CHAPTER 3:
The cooperative relationship between scientist, practitioner and client in conducting research

3.1   Introduction

The investigation by team members and their facilitator of the team's collective valuation system and corresponding patterns of cooperation is a complex affair that should be handled with proper methodological care. The Team Confrontation Method (TCM), being a method for team development, should do justice to the nature of this investigation process and hand to the investigators the proper methodologies for their research. We therefore have to take the methodological part very seriously when we design the method, its instruments for assessment and interventions for improvement. Chapter three offers an insight into our central methodological viewpoints that lead the design of the TCM. These viewpoints are inspired by the same viewpoints that led the design of the Self Confrontation Method (SCM). They reflect the spirit of the method (SCM as well as TCM): a cooperative attitude of all investigating parties involved in their common project of producing valid and valuable findings.

How can people with very different roles (like that of team member and facilitator) conduct a joint investigation and enrich the investigation process from their differing perspectives? In a certain sense, the investigation which is to be conducted with the TCM is a multi-voiced project. Clients (team members) and practitioners (facilitators) have a different way of interpreting phenomena that they encounter when investigating. Scientists look to the processes in a team from a distinct angle. Each investigator role (or each type of investigator) has a different voice that articulates a different view. It is a matter of working well together, in open dialogue, to make sure that the end result of the process be of value to the research interests of all parties, and represent findings that would not have been there had each of the parties been working independently. The cooperation between or combination of the different investigator roles is the first topic of methodological importance that we address in this chapter.

Once we know that cooperation between different types of investigators is an essential feature of the projected method, then the final design of the method should make it possible. The author of this study did the design, and for this purpose he had to combine the roles of scientist and practitioner. How could this combination of roles be properly handled? The complexity of combining different types of research in one research-project is, of course, not without problems and in different situations one should choose a different investigator role. This is the second methodological topic in this chapter.

When we know that this study was to be conducted from the different angles of scientist and practitioner, what methodologies would be available for our research? After all, different investigator roles bring different research questions along; and different research questions require the use of different methodologies. In this chapter we will offer also a general overview of the methodologies applied in this study.

Section 3.2 distinguishes between different roles of people involved in the process of investigation and proposes a concerted action between these roles. Section 3.3 specifies the roles the author took in this study and an account of the way he combined them. Section 3.4 illuminates the choice of research methods that were used in this study and how this choice matches with our intentions.

3.2   Investigator roles in self- and team-investigation

In what way can team members (client system), their facilitator (practitioner) and the designers of the TCM (scientist and practitioner) work together in the process of investigating a specific team situation and produce findings that are valid as well as valuable? How could a combination of their different perspectives enrich these findings? But before that, why should they actually work together? This paragraph focuses on the why's and how's of a cooperation between and combination of different roles in conducting an investigation into team functioning. Such cooperation is a basic feature of the TCM and essentially reflects the spirit of the method.

The SCM and its spirit of joint investigation

The Self Confrontation Method (SCM, see for further detail section 2.2) reflects the same spirit. Central to it is the constructivist nature of the investigations taking place when following the method. The SCM invites a self-investigator to select and interpret a set of valuations that represent units of meaning which he brings to his world. Meanings are attributed subjectively by a person to objects and situations and are context-sensitive; they give insight into the way the person construes his world.

It is the person himself who has the best insight into the sense of these meanings. Therefore, an emphasis on the investigator role and capabilities of the study subjects themselves is of central importance. It is a fundamental tenet of Valuation Theory (VT) that the client function as 'the I who studies the Me in collaboration with the psychologist' (Hermans & Hermans-Jansen, 1995, p.33)[1]. With the aid of the SCM, the psychologist *assists* him at his purpose. When a client expects to receive, on the basis of "test findings", results or advice from the psychologist, or when he puts all responsibility for "cure" in his hands, he is considered to act in a way contrary to the spirit of the SCM.

This spirit is characterised as follows: 'In order to establish the atmosphere for a productive self-investigation, psychologist and client must *work together* to create three important attitudes: commitment, cooperation and shared responsibility' (Hermans & Hermans-Jansen, p.34; emphasis added). Commitment here means the determination of especially the client to engage in a deep self-exploration without passively biding his time, having the interest in the advancement of self-knowledge as a goal in itself. Cooperation means the trusting involvement of client and psychologist in a process of dialogue. Finally, shared responsibility means that the client is responsible for the selection, formulation and interpretation of significant meanings in the self-investigation, and for the decision what to do with the results of the investigation, while the psychologist is responsible for the proper use of the method as an aid for the client's explorations. This implies that the psychologist take care of the right application of methodical steps and put, if appropriate, his formal knowledge on universal aspects of human functioning at the client's disposal.

In sum, the SCM invites the client to actively investigate his own reality by methodically attributing meanings to it. The psychologist has a supporting role that is based on his formal training. It is of major importance that client and psychologist work together, each bringing their own expertise to the investigation.

Joint use of the TCM, implying joint investigations of meanings

---

[1] As mentioned before in section 1.2, William James (1983 [1890]) distinguished between the 'I' and the 'Me'. The 'I' is equated with the self as subject (or: knower), the 'Me' with the self as object (or: known). Sarbin (1986), following James's thought, distinguishes between the 'I' as the author of a person's life-story and the 'Me' as the actor or different actors playing a role in it. The 'I' decides which 'Me' plays a role in which situation or episode.

As it is to be in line with the SCM, the application of the Team Confrontation Method (TCM) in team settings, consisting of unique situations that present real problems to a team, should be done in mutual cooperation, with a shared commitment and responsibility, by the client (team) and the practitioner (facilitator). Team members are not study subjects of the psychologist, but active meaning-makers, and as such, active investigators as well. The providers of the method, practitioner as well as scientist, will have to co-operate with the team in order to produce satisfying results of the investigation.

