Social Psychology and the Challenge for Interdisciplinary European Research

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Abstract: European Research projects are sometimes big but not necessarily world class. In particular, the expected benefits of interdisciplinarity (integrated solutions for complex problems) at times fail to materialize. Some of the projects that do not produce the promised results have not applied the knowledge produced by over 60 years of research and practice in social psychology. Other projects that used this knowledge are faring better.

This article reviews certain findings of social psychology that are relevant for managing interdisciplinary research projects referring to works by Kurt Lewin, Carl Rogers, Edgar Schein and others. The article then presents two case studies from the 6th Framework Programme – examples that show which activities fail to produce the hoped-for benefits as well as other activities that seem to work better. Problems are related to fuzzy objectives, the absence of a clear and shared vision, no attempt to create a shared language, absence of feedback sessions about the way the work is done, a predominantly controlling management style rather than a supportive one, and other problems.

The article concludes with recommendations for the European Commission to ensure that the hard-won insights of social psychology are brought to bear on the leadership and management of interdisciplinary projects.

Key words: Social psychology, European interdisciplinary research, leadership and management

Introduction

In 1543, when Copernicus showed that the Earth was not the centre of the universe but only a part of our solar system, he not only made an important discovery that opened the way for further discoveries, but also discredited and threatened the established theory and practice and forced science to go through a process of relearning.

Today, parallels can be drawn between Copernicus' discovery and some of the striking advances that social science - and more particularly social psychology - have made over the last seven decades. It has been fairly well established through systematic research but also by less controlled experiments that people from different cultural backgrounds can enable potentially significant learning as well as action that generates constructive change.

Clearly, these insights can be of benefit to the leadership and management¹ of multidisciplinary and multinational European research projects, especially as these projects are increasingly concerned not only with producing new insights in laboratories and for other scientists, but also with the need to make practical use of the knowledge that is generated (Schrogl 2006, 61).

And yet, much of what has been established by social psychology in the last seventy years is ignored in at least some of the projects – and maybe in many – with demonstrable drawbacks for interdisciplinary scientific projects and also for the efficient solving of complex problems in the real world – not to mention the joint development of products that could be sold profitably and thus generate employment.

My hypothesis is that the interdisciplinary research projects that generally ignore the relevant insights provided by social psychology fail. Conversely, projects that heed such insights are more likely to achieve their objective of finding appropriate solutions for complex scientific and practical problems.

¹ Leadership is seen here as any action that provides effective guidance and motivation; management as those actions that contribute to the efficient use of resources. The two notions are interlinked.

This article illustrates the above hypothesis with a case study thereby providing some (albeit limited) evidence to support it. By doing so, I hope to achieve the following objectives:

- Reiterate some neglected insights from social psychology whose use would benefit interdisciplinary research projects in Europe.
- With reference to the case study on European Research projects, show what happens when these insights are ignored or only partially used by project leadership at different levels.
- By doing so, make the case for taking a fresh look at social psychology and for integrating its insights more systematically into European research.

In the following section, the term social psychology and the associated legacy of Kurt Lewin is explained, and three current approaches in social psychology that can be considered to be related to his legacy are briefly reviewed. The two research projects financed by the European Commission which provide the basis for the case study are then outlined. Next, a number of challenges typically associated with such projects are discussed. Some findings of social psychology that pertain to project leadership and management at different levels are presented with examples of what actually happens in research. The article concludes with a few recommendations of how social psychology could be more productively applied.

A brief background to Kurt Lewin and social psychology

Kurt Lewin (1890-1947), a German immigrant to the United States, is considered to be "one of the most creative and controversial figures in the history of psychology" with a lasting legacy in contemporary social psychology (VandenBos 1997, v). He fused the two disciplines of sociology and psychology with the aim of studying "social facts" as explanatory factors for the behaviour of individuals and groups of all sizes.

Social facts are "forces" that influence the behaviour of individuals, groups and organizations. According to Lewin, these forces are usually diverse, dynamic and interdependent and might include issues such as the personal values of individuals, group structure (e.g. problems of hierarchy), the personality of individuals in the group and their behaviour (including leadership), as well as any other fact that might bear on group dynamics, such as the health of a group member, or the place where a meeting is held (Lewin 1939a, 264). Relevant social facts exist within the group/ organization but also in its environment.

