european psychotherapy

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Resource-activating Selfmanagement with the Zurich Resource Model (ZRM)

ABSTRACT

This article is the second part of a study contributing towards coordinating and integrating various forms of psychotherapy on a sound scientific basis and tried and tested in practice. Here the neurosciences have an important bridging function. The new findings of brain research of the past ten years have made it possible for psychologists to develop concepts with sound theoretical and empirical bases that reveal linkages between the concepts and methods of different forms of psychotherapy. The first part of the study (Storch, 2002; 2004) examined neuroscientific theory. Based on those considerations, this second part introduces a resource-activating method to enhance selfmanagement in psychotherapy, coaching and counseling. It is called the Zurich Resource Model ZRM and was developed and tested at the University of Zurich.

Key words: self-management, personality development, psychotherapy, goal psychology, motivation, neurobiology, resources, self-efficacy, health psychology.

The Zurich Resource Model is the result of fruitful collaboration with my colleague Frank Krause and the numerous, motivated graduate students at the University of Zurich who did papers and theses on the topic. The model, based on neuroscientific findings and psychological theory, provides a theoretical model that is conceived as training in integrated self-management. We also implemented our theoretical considerations in a practical training program, called ZRM Training[1], which is suitable equally for work with individuals and with groups, with adolescents and with adults (STORCH & KRAUSE, 2002; STORCH, 2003a, STORCH & RIEDENER, 2004). The Zurich Resource Model is comprehensive in concept and was not developed for any specific disorder. It can be adapted to fit the needs of the client and can be used with clinical groups as well as in educational or work psychological settings. We know of no contraindications for using the approach. The effectiveness of ZRM Training is undergoing continuous scientific evaluation in an ongoing research project (KELLER, STORCH & BIGLER, 1999; KELLER & STORCH 2002a; KELLER & STORCH 2002b; STORCH, KÜTTEL & STÜSSI, 2004).

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[1] ZRM Training is "Neurodynamic Self Management" (NSM) in English.

ZRM Training and the Zurich Resource Model that forms its basis have the following features:
• concept of "resource," neuroscientifically defined
• development of resources, based on memory theory
• somatic markers to check self-concordance
• resource-guided theory of action.

ZRM Training can be conducted in group settings, either as a block course of three days' duration or as a series of five sessions (each three to four hours long). For individual therapy, the parts of the training seminar can be scheduled as desired. For groups up to 12 people, one experienced trainer, or coach, can conduct the training seminar; for groups larger than 12, two coaches are required. The maximum size for a ZRM Training group is 20 persons. However, for clinical groups and for young people, it is recommended to keep the group size small (six to ten persons). A detailed and well-documented manual of the training methods and procedures is available (STORCH & KRAUSE, 2002; STORCH & RIEDENER, 2004).

The Zurich Resource Model bases upon the view of man in the tradition of humanistic psychology. Recently, solution-oriented approaches have once again taken up on this view, namely, that all people carry within themselves essential resources that they need to realize their goals. Psychotherapy consists in helping people to discover those resources and to utilize them consistently. This fundamental assumption stands in excellent agreement with a neuroscientifically-defined definition of the concept of resource. Resources in this sense are all those neural networks that when activated, put the person in the state required in order to implement goals in action. Resource as a concept underpinned by neuroscience is also supported by GRAWE (1998, 2004). In the first part (STORCH, 2002; 2004) of the present study, we looked at the fact that, from a neuroscientific perspective, the psychotherapist's task much resembles that of teachers. Psychotherapy, in this view, consists in unlearning maladaptive knowledge and learning the adaptive knowledge that assures psychological well-being. The task entailed in this psychotherapeutic procedure is to identify the adaptive knowledge that is an appropriate replacement for the particular individual's undesirable, maladaptive knowledge and to understand how new, desirable and, thus, adaptive knowledge can be successfully implemented in the person's daily life. The heuristic model that we chose for translating this process into a scientifically-grounded and comprehensible systematic is the Rubicon model by HECKHAUSEN (1991) and GOLLWITZER (1990), extended for our purposes. We call the extended form of the model the "Rubicon Process" to underline that the model presents a sequence of individual steps leading towards systematic goal-realizing action. This will be described in the following.

The Rubicon Process

Heckhausen and Gollwitzer's Rubicon model is a motivation psychology model of goal-realizing action. The model shows the entire sequence of a person's goal-directed activities starting out from an action goal, something that the person desires to do. The model gives an overview of various "maturing" phases that a wish or desire – once it becomes conscious – must go through before the person is mobilized, motivated, and activated to turn a wish into a set goal, follow it with determination, and realize it in action. Heckhausen developed a conclusive and well-founded description of the course of the action phases, which aids laymen and professional counselors alike in finding the correct route to goal realization. Heckhausen chose the term "Rubicon" in allusion to the decisive moment in 49 B.C. when Julius Caesar, after much deliberation, decided to cross the river Rubicon with his soldiers, declaring "alea jacta est" ("The die is cast") and effectively starting a war. The Rubicon model is, of course, not a theory to explain how wars are started. But it analyses the basic problem in motivation psychology, namely, that there is a metaphorical Rubicon to cross between the separate and distinct processes of how intentions to act are formed (the pre-decisional phase) and how action goals are realized (the implementation, or actional, phase) (GOLLWITZER, 1991, p. 39). In other words, it analyses the process of what wishes must go through such that they can be implemented effectively in pertinent actions (GOLLWITZER, 1991, p. 39).

The Rubicon Model in its original form divided the action stream into a sequence of four succeeding action phases, beginning with a motive and ending with action. However, Gollwitzer's concept of motives seems too imprecisely defined to be applied with any benefit in practice: "the motives of a person are understood as the more or less strongly bubbling sources of wish production" (GOLLWITZER, 1991, p. 40, freely translated here). As a consequence, criticism has been directed to the weakness of the original model, namely, that the description of action phases begins only with *consciously* perceived motives, wishes, or fears (GRAWE, 1998, 2004). With the model, Gollwitzer is not interested in studying the basis of the "bubbling source"; it is merely a given. Neuroscientific theory formation starts out from the assumption that the forming of motives must be sought in unconscious processes. "The unconscious, limbic memory of experience steers – just as Freud said – our actions much more strongly than our conscious ego; it expresses itself as motives, likes and dislikes, moods, drives, wishes, and plans that are experienced as relatively diffuse and lacking in detail" (ROTH, 2001, p. 373, freely translated here). From a motivation psychology perspective, KUHL (2001) starts out from the assumption that every conscious motive originates from a core need (p. 553). For this reason GRAWE (1998, 2004) proposes inserting into the model a very first phase, prior to the conscious motivation phase, that contains unconscious and preconscious needs. Figure 1 below depicts the Rubicon Process (the Rubicon model has been extended to include this pre-phase) corresponding to the ZRM Training method. This extended process model distinguishes among, need, motive, intention, pre-actional preparation phase, and action.
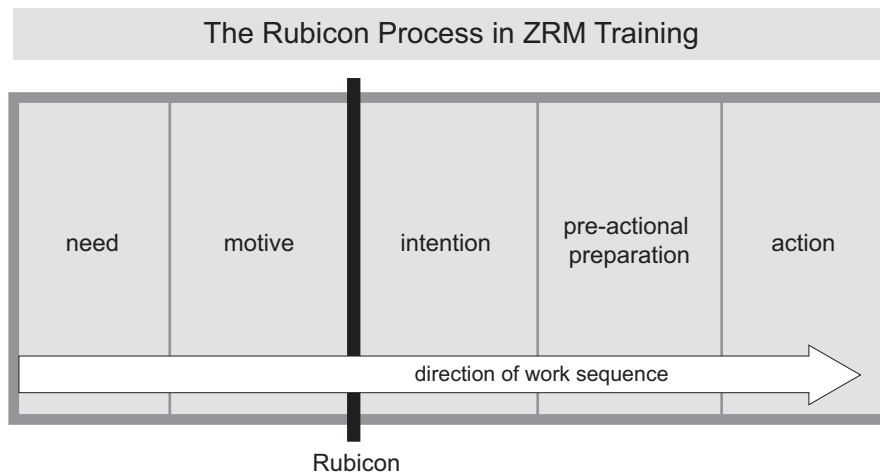
Fig. 1: The Rubicon Process.

As the Rubicon Process represents a theoretical system, whereas ZRM Training was developed for practical implementation, the individual phases in the training are given different weightings and foci for therapeutic work. Phase 1 of ZRM Training addresses the transition from need to motive. Phase 2 is the "crossing of the Rubicon." In Phase 3 of ZRM Training, a resource pool is developed, which in the logic of the Rubicon Process falls under the area of "pre-actional preparation." Phase 4 of ZRM Training also works on pre-actional preparation, but with a different focus. In the Rubicon Process, the phase of pre-actional preparation leads to action. Action itself can no longer be considered part of the training, for training participants at this point in time have completed the training seminar. Nevertheless, it is possible to initiate, during training, additional measures to assure transfer, to assure that participants will have support when they are "out there" in their everyday lives. This is the subject of Phase 5 of ZRM Training, which deals with social resources. As is usual with out-patient or stationary psychotherapies, action is usually executed outside the therapeutic setting, but the therapist can monitor this much more closely than with a training method that is completed in only three days. For this reason, it is always our recommendation that three to six months after the training seminar, a follow-up day is held for participants in a ZRM Training seminar. In the following, the individual phases of ZRM Training will be presented in greater detail.