The investigation by team members into the meanings they typically attribute to their world is of a constructivist character. The TCM fills a need, since according to Crossley (2000), 'we need methods and tools appreciative of the context-sensitivity and interrelations of various dimensions of human experience, as manifest in the use of language and narrative' (p.11). The TCM tool should be fit for the investigation and production of meaning in cases of unique context, and produce knowledge that is valuable for the client team in the first place. It should primarily concentrate on the context of the team's historical functioning and its members, on the meanings their experiences have for them, and on local rather than universal truths. This requires the *commitment* of the team members to the investigation and its outcome: they cannot wait passively until a researcher from outside has produced his diagnosis; the diagnosis should come from themselves. In producing it, they *co-operate* with the facilitator as an expert on the assessment procedures as laid down in the tool: they themselves are considered to be experts on their own experience and meanings they attribute to it. Thus, team and facilitator *share a responsibility* for the quality of the outcome of the investigation and the resulting change process.

In short, the TCM should not judge a team according to universal criteria but make use of data produced by the team members themselves, which are inherently more meaningful (and valuable) to them. At the same time, it is the method that provides a theoretical framework for the collection of relevant data, so as to make sure that the research data produced by the team are not coincidental or random, but valid through their fitting into a conceptual framework, provided by psychological science. The reader has in the first two chapters of this study become acquainted with the conceptual framework that grounds the TCM.

Joint design of the TCM, implying joint research into theory and practice

The method is to be developed by the scientist in cooperation with the practitioner who practices team development. Both bring unique knowledge to the method: the scientist brings theoretical knowledge that provides the conceptual framework; the practitioner brings the practical knowledge of team facilitation that is needed for the design of the method as a tool for intervention. Especially the development of assessment instruments is their shared field of expertise. The scientist knows best what to measure (based on theory) and how to measure it (based on his methodological knowledge); the practitioner knows best why to measure (based on his practical knowledge), and to what ends (based on his knowledge of functionality, of what works in which circumstances).

In this respect it is of special interest to focus on the use of quantitative analysis in the method. This is an indispensable part of the SCM and is to be used in the TCM as well. Scientists look to figures that constitute quantitative patterns as potentially interesting sources for the corroboration of their hypotheses. Practitioners, on the other hand, may look to figures from yet another perspective, that does not usually get much attention in psychological scientist surroundings. It is not so much in the practitioner's interest to prove or reject a scientific hypothesis; it is first and foremost in his interest to use measures as a way to intervene. The assessment here is not meant for generating test findings on the team that should fathom the team as a research subject. In constructivist terms, with the assessment the practitioner stimulates these 'research subjects' to actively construe new knowledge about themselves and their world. The assessment delves into the meanings the team members themselves produce, and the

assessment results particularly become meaningful upon their own inspection. This opens up the possibility that team members make new connections between meanings, on a deeper level of understanding. The fact that the TCM is to offer instruments for assessment has some important advantages. Firstly, assessment offers a deeper insight into the experience of events, i.e. the meanings team members attribute to these events; secondly, a fluent transition between awareness and action is fostered, for the insights obtained by the assessment of their situation push the team members softly but steadily towards experimenting with new (pattern-breaching) actions. Assessment produces a structured overview of meanings referring to the matters of the team, which gives direction to change. Thus, the use of figures not only has a potential scientific relevance, i.e. to ultimately offer an empirical grounding for a theory; it also has a potential practical relevance in the process of the production of new self- and team-knowledge and using it for improving the team's situation.

In order to jointly design an intervention instrument, scientist and practitioner are to co-operate in the research that is needed for making the design process possible. This means that the scientist conducts research in the field of theory (in order to derive a conceptual framework that produces the input for the intervention instrument's assessment tools) and methodology (in order to develop the proper form of assessment tools and the procedures for their use); at the same time and in concordance with him, the practitioner conducts research into the workings of the designed intervention instrument, in order to iteratively improve them and, ultimately, improve the design as a whole. Moreover, while working with the instrument, the practitioner produces research findings that may feedback into the process of theory construction which is being conducted by the scientist. Thus, the practitioner's research has a value of its own, as has the scientist's. Each type of researcher stimulates the other and contributes to the quality of the other's work.

This cooperation between scientist and practitioner isn't yet rooted in the tradition of the trade. Psychology as a scientific community has for decades been engaged in a debate on the desirability of systematically including the practical knowledge base of the profession into the formal knowledge base of research. As Hermans & Kempen (1993) already observed, in the conventional Cartesian approach psychological practice itself is assumed not to be in a position to generate valid knowledge. Basic science is regarded as highest in rigor and purity, and practitioners are to be seen as appliers of the knowledge produced by science. Thus, researchers are assigned higher status than practitioners.

This approach is being questioned by a widening circle of academics from psychology as well as related fields (Hoshmand & Polkinghorne, 1992; Belar & Perry, 1992; but also Schön, 1983, 1987; Hope & Sutcliffe, 1998; Jarvis, 1999). They argue that even if psychology, or social sciences in general, could substantiate the claim that social science is able to produce universally valid knowledge, science should open itself up to other than formal (i.e. more contextual) sources of knowledge. After all, they are to make a contribution to society by solving pressing practical problems that do not simply obey to formal rules. This implies that not only results from laboratory research, but also findings in the practitioner's field are relevant; the last probably even more than the first for developing answers to complex real problems. Rather than the rigorous testing of abstract theories, it is systematic reflection in close proximity to action that may result in knowledge that is of direct relevance to the local situation in which the practitioner and the client are at work. The current rationalist epistemology is to be exchanged for a pragmatist epistemology, that resembles the Deweyan replacement of the definition of truth as 'corresponding with reality' for the definition 'successful rules for action'. It is therefore not the sheer application of results of scientific research, but the co-development of useable, practical knowledge in cooperation with scientists that best corresponds with the desired contribution of practitioners to social science. In short, there should be an intensive scientist – practitioner cooperation. And, more than that, as Belar & Perry (1992) report, this cooperation is desired to be much more integrated than it is to-date. The dash in the scientist – practitioner should be

replaced with a symbol reflecting the integration and interaction of the two aspects (e.g., scientist ~ practitioner, or scientist x practitioner). Hermans & Kempen translate this programme into a dialogicality between two major voices:

> '(…) we consider present-day psychology as a more or less divided institution in which at least two collective voices can be heard, the voice of scientists and the voice of practitioners. As long as there is a scientist-practitioner "split" or "schism", the active exchange among two groups is seriously limited. As long as there is unilateral relationship between science and practice in which science is considered as superior over practice, the scientific voice dominates the practical voice, with the deplorable effect that – from an epistemological perspective – practitioners cannot contribute from their own perspective and expertise to the practical – scientific process as a whole. Moreover, in a situation of asymmetry that is highly biased to "basic science", the possibility that the two parties cooperate in the co-construction of psychological reality is seriously limited. After all, the scientist – practitioner split is rooted in a value system that is hierarchically organized (with rational thinking as higher than embodied doing). It is precisely for this reason that the scientist – practitioner split represents one of the most challenging problems to psychology in the future. It requires a change from a decontextualized, analytical approach of psychological reality to a contextual, synthesizing approach' (Hermans & Kempen, 1993, p.137).

An improved dialogicality between the voice of scientist and practitioner would require 'a revised conception of the relationship of science and practice, in which there is productive interplay rather than elevation of one form of knowledge above the other' (Hoshmand & Polkinghorne, 1992, p.63) and imply 'a greater role of the knowledge of practice in the scientific base of the profession' (ibid., p.63). That this would most probably also have implications for the epistemological principles guiding this cooperation, seems clear.

In the field of educational science, developments in this respect seem to have been more rapid. At least some academics in this 'applied science' (in the terms of conventional thinking) do not regard the distinction between scientist and practitioner as being that sharp. The practitioner is considered to be someone who is able, as much as the scientist, to conduct systematic investigations. For example, Ponte (2002) showed how teachers conduct action research into their own practice, by systematically varying their teaching methods across different classrooms and evaluating the effects. The difference between practitioner and scientist is seen as a difference of degree rather than fundamental. The distinction lies in their focus of research: the practitioner is more interested in the development of instrumental knowledge, as it can be done with the aid of action research or design methodologies; the scientist is more interested in discovering truth instead of actively applying it. And the practitioner is interested in producing knowledge that is meaningful for an immediate and unique context; the scientist is more interested in the development of fundamental knowledge that is valid across situations, i.e. knowledge that is de-contextualised and universal.

A programme for cooperative research: researcher roles

It is important to take the potential of practitioners and their clients for conducting research seriously next to the scientists', and to see their research outcomes as being as much valuable as those of scientists. They could all three play a different role in the joint production of knowledge:

- the scientist produces or provides universal concepts and theories in order to guide the understanding of general features of a situation, as well as the methodology needed for the development of assessment instruments;
- the practitioner produces or provides instruments, interventions, models, tools or rules of thumb that are useful for the understanding and improvement of a unique situation in its context;
- the client produces or provides personal meanings that help his situation improve.

There is a difference of degree between these three if it comes to distance and proximity. The scientist is relatively distant and contemplative; the client is an immediate stakeholder in his situation, a player in a field of forces and, in his natural propensity, relatively non-reflective. The 'practitioner – researcher' (Jarvis, 1999) can be a mediator between scientist and client, in the sense that he can afford to be reflective about as much as intervene in the client's situation and his own role in it. He brings elements of reflection and action to the situation; he may do his (action) research as thoroughly and systematically as a scientist, planning his interventions simultaneously with his research activities.

This has implications for our work to be done in the scope of this thesis. If we want to *design* a TCM, we should try to be 'scientist – practitioners', combining general knowledge from fields like psychology, education and management science with practical knowledge of team development and group dynamics. If we want to *use* a TCM for team development in the unique situation of a team, we should try to be 'practitioner – researchers', combining instrumental knowledge of the method with field knowledge of the team situation, and adding systematic research capabilities to it, by testing new hypotheses that may have come up, with the use of scientific knowledge of universalities if necessary.

The cooperative research programme as it is being unfolded here, is to be arranged without many preceding examples in psychology. In fact, the organisation of the research programme around VT and the SCM is one of the rare useable models for our case. Firstly, a whole community of practice (the 'Union of SCM Practitioners') has developed around the use of the SCM in different areas like mental health, education, and work psychology. VT and the theory of the Dialogical Self (DS), ideally contributing to theory development through the production of empirical data when using the method, inspire some practitioners and users of the method to produce dissertations with research findings that anchor new applications of it. Secondly, the developers of theoretical and methodical innovations have joined (in the 'Valuation Theory and SCM Foundation') with the aim of preserving and extending the body of knowledge associated with this theory and method, offering educational programmes for aspiring practitioners who want to get hold of the theory and method. Thus, scientists and practitioners work together in the development of theory as well as in the development of practice.