Together, social facts create a complex field of forces that the social psychologist has to understand both in detail and also as a whole in order to be able to predict what is going to happen within the group. To cite Lewin: "Whether or not a certain type of behaviour occurs depends not on the presence or absence of one fact or a number of facts as viewed in isolation but upon the constellation (structure and forces) of the specific field as a whole" (1939a, 275).

Lewin did extensive empirical research on groups and used his insights to develop theories – some of which are still widely used today in their original form, such as his force field analysis and his theory on how change happens in groups and organizations (Schein 1996).

Of lasting importance is his contention – which he confirmed by his research and theory building – that constructive and destructive behaviour in groups can be studied and that conclusions can be drawn with regard to how groups and organizations should be led if learning, motivation and change are desired.

Social Psychology as defined in this article

Much has been written and has happened in the field of social psychology since Lewin's death (for partial overviews see Argyris 1993, 15-48, and Schein 1996). Here, I have made an arbitrary selection of three streams that I consider are particularly relevant to the above-mentioned objectives of this paper.

- 1) Process consultation: The term is Edgar Schein's (1987) from the Sloan School of Management at MIT. The approach is in line with the legacy of Lewin's work, explicitly picking up his theories and developing them further, mostly focusing on questions of organizational change. Other theorists-practitioners in this field, though by no means the only ones, are Chris Argyris (e.g. 1993) from Harvard Business School and Klaus Doppler (e.g. Doppler and Lauterburg 2000), the editor of the journal Organisationsentwicklung (organization development).
- 2) Group process facilitation: This approach focuses mainly on situations encountered in group meetings and asks what interventions if any can make them more effective. Special attention is paid to meetings and workshops with participants from a variety of backgrounds, with different views and perspectives (see for example Kaner 1996; Spencer 1989; Stanfield 2000). This approach is particularly useful because it discusses even the smallest details of communication and learning situations and how to deal with them constructively. In many regards, process facilitation is the practical application of the empirical findings of social psychology.
- 3) The person-centred approach/ humanistic psychology: The founding father was Carl Rogers (1902-1987), called by his biographer: "America's most influential counsellor and psychotherapist and one of its most prominent psychologists" (Kirschenbaum 2004, 116). In fact, Rogers is probably better seen as the initiator of a new and important trend in the social sciences humanistic psychology rather than as an heir of Lewin. His work is nevertheless summarized here under the title of social psychology because thematically Rogers was not far from Lewin, being concerned with setting up an environment that best enables change and problem solving for individuals and groups (e.g. Rogers 1961). Like the work of Lewin, Schein and Argyris, this approach has been confirmed by rigorous research.

The case study: two European Commission-funded interdisciplinary projects

Here I use as a case study two projects funded in the 6th Framework Programme (FP6) of the European Commission for research and technological development. I received considerable information about the first two years of the two projects on which I have drawn here. I have named the projects FP-T (for rather traditional leadership style) and FP-M (for a more malleable leadership style). As the knowledge I have on FP-T is more detailed than that on FP-M, in the following, I focus more on FP-T.

FP-T and FP-M are both funded with more than eight million Euros and each include over 30 research institutions and a few private enterprises. Each project involves more than 60 researchers from more than 10 different countries and from scientific disciplines ranging from civil engineering and agronomy, to political science and psychology. In each project, more than five case-study test sites in Europe and abroad are being used to apply and generate knowledge locally.

Both projects hope to bring about palpable change as they set out to address complex environmental problem situations using an interdisciplinary approach and by involving local stakeholders. More specifically and among other outcomes, the interdisciplinary integration and the inclusion of stakeholders is intended to bring about real change locally but also at a European scale with regard to how certain environmental issues are handled (FP-T a; FP-M a).