Phase 1: Key Theme

Phase 1 of ZRM Training corresponds to the transition from need to motive in the Rubicon Process. Recall that in Rubicon terminology, needs and motives differ in the extent to which they are conscious. Needs are unconscious drives and wishes, whereas we speak of motive

once the possessor of the motive has become conscious of an unconscious need and can communicate it to self and others. We extended Heckhausen and Gollwitzer's Rubicon model to include the need phase. It deals with the domains of the unconscious and, thus, with a topic that is originally psychoanalytic. While the first psychoanalytic thinkers had to base their explanations of the interrelations of unconscious processes to a large extent on suppositions and speculation, today psychoanalysts are making increasing efforts to connect psychoanalytic theory formation on the functioning of the unconscious with the findings of the neurosciences (SOLMS, 2004; DENEKE, 2001; KAPLAN-SOLMS & SOLMS, 2000; SLIPP, 2000; FONAGY, 1999; KOUKKOU, LEUZINGER-BOHLEBER, MERTENS, 1998, LEUZINGER-BOHLEBER, MERTENS, KOUUKKOU, 1998). On the other hand, academic psychologists discover the unconscious as fascinating topic, that opnes up to empiric research (HASSIN, ULEMAN & BARGH, 2004; CHARTRAND & BARGH, 2002; WEGNER, 2002; WILSON, 2002).
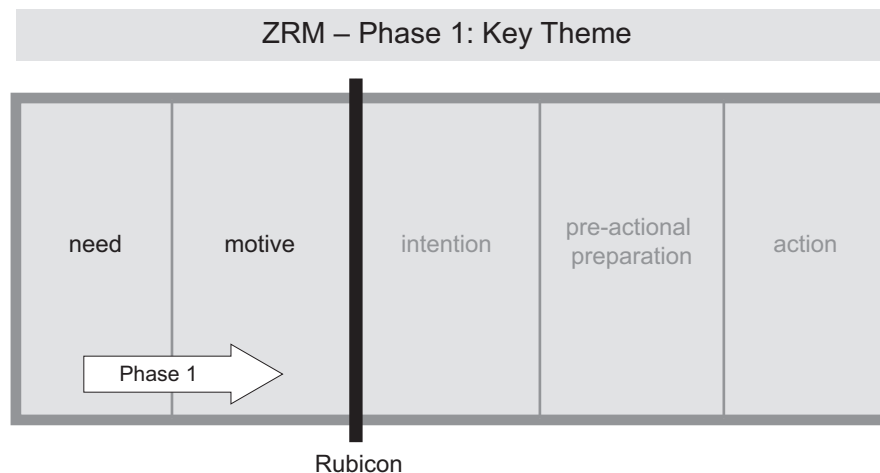

ZRM – Phase 1: Key Theme

need | motive | intention | pre-actional preparation | action

Phase 1

Rubicon

Fig. 2: Key theme.

KUHL (2000, 2001) supports the inclusion of classical psychoanalysis in academic psychology when he writes that, despite Freud's ground-breaking findings, it requires still today a massive effort at argumentation to explain that study participants, in their self-evaluations, often tell us much more than they can possibly know: consciousness generates explanations continuously, even for those things that the true explanation cannot be known (NISBETT & WILSON, 1977; WEGNER & WHEATLEY, 1999; WILSON, 2002). Not infrequently these explanations contain self-chosen intentions as well as goals suggested by others or some sort of presumed meaningful connection. In everyday life, we often cannot verify whether what a person says about his/her intentions really describes the true forces behind a person's actions (BARGH, 2002).

GRAWE (2004) writes that it is in psychotherapy particularly that we deal with the phenomenon that people follow a number of intentions simultaneously that are actually not congruent and thus work mutually to hinder realization of any one of them. We then speak of conflicts. What is interesting, however, is "that these contradictory intentions very often are not consciously experienced as conflicts. It would then seem correct when psychodynamic therapists speak of unconscious conflicts and accredit a crucial role to their processing and resolution for achieving successful therapy outcomes" (p. 59). Personality psychologists meanwhile widely agree, that the synchronization of unconscious and conscious intentions can be seen as an important factor of psychic health (RYAN & DECI, 2001; KOOLE & KUHL, 2003; DEVOS & BANAJI, 2003).

Going beyond the psychoanalytic realm, the use of so-called projective tests in psycho-diagnostics has since become firmly established. The methods are utilized in ZRM Training, based on the assumption that suitable visual material can activate unconscious processes. Unconscious elements are projected on appropriate material. Although projective methods are not always undisputed according to the validity criteria of test theory, they can be used with good reason as stimuli that serve to generate reflection and discussion in the psychotherapeutic context (SCHAIPP, 2001). Based on his conclusions after an extensive review of the literature, KUHL (2001) recommends the use of projective methods for discovering *implicit* themes which cannot measured by using direct inquiry methods as, for example, questionnaires or interviews.

Projective methods have been used traditionally to tap inner psychic conflicts, as described by Grawe. For this reason, visual stimuli are often used that depict situations that can trigger projections of the conflict. From a consistent resource perspective, however, this procedure is not optimal, for the problem-centered visual materials of typical projective methods appeal to the client's deficits, not his/her resources. ZRM Training implements two measures to ensure that important resources in the client are activated from the very start of the therapeutic work. For one, the training seminar works with a *special selection of visual material*. The collection of pictures presented to the client is geared to enabling the client to enter into the development work with an activation of personal resources. It contains only pictures with resource content. This means that the pictures are floral motifs, pictures of beautiful landscapes, animals, scenes of people engaged in pleasant interaction or in pleasant situations when they are alone. Secondly, the clients are given *special instructions* on how to work with the pictures. Clients are instructed to select from the collection those pictures that trigger positive *somatic markers* (1). The selection of pictures in this way assures three things. Putting the focus on positive, and not on negative, somatic markers gives clients access to things that they would like to achieve instead of things that trouble them. In this sense, a resource has already been activated. Then, selecting pictures according to somatic markers instead of conscious decision assures that unconscious contents that the client has have an initial opportunity to articulate themselves.

Following GRAWE (2004, p. 64), moreover, referring the client to somatic markers from the very start makes possible direct and systematic access to the client's affective schemata. This results in deeper processing, or elaboration, following Sachse's model of processing depth (SACHSE 1992) and thus better prospects for therapeutic success.

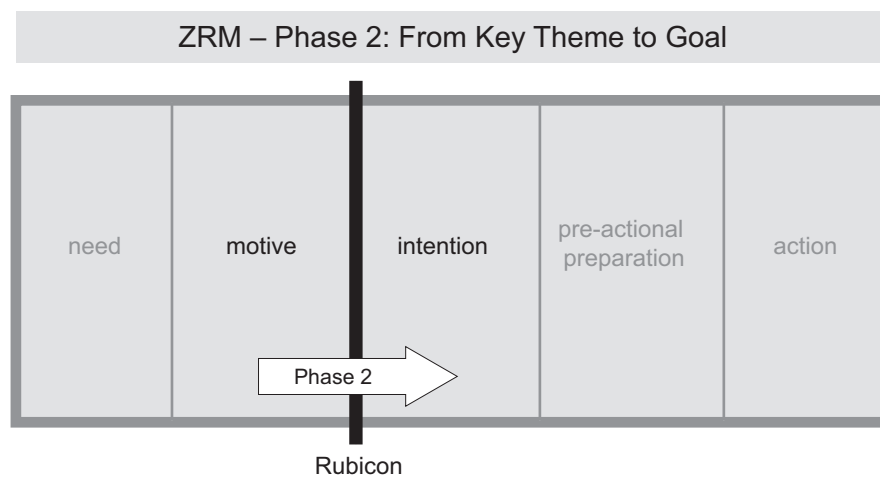## Phase 2: From Key Theme to Goal

Fig. 3: from key theme to goal.

At the start of Phase 2, motives are available that have become conscious. To reach the route to action, they must go through the next phase, the crossing of the Rubicon and thus the forming of an intention. (Rather than use the word "intention," which in German is a borrowed foreign word, participants are asked to focus on an "action-effective," or highly motivating goal.) Thus, Phase 2 of ZRM Training deals with the crossing of the Rubicon. If Phase 1 has been traversed successfully, a need has now become a motive. The characteristic of motive, in the framework of the Rubicon Process is that it is available to consciousness. An action goal in the form of a motive can be communicated. Also in this phase, possible motive conflicts have become conscious and recognized as contradictory. If the motives that have arisen from unconscious needs stand in harmony, progress to Phase 3, pre-actional preparation, can be fast in the individual client setting. In a group setting, Phase 2 is worked on within the group. Motives that stand in conflict to one another have to be reviewed and evaluated as to their relative weightings in some form or other.

As an important function of psychotherapy, Grawe sees its contribution towards a motivational clarification process that facilitates the forming of clear intentions. Grawe is of the opinion that the deliberation process prior to selection of the goal intention in the Rubicon model presents a suitable starting point for initiating therapeutic changes (2004, p. 64). The transition from motive to intention, the making of a decision, is the metaphorical "crossing of the Rubicon" in the Rubicon model. This is the task of Phase 2 of ZRM Training. It is therefore important to examine the two "sides of the river" more closely.

On the left bank of the Rubicon are the motives, on the right bank an intention. In terms of the experience, the difference between motives and clear intention is called the difference between goal setting and goal striving (GOLLWITZER, 1991; 1993; HECKHAUSEN & GOLLWITZER, 1987). Feelings play a crucial role in the difference between the two phases and the choosing of goals. The process of search and deliberating moves forward into volition via a feeling of decisiveness and certainty (MICHOTTE UND PRÜM, 1910). The goal takes on a binding character; there is a feeling of commitment to pursue the goal (GOLLWITZER, 1991, p. 42). KUHL (1996, 1998) also describes the relation between emotion and goal striving in this way: a positive affect is what determines the value of pursuing a goal and helps a person to cross the Rubicon. When the positive affect is experienced, the decision and commitment have been made. Now action can begin.