The mutual cooperation between scientist, practitioner and client in research is represented schematically in Figure 3.1. It is useful for our purpose to arrange for an optimal cooperation and dialogue between these three investigator roles.
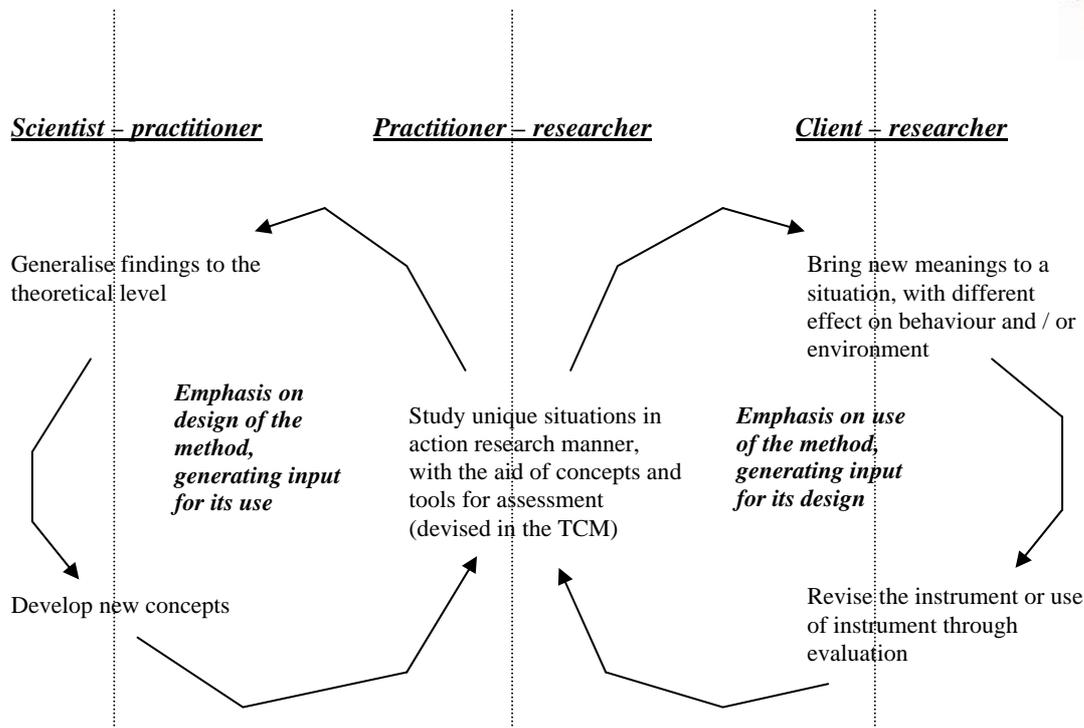
| Scientist – practitioner | Practitioner – researcher | Client – researcher |

Generalise findings to the theoretical level

Emphasis on design of the method, generating input for its use

Study unique situations in action research manner, with the aid of concepts and tools for assessment (devised in the TCM)

Emphasis on use of the method, generating input for its design

Bring new meanings to a situation, with different effect on behaviour and / or environment

Develop new concepts

Revise the instrument or use of instrument through evaluation

Figure 3.1 – The mutual cooperation between scientist, practitioner and client

As can be seen, the example given above about the possible relationships between the scientist, practitioner and client (crystallised in a cooperating Union of practitioners who contribute to science through their work with clients, and a Foundation of scientists who contribute to practice through their work with practitioners) is reflected in the figure. It gives clues as to how to enhance optimal cooperative research.

- In order to make the scientist able to develop new concepts, or theoretical or methodical innovations, the practitioner provides him with relevant (quantitative as well as qualitative) data about the use of the method and theory in practice, and the practical experiments he has conducted;
- In order to make the practitioner able to work with the newest devices, the scientist provides him not only with good ideas and concepts, but also with the necessary instruments and hints for using them when intervening in practice (e.g., assessment tools);
- In order to make the client able to change situations that he finds problematic, the practitioner provides him with methods and tools that invite him to bring new meanings to a situation and try out new behaviours;
- In order to make the practitioner able to revise and improve his instruments or the way he makes use of them, the client provides him with evaluating comments on their effectiveness and efficiency.
- There is not necessarily a sharp boundary between the roles of scientist, practitioner and client; scientist, practitioner and client overlap in their contributions to the research process. This is illustrated by the use of coloured areas in the figure that indicate areas of cooperation.

- The practitioner has a central role, having contacts with the scientist and client alike. In his cooperation with the scientist, the practitioner puts an emphasis on the design (or redesign) of the method, hereby providing a starting point for its (further) use; in his cooperation with the client, he puts an emphasis on the use (and adaptation) of the method, hereby providing a starting point for further design steps or even further theory development. The scientist and practitioner in their cooperation are led by issues of methodology, while practitioner and client are led by methods of joint investigation as they have been designed in the cooperation between scientist and practitioner.

The cooperative research is to be shaped in continuous dialogue between the three roles. Integration of the roles can happen by the cooperation of different individuals who each personify a separate role; it can also happen within an individual who tries to combine different roles. The optimal cooperation between the different roles should however not be taken for granted once we have mapped the conditions for it. This is proven by the sporadic occurrence of misunderstandings between the Union and the Foundation in the SCM case: here, ever now and then scientists put higher demands on practice than what practitioners want to comply to; vice versa, many practitioners fail to take the scientific aspect seriously and forget to systematically gather data or report practical experiments. Both parties traditionally set different standards and correspondingly commit themselves to different responsibilities. For example, to the question: "Is a questionnaire of 4 items acceptable if it comes to reliability and validity?", scientists and practitioners would probably give different answers. A very important problem in contemporary psychology is that there is no body of knowledge available on how to shape the dialogue and relationship between scientists and practitioners. This could probably become gradually available if here and there a shift in the epistemological (Cartesian) paradigm took place. On such occasion an agreement about the mutual relationship between the parties involved would become desirable.

Investigators as designers

The TCM is a method that is designed for the practitioner of team development (i.e. the facilitator of team development sessions), in order to use it in cooperation with his clients. As the central user of the method, it is the practitioner who is the main designer of it, with the scientist and client as his assisting co-designers.

The act of design attends to a 'mutandum', i.e. an object that is to be functional in a process of transformation in the physical environment of the object, e.g. pulverising (coffee mill), holding (chair), informing (poster), transporting (lorry) (Van Aken, 1998; Pieters, 1992). Design science is aimed at the development of knowledge that is to be applied in the design of useable 'mutanda'. It wants to prove what works and what not, and tries to generalise toward propositions on what is functionally valid for classes of cases. As a rule, design research is strict, starting with a problem definition, trying to provide insight into the problem, leading to a conclusion on what should be done. Such conclusions can be translated in design principles on which the designed solution is to be based. The scientific additive to this is the generalisation of features of the designed solution toward 'technological rules' or 'prescriptions' that can be applied for solving other problems as well (for an elaboration on design methodology, see section 4.3). In this study, a design is made and design knowledge developed by the practitioner-researcher, assisted by his fellow design researchers, the scientist and client[2].