From my information about the projects it is clear that project leaders and coordinators faced specific challenges even before the projects started:

The (possibly typical) challenges of European interdisciplinary projects

- The most obvious challenge lies in the wide range of scientific disciplines. Each discipline has developed its own language (although even members of a given discipline often do not agree on the definition of certain terms). Understanding the concepts of only one other discipline requires first of all interest (and not seldom the overcoming of prejudice) but also time.
- The second obvious challenge is the diversity of national cultures. That the French, Italians
 and the Spanish drink wine with their lunch but the Dutch prefer butter milk is possibly not very
 serious, but fluid concepts of time in one culture might be seen as "ineffective" in another. And

- senior male researchers from Greece might have quite different views on the meaning of project hierarchy than female PhD students from Germany.
- Unlike in more traditional project and management situations members are geographically scattered. This makes building relationships even more challenging, and solving problems standing around the coffee machine is obviously not often possible.

Less obvious challenges also exist, but they are nevertheless very tangible to project managers:

- A work overload of maybe a majority of researchers: Typically, project partners work in different projects simultaneously, and have to report, coordinate, publish (or finish their PhDs) and fulfil the administrative demands of their own organizations. Trying to meet all the requirements of any given project on time can simply be too much.
- The existence of established research priorities prior to the start of any project: Projects have their objectives, but researchers and institutions also have theirs. These objectives do not necessarily match, even when the project partners defined the objectives of the project together. Before the beginning of the FP-T and FT-M projects, many researchers were already pursuing specific smaller scale research projects, not necessarily interdisciplinary ones. In the opinion of some researchers, FP-T and FP-M then provided funds to continue these studies but not necessarily to integrate them with others. Also quite a few researchers tried to initiate new non-interdisciplinary work in their own research areas using funds destined for the project. The challenge for the coordinators is thus to see how these interests can be integrated into the overall objectives of the project.
- Interpersonal issues: In big projects researchers often have to work together who already
 collaborated on previous projects so trust or mutual dislike has already been established. In
 the case of mutual dislike, their relations may put a burden on the project. Depending on the
 degree of conflict from disagreement on scientific matters to overt antipathy cooperation
 becomes difficult.
- The lack of client-orientation among many (though not all) researchers: The primary concern of many researchers seems to be to obtain the data they need for their research, to publish and then start their next research study. This might appear to be legitimate. However, the interest of the above-mentioned projects is also to constructively work with stakeholders, solve problems and bring about change. To illustrate the issue: One case study site coordinator told me that she was surprised that stakeholders were still polite to researchers after they had been asked "the same questions for the fifth time" (of course by different researchers). And another researcher had the impression that environmental managers sometimes seemed to merely tolerate researchers at their meetings rather than to expect anything from them.
- A lack of experience with successfully managing the complex tasks of interdisciplinary cooperation and stakeholder-oriented problem solving at all levels of coordination of the projects: This is not to say that all coordinators at the different levels of the two projects lack experience. On the contrary, some are very experienced. But successful management requires more than a few people, as is obvious from what has been happening in the projects (see below). Sometimes it seems to be assumed that researchers are automatically good leaders and managers. This, however, is clearly not the case because the training required for leadership and management is quite different from that needed to conduct research.

These challenges show that coordinating a big interdisciplinary project is a major task.

The record of the projects so far

According to official project reviews published about 16 months into the projects, at that point in time, both had a mixed record in handling the challenges. With regard to FP-T, the reviewers said that the project had generally performed well and had solved problems in a creative way and that a lot of work had been done (FP-T b). On the other hand, the review also listed many significant problems. These problems clearly persisted and possibly even grew as 22 months into the project, the FP-T leadership group (the different work block² leaders) used even sharper words than the external reviewers to sum up continuing problems:

² Work packages are smaller project coordination units, typically involving not more than two or three researchers. They are grouped into "work blocks" that on average comprise around five work packages.

- Project partners have not yet agreed on a common vision of what they want to achieve at the end of the project;
- Many of the project deliverables were handed in late and were of poor quality
- Some interdisciplinary teams that worked at the test sites in fact did not collaborate (FP-T c).

This indicates that researchers had not really been communicating on the overall project, but also not always at the test sites, and that interdisciplinary problem solving was not happening at some of the sites. Also, necessary work of the required quality was no completed on time.

According to the external reviewers, these shortcomings were not related to the lack of partner commitment or ineffective forms of collaboration but to the underestimation of the complexity of the tasks involved (especially with regard to work at the test sites) when the project was originally planned, and to the fact that most partners generally had not known each other well at the time (FP-T b). While these reasons need to be acknowledged, they do not fully explain the above-mentioned, problems, especially not two years into the project. As I show below, certain leadership and management practices used in FP-T were responsible for the varying degrees of collaboration between the participants and their motivation (or lack of it). And this is where significant explanations have to be sought.