At this point it is possible to find important parallels in the neurosciences. DAMASIO (1994) describes in his theory of somatic markers that emotional experience memory, a biological assessment system, evaluates every event in a person's life and associates it with a somatic marker. The dual system of somatic markers assesses situations as "good" or "bad" with regard to the person's psychological well-being. People can perceive these somatic markers via bodily signals and/or feelings. Damasio's studies have shown that somatic makers play a decisive role in decision-making situations. Bodily signals or emotions, as the theory goes, provide the crucial "stop" and "go" signals in motivational processes. It is reasonable to conclude that positive feelings, which are known in motivation psychology to allow the crossing of the Rubicon, are identical with somatic markers as demonstrated by the neurosciences.

Moreover, Damasio has shown that not all people perceive their somatic markers, even though their appearance can be measured physiologically, such as through changes in skin conduction. To help people to successfully end the deliberation phase and cross the Rubicon, a key to a psychological counseling method can lie in directing clients' attention to the emergence of somatic markers from the unconscious, rather than to brood over possible solutions at a conscious level. If we assume that the system of somatic markers working below the threshold of consciousness gives the decisive command to "go!" across the Rubicon, then this yields particular psychological methods also for the case of conflicting motives. What is needed, is

strong positive affect. In order to arrive at effective solutions, therefore, methods are needed that stimulate positive affect. In the ZRM-Training we use a special type of goals to reach this aim: we call this type of goals *general attitude goals*.

General Attitude Goals

Goals as developed within ZRM Training seminars have an important feature that makes them highly action-effective. We work with a special type of goals, namely, not with concrete, specific goals, but rather with *general attitude goals*. This difference has been investigated in a branch of research on goals that categorizes goals into various types, depending on whether they are concrete and specific or abstract and general in formulation (for an overview of the research, see EMMONS, 1996a). For example, the intention to present oneself more self-confidently could be expressed in a concrete goal as follows: "At the next team meeting, I will make a proposal for project X." The same intention, formulated generally as an attitude, might be: "I will trust in my abilities and show what I am capable of." People experience generally formulated attitude goals as belonging much more strongly to their own selves than specific goals do. They are typically accompanied by stronger emotions (MCCLELLAND ET AL., 1989). GOLLWITZER (1987) called this type of goal an "identity goal" and described it as "insatiable," insatiable because identity goals can remain valid and continue to guide one's actions throughout one's entire life (see also WICKLUND & GOLLWITZER, 1982; BAYER & GOLLWITZER, 2000). KUHL (2001) criticizes traditional motivation research for restricting investigation to very controlled laboratory situations and failing to devote attention to this type of comprehensive personal goal, which he calls "life goals" (p. 277).

The different possibilities of formulating goals can be represented in graphical form.
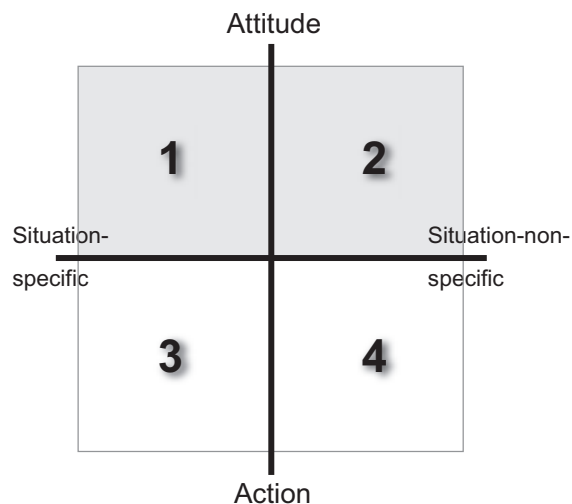

Fig. 4: The four quadrants of goal formulations.

Goals can be categorized according to whether they are formulated as specific to a situation or transcending situations. For instance, "I want to be calm and focused when I take my driving test" is an extremely situation-specific goal that applies to only about one-half hour of your whole human life. "I want to achieve a harmonious balance between work and life," is a goal at the opposite end of the continuum. Clients typically see this kind of goal as valid "always." It transcends particular situations and, for most people, is valid also in the future, for life.

Goals can also be categorized as attitude goals or action goals. Goals at the attitude level describe, in a general formulation, a particular inner state of mind that will lead to particular behaviors, which are not, however, stated in the formulation of the goal. "I will stay relaxed to the core" is such a goal. It describes a state of mind with which the client would like to approach the world in certain situations (or always). "The next time Customer X speaks to me, I will take three deep breaths before I respond" is a possible specification of this state goal at the action level. In psychotherapeutic methods, it is often recommended to make sure that the client's goals be specified and concrete. The goal formulations can be usually located in the graphical representation in Figure 4 in quadrant 3 or 4, depending on whether the goal is formulated as specific or non-specific to situations (2).

ZRM Training is explicit about taking a different route. Goals are formulated in Phase 2, at the crossing of the Rubicon, as *general attitude goals* and not as concrete action goals. As mentioned above, most therapy clients do not have to be instructed explicitly to do this, because they in any case formulate the things closest to their hearts as attitude goals. "I want to finally have joy in my life" or "I want to be more self-confident" are typical goal statements that psychotherapists come to hear at the start of therapy. Rather than to immediately break these goals down into concrete measures, ZRM Training participants are encouraged to stay at the attitude level until they have crossed the Rubicon. There are a number of reasons for this: In addition to the reasons mentioned above, it is important to recall the fact, presented further above, that the emotional memory of experience that we require to produce positive somatic markers is more accessible via pictorial and metaphorical contents than through all too concrete and realistic resolutions. Naturally, in the course of ZRM Training, the action level is also worked on, but not until later, namely in Phase 4. The crossing of the Rubicon takes place, made possible by strong positive emotions, in quadrant 1 or 2 at the attitude level. Only as a later step are goals specified at the action level.

In ZRM Training, the task of formulating general attitude goals takes place by having seminar participants work further on their key theme, taking three core criteria into account.

The three core criteria of an effective goal as an engine to action are:
• The goal must be an approach goal.

• Realization of the goal must be solely under the control of the person.
• The goal must be accompanied by a clearly observable, positive somatic marker.

There is a long tradition in academic psychology that deals with goals and their effects on the results of action. There is also an abundance of sound results demonstrating how different types of goals are associated with psychological well-being and what shape goals must take in order to ensure high motivation to take the steps necessary to fulfill those goals (for detailed overviews, see BRUNSTEIN & MAIER, 1996; EMMONS, 1996b or GOLLWITZER & MOSKOWITZ, 1996). The three core criteria of ZRM for formulating an action-effective goal are based upon the findings of "goal psychology."

Approach Goal versus Avoidance Goal

One and the same good intention can be expressed verbally in two ways. Take, for instance, a person who has decided that it is important for her to have more rest and recuperation in her life. She can word this intention in different ways. She can say, "I will give myself more rest" or "I will put myself under less pressure." Both statements deal with the same topic. It might seem inconsequential as to which verbal formulation is used. However, research has shown that the way that a goal is formulated can have important consequences. Goal formulations that contain the state that is to be achieved are called approach goals (I will give myself more rest). Statements that describe the state to be avoided are called avoidance goals (I will put myself under less pressure). People who habitually use avoidance goals show lowered mood, increased anxiety, less satisfaction with life, and even poorer health (GOLLWITZER & MOSKOWITZ, 1996, p. 367). ELLIOT AND SHELDON (1997) found that people with avoidance goals feel less competent when it comes to implementing their goals in action. The reduction in experiencing competency that goes along with avoidance goals also has negative effects on goal-related achievement and on psychological well-being. Based on their investigations, Elliot and Sheldon go so far as to issue a warning: "The adoption of avoidance goals must be considered a psychological vulnerability in that it places one at risk for a host of negative experiences and outcomes" (ibid., p. 182).

100% Under Personal Control

This core criterion for a highly motivating, action-effective goal is also derived from an insight provided by the Rubicon model: motives are more likely to cross the Rubicon and become intentions if they are feasible and attainable. The more strongly a person feels that she can reach a particular goal under her own powers, the greater the motivation to make a sustained effort to do so. This finding of motivation psychology connects up directly with an area called locus of control (ROTTER, 1954). This type of expectation shows up in numerous constructs in psychology. The concept of self-efficacy (BANDURA 1997) is, for example, a well-known construct of control beliefs, whose effects on psychological and physical well-being have been

researched extensively. It is the person's expectation that he or she can perform the necessary action, that is, will have the strength and determination to actually perform the action even in the face of internal and external difficulties (KUHL, 2001, p. 259, freely translated here). Related concepts are found as an element of "sense of coherence" (ANTONOVSKY, 1979), which Antonovsky calls "manageability." KOBASA'S (1979) concept of "hardiness" also contains positive control beliefs. Positive control beliefs also appear as a central determinant of emotional health in more recent concepts on optimism (SELIGMAN, 1991) and resilience (FLACH, 1997; WALSH, 1998). It can be stated generally that people who are convinced that they can do something in difficult situations in order to improve their position deal more successfully with stressful situations than people who slip into the role of victim and develop symptoms of "learned helplessness" (SELIGMAN, 1975). These are people who act proactively rather than reactively. They have a "doer mentality and view themselves as responsible for solving problems, even if they did not create the problems themselves" (SCHWARZER, 1998). Positive control beliefs are a decisive support to people as they deal with emotional strain and stress. FLAMMER (1990) provides a detailed overview of this topic.