---

[2] In a broad sense, the three types of investigators could here as well be seen as designers in their own field: the scientist designs an assessment tool in order to use it for further developing his theory; the practitioner designs an intervention method and uses it for offering an approach to practical problem solving; the client designs his meaning system and uses it for solving his problems. We will not follow this line of reasoning any further.

All three of the investigator types contribute to design research when developing the TCM. The scientist offers concepts and measures to be used for the team development function of the TCM tool; the client offers evaluations on the functionality of the tool when applied in their case, which are to be used for adjustment of the tool. Finally, the practitioner brings insights in processes of team development and group dynamics, to be used for the make-up and juxtaposition of interventions included in the tool.

In fact, in being co-designers the practitioners, scientists and clients can together bring their unique perspectives to the design process and blend them creatively into an integrated solution. This is what Engeström (2000) calls 'co-configuration' of a product or service. He names six criteria as a tentative definition of it: (1) adaptive product or service with a relative long life trajectory; (2) continuous relationship between user, product/service, and producer; (3) ongoing configuration or customization of the product/service; (4) active customer [client] involvement in the ongoing configuration; (5) involvement of multiple collaborating producers; and (6) creative tensions, negotiation, improvisation, and mutual learning in the interactions between the parties involved. As can be seen by this definition, the cooperation between different (researcher) roles may be promising, but not without potential problems.

The quality of inquiry: an investigative attitude

Quite a few educational scientists make a connection between research and learning, when they equate learning with exploring (Mercer, 2000) or with doing research (Simons, …). In their view, every learner can be seen as someone who conducts research, also a beginner like a new student. This gives a wider perspective on research than traditional science may adhere to. Central to it is the explorative mood of people who engage themselves in a learning situation. Scientist, practitioner as well as client can prove here to be good researchers, for as real learners they can show an investigative attitude. This is an attitude of *sustained* investigation:

- The practitioner keeps on investigating into his methods of intervention and the consequences of their application, just when the methods do not seem to work (anymore) and demand adaptation;
- The scientist keeps on investigating the consistency and appropriateness of his developed conceptual frameworks, by further developing or revising these when empirical findings demand it; and he keeps on investigating into the quality of the assessment tools he developed, just when they do not prove to be valid (anymore) and demand adaptation;
- The client keeps on investigating the meanings a problematic situation has for him, even though a solution to his problems seems far away and dependent on others.

When an investigator meets his limits, and his research premises evidently do not show and promise any progress anymore, he may become weary, stick to his premises and beliefs and stop investigating, although this may be invisible to his peers or even to himself. Although in most cases it would be wise to continue investigating, whether or not along different paths, he stops and looses his investigative mood. An investigative attitude is as much important for the quality of research as the choice of methodologies to be applied in the investigation. Rules that govern a proper choice (e.g., a traditional set of methodological rules provided by science that demand the adherence of practitioners) are necessary, but not sufficient for proper research. The researcher should be prepared to investigate his own assumptions; this goes for scientist, practitioner and client alike.

It is Argyris & Schön (1996) who call for a public inquiry into the employed premises and practical rules of thumb, the own mental models and meaning systems of learners. This happens by engaging in intensive dialogue. What we ask of teams, i.e. investigating the meaning systems they apply to their world, is what we ask of scientists, practitioners and clients in their mutual

cooperation: 'The focus on meaning and interpretation is of extreme importance. It means that we constantly reflect on what is happening in and around us' (Crossley, 2000).

And thus the scientist, practitioner and client are investigators who learn about their own meaning systems and practice and those of others, either colleagues or non-colleagues. They could do this in an excellent way, hinted to by Maso (1990). For the investigator, the application of a method is only possible by using his power of judgement in a way that is not described by the method itself. The method will often have to be completed or changed depending on the research subject and situation; it will sometimes even have to be neglected or substituted by other approaches. The mutual calibration of research acts and the research situation does not happen solely by means of the intellect; many times, intuition and sensibility will be as much as important. The awareness of the fact that a method is not more than a guideline that has to be adjusted or substituted depending on specific research circumstances, undermines the rhetorical power of the method that convinces so many buyers of its results. In fact, if it comes to the defence of their research approach, the investigators should also account for the acts, choices and decisions that do not necessarily follow on from the chosen method itself. It is precisely in the application, or even in the abandoning of the method that the researcher can and should show his excellence. This means that they should be excellent investigators, not only from a scientific perspective, but also from an ethical and practical perspective:

> 'It means that these researchers must be aware of and take into account the historical, societal and cultural situation in which they find themselves and in which they come across the phenomenon that they investigate. It means that they should possess, if available, all relevant information about that phenomenon and about the situation in which it is investigated. It also implies that they must have a thorough knowledge of the theoretical and practical aspects that are relevant for the phenomenon and its situation and what they, also following from this, can and must do. It furthermore means that they must realise which influence they exert as an investigator and as a person on the phenomenon, the research situation and the investigation itself, and which influence they themselves undergo here. It means also that, based on this awareness, they must make sure that no damage is done to the investigated subject nor to its situation, nor to themselves, nor to the research process. It implies that they flexibly, adequately and responsibly react to what they find. Finally, it means that they must fully account for the followed procedure, including for what went wrong and what still goes wrong' (Maso, 1990, p.11; author's translation).

These high demands on the excellent investigator (that may apply to scientist as well as practitioner and client) make sure that it is not so much truth itself that is at stake, but the quality of it. Similar high demands are made by Argyris & Schön (1996) when they describe how action research should take place as should public testing of assumptions brought by stakeholders to their situation. Excellent investigators are researchers that try to conduct sound research, but never wholly succeed in it, and are aware of that. From this point of view, research is something in which the quality of the process rather than the result is what counts. We think that also in the field of developing and practicing the TCM as a method for investigation of real situations, this attitude is recommendable.

