve a lot when it works hard. 7. No task is too difficult for this group.	Potency	0.775 (p<.001)
1. I feel strongly identified with the group. 2. I feel I belong to the group. 3. I feel similar to the other group members. 4. The group is important in how I see myself.	Group identity	0.734 (p<.001)

Note: data corresponding to 4050 workers belonging to 428 teams of 8 different organizations



We are currently applying the tool in several companies of the automotive industry in which we have included different objective effectiveness criteria used by the companies themselves, such as absenteeism, generated improvement ideas, company budget expenditure, polyvalence, and quality ratios, among others. We hope to find interesting relationships between the uncertainty levels and task interdependence and the processes described in the previous sections, the measure of subjective effectiveness and these objective results (for similar applications see Osca, García-Salmones, Bardera and Urién, in this same issue).

**REVISITING THE MODEL: HOW ARE WORK TEAMS DESIGNED?**

Returning to the work team model that has guided our entire exposition (see Figure 1) and with the aim of integrating what has been said up to this point, we would like to contribute some ideas on how to extrapolate the

elements included in it to the professional practice in work team design and management. To begin, we would like to explain that the representation of the model as three elements that feedback to each other (instead of proceeding with the classical input-process-output schemes with which the reader will become familiar throughout this monographic issue) was intended with the first objective of emphasizing the importance of these permanent feedbacks produced among the three elements and second, to imply that we can start the design of teams either by the tasks or by the processes, or by both at the same time.

With the aim of guiding professional intervention, we could be faced with two different situations. First, that the professional finds him/herself facing an *ex novo* design of a work team, and second, that he/she faces a team that is already formed or a team in the process of formation. What is more usual is that in this second situation tasks have already been defined to a great extent and, therefore, the possibilities of intervention are mostly in the processes. When facing situations of the design of new teams, the options are greater. Table 5 synthesizes the main guides for intervention some of which we will focus on next describing some known entrepreneurial practices.

For example, for designing tasks with a certain dose of uncertainty, it may be useful to combine cooperation and competition. Sony has a practice that illustrates this. When Sony tackled projects such as the creation of a new high-quality video format and a massive data storage system, they appointed the project to several teams of engineers who were invited to compete with each other to provide a solution. In the development of the project, the different teams were equally requested to make presentations of the state of their projects offering technical details of these. With this, the different teams could copy or adapt into their own project the solutions found by the other teams. And the end result of this competition-cooperation process was the creation of the *Blu-ray* as a new high-quality video and storage standard.

Sony is not the only company that uses this practice and other similar ones. Many worldwide new-technologies organizations (Toshiba, Canon, etc.) usually operate in a similar manner. Although this way of proceeding could be criticized regarding the duplication of tasks that it implies, different studies have shown that this duplication is important when the company business resides in its capacity to innovate (Nonaka, 1991).

Scale	Questionnaire items	Alfa de Cronbach
Achieved results	<ol style="list-style-type: none"> <li>1. We are efficient performing our tasks.</li> <li>2. My colleagues are concerned about attending to my needs.</li> <li>3. We frequently have internal functioning problems (inverse).</li> <li>4. The incorporation of the new members is positively valued.</li> <li>5. We do not often achieve the proposed results (inverse).</li> <li>6. We pay attention to what each member needs.</li> <li>7. We function very well as a work team.</li> <li>8. We fully trust every group member.</li> <li>9. We are accustomed to being effective.</li> <li>10. Frequently, member needs go unnoticed (inverse).</li> <li>11. We organize and coordinate ourselves efficiently.</li> <li>12. Although we share work activities we don't feel very united as a group (inverse).</li> </ol>	0.761 (p<.001)
Quality of internal service	<ol style="list-style-type: none"> <li>1. We frequently feel that the other groups hinder our work (inverse).</li> <li>2. The other groups provide the service that we need to do our work well.</li> <li>3. The other groups' work facilitates our own.</li> </ol>	0.761 (p<.001)

Note: data corresponding to 4050 workers belonging to 428 teams of 8 different organizations.