Formerly, positive control beliefs were viewed as a set personality characteristic, or trait. Today, it is acknowledged that positive control beliefs can be learned. SCHWARZER (1998) developed a training program to promote self-efficacy in teachers. SELIGMAN (1999) developed optimism training for children. Seligman believes that just as one can learn helplessness, with professional help one can also learn optimism. In ZRM Training, positive control convictions are a core criterion for action-effective goals for two reasons. First, as an aspect of motivation, control beliefs facilitate the crossing of the Rubicon and thus the forming of intentions. Second, they make a sustainable contribution towards emotional health, from both a salutogenetic and prevention perspective.

Positive Somatic Markers

The third core criterion of ZRM tests for positive affect that leads to determination and accompanies a motive across the Rubicon. Our theoretical basis here is the theory of somatic markers by DAMASIO (1994), who starts out from the assumption that the person's individual emotional memory of past experience evaluates decision situations through the aid of somatic markers. Psychologists call this type of process *automatic evaluation* (DUCKWORTH ET AL., 2002; GARCIA & BARGH, 2003, MUSCH & KLAUER, 2003). Although the evaluation processes take place below the threshold of consciousness, the signals of the completed evaluation can be perceived. These signals are observed well and reliably by people themselves or by others, because they are expressed bodily. People in whom a positive somatic marker occurs begin to glow and show clearly recognizable signs of satisfaction. This can be seen, for example, in a laugh or smile, a change in posture or breathing, or a better flow of blood to the skin of the face. ZRM Training seminars include a demonstration, with the aid of volunteers from the group, of the

appearance of positive somatic markers when a goal is formulated accordingly. Somatic markers have high face validity, so that a group of laypeople become quickly capable of reliably recognizing their presence or absence.

Recent considerations by KUHL (2001) allow the conclusion that the emotional memory of experience with its somatic markers, as the neuroscientists call it, is largely identical with what psychology has called the "self system." Kuhl writes that bodily sensations apparently belong to those signals that help the self system to choose among options for action that have been tried in the past (KUHL, 2001, p. 153). The self system, according to Kuhl, is stored in implicit, unconscious memory, just like the emotional memory of experience of neuroscience. Decisions, which include the bodily and emotional signals of the self system, make possible the setting of goals that have high congruency with the self. Psychological research has produced a lot of evidence that goals that are accompanied by a high degree of self-concordance more frequently lead to success than goals with lower self-concordance (SHELDON & KASSER, 1995, 1998). This is also related to the concept of intrinsic motivation: "By definition, intrinsically motivated behaviors, the prototype of self-determined actions, stem from the self. They are unalienated and authentic in the fullest sense of those terms" (RYAN & DECI, 2000, p. 74).

When connecting these psychological considerations with neuroscientific findings on somatic markers, as ZRM does, the strong positive feeling that reveals a somatic marker is indicative of self-concordance and intrinsic motivation. It is reasonable to assume that the so-called "felt sense" that plays a central role in the focusing technique (GENDLIN, 1998) also describes the appearance of somatic markers. It is through this third criterion that ZRM Training seminar participants learn to continue to develop their goals until a good feeling is generated that is clearly observable to themselves and others. This provides them with an easily learned and unambiguous criterion for their own self-regulation. Kuhl writes that he considers the ability for the self-regulated recruiting of positive affect to be a decisive prerequisite for self-determination and intrinsic motivation (KUHL, 2001, p. 177).

However, this kind of self-motivation only succeeds if it is possible to form goals that are in accordance with the need and value structure of the organism (KUHL 2001, p. 181). If access to bodily and emotional signals is blocked, "volition inhibition" results. The system cannot even identify thoughts, feelings, or goals that do not fit the self and are therefore undesirable, as incompatible to the self, never mind stop them (KUHL, 2001, p. 169). A person who does not perceive the signals of the self system can in this sense not even have his own wants, but remains dependent upon goals, values, and motivators from the outside. In the worst case, the person spends a lifetime following goals that may look fine as measured by external standards, but may stand in grave contradiction to the self system. In the long run, this makes people ill, so that Kuhl sees marked volition inhibition as an indicative of mental illness. Hautzinger writes

that it has been demonstrated empirically that mental illnesses such as depression, obsessive-compulsive disorders, anxiety and eating disorders, etc., are accompanied by an excessively strong volition inhibition that results from affective fixation (HAUTZINGER, 1994). Therapeutic progress depends decisively on eliminating this special form of inhibition (HARTUNG & SCHULTE, 1994) (KUHL, 2001, p. 179).

Because in ZRM Training a goal is accepted as highly motivating if it is accompanied by clearly recognizable positive somatic markers, even training participants who have previously not had access to the emotional and bodily signals of the self system learn to take this important source of information into account. However, in cases of grave volition inhibition, it can take some time before participants learn to perceive bodily signals, a type of perception that is also called *proprioception*. The group situation in ZRM Training seminars makes the learning process significantly easier. We mentioned above that positive somatic markers have high face validity; they are clearly observable. For this reason, a demonstration of the appearance of positive somatic markers in volunteers in the group provides observing participants with the opportunity for role model learning. Also, in ZRM Training seminars, the core criteria for goal statements are worked on in the framework of an exercise for small groups, with the small group functioning as a human biofeedback system. When visible somatic markers appear in people who may themselves have little proprioceptive ability, they are readily observable by fellow participants, who provide immediate feedback. In this way, the training works to systematically eliminate volition inhibition.

ZRM Training participants work on the three core criteria for goal statements in small groups. Group members support each other mutually in the formulation of goals that meet the criteria and thus are highly motivating. In this phase, however, good coaching of the small groups is necessary. Although it is always astonishing how capable groups of laymen are, after hearing theoretical explanations and observing one or two example exercises using volunteers, of providing each other with decisive impulses. Nevertheless, it can happen that an individual may be so caught up in a deep conflict of motives that the capacity of the lay group is overtaxed. In this case, the coaches intervene. They have at their disposal a repertoire of intervention methods that they acquired as part of their ZRM training as coaches. These can be psycho-dramatic or gestalt therapy methods or more conversation-oriented procedures. BAMBERGER (1999) provides a comprehensive collection of solution-oriented interventions in the tradition of Steve de Shazer. ZRM Trainers have been instructed to always apply a fundamental rule: intervene only as required, with as little intervention as possible! ZRM Training, following the idea of self management, is designed to help others to help themselves, and a helpful suggestion by the coach is often enough to get a small group on track and once again autonomous and able to work.
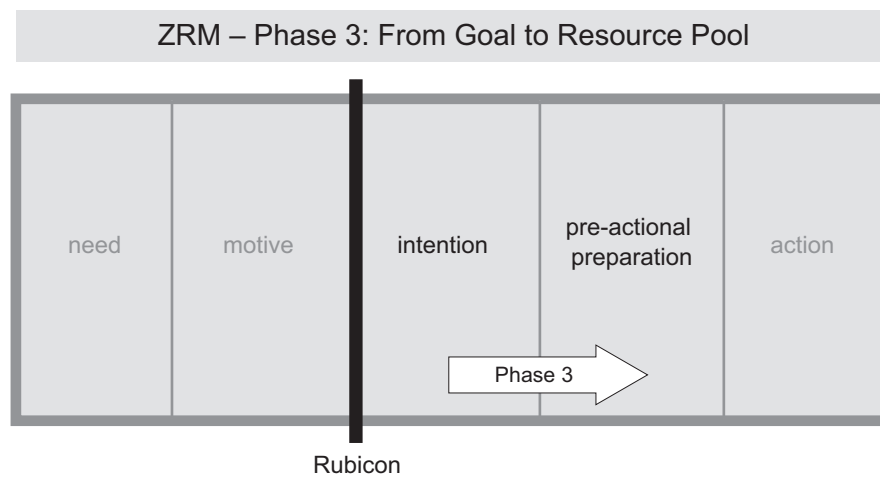
Phase 3: From Goal to Resource Pool

Fig. 5: From goal to resource pool.

Once participants have developed goals at the attitude level that meet the three core criteria for action-effective goals, the pre-actional phase begins, to use the terminology of the Rubicon Process. Now additional preparations are made for implementing the goals in actions. The goals, as developed up to this point, are viewed in the Zurich Resource Model as newly formed neural networks. In contrast to the maladaptive neural networks that have previously guided the clients' behavior, the adaptive neural network associated with the desired goal is rudimentary and usually not yet sufficiently firmly established to be reliably action-effective. Thus, the crucial task now is to transfer the goal, which at this time is mainly accessible in the explicit knowledge system, to the implicit knowledge system, where it can become automated and thus become effective at steering behavior even in difficult situations (3). The way in which pre-actional preparation is approached is a further decisive feature of the Zurich Resource Model.

In ZRM Training the phase of pre-actional preparation is divided into two successive work phases. A *resource pool* is developed first (Phase 3), and only then are *implementation intentions* developed (Phase 4). While the resource pool still relates to the attitude level, implementation intentions deal with specific actions to realize the goal. There are two reasons for this sequence of proceeding in preactional preparation – resource development at the attitude level first, followed by planning implementation intentions at the action level:

Goal-realizing action is achieved, according to the Zurich Resource Model, when the adaptive neural network of goal-related resources can be activated reliably precisely when it is needed. This means that the desired neural network, which should go into action at the moment of action – at present a goal formulated at the attitude level – must become a more firmly established neural pathway. Reliable activation aids must be found, which is the object of the work on the resource pool. Logically, only once a selection of efficient activation aids are available is it possible to consider implementation intentions, or in other words, to consider implementing aids in specific situations.