3.3   Roles of the author/researcher in this study

If the design of the TCM is to be regarded as a cooperation between three different types of investigators, then what is the role taken by the author of this study? This study tries to tackle a few problems of different character: first, the conceptual transposition of the VT and DS framework from the individual to the collective level; second, the design of a method that fosters the improvement of collective and individual functioning in teams; third, the construct validation of the assessment measures based on the developed conceptual framework; fourth, the functional validation of the designed method. Each problem asks for a different role of the researcher.

Briefly put, the transposition of concepts requires the scientist role; the design of the method requires (mainly) the practitioner role; the construct validation of the measures requires the scientist role; and the functional validation of the method requires the practitioner role. In fact, the whole project requires of the author a combination of the scientist and practitioner roles: he should be a 'scientist-practitioner'. How could this combination of roles be properly handled?

As a researcher the author of this study has performed a scientist role as well as a practitioner's. Below, an explanation is offered on how to understand both roles by focussing on their specificities; and see in which circumstances what role or what mix of roles was most appropriate in the author's eyes.

The scientist role

As mentioned before, this study essentially takes a constructivist perspective, from where context and meaning are seen as central to the understanding of phenomena and events that happen to team members, and from where the team members themselves are seen as fully fledged investigators of their own situation. They are invited to investigate their own reality by methodically attributing meanings to it. The constructivist way of working has its own scientific standards. It means here that 'our scientist' will slightly diverge from the classical Cartesian standard of objective and neutral study, neutral in the sense that the classical researcher will not intervene in the processes the subject is engaged in. Our scientist's concepts are focussed on improvement, and his measures require meaningful interpretation by the subjects. In short, we are focussed on intervention, in cooperation with practitioners and clients. Our scientific research is to be seen as what Berings, Doornbos & Simons (in progress) call 'new paradigm research' as opposed to 'classical research' which is of a (neo)positivistic character. According to these authors, new-paradigm researchers do not have final, ultimate criteria for testing truth, but negotiated criteria that can be agreed upon at a certain time and under certain conditions. The adequate investigator roles that fit to this new paradigm can either be the 'passionate participant' (whose interpretative methods employ dialogue with investigation participants in order to understand their meanings), the 'activist' (whose participatory methods are action-oriented, i.e. joint problem solving in an action research sense) or the 'reflexivist' (whose critical methods critically reflect upon the political, cultural, economic, ethnic or gender values that underlie the researchers' understanding of phenomena). In our new paradigm research, we think the scientist roles of 'passionate participant' and 'activist' match best with the nature of our research.

Being an academically trained psychologist, the author has in his scientist role conducted research on the possibility of the extension of an existing conceptual framework and the development of new theoretical concepts; and furthermore, research on their applicability: an investigation of the construct validity of the measures based on these concepts, through application of a mix of classical and new paradigm methods.

Traditionally, it is the scientist who brings to the investigation of practice a standard for conducting research. In our case too, it should be scientific standards of rigour and quality that guide practitioner and client alike, controlling the validity of their findings. It should be noted that our scientist has been led by a broadened outlook on such standards, that is to say partly based on 'new paradigm'. But also new paradigm research applies standards of rigour and quality, as might be concluded upon inspection.

In section 3.4, the reader will find more on the methods and standards applied as matching with the chosen scientist role.

The practitioner role

The practitioner is traditionally seen as someone who applies in practice the research findings that are produced in the laboratory. Such findings are then viewed as being of a higher scientific value than the practitioner's personal practical experience that he is inclined to use when approaching unique and complex problems in the field. Scientific research findings are supposed to have universal value, and to be protected against the personal biases of the investigating practitioner.

Schön (1983, 1987), however, regards the practitioner's contribution to relevant practical knowledge as pivotal. A 'reflective practitioner' investigates his practice (i.e. the problem in the field as well as his own approach to it), by consciously experimenting with different approaches to the situation at hand, thus gradually deducing good practices and ruling out bad ones, and producing rules of thumb that can inspire, but never dictate, other reflective practitioners. In Schön's opinion, the traditional approach of science, as supposed to be of a higher rank than professional practice, is tragically off target: its rigorously achieved knowledge (often brought about in laboratory circumstances) is irrelevant for the unique and complex problems that occur in practice. It will always require a reflective practitioner to account for an informed solution of a practical problem. 'Scientific' knowledge is simply not enough.

When we talk about the practitioner role to be taken by the author of this study, we should see it in a way familiar to Schön's: 'our practitioner' is not an obedient applier of irrelevant knowledge (could he be?), but as a practising professional who continuously approaches a case as a unique problem that requires a unique solution, not prescribed by one or another scientific maxim. This means that he is relatively independent of the scientist; he may use the scientist's input as an inspiration or even as a criterion for his action, but he will always remain open to "non-theoretical" facts so as to be able to creatively respond to them.

This, however, does not mean that he is indifferent to certain research standards of rigour and quality when he conducts his investigations. He will try to apply such standards in the immediate situation. If important, personal bias should be ruled out and objectivity strived for. The quality of his reflection (authentic and sound) is then crucial. In this sense, the practitioner conducts research, by inferring knowledge about the question whether an intervention (or an approach, a concept) works or not.

The author, being trained as a practitioner of team development and teambuilding, has conducted practitioner research on the design of the Team Confrontation Method (TCM); and moreover, on its applicability, by using the method with different teams and evaluating its functional validity. For this, different research methods are applied, which are illuminated in section 3.4.

The scientist – practitioner: a split personality or a tautology?

To be able to bring this concept, design and validity study to a satisfactory conclusion, the author should combine the researcher roles of scientist and practitioner. Above we described our interpretation of these roles; here we dwell upon the combination of both. In what ways would it be necessary and/or possible to combine both roles?

We already clarified in general in which situation a certain role is preferred: the scientist in the case of concept development and construct validity check, the practitioner in the case of design and evaluation of the functional validity. This suggests that the researcher has to divide himself in two, doing one thing in the first type of circumstances and the other in the second. And as Van den Akker (1999) observes,

> 'a tension can easily arise between designers [practitioners] who are eager to pursue their ideals in creating innovative interventions on the one hand, and researchers [scientists] who tend to critically seek for correctness of decisions and empirical proof of outcomes, on the other hand' (p.11).