FP-M received a more positive external review than FP-T especially with regard to achieving its objectives within the reporting period and also with regard to the quality of collaboration between the partners. (FP-M b) Other problems were also mentioned but they related more to items of secondary importance such as the form and content of reporting, though the fact that some partners did not contribute much was also mentioned. As one positive factor for collaboration, the reviewers stated that many FP-M researchers had already collaborated previously (FP-M b). However, as I will be mentioning in the following section, the leadership and management practices used in FP-M differed from those used in FP-T. This should also be considered as an important explanation for why objectives are reached and collaboration proceeds more smoothly.

Social psychology factors that influence project performance 1. Feedback on issues that involve embarrassment or threat

Huge projects like FP-M or FP-T need to learn about themselves if they want to improve - this may almost seem too trivial to mention. And to a certain extent they do: the statement by the FP-T leadership group on their difficulties (cited at the beginning of the previous section) is an important feedback item. The FP-M leadership group also regularly thought about how the project was working, which provides evidence of a degree of introspection.

But how far did these analyses go? And were the essential causes addressed and changed? For certain essential issues they were not, as the following examples show:

A PhD student in FP-M requested data directly from a senior researcher. The researcher's negative reaction made the PhD student think that he might have a completely different opinion of "proper" lines of communication. However, the issue – which is important because it involved data flow - was not further pursued between them.

A senior project partner tried to add an issue to the agenda of the FP-T leadership group meeting dealing with the definition of project objectives. However, in that part of the meeting, several group members preferred to discuss other issues in the corridor. Neither the project leadership nor the project partner questioned this behaviour in the meeting.

At least two work block leaders who left their functions in FP-T, mentioned in private considerable dissatisfaction about how some issues were handled. To my knowledge, the reasons for their stepping down were never openly addressed in the "official" project (and there is no record in the project minutes on this subject).

³ Reaching objectives in the reporting period and effective partner collaboration was judged to be "partially [achieved]" by FP-T and achieved by FP-M.

Other similar situations could be mentioned. Following Argyris (1993), they all have two features in common. First, they involve negative feelings (anger, disappointment, fear etc.), which are not acknowledged - at least not openly. This "bypassing" of negative feelings is then covered up, that is, the individuals pretend officially that the negative feeling has never occurred. Second, individuals use this strategy because the situations are perceived as "embarrassing or threatening". This again is due to the desire to avoid losing face oneself but also to cause the other side to lose face. Argyris and colleagues were able to show that this mechanism of bypassing and covering-up exists cross-culturally, though the actual way it is done varies with the culture (mentioned in Argyris 1993, 51).

This behaviour is empirically associated with avoidance of essential learning and – not surprisingly with a reduction in improvement of performance improvement and in motivation. It can also lead to disaster as shown by Argyris with the dynamics that led to the explosion of the Challenger space shuttle (Argyris 1993, 41 and 45; also Schein 2004, 396).

In FP-T, constructive personal feedback is not systematically sought despite the serious problems mentioned above. The existence of strong "defensive routines" (Argyris) is indicated by the fact that many of the researchers involved agree that items which might involve a loss of face for those involved are discussed in private but usually not mentioned officially.

In FP-M, on the other hand, even though certainly not everything is dealt with openly, the overall situation appears to be more relaxed. For example, at one meeting, the coordinator organized a feedback session on a workshop that she had led previously, and the session was run by someone else. Workshop participants did mention personal needs, e.g., for different session styles.

2. Safe space for feedback

Clearly, not every psychological environment invites feedback. Several of the big FP-T meetings took place in large lecture halls, with - at least at the beginning - the senior people sitting on a podium in front. Despite occasional break-out times in smaller groups, much of the meetings were taken up by PowerPoint presentations - not unlike most "scientific" encounters.

In these circumstances it is rather difficult and maybe counterproductive to offer constructive personal feedback. And yet this feedback can take place, but it is facilitated by a specific environment.