Second, motivation psychologist OETTINGEN (2001) has shown that success expectancy judgments and commitment to goals increases when people indulge in spontaneous positive fantasies about achieving their goals *first*, and only *then* consider actions to realize those goals. If the reverse order occurs, expectations of success and commitment do not increase. The results can be interpreted to indicate that the positive emotions associated with fantasies about the future can help to firmly establish at the emotional level the neural network that represents the goal. With activation of the goal, reliably strong, positive emotions are then developed simultaneously. These can help in maintaining motivation if implementation difficulties appear later on.

The procedures in Phase 3 are consistently resource-oriented and are based on neuroscientific and memory theory foundations of the acquisition of implicit knowledge (4). There are two routes to acquiring implicit knowledge (SEEGER, 1994). Through *repetition, practice*, and *training*, automatic reactions that run at the unconscious level can be developed. A good example of slowly building up automated sequences is the way that people learn to drive. The other route to implicit knowledge proceeds via a particular form of non-conscious learning called *priming* (for an overview, see HIGGINS, 1996; DIJKSTERHUIS ET AL., 2004). Social psychologist John Bargh has demonstrated in numerous experiments that through priming, emotions, attitudes, goals, and intentions can be activated non-consciously and that this non-conscious activation has a demonstrable effect on the way that people think and act in the associated situations (FITZSIMONS & BARGH, 2004).

In one of their most well-known experiments, BARGH AND COLLEAGUES (1996) presented participants with a scrambled sentences task including either elderly stereotype words ("elderly prime") such as old, retired, and wrinkle for the experimental group or neutral words ("neutral prime") for the control group, thus subliminally priming the participants. In other words, in the experimental group, participants' brains were "forced" to activate neural networks associated with "elderly." When they were done, the participants were informed that the experiment was over, and they could leave. But the real data collection had only just begun. When these participants left the lab, a confederate in the hallway recorded the time the participant took to walk from the lab to the elevator to leave the building.

Participants who had been primed with the elderly stereotype walked significantly slower than participants who had done a version of the word jumble task that did not prime the elderly stereotype. Without the participants' awareness, the concept "elderly" had been neurally activated, and this small intervention had an immediate, automatic effect on participants' behavior.

At first glance, it may seem outlandish that people walking slowly down a corridor should be of importance to psychotherapy. But the priming experiments are interesting for the Rubicon Process, because it could be shown that this type of unconscious learning can be utilized in the service of goal-realizing behavior. BARGH ET AL. (2001) conducted further experiments on non-conscious activation and pursuit of behavioral goals, from which they conclude that "mental representations of goals can become activated without an act of conscious will, such that the subsequent behavior is then guided by these goals within the situational context faced by the individual" (p. 1014). *Non-conscious* priming that contains *goals* can have effects on people's goal-realizing *actions* that are similar to the effects of goals followed consciously. If a person aims to remain "calm and composed" in a particular situation, he or she can use priming to ensure that action. The scientific findings provide evidence that the non-conscious learning processes that were examined in the priming experiments do indeed increase the probability of the appearance of goal-appropriate actions.

For this reason, BARGH ET AL. (2001) speak of the "automated will." Bargh starts out from the assumption that particularly in difficult situations, it can be advantageous to switch from conscious goal pursuit to automated goal pursuit: "Because of the limitations of conscious processing, and the strain on these limited resources in times of difficult self-regulation tasks, to shift the regulation of goal pursuit from conscious control to automatic control can be an adaptive way of ensuring effective goal pursuit even under new, complex, or difficult circumstances" (BARGH ET AL., 2001, p. 1025). For people who after the forming of an intention are not yet capable of sustaining goal-realizing action, it can be recommended in the pre-actional phase to ensure that good priming processes are installed prior to and during the crucial situations, so that the implicit mode is "well instructed."

Phase 3 of ZRM Training focuses on the preparation of such priming processes, systematically utilizing the brain's synaptic plasticity (5) in the service of the new goal. This is achieved through the installation of memory aids and through body work.

Memory Aids

To strengthen the new neural connections set up during the work on the goal, the first purpose is simply to begin immediately to use the new synaptic connections as frequently as possible. From the priming experiments, we know that to be effective, it is not important whether activation of the neural networks occurs with or without the person's awareness. It is this phenomenon that yields an extremely elegant option for psychotherapy. Many forms of therapy utilize the intervention of giving clients assignments to do outside therapy. One great difficulty

with this type of intervention is the same than any teacher has with assignments: people often do not do their homework. In many cases, this has nothing to do with evil intentions or secret resistance on the part of the client to therapy or therapist; people are often just too busy with their daily lives. If it is indeed so that simply frequent use of a neural network already sets into motion the process of plastic change of neural structures, than a one-time action, namely, *targeted installation of memory aids, or reminders,* can accomplish much in terms of adaptive change of the brain. After this action has been taken once, clients can turn their attention to their daily lives, for the changes in the brain proceed on their own, as it were.

In ZRM Training seminars, participants hear a report that explains the principle of synaptic plasticity and a list of memory aids that in our experience have proved to work well for most people. The reminders come from diverse areas, ensuring that each person will find reminders that suit their preferences. The reminders range from triggers through specific pieces of music, to smells, such as perfume, to the targeted use of colors, whether in clothing or in objects at home or in the office. People often like to use certain plants as reminders, or special pieces of jewelry, or key chains. For business people, a special screensaver or wallpaper on their personal computers is a good reminder, and some clients decide to utilize a special word as their computer password as a memory aid. It is of utmost importance when choosing personal reminders that the reminder always relates to the goal to be realized. It is not enough to buy a pink blouse, because pink is fashionable at the moment, or to listen to Gregorian chants in the evening, because you have the CDs at home anyway. Reminders should activate the adaptive neural network. A person with an activity goal must choose a different music selection as a reminder than he or she would choose if the goal had something to do with relaxation and composure.

The method utilized here to make the neural network more effective consists in a kind of "chronic priming", in psychological terminology. Training participants are encouraged to systematically set up and equip their environments with reminders that ensure that the new neural pathway is always activated, even when their attention is caught up in other matters. In the language of behavior therapy, this is "self-conditioning," and the reminder has the status of triggering stimulus. Allowing training participants complete freedom in the selection of their memory aids ensures that each person finds individualized ways to prepare his or her environment accordingly.

Body Work

The goal of body work in ZRM Training is to strengthen the synaptic connections in the new neural network through broad-based information, making it more readily activated. Research in memory psychology indicates that lasting storage of information can be facilitated by a resource that is available to everyone: the body. ENGELKAMP (1997, 1998), a memory psychologist, has

developed a multimodel memory theory that examines the "do effect." The "do effect" is based on sound empirical evidence regarding memory of one's own actions. In an experiment, Engelkamp read aloud lists of simple, unrelated phrases on actions to participants, such as "comb hair," "open jar," "bend wire," or "close umbrella." A group of participants that only listened to the phrases was compared to another group that was asked to actually execute the actions. The second group had a much higher recall of the phrases than the group that had only listened (ENGELKAMP, 1997, p. 11). Engelkamp explains the difference as due to the fact that execution of the actions provides additional encoding of the information. This encoding takes place at the sensory-motor level.

Research on "autonomous agents" (PFEIFER, 1995; PFEIFER & SCHEIER, 1999) confirms the memory psychological findings. The term autonomous agents refers to robots that are capable of acting autonomously. Constructors of autonomous agents build small robots that can play football or learn to collect garbage, for example. Attempts at programming these machines revealed that learning programs without sensorimotor feedback are not successful. Thus, an approach that can be fruitfully applied to the connection between human memory and bodily processes gained confirmation from the world of informatics and machines. The research approach belongs to the field of "embodied cognitive science" (for a detailed overview, see TSCHACHER AND SCHEIER, 2001). In this tradition, memory is understood as an active, creative act of the entire organism that bases on sensorimotor-affective coordination processes (LEUZINGER-BOHLEBER, 2001, p. 81). Information in long-term storage in memory always has a bodily component. It is "embodiment" of information that allows reliable recall. Remembering is dependent upon integrated, embodied, sensorimotor-affective and cognitive processes in and between persons (LEUZINGER-BOHLEBER, 2001, p. 83).

In the language of memory psychology, in ZRM Training the new goal becomes encoded bodily. In neuroscientific terms, the new neural network becomes associated with goal-appropriate bodily representations. In order to achieve this, ZRM uses a procedure that is familiar from hypnotherapy (KOSSAK, 1989) and mental training (GUBELMANN, 1998). From neuroscientific findings, we know that imagining bodily movements is sufficient to stimulate plastic changes in corresponding motor areas of the brain.