There is a tension between subjective and imaginative involvement and objective and critical distance. Would that not make of us a split personality, where both our researcher sides are dissociated? Then there would be no combination of roles. In one case we would, as a scientist, keep a proficient distance to his subjects, so as to avoid subjective biases and to be able to generalise findings to a level of more or less universal validity; in the other case we would, as a practitioner, be empathic and supportive toward his subjects, so as to be able to work with their meanings and to avoid the aloofness that would block his power to stimulate improvement. We should sometimes also need to bring in our own judgements, meanings, expectations in order to get the subjects going.

In fact, we think a combination of roles is necessary. After all, we have to take into consideration that the character of our study is constructivist. This means that also our scientific activities (concept development and construct validity study) are coloured by 'new paradigm': the research that we conduct as a scientist will never be rigorous in the classical sense. There will be elements of practitionership in the scientist's choices, meaning that he takes into account the subjects' judgement on the usefulness of concepts and the validity of a construct; and that he takes usability as an important criterion for judging concepts and constructs. The designed techniques that we adopt as a practitioner should be approached with rigorous criticism, and we should judge our findings on the clients' improvement with care. Here, the distance of the scientist comes in. The tension between scientist and practitioner could thus be used as a productive force that contributes to balanced solutions.

It is in the combination of distance and proximity that both roles are to be united in one person. The researcher should not be enchanted by his own success as a practitioner but stay open to critically checking the effects of his interventions; he should not be standoffish when working with his subjects when he wants them to improve. If we want to conduct constructivist research in our case, then we should combine both roles; as researchers, we are scientist and practitioner at the same time. From that point of view, the scientist – practitioner may even be seen as a tautology. We think the author of this study has been legitimately walking on two legs.

3.4 Research methods applied in this study

Our study has the character of a scientific as well as a practitioner's approach to team development. We want to do research as a scientist and as a practitioner, and then we also want the clients, who are the people for whose collective and individual development the method is meant, to be active investigators of their situation. What research methods should be applied by the different parties involved? How could we match these methods with the purpose of our study? In section 3.4, we list our choice of research methods that were used in this study. We start with clarifying how we tried to make a choice that matches our intentions.

The scientific research that we apply is not of a classical, 'Cartesian' character, as we outlined earlier in this chapter. If it were, what would our research be like? A classical Cartesian researcher develops 'from without' a normative standard for the effectiveness of the team. Based on the standard, he builds measurement instruments to assess whether the developed standard were met by the team. In our case, regarding ourselves as constructivist researchers, we intend to give our subjects, the team members, an active role as investigators. And as scientist-practitioners we actually intervene in their processes, so we could not simply distance ourselves from them as our subjects, even if we wanted to. Why should we not, together with them, develop normative standards for team effectiveness 'from within'? The methods of investigation we have selected match with this intention. In many methods that we apply, the opinions and viewpoints of clients as well as practitioners are important. It is not only the scientist who decides upon the research methods to be used.

Below, the treatment of applied methodologies is kept relatively general, since the operational aspects of the methods will be introduced in further detail in following chapters. This paragraph therefore has the character of an overview and general justification. We will structure our treatment according to the main remaining objectives of our research (the objective of conceptual framework development having been met meanwhile, in the first two chapters), being (1) the design of the TCM, (2) the construct validity check of the method's measures, and (3) the functional validity check of the method's design.

Methodology for the design of the TCM

The design of the Team Confrontation Method has been done with reference to design methodology (to which a fine introduction is offered by Van den Akker, 1999), because the methodology is problem-oriented as well as interdisciplinary by nature, and because the application of traditional research methods hardly provides prescriptions with useful solutions to practical problems. After all, our greatest challenge is to cope with the manifold uncertainties of team facilitation. Our research should not concentrate on the question whether the theory yields coherent and accurate predictions, but it should ask whether it works: i.e., whether the theoretical concepts and principles inform practices in productive ways:

> 'Designers do appreciate more adequate information to create a solid ground for their choices and more timely feedback to improve their products. Moreover, the professional community of developers [i.e., designers] as a whole would be helped by a growing body of knowledge of theoretically underpinned and empirically tested design principles and methods.' (Van den Akker, 1999, p.2)

Design methodology is concerned with the systematic shaping of design products (here: the TCM) that meet pre-specified requirements, and the generalisation of the designed solutions to a level on which they are valid for a class of cases, instead of just one. The design is done through thorough problem analysis, resulting in a specification of the solution. This solution should make possible the intended function of the designed object. Design knowledge that is being developed along this way can be checked for its functional validity, which predicts whether a certain proposition of a design works or not, i.e. whether it produces the intended outputs or not.

Design research aims at making practical contributions. In the search for innovative solutions, the interaction with practitioners is essential. A gradual clarification of both the problem and the characteristics of its potential solution is necessary. An iterative process of 'successive approximation' of the 'ideal' intervention is desirable.

> 'The ultimate aim of design research is not to test whether theory, when applied to practice, is a good predictor of events. The interrelation between theory and practice is more complex and dynamic: is it possible to create a practical and effective intervention for an existing problem or intended change in the real world?' (ibid., p.8)

But design research also aims at making scientific contributions. It is to produce generalised knowledge, through the generation, articulation and testing of design principles. These principles can be of a substantive nature, referring to characteristics of the intervention (what it should look like), or of a procedural nature (how it should be developed). Thus, design research tries to reduce uncertainty of decision making in designing interventions (Van den Akker, 1999).