Carl Rogers, who has done extensive empirical research (see for example Rogers 1961; and 1978) on the kind of environment that allows individuals maximum openness, trust and frankness, identified three principal factors:

"One is the willingness to 'indwell' in the perceived reality of the other; a willingness to step into his or her private world and perceive it as if it were one's own. The more such profound understanding occurs, the more tensions relax, fresh insights occur, and communication becomes possible. Another facilitating attitude is valuing, respecting, and caring for the other person. The more this exists, the more the individual gains in self-esteem, and hence in a more responsible and responsive stance toward others. Finally, realness and absence of façade in one party draws out realness in the other and genuine meeting (to use Buber's term) becomes possible." (Rogers 1978, 139).

If this sounds quite simple (and maybe simplistic), anyone who genuinely tries to apply Rogers' insight, will appreciate the huge challenge. Clearly the ability to practice the recommended behaviour cannot be learned overnight.⁴ For many - maybe most - researchers involved in interdisciplinary (and other) projects there is a vast field of learning here. And as this almost certainly implies personal change, it is possibly not very appealing to too many individuals. And yet, if one is seriously interested in achieving better work results, one would be ill-advised to neglect Rogers' insights.⁵

⁴ Rogers and Marshall B. Rosenberg (for example 2005) have shown what is involved in great detail and also how these attitudes can be learned and practiced successfully and across cultures.

⁵ Doppler and Lauterburg re-state Rogers' insights in different form and call them "strategic factors for [the organization's] success" (2000, 191).

By honing these attitudes and practices, project leaders (at all levels) would not only allow participants to open up on critical behavioural issues. They would also likely stimulate motivation and creativity (compare Rogers 1961, 355; also Lewin 1939b). Considering that the two big projects were also much concerned with developing innovative concepts and products, such an environment would clearly be of relevance to them.

3. Releasing control - gaining influence

A point that naturally follows from and extends Rogers' first two attitudes of empathy and positive regard is that if participants are invited to co-construct a project and to co-decide on how it is to be carried out, their commitment to the project is usually strengthened.

"The whole natural sense of one's own worth, as well as the basic need to mark oneself out and have a share in arranging matters, operate against simple acceptance of a 'ready-made product" (Doppler and Lauterburg 2000, 50).

To be sure, participation in project construction and decision making is not always a precondition for motivation. There are many examples of enthusiastic followers of autocrats and also of economic growth and development under authoritarian conditions.⁶

However, there are at least four reasons that militate against using this observation as a justification for project conditions that involve rather limited participation:

- In a European context, this is normatively undesirable, especially in research projects that aim to include the participation of the public.
- Beside the contradictory example of motivated followers in an authoritarian setting, significant research⁷ and observation of practical experience⁸ show that organizational leaders who are not especially charismatic (few are) and do not take into consideration individual needs are likely to face "implementation [that] will be half-hearted at best, probably misunderstood, and more likely than not, fail." (Doyle 1996, vii).
- The same and other research states that responsiveness to followers and relinquishing of control approaches usually generate higher performances in project partners.⁹
- According to the empirical work of Lewin (1939b) and the hypotheses and findings of Rogers (1961, 356; 1978, 100), it is very likely that creativity cannot flourish under autocratic conditions but instead requires psychological safety.

Of course, this kind of wisdom seems - at least partially - to have been integrated in descriptions of European research projects, as for example in FP-T, which states that the project management style shall invite participation of partners and that the research to be carried out shall be stakeholder-oriented (FP-T a).

In reality, however, the two projects considered here have a mixed record on how they ensured the participation of research partners in the project and on integrating stakeholders. On the one hand, in both projects stakeholders were given a voice on project level and at test sites. And in both projects, at

⁶ This might have to do with the importance of charisma in leadership (see for example Howell and Avolio 1993), and with the importance of the capacity of individuals - even in certain autocratic conditions - to set and pursue their own goals – such as an increase in personal income (compare Lewin 1942).

⁷ Already in the 1950s, Rensi Likert investigated high and low performing managers in more than 5000 organizations. He found (among other things) that the "high producers" allowed their subordinates to participate in decisions. The low-producers were very autocratic." And "[t]he high producers were good delegators; the low producers were not" (summary of his research cited in Rogers, 1978, 97). Howell and Avolio (1993) found that leaders' individual consideration of followers is associated with effectiveness. Also Schein states that: "we have overwhelming evidence that new solutions are more likely to be adopted if the members of the organization have been involved in the learning process" (Schein 2004, 395).