PASCUAL-LEONE ET AL. (1995) conducted an impressive experiment. Subjects who had never played the piano learned a one-handed, five-finger exercise on the keyboard. They were divided randomly into a "practice group," a "mental training group," and a control group. The manual practice group played the exercise for two hours a day for five days. The mental training group sat at the piano, imagined playing the exercise, but did not actually practice on the piano or even in the air. The control group, after initially learning the exercise, did not practice any specific task, manual or mental. Transcranial magnetic stimulation (TMS) mapping, which is a non-invasive method of recording brain

activity, was used daily to map the cortical motor areas targeting the contralateral long-finger flexor and extensor muscles of the hand used in the exercise. During the five days of the experiment, for both the practice group and the mental training group, the cortical motor areas targeting the long-finger flexor and extensor muscles enlarged, and their activation threshold decreased. No changes of cortical motor outputs occurred in the control group. "…mental practice alone led to the same plastic changes in the motor system as those occurring with the acquisition of a skill by repeated physical practice. By the end of day 5, the changes in the cortical motor outputs to the muscles involved in the task did not differ between the physical and the mental practice groups" (PASCUAL-LEONE ET AL., 1995, p.1041).
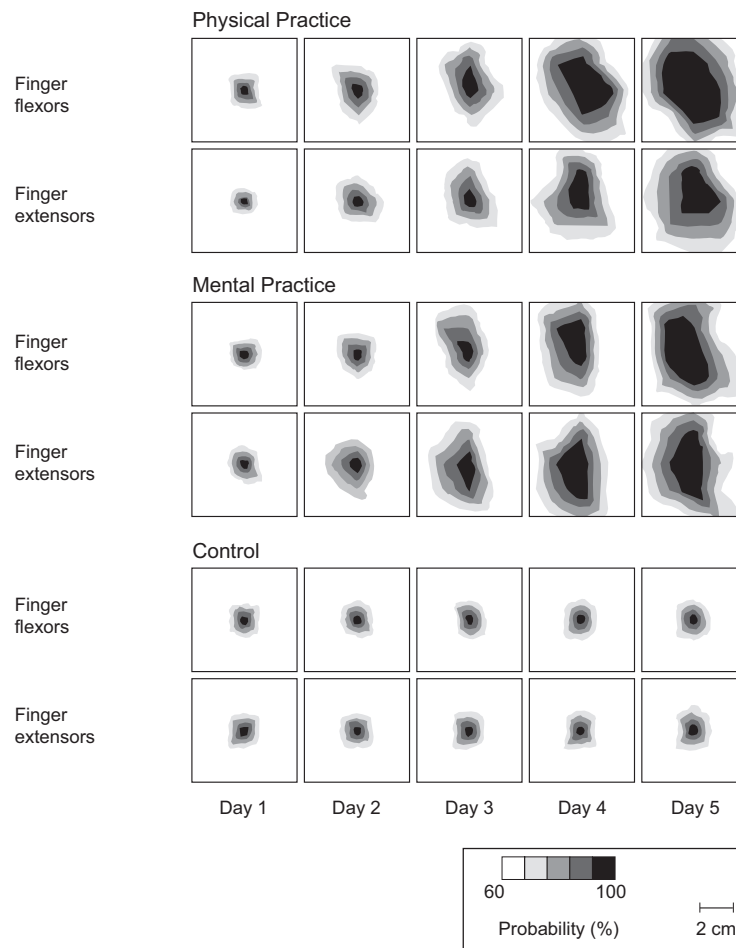

Fig. 6: Representative examples of the cortical motor output maps for the long finger flexor and extensor muscles on days 1-5 in a subject from each group. Each map is based on 25 measured points (Pascual-Leone, 1995).

After measurements had been completed, the mental training group was asked to play the exercise on the piano. Although their skill did not reach the standard of the practice group, their ability to play the exercise – after no manual practice at all – was equal to the skill of the practice group on day 3. Moreover, after practicing for only two hours, their skill was equal to the skill of the practice group on day 5. Pascual-Leone et al. see mental training as effecting a virtual simulation of behavior and activating the associated neural connections. This assumption is confirmed by general findings in psychology: "…research over the past several decades has shown that mental imagery has many of the same characteristics as a real experience" (BLAIR ET AL., 2001, p. 828). Preparation through mental training can significantly accelerate the acquisition of new motor skills. This is the case not only for simple finger exercises, but also for highly complex sequences of movements. Because of its effectiveness, mental training has long since become an established method in the training of athletes (GUBELMANN, 1998). Pascual-Leone et al. also report that many famous performance musicians utilize mental training as a part of their preparations for concert appearances (SCHÖNBERG, 1987, 1988).

Based on the findings on mental training, the bodily expression that corresponds to the goal to be realized is first trained in ZRM Training mentally. Training seminar participants take part in a mental journey guided by imagery, whereby they picture themselves executing the desired goal-realizing actions. The guided imagery provided by the training coaches focuses on the bodily features of the goal-realizing actions, including both skeletal-motor aspects and the inner perception of bodily phenomena, such as a feeling of warmth in certain areas of the body. In addition, the ZRM mental journey allows participants to develop associated mental pictures, such as landscapes, which often provide better access to the implicit system than words do. For example, a teacher who wanted to be more relaxed and composed in difficult classroom situations imagined himself standing at the top of a lighthouse, with the raging sea far below him. In this imagined position in the lighthouse, his body posture changed, his breathing became deeper, and he reported experiencing a feeling of "freedom" in the chest. In this way, the neural network associated with the goal becomes strengthened through information that contains the associated bodily expression. After the mental journey exercise, training seminar participants practice this bodily expression associated with the goal in reality. The practical approach in ZRM Training here follows methods that were developed in psychodramatics. In psychodrama, the attempt is made to create scenic experience that is as authentic and corresponds as closely as possible to reality; for this reason, there is a strong emphasis on adequate introduction of the roles that people will play. The techniques that are used to bring people into the experience are similarly elaborated. The ZRM Training Manual (STORCH & KRAUSE, 2002) provides detailed information on the techniques as used in ZRM Training seminars.

The Resource Pool

At the end of Phase 3 of ZRM Training, participants begin to develop their pool of personal resources. At this point in the training program, their resource pools contain:

• personal goal, formulated to promote effective action
• personally meaningful reminders and triggers
• personally important body resources facilitating goal achievement

Phase 4: Targeted, Goal-Oriented Resource Utilization

ZRM – Phase 4: Targeted, Goal-Oriented Resource Utilization

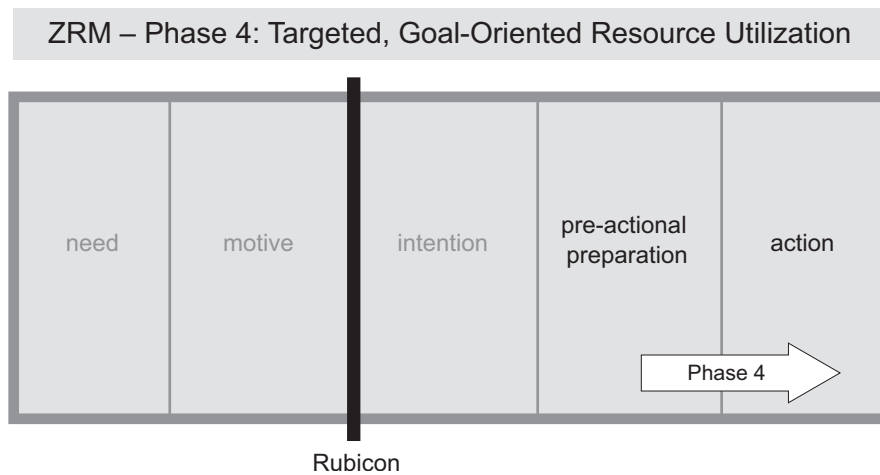| need	motive	intention	pre-actional preparation	action

Phase 4 →

Rubicon

Fig. 7: Targeted, goal-oriented resource utilization.

Phase 4 of ZRM Training deals with implementation intentions. This phase is a shift from the attitude level to the action level. The aim is to activate and utilize resources in a targeted way to trigger the adaptive neural network as planned and desired by the participants. Following GOLLWITZER (1993, 1999; GOLLWITZER ET AL. 2004), we can distinguish between goal intentions and implementation intentions. 'I Intend to do X" is a goal intention; "I plan to do X in the following way, when situation Y occurs" is an implementation intention. GOLLWITZER (1999) provides an overview of the various advantages of forming careful implementation intentions in the pre-actional phase through the aid of conscious deliberation. For one, the forming of an implementation goal clearly increases one's sense of personal commitment. This is particularly relevant when it comes to goals that involve changing health-related behaviors, such as smoking cessation, weight loss, or getting more physical exercise (RENNER & SCHWARZER, 2000). In addition, implementation intentions help people to begin executing goal-oriented actions. People put into action goal intentions that have been transformed into implementation inten-

tions three times more frequently than goal intentions that have not been transformed. Implementation intentions, because they are coupled with situational conditions, have sustained impact. They continue to be effective for long periods after the intention was formed, whenever the specific situation occurs.

Gollwitzer explains the positive effect of implementation intentions as resulting from the fact that situation-specific key features are more easily recognized if a mental pathway has been facilitated already during the pre-actional phase. In the pre-actional phase, the specific situational conditions are coupled mentally to the desired behavior patterns. When the situation occurs, it takes on the character of a trigger and steers execution of an action. With the planned implementation intentions, the situation is the trigger stimulus for the planned reaction. The initiation of the action is triggered automatically; little or no conscious processing is required. Due to planning, there is direct access to the implicit mode. GOLLWITZER (1999) writes: "Once people have formed implementation intentions, goal-directed behavior will be triggered automatically when the specified situation is encountered" (p. 501). Forming implementation intentions automates the start of goal-realizing actions. This is a second way in which people during the pre-actional phase can prepare the implicit mode in a targeted fashion for the desired action.

At this point in ZRM Training, the implementation intentions relate to the action level. This does not involve a change in the formulation of the goal, for following the logic of the Zurich Resource Model, implementation intentions are formed with a view to triggering the adaptive neural network. For this reason, they relate to the way that resources from the resource pool can be utilized. Here ZRM Training seminar participants decide themselves what resources they will call upon. This procedure of leaving the selection of resources to the participants themselves increases the likelihood that each participant can apply effective individual preferences. Many forms of psychotherapy are specialized in one method alone. There are methods that employ language, music, painting, or dance and methods that work with fantasy techniques or the body. Each appeals to some people, who feel at home in the therapy method, and not others, who can make nothing of it. In Phase 4 of ZRM Training, the participants have available a resource pool that contains a broad and diverse repertory, and they are completely free as to the choice of preferred resources. Thanks to this, resistance on the part of participants to ZRM Training is virtually non-existent. One participant may work with verbal formulations of the goal, while others may use musical triggers or a rose as a symbol, and still others may work with bodily features.