Design research activities differ from what is typical for design approaches in professional practices, where the design is more of a pragmatic of artistic nature (Visscher-Voerman, Gustafson & Plomp, 1999; see also our introduction to this thesis, page). Van den Akker (1999) lists the differences: (1) the preliminary investigation of the problem and its connotations is more intensive and systematic; (2) the theoretical embedding is done systematically by application of state-of-the-art knowledge in articulating the theoretical rationale for design choices; moreover, after empirical testing findings are fed back into theory formation; (3) empirical testing is being

carried out, i.e. the collection of empirical evidence about the practicality and effectiveness (functional validity) of the intervention; (4) much attention is given to documentation, analysis and reflection on the entire design process and its outcomes. It seems clear that our present study fits well to these criteria.

In our design activities, we incorporate the contribution of the clients for which the TCM is intended. When appropriate for design purposes, their evaluations of the functionality of the tool are gathered. Thus, the design can be iteratively developed through adjustment of its features. Furthermore, we incorporate the contribution of scientific investigation: a conceptual framework for collective and individual functioning and improvement in teams, and a set of properly constructed assessment measures are inputs for the design. And of course, we also incorporate the practitioner's contribution: the trade's insights in team processes are used as an input for the arrangement of interventions that makes up the TCM.

In chapter 4, section 4.2, we will extensively dwell upon operational aspects of design methodology. Moreover, we will report there on the actual step-by-step design of the TCM.

Methods for testing construct validity

Construct validity is the extent to which the elements of a measurement tool are representative for the construct that one intends to measure. Within the scope of this study, we have been developing a conceptual framework (see chapters 1 and 2) that consists of three important concepts that are viewed to be central to collective and individual functioning in teams: collective valuation, collective affect and collective voice. For these concepts we have developed partly qualitative, partly quantitative measurement tools; in chapter 5 we will introduce these tools and account for their construct validity. This will be done by deduction from the essentials of the concepts, and by statistical analysis of outcomes produced with the tools at different groups and teams; an additional source of evidence that will be used is the opinion of team members about the comprehensibility of concept and measure and the perceived consistency between the two, as well as the consistency of the measured outcomes with their experience.

In fact, a mix of a classical with a new paradigm method underlines the contention of Berings, Doornbos & Simons (in progress) that methodological approaches derived from different research paradigms start to interbreed. We think this to be a proper choice, because of the (constructivist) nature and intention of our study. Through application of these methods, we will demonstrate that the selected measures do indeed reflect the intended concepts.

Methods for testing functional validity

Functional validity is the extent to which a designed tool functions according to plan, i.e. the extent to which it performs its intended function and produces the results it is designed for. Within the scope of this study, it is the functional validity of the designed TCM that is being tested. This is done extensively, as follows.

First, we will specify the intended main functions and derived sub-functions of the TCM in chapter 4. Second, we will measure, qualitatively (e.g., by use of client evaluations) as well as quantitatively (by use of the developed assessment tools), to what extent these intended functions are met by the method when applied in real teams. As may be concluded upon inspection, we have applied for this test a mix of classical and new paradigm methods like we did for the construct validity test. The findings are presented in case studies, case by case; reports on possible iterations in the design may appear here as well. This is all done in the chapters 6 to 11. Here, the reader will also have ample opportunity to get an integral idea of the qualities of the method, its possibilities and its limits for use.

Within the scope of a single case study, a specific methodology (like 'the learning history') will sometimes be introduced in order to address a research question that is appropriate on the

given occasion. If so, the method is locally applied and will be discussed only in the chapter of the case study concerned.

3.5   Summary

In this methodological chapter, we proposed a special way of looking at the relationship between scientist, practitioner and client in conducting research, in order to be in agreement with the constructivist character of our project. The relationship should be cooperative. Clients (team members), practitioners (facilitators), as well as scientists (academics) each have a different way of interpreting phenomena that they encounter when investigating; for the production of research results that are meaningful to all three of them, they should work together systematically. This is for the following reasons. In the first place, team members are no study subjects of the psychologist, but active meaning-makers, and as such, active investigators as well. The providers of the TCM, practitioner as well as scientist, will have to co-operate with the team in order to produce satisfying results of the investigation. Thus, the spirit of the SCM is adopted, in the sense that a shared commitment and responsibility for meaningful results lies with the client (team), the practitioner (facilitator) and scientist. In the second place, scientist and practitioner should work together intensively when designing the method. The scientist brings theoretical knowledge that provides the conceptual framework; the practitioner brings the practical knowledge of team facilitation that is needed for the design of the method as a tool for intervention. Especially the development of assessment instruments is their shared field of expertise. An investigative attitude is central to the quality of the research of all three. Scientist, practitioner as well as client can prove to be good investigators by showing that they are prepared to essentially have their employed premises and practical rules of thumb, their own mental models and meaning systems be 'publicly checked'. This means that not only clients should be open to learning, but also practitioners and scientists. Their practice is to be continuously developed further. The cooperation between or combination of the different researcher roles was the first topic of methodological importance that we addressed in this chapter.

For the design of the TCM, the author had to combine the roles of scientist and practitioner. We explained here the choices made in order to make such combination possible. As a scientist, the author should apply the roles of 'passionate participant' and 'activist', for they match best with the nature of our research, i.e. doing research on a possible extension of an existing conceptual framework and the development of new theoretical concepts, as well as on their applicability. After all, sensible research results could only be reached by actively working with teams. As a practitioner, the author should apply a high quality reflection, authentic and sound, through a continuous mentality of scrupulous attention for and during the process of applying the method in practice, and an openness to experiment when new challenges come to the fore. In this way, he could do practically-oriented research on the design of the TCM and its application, by using the method with different teams and evaluating its functional validity.

The last question addressed in this chapter was the methodologies to be selected for our research. After all, from different investigator roles we ask different research questions; and different research questions require the use of different methodologies. We specified a choice of research methods; the treatment of applied methodologies was kept relatively general, to be elaborated when applied in a case study in one of the following chapters. The chosen methodologies concentrate on: (1) the design of the TCM (with 'design methodology'), (2) the construct validity check of the method's measures (by 'statistical analysis of questionnaires'), and (3) the functional validity check of the method's design (with 'case study research'). Within the scope of a single case study, every now and then another methodology will be introduced in order to address a research question that is appropriate on the given occasion.