⁸ Doppler/Lauterburg 2000, 50. See also Schein 1987, 22 and Rogers 1978, 186.

⁹ Beside the previously quoted research, Beierle and Cayford (2002) carried out a survey on 239 cases of public participation in environmental decision-making in the United States over the previous 30 years. They conclude that "the correlation between responsiveness of the lead agency [towards the needs of the public] and success is high, positive and statistically significant." (50). And: "the relationship between success and the degree of public control is low but positive and statistically significant" (53).

some sites stakeholders were asked to list their needs in detail. Some work block leaders in FP-T persisted in asking project partners about their needs and in trying to take them into account. In FP-M, the project manager attempted to include the wishes of the many project partners in the complex agendas of the General Assemblies. The project leader of FP-M delegated feedback rounds on sessions she had led to other facilitators and thus demonstrated effective relinquishing of control. Other points could be mentioned for both projects.

On the other hand, the following behaviours were also observed: One work block leader in FP-T first responded positively to the proposal of a project partner and then failed to implement it. A senior FP-T project manager in a regular project meeting repeatedly verbally interrupted the statements of project partners and then spoke at length himself. A major FP-T project meeting was started with the message that it was important for partners to do their reporting (clearly not reflecting the needs of the partners but those of the individual who made the announcement). In an FP-T decision-making situation involving budgets, consensus was assumed by the meeting leader (nobody contested his proposal) but not tested by taking a vote.

The challenge from social psychology for project leaders at all levels is to understand the paradox observed by Rogers (1978, 90-104) that in many cases the use of control strategies will reduce one's influence because it will de-motivate project partners to carry out their work. Conversely, releasing control – together with other constructive leadership behaviour as described in the two previous and also in the two next sections – is likely to increase influence, motivation and performance.¹⁰

To apply this insight in practice, no clear-cut strategy is available that would fit all situations. ¹¹ The key to success is to be aware of the needs of those involved and not to be afraid to genuinely take them into consideration and to act accordingly. This may or may not involve the delegation of power such as in agenda setting (content and process), length of talk, meeting leadership, making available budgets, genuine testing of consensus, and others.

4. Some essential steps in interdisciplinary research projects

The findings of the previous three sections imply the integration of certain process steps into the project as a whole and also into specific project meetings if performance is to be optimal.

- 1. Feedback sessions should be conducted at least when partners observe defensive behaviours.
- 2. The creation of a safe space is something that happens continuously as it is influenced by almost every speech act by a project leader.
- 3. The individual needs of participants should be taken into consideration from the beginning. As they develop and as people become more open over time provided a safe environment exists this needs to be a repeated activity.
- 4. Leaders should check if any individuals are interested in taking responsibility for certain aspects of the project, and then see if and how it would be possible to co-construct or delegate.

In the two interdisciplinary projects mentioned here, especially the first two of these steps were not carried out systematically, although more regularly in FP-M than in FP-T. The forth step (delegating responsibility) also appears to have been included more frequently in FP-M than in FP-T. The third step (identifying individual needs) was usually included with regard to the research interests of individual researchers, but more rarely with regard to meetings design or joint activities of researchers outside regular meetings.

In addition to the four steps listed above, others appear to be necessary for the success of interdisciplinary research:

¹¹ One would be ill-advised to use lengthy participatory processes in emergency situations for example. Also participatory processes cannot be imposed (a contradiction in terms) against the will of local leadership in a specific location.

¹⁰ This also seems to be confirmed by the study of Beierle and Cayford (2002, 53) mentioned earlier.

 The definition of a thematically and geographically specific research area that contains a problem to solve that warrants being addressed together by different disciplines.

Logic demands that in order to work on a specific environmental problem it is necessary to define its exact location and the related questions to be addressed. Twenty-three months into the FP-T project, researchers at most test sites still had not agreed on the specific issues they wanted to address together, that is, interdisciplinarily. In fact, most test site coordinators had never even asked them to do so. With some exceptions, it was not yet clear how the work of economists, hydrologists, and sociologists would come together. Often they seemed to focus on quite different problems and sometimes even on different locations and partners, which were only interconnected at an abstract level. The same problem was encountered at least one site in FP-M.