For implementation of goals in action, the Zurich Resource Model differentiates three types of situations and prepares training participants for meeting these types of situation as they go about implementing their goals:

Type A Situations
• Situations in which goal realization succeeds almost effortlessly

Type B Situations
• Situations in which goal realization is difficult, but which are foreseeable and thus can be prepared for

Type C Situations
• Situations in which goal realization is difficult and which are unforeseeable and unexpected

No implementation intentions have to be developed in the training program for situations of Type A, as what has already been learned through training is sufficient to allow participants to act to realize their goals. Type B Situations, however, require specific implementation intentions. Type C Situations cannot be mastered directly following the end of training, for quite a long time is required before the automation of new action intentions has advanced enough for the unexpected occurrence of a particular situation to work as a trigger for the desired action. However, ZRM Training participants receive an introduction to dealing with these situations.

For Type B Situations, implementation intentions are recorded in a very precise form in writing, as recommended as in many cases advantageous by RENNER & SCHWARZER (2000, p. 43). Training participants consider carefully what context conditions they will face if they wish to implement their goals in a difficult, but foreseeable situation. After considering the situation, they plan how they will utilize their resources and take measures. For instance, the participant who wants to work with the symbol of the rose decides to place a rose on her desk the next time that she is to make a presentation and wants to be competent, charming, and self-confident. A teacher who prefers to work with bodily resources sets up a "resource station" in a corner of his classroom behind a large map. He can withdraw there briefly to perform his exercises. A student who wants to remain calm and composed when taking an examination decides to wear a green sweater to the test, as it is her "resource color." A creative-thinking participant, whose goal is to live out the last two years before retiring from a stressful company team situation in such a way that preserves his joy in life, utilizes his picture from the "mental journey" exercise. The picture shows him sailing into a Portuguese harbor; he will have it with him at the next team meeting and imagine that he and all of his co-workers are sitting together in a harbor pub in Portugal.

Type C Situations are also discussed with ZRM Training participants. This is important mainly in consideration of maintaining self-efficacy beliefs and in view of possible failure and to facilitate "recovery self-efficacy" (MARLATT et al., 1995). As KANFER ET AL. (1990) state, not even the best preparation for a stressful situation can ever anticipate *all* of its unpredictability; a complex situation can develop into something quite other than predicted (KANFER ET AL. 1990, p. 435). Although unexpected situations per definition cannot be foreseen, some degree of preparation

can be taken in the pre-actional phase. ZRM Training helps prepare participants guided by behavior therapy procedures as recommended by MEICHENBAUM'S (1979) Stress Inoculation Training, which has been found to be particularly effective for people who are subject to multiple strains and stresses in their daily lives (NOVACO, 2000, p. 330).

In the instruction phase, Meichenbaum's stress inoculation training refers mainly to the stress theory by SCHACHTER AND SINGER (1962). Other, similar training programs are based on the stress theory by LAZARUS (1966). In ZRM Training, we use our own theoretical developments to prepare participants for Type 2 Situations. While guided by current theoretical considerations, our materials focus on the utilization of resources. Figure 8 shows a graphical representation that is used in ZRM Training seminars to explain preparation for a stressful situation.
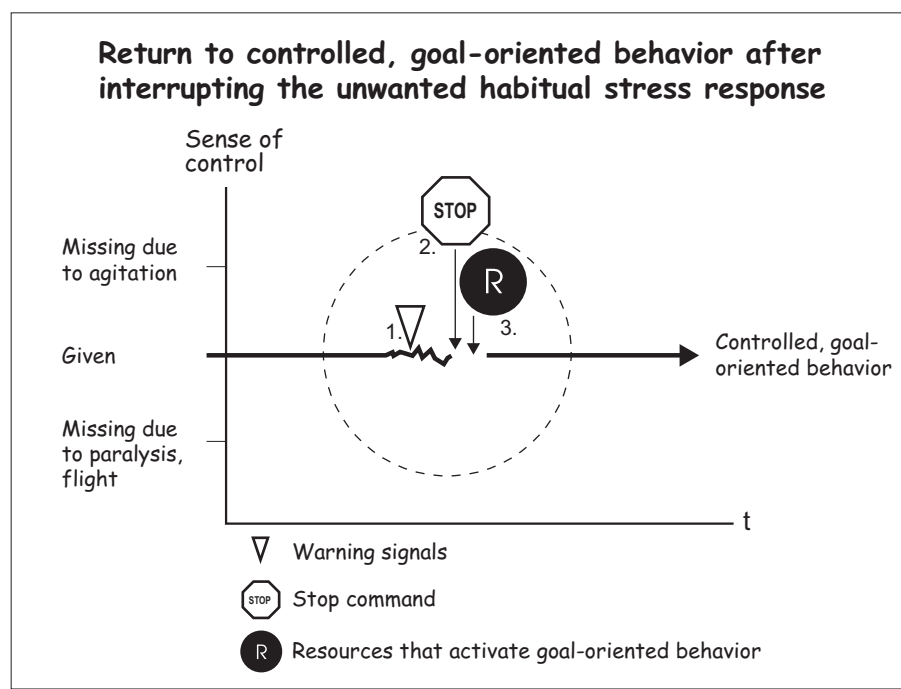

Return to controlled, goal-oriented behavior after interrupting the unwanted habitual stress response

Sense of control

Missing due to agitation

Given

Missing due to paralysis, flight

STOP

R

Controlled, goal-oriented behavior

t

▽ Warning signals

ⓢⓣⓞⓟ Stop command

Ⓡ Resources that activate goal-oriented behavior

Fig. 8: How to use resources.

The participants learn to identify the warning signals – internal and external – of Type C Situations, choose appropriate internal "stop" commands, and plan ways to activate the adaptive neural network where the opportunity exists. Participants work on this planning individually, in small groups, and in the larger training group, so that by the end of this phase, each participant possesses a reliable reservoir of ideas for dealing with Type B and C Situations.

The Resource Pool

At the end of Phase 4, each participant expands his/her resource pool. At this point in time, the resource pool contains:

• personal goal, formulated to promote effective action
• personally meaningful reminders and triggers
• personally important body resources facilitating goal achievement
• warning signals for the activation of the maladaptive neural network
• effective "stop" commands to interrupt undesired activation of maladaptive neural network

Phase 5: Integration and Transfer

The measures taken in Phase 5 of ZRM Training have to do with the realm of social resources. In the literature, "social resources" is a collective term that is used by different scientific disciplines according to partly different definitions (for detailed overviews of the history of the concept, see LAIREITER, 1993; RÖHRLE, 1994 and BACHMANN, 1998). One essential point that differs in the various conceptions is the issue of where social resources are to be located. Some approaches see social resources as *resources in a person's environment*. They focus on the existence, availability, and efficiency of social networks and social support. Other approaches view social resources ultimately as a characteristic of the *person*. These approaches focus on the capacity of the individual to build up social resources, recognize them as such, and use them when available; they also emphasize that merely knowing about social resources and their emotional, and not necessarily actual, availability can have decisive health-promoting effects. Also belonging to these approaches focusing on the personal aspects of social resources are approaches that point out the identity-creating aspects of social reflection processes. This aspect is well-known mainly from work within the tradition of symbolic inter-actionism (for example, MEAD, 1934). A third position, which is also a guiding approach for the theoretical considerations of the Zurich Resource Model, starts out from the assumption that in addition to environment aspects and personal aspects, the *transactional* instance between these two aspects is also essential. Resources in the environment and individual resources must enter into mutual interaction in order to be effective. As put by HORNUNG AND GUTSCHER (1994), the individual's action resources are prerequisite for optimal accessing of environmental resources (HORNUNG UND GUTSCHER, 1994). This exchange between individual and environment forms the basis of mutual transactions. In ZRM Training, we attempt in Phase 5 to stimulate the emergence of both the personal features and environmental features of social resources and to plan, already during training, for exchange between them.

It would be illusionary to expect that the period during which the social system of the training participants becomes familiar with the person's new behavior patterns is always a smooth one. The trainees' newly developed patterns of behavior do not always brings advantages for the

social interaction partners; frequently, the new behaviors cause them more discomfort than comfort. Although the training participants consider the probable reactions of their social systems to their new behaviors during training when formulating their goals, people's actual reactions often raise wholly new aspects that require adaptation and balancing of the goal as developed in training. How can we support training participants as they test their new neural networks out there in the raw winds of everyday life? How can we help them with appropriate evaluation and balancing of the new patterns in consideration of social responses? ZRM Training addresses these issues using two measures: one directed to the level of the identity of the participant, and one at the level of the social network and social support (environmental aspect), including attention to the corresponding transactions.

The Identity Aspect

The concept of *self* as used in the Zurich Resource Model refers mainly to a person's inner life. It comprises both conscious and unconscious parts. This concept is appropriate for Phases 1 to 4 of ZRM Training. For work on areas that have to do with social interaction, as is the content of Phase 5, we find it more useful to use the term *identity*. Identity was introduced in this sense by ERIKSON (1973), who selected the term and developed theoretical considerations to express the socially transmitted aspect of the psyche. Whereas Erikson assumed that that identity is formed during adolescence and retained until life's end, there is today general agreement that the forming of identity is a process that must be produced actively in continual balance with the environment throughout one's entire life (STORCH, 1994; KRAPPMANN, 1997; KEUPP, 1999; FEND 2001). BARKHAUS (1999) provides an excellent overview of the history of the concept of identity, and STORCH (1999; STORCH & RIEDENER, 2004) discusses recent approaches.