Another route for the implementation of task uncertainty may be through management by values as opposed to the more classical systems of management by objectives or instructions (García and Dolan, 1997). In management by values, the behavior of the workers is intended to be guided not based on some given instructions or some established objectives. To the contrary, what is pursued is that workers materialize the essential values of the company into their daily activity and behavior. For example, La Caixa endeavors to achieve that their workers guide their behavior to express values such as trust, quality and social commitment (Hervás, 2008). Thus, the worker's behavior is guided in a flexible manner allowing its adaptation to the multiple and diverse situations he/she will certainly have to face, and not in a fixed and rigid manner, which is what is achieved with management by objectives, and especially with management by instructions.

For the promotion of interdependence, it may be useful to provide the team with decision-making autonomy. A very well-known example can be found in a practice of the Ritz-Carlton hotel chain (Reddy, 2009). Within the budget that each Ritz-Carlton hotel has, the groups of employees are authorized to spend up to 2000 dollars a day on what they deem to be necessary and with the only guidance that it has to solve some clientele problem. Given that this company's philosophy is the maximum satisfaction of its clients, this practice produces excellent results. Other less striking practices but equally efficient can be found in the automotive industry where the use of quality circles is common. In these quality circles, small groups of workers propose new ideas for the improvement of the quality of the production processes (Peiró and González-Romá, 1993).

With respect to the level of group development, it can be facilitated, for example, through the application of certain practices in the selection and training of workers. A good example of this is found in the selection that was conducted for the configuration of the staff for the new Hesperia Tower hotel in Barcelona (Marco, 2006). After dividing the candidates into the nine groups of positions the hotel was going to have, they participated for a whole day in diverse group activities with the main objective of evaluating their capacity of working as a team. Among the performed activities there were several group coordination exercises, a *gymkhana*, the construction of a *castell* (a human tower), exercises of team positive reinforcement, etc.

It can also be very useful to reward team work in some way. Numerous organizations offer non-monetary rewards for good team results (through trips, for example). There are even organizations that set as their management objectives the improvement of the teams they manage and to this they associate a certain part of the variable retribution. For example R, the Galician communications operator, has 5% of the variable retribution for managers linked to the improvement of the results of their group of collaborators in the organizational climate survey that is periodically conducted (Rodríguez, 2010).

To generate beliefs of potency in the team, the combination of several strategies can be useful, such as the remembrance of past successful experiences, the design of achievable and challenging objectives or the promotion of leadership styles that generate trust in the team's own capacities. An example that combines these aspects is found in the well-known role undertaken by Steve Miller when he took charge of the management of Shell in the mid-nineties (Pascale, Milleman and Gioja, 2000). With the aim of configuring a new strategy for the company, he used an also new method for generating it using the group technique known as the "fishbowl". In it, the group of managers and different work teams belonging to several operators exchanged opinions regarding the running of the business and where it should be headed. Opening these communication channels, Miller prioritized that all participants experienced a feeling of belonging to a group, and how the contribution of each team was connected to the global organization. In addition, the employment of this type of technique permitted the overcoming of the communication barriers established during the years of separation in Shell between the management and the line personnel, generating feelings among the management group of trust in their task of managing people.

Another very effective route for generating collective potency and finding shared meanings to the work conducted can be through the use of the so-called future searching conferences that Weisbord (1992) has worked in detail. In these seminars, the different interest groups that shape the organization (*stakeholders*) are encouraged to express how they perceive the past and the present of the organization as well as to collectively imagine its future. There are two common results in these types of processes: the discovery of a common substratum, of something shared by the different members of the organization (the

common ground to which the title of the book by Weisbord makes reference); and the emergence of feelings and perceptions that the future of the organization depends on what its members are capable of doing, that is, the generation of potency beliefs.

Finally, and to close this section, there are numerous interventions that can be carried out in the different areas of the model. From some of these interventions it is easy to obtain entrepreneurial practices that, it can be said, are starting to become increasingly more common. In all of them, and to conclude with a key learning point, the emphasis is on collaborative work escaping from the traditional individual approach and the job post that has predominated in almost all organizations throughout a great part of the past century.