• The ability to lead an ongoing genuine interdisciplinary dialogue

Much lack of cooperation seems to be due to a lack of mutual understanding. While it is generally accepted in social psychology that it is impossible to cooperate, if the definition of the main concepts is not shared (Doppler and Lauterburg 2000, 229; Rogers 1961, 336), in most cases in FP-T the required work is not done – either at the level of project as a whole or at a test site. For example, two years into the project, basic terms that partially defined the project itself had not yet been fully discussed and understood.

Instead, at FP-T meetings, a lot of information was usually provided (often in the form of PowerPoint presentations), but little or no time was allocated to find out what each partner affected by the information had in fact understood.

• An interdisciplinary vision

In FP-T it took almost two years before more specific goals were formulated at the project level, in addition to the general objectives listed in the project description. And, at this point in time, even these goals had not yet received input from the majority of project partners. The situation at the test sites was similar: two years into the project, there were no goals to be reached that had been drawn up interdisciplinarily. It is difficult to imagine how under these conditions, interdisciplinary work could start and continue to be energized. As early as 1942, Lewin already recognized: "a time perspective guided by worthwhile goals is one of the elements of high morale" (89).

5. Professional facilitation of group process

One might ask: How can all these different steps and attitudes be put into practice? Does it not take too much time to not only define interdisciplinary problems, dialogue and visions but also to set up feedback sessions?

One answer to this question is that it is possible to start a journey without concrete consensual goals, without a specific map, and with fellow travellers most of whom one does not attempt to understand until the end of the journey. This might indeed be "faster" but without doubt also less constructive, especially if one aims to arrive at the destination together. After 24 months, the results of the FP-T project show what happens when essential knowledge of social psychology is not systematically applied.

Another answer is that there already is an applied body of knowledge which the above-mentioned attitudes and process steps allow to be transmitted in the fastest possible way at meetings, workshops, conferences and projects. This approach is called group process facilitation.

Group process facilitation can be described as an approach to working with groups in which the facilitator takes a neutral position with respect to the problem under consideration and helps the group to optimize their thinking and at the same time to build relationships. The facilitator does this by managing the process (how people interact) including skilful handling of potentially embarrassing issues if needed. In this sense, facilitation puts into practice many of the empirical findings of social psychology.

The relevant manuals on facilitation describe the steps that need to be taken, for example how to lead a group dialogue (Kaner 1996), a brainstorming session (Spencer 1989), support the group with visual aids (PinPoint 2002), or organize feedback sessions (Stanfield 2000). One of the pioneers of facilitation states that it is "one of those ideas that simply work. As an approach to running meetings, it has been applied in almost every conceivable situation around the world." (Straus 2002, 127).

In FP-T, professional facilitation (as embodied by somebody who is an accredited facilitator or had at least practiced the relevant attitudes and methods for several years) was never used at project level, rarely at a work block coordination level, and even more rarely at the test sites. In FP-M, a facilitator was regularly used to support the General Assemblies. Professional facilitation was used at several test sites, and regularly in at least one site.

Summary and conclusion

In this article, the hypothesis was proposed that multidisciplinary European research projects that neglect essential insights of social psychology fail while that those that heed such insights fare much better.

A brief description was given of social psychology with its founder Kurt Lewin and three current streams in the field – process consultation, process facilitation and Rogers' person-centred approach.

To illustrate the hypothesis, the article mainly focused on two relatively large-scale interdisciplinary projects with a stronger focus on FP-T than on FP-M due to relatively more available knowledge about the FP-T project. Despite the positive features mentioned above, in its own words FP-T suffered from lack of quantity and quality of its work but especially from the lack of integration of the different disciplines. At the same time, at different project levels, FP-T also failed to implement many essential insights of social psychology. Notable were the failure to provide frank but constructive feedback at different levels, the absence of a safe space at many project meetings, too frequent focus on personal control of important decision-making items, no definition of interdisciplinary problems, vision or dialogue; and the failure to use practitioners of social psychology i.e. facilitators. All of which reduces the likelihood of achieving "big" goals such as producing change in environmental policy at the European scale but also more specific goals such as producing creative innovations that would be competitive on the market.