In an identity theory perspective, the goal that participants have developed is a new part of their identities. For example, a person who has previously always seen himself as a "helpful" person may decide to take up a new facet in his view of himself, namely, self-boundaries. In order to maintain mental health, it is important that the new part-identity can be integrated into the person's existing ideas about self in a coherent way. "Narration" approaches offer a very use view of how individuals can bring coherency to their inner diversity (MCADAMS, 1997, KEUPP, 1999). According to narrative approaches, inner coherency can be produced by the individual himself by developing an appropriate history, or narrative. In our example of the helpful person, his possible narrative could look as follows: "I was the eldest of five brothers and sisters and was always responsible for others. That is why I developed an above-average sense of responsibility, and I was always thinking, I just can't leave the others to fend for themselves. But I got so burned out over time that I just couldn't do it anymore. Now I have to learn to take better care of myself, because if I get sick, I won't be of any use to anybody anyway."

Narratives are experienced as fitting or not according to the individual's *sense of identity*. Following Kreupp, identity is a project that has as its goal the creation of an individually desirable or necessary sense of identity (KEUPP, 1997, p. 34). BLASI (1988, 1991) also empha-sizes the emotional components of successful identity (6). For these reasons, ZRM Training introduces a narration process in Phase 5. Participants are asked to reflect upon and discuss their personal processes during the course of the training seminar – from the very first visual material that they selected, to their goal, to their resource pool. At the end of the reflection period, participants are asked to paint a picture that integrates all of these things. Thus, narration work is stimulated in two ways, at a more verbal-analytic level and at the integrative-creative level.

The Environment Aspect

When social resources are viewed under the aspect of environmental resources, it refers to the availability of people with whom social exchange processes are at all possible. Here we can distinguish two components: the *structural* and the *functional*. The structural level is discussed in the literature mainly in connection with the topic of social networks, with the research inves-tigating what social networks are available to individuals, how many people these networks contain, the density of the interconnections within the network, or what the relationships are from a sociometric perspective. The functional component is the subject of interest in the research on social support. Here the analyses focus on emotional exchange among members of a social network, the atmosphere of the network, and individuals' satisfaction with their social support from the network. The particulars of the exact interacting causes and effects continue to be discussed, but a central finding of health psychology is that social resources, under both structural and functional aspects, are a significant factor in mental health (BACHMANN, 1998, p. 30 ff).

Structurally, at the end of the training seminar the participants do not yet have a network of people with whom they can exchange their experiences with their new behavior patterns. Our conversations with people who completed the seminar and during seminar follow-up sessions revealed that training participants have a great need for this exchange. They take meaningful steps during ZRM Training toward personal development, for the consolidation of which they need social mirroring processes. And that is not all: they also learn a lot of theory during the course of the training seminar that they need to process. Their conversation partners in their regular social networks usually lack this knowledge base and cannot offer the same support as fellow training participants can. This is a problem that many therapists are familiar with. People who have experienced a significant development process of a psychological nature under professional direction have had the experience that even very well-meaning people whom they are close to are able to follow their reports on the happenings in psychotherapy or a seminar only with difficulty. Problems already begin with understanding the technical terms that are

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explained thoroughly in the professional setting, but may not be so easy for people themselves to explain to others. From the research in adult education, we know that social support from fellow participants, or peers, can significantly improve the translation of what has been learned in a seminar to everyday life (SCHMIDT, 2001).

In a *functional* view as well, persons who have taken a ZRM Training seminar together are highly competent at assuring that the quality of social support in a network is very high. During training, they have developed a constructive, resource-oriented, and respectful culture of communication. They have learned to choose their words with care and have also learned to recognize reliably the effects of what they say on the other person by means of somatic markers. For these reasons, there are optimal conditions for exchange in networks of fellow training participants, also without the presence of coaches, and they achieve good results. The coaches welcome this effect and also refer to it several times during the training seminar. Helping others to help themselves, as foreseen by the Zurich Resource Model, is not limited to individuals, not even during training itself. The communication culture that is transmitted to the participants also creates the opportunity for them to continue onwards in the context of intervision groups working self-responsibly after completing the training seminar. This is a social resource that should be utilized.

The Resource Pool
At the end of Phase 5, the participants expand their list of resources to include social resources. At the end of training, the resource pool contains:
• personal goal, formulated to promote effective action
• personally meaningful reminders and triggers
• personally important body resources facilitating goal achievement
• warning signals for the activation of the maladaptive neural network
• effective "stop" commands to interrupt undesired activation of maladaptive neural network
• their most important social resources

Conclusions
At the end of the first contribution (STORCH, 2002; 2004), we refer to the fact that psychology has not only natural science aspects, but arts and humanities aspects as well. I would like to return to this topic here, at the end of part two, on practical application, of this contribution. Especially when the natural sciences provide a great deal of knowledge on how people can be supported effectively and systematically to place their goals, actions, and ultimately elements of their personality in the service of their psychobiological well-being, it is the task of psychotherapy to reflect on its roots in philosophy and the humanities. For even the best knowledge of synaptic plasticity will give birth to horrors, if the meaning of human life is

measured in the number of adaptive neural networks that can be formed in the brain. In human life there is also suffering, darkness, difficulty, and the incomprehensible – these all have a place and must continue so. Many of the greatest works of art known to humanity did not emerge from exuberant feelings of happiness, but from states of the soul that for neuro-biology would perhaps fall under the category of "maladaptive neural networks."

Particularly when psychotherapy is in a better position to produce happiness, it is important to ask ever more carefully what happiness really is. And it is better, if it comes to the conclusion that there is no formula for happiness. In many cases of human misfortune that confront psychotherapists in their professional work, helping consists in simply providing accompani-ment to and helping people to bear cruel strokes of fate and private tragedies that they have experienced. In existential situations such as those, tackling clients prematurely with adaptive neural networks would be a loss of respect for the unpredictability of life and a fall into scientific megalomania. In the interest of holding onto and strengthening our roots in the humanities, I would like to recommend two works. The first book is by the Freiburger philosophy professor Ludger Lütkehaus and carries the striking title *Nichts* (LÜTKEHAUS, 1999). The second book is *Verdammt zum Glück* by PASCAL BRUCKNER (2002), and it described happiness as the curse of modernity that actually brings people to real unhappiness. I believe that reading these two works will give psychotherapists a good, humanistic cushion of reservation that will allow them to deal responsibly with the blessings of neurobiology.

Notes:

(1) Somatic markers are signals from emotional experience memory, or biological assessment system, and they are perceptible as bodily sensation and/or emotions. The concept of somatic markers was devel-oped by neuroscientist ANTONIO DAMASIO and introduced to a wider public in his book *Descartes' Error*, published in 1994. Somatic markers are explained in detail in part one (STORCH, 2002; 2004) of the present contribution. Recently, the present author has also published a popular scientific book on the subject, providing a comprehensible account for clients and patients: STORCH, M. (2003b). *Das Geheimnis kluger Entscheidungen Somatische Marker und Bauchgefühl.* [The Secret of Smart Decisions. Somatic Markers and Gut-Feelings]. Zürich: Pendo.

(2) In their textbook on solution-oriented short-term therapies following STEVE DE SHAZER, WALTER & PELLER (1994) recommend that goals be formulated as specifically as possible (p. 77). KANFER, REINECKER AND SCHMELZER (1990), in their self-management therapy, have this to say: "Many goals are formulated as exceedingly vague and global declarations of intention (like "get healthy," "find satisfaction," "follow good environmental policy," etc.). An important step on the way towards effective implementation of these global goals in real action, therefore, is breaking down these vague intentions into a number of specific behaviors" (p. 461, freely translated here). In ZRM Training, this breaking-down of goals does *not* take place.

(3) The difference between the explicit (conscious) and implicit (unconscious) functioning mode was presented in detail in part one (STORCH, 2002; 2004) of the present contribution. The explicit mode and implicit mode are grounded in different anatomical brain structures. The explicit mode works slowly and is susceptible to disturbances, but it works with precision; the implicit mode works quickly and reliably, but diffusely. The brain switches over to implicit processing to steer behavior particularly in pressure situations, but it often activates maladaptive neural networks, if they are firmly established and have become automatic. Psychotherapy regularly works with people who suffer detriments to psychological well-being due undesired, automatic activation of maladaptive neural networks.

(4) A significant prerequisite making it possible for clients to access the implicit mode with their goal, which has been produced according to the rules of the Zurich Resource Model, lies in the fact that the goal was formulated in Phase 2 as a general attitude-goal. Generally formulated attitude-goals are typically stored in the implicit mode. GRAWE (2004) writes that the greatest part of mental processes is determined by transcendent identity goals in the sense of automatic perception, information processing, and action regulation (p. 62). Grawe bases this statement on action control theories by POWERS (1973) and CARVER AND SCHEIER (1981) and makes a plea for more consideration of this type of goal in psychotherapeutic procedures (GRAWE, 2004, p. 158f). KUHL (2001, p. 150f) also see implicit regulation of general goals as the decisive factor in successful self-regulation.

(5) Readers are referred to the discussion of synaptic plasticity in part one (STORCH, 2002: 2004) of the present contribution. This is the ability of the brain to change its own structure, which is dependent on use: neuronal pathways that are used frequently increase in processing efficiency.

(6) Here there are, of course, interesting parallels to the theory of somatic markers. It would be worthwhile to conduct scientific studies to investigate relations between identity theory considerations, which emphasize the emotional components of identity, and neuroscientific theories.

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