**CONCLUSION**

Several have been the essential ideas that we have defended in this article, some explicitly, and others, in the

form of implicit assumptions. We wish to finish this paper highlighting some of the most important ones.

First, we are convinced that the knowledge derived from current scientific production can be used to guide interventions in a more professionalized manner. Many scientists have become interested, and continue to be so, in understanding work teams and the aspects that determine their success. Making good use of the knowledge and tools these offer can be a competitive advantage. The fact that we have presented the assessment instruments that we use here is an invitation for professionals to use them as they deem appropriate.

Second, we believe that assessment and intervention must go side by side. Assessment is needed in order to guide intervention. And reassessment is needed to evaluate the usefulness of the intervention conducted.

And third, a general hypothesis guides the work that we have been developing to date: the efficacy of work teams is determined by the adjustment between its maturity level

**TABLE 5**  
**POSSIBLE INTERVENTIONS FOR TEAM DESIGN AND MANAGEMENT**

Area of model	Key dimension	Possible interventions
Tasks	Uncertainty	<ul style="list-style-type: none"> <li>✓ Designing varied tasks that require the use of multiple competencies.</li> <li>✓ Designing new tasks to which the group has hardly been exposed before.</li> <li>✓ Designing objectives with a certain dose of paradox between them (for example, to increment quantity and quality at the same time, to repeat what one already knows how to do and innovate, compete and cooperate, etc).</li> <li>✓ Designing tasks in which the following are not completely fixed: 1) the objectives to be achieved, 2) the ways used to achieve them, or 3) both things (for example, through management by values).</li> </ul>
	Interdependence	<ul style="list-style-type: none"> <li>✓ Designing tasks whose objectives require highly coordinated work.</li> <li>✓ Assigning subtasks to different members taking advantage of their different competencies.</li> <li>✓ Providing the team with autonomy when making decisions regarding how to approach the task.</li> </ul>
Processes	Level of group development	<ul style="list-style-type: none"> <li>✓ It must be remembered that to gain maturity, the team needs time.</li> <li>✓ Facilitating high interaction among members (e.g., also doing informal activities together).</li> <li>✓ Selecting and training good team players (oriented toward the group).</li> <li>✓ Designing organizational reward systems that emphasize collaborative work.</li> <li>✓ Leadership that provides meaning to group work.</li> </ul>
	Potency	<ul style="list-style-type: none"> <li>✓ Remembering previous successful team experiences.</li> <li>✓ Designing achievable and challenging objectives.</li> <li>✓ Celebrating the obtained results.</li> <li>✓ Developing leadership styles that generate group trust.</li> </ul>
	Identification	<ul style="list-style-type: none"> <li>✓ Categorization: labeling the groups that make up the organization.</li> <li>✓ Comparison: establishing comparisons among the different groups.</li> <li>✓ Positive comparison: emphasizing what it is that makes the group better.</li> </ul>
	Transformational leadership	<ul style="list-style-type: none"> <li>✓ Promoting and developing leadership styles at the service of the group’s necessities</li> <li>✓ Developing leaderships that attend to the particular needs of each member.</li> <li>✓ Facilitating the emergence of leaders capable of developing attractive and achievable future visions for the team, aligned with organizational objectives.</li> </ul>



(group development; potency, etc.) and the characteristics of the tasks to be performed. The greater the uncertainty and requisites of task interdependence are, the greater the demands for team work. The greater task uncertainty is, the greater the complexity in the groups. This idea has already been confirmed in the organizational field in general if we analyze, for example, how network-type organizations manage to thrive in the current settings characterized by uncertainty and turbulence. But now it must be tested at the group level. For this, and as a future challenge that we have in mind, we need to extend our current sample of eight organizations to the maximum possible number, especially increasing the diversity of the sectors in which they operate. In that endeavor, we are now immersed.

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