The FP-M project, which appears to be more successful than FP-T in terms of reaching objectives and partner collaboration, did apply more of the insights of social psychology: it regularly used professional facilitators for large project meetings as well as at some test sites, significant feedback was invited at least occasionally, and the opinion of partners – even those not in the leadership group – was sought on important issues such as fixing the agenda of the general assemblies. Nevertheless, at least one or more test site also suffered from the syndrome of the various scientific disciplines working only alongside one another rather than together as no specific joint problems seem to have been defined and no common visions established.

The absence of real interdisciplinarity is also encountered in other EU-funded research projects according to conversations that I had with researchers involved in such projects. This phenomenon must be alarming to the European Commission given its attempts to further "excellence" in the European research landscape. 12

The difficult a priori conditions of multidisciplinary research projects — especially big projects — mentioned above can explain some but not all of the problems encountered: the time and motivation required to understand other disciplines, the diversity of national cultures, the geographical dispersion, the work overload of many researchers, pre-established and diversified research interests, the existence of sometimes conflicting relationships from the outset, the lack of client and practical problem-solving orientation of many researchers, and the lack of knowledge of many coordinators on how to tackle these challenges.

¹² See for example http://ec.europa.eu/yourvoice/results/research/future_fp7.pdf

This last point strongly suggests that qualified project coordinators are needed at all levels (project, work blocks, test sites) to enable interdisciplinary research. The knowledge these people require is not necessarily in advanced research in a specific field - although in itself, this is not a disadvantage. Rather, the leaders should have a proven track record in enabling researchers from very diverse backgrounds and multiple interests to dialogue with each other about problems worthy of being solved through mutual collaboration, and in motivating them to address these problems. Project leaders should also not be shy about asking professional facilitators to help with meetings and overall project process.

It would certainly be worth examining other relevant projects to see how interdisciplinarity works and which leadership and management approaches are used. But, given that the studies in social psychology cited in the text have already reviewed a wide range of organizational situations, I expect that the hypothesis I proposed here, holds.

Nevertheless, other studies on interdisciplinarity should be conducted. More insights from social psychology than could be discussed in the scope of this article deserve close attention. These include - but are not limited to - Lewin's force field analysis, his complete change theory, action research (all in Lewin 1997), the empirical study of effective leadership (e.g. Howell and Avolio 1993), the emergence of culture on organizations (Schein 2004) as well as theories and empirical findings on learning (e.g. Argyris 1993).

In addition, more practical experience should be gained on exactly how the insights of social psychology can be applied in practice, considering that in many cases they require difficult personal adjustments. The most effective way – social psychology is also clear on this (e.g. Argyris 1993) - would be to gain such experience in a practical way and to keep a track record. Researchers should be encouraged to try applying these insights during their projects (possibly with experienced facilitators to accompany them), and to reflect on their experience and to keep track of their learning experience. This is another level at which fruitful interdisciplinarity could be developed between the natural and the social sciences.

Experiments in Lewin's country of choice, the US, show hat this is possible – provided that the political will exists. School teachers, for example, have their colleagues observe them during class time and give them feedback on issues such as their treatment of students (Söhn 2007, 74). And for decades, American university students have provided anonymous feedback to their instructors.

Lewin, who was Jewish, chose to leave Germany when Hitler took power in 1933. Since then, Europe has overcome fascism politically. But is it ready to learn from the minds that it once lost and take a further step towards excellence and towards a more humane science?

Only when the management practices applied in interdisciplinary projects change, can the new Copernican revolution take place. Like in Copernicus' time, unlearning of old scientific attitudes and practices will be painful. On the other hand, it also opens exciting perspectives of personal development and higher overall performance. Those who choose to not follow it, take the risk of not even understanding why their interdisciplinary projects are failing.

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FP-M b Review of FP-M Project. Unpublished Document.

FP-T a Annex I - Description of Work. Unpublished Document.

FP-T b Review of FP-T Project. Unpublished Document.

FP-T c Minutes of the Leadership Group Meeting. Unpublished Document.

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