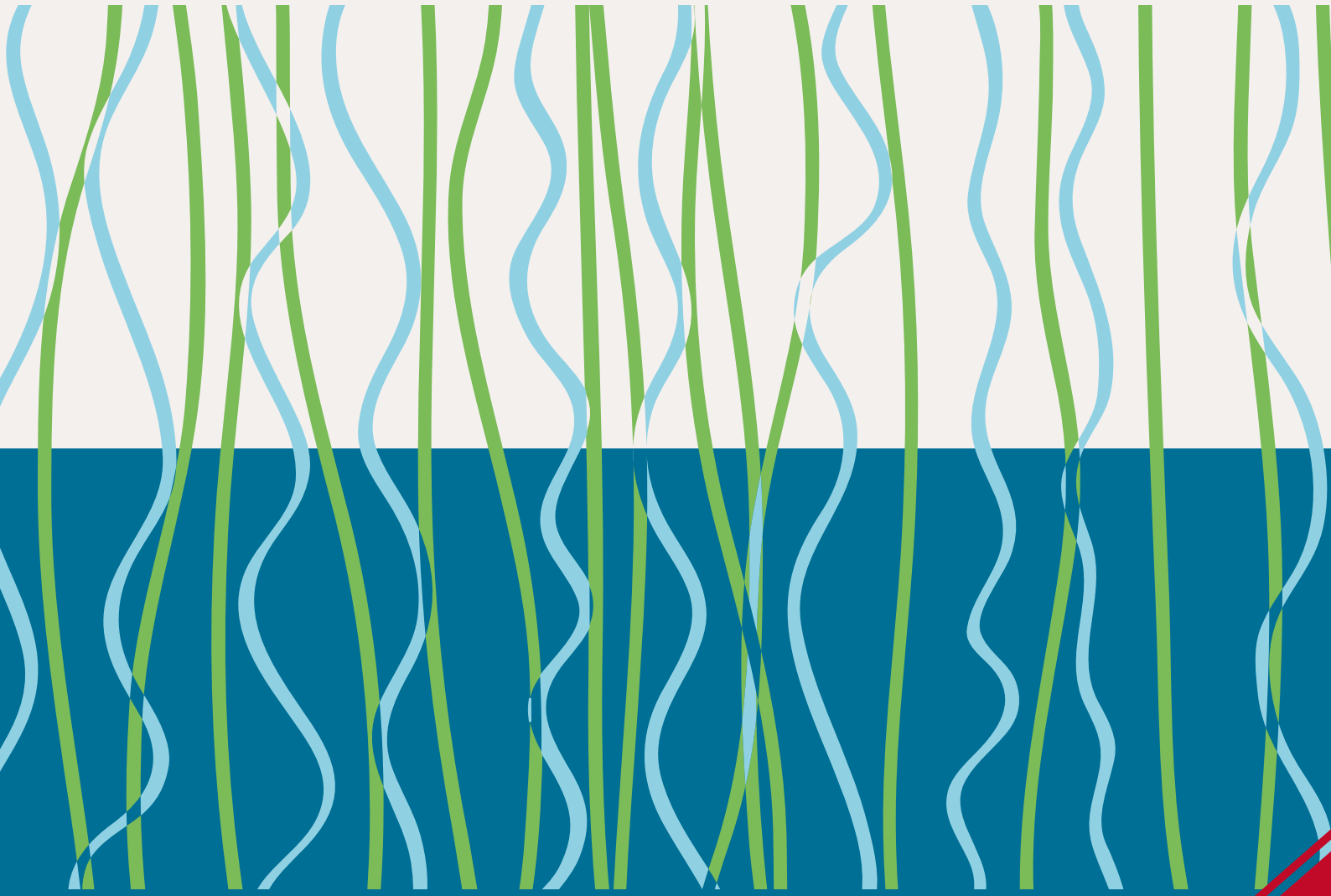
Somatopsychic

Health for body and soul

Professional grounding and practical guidance from the perspective of control psychology



Wilfried Echterhoff

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Innovation for healthcare

Somatopsychic : Health for body and soul

Professional grounding and practical guidance from the perspective of control psychology

by

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Foreword

When I started investigating experiences of extrem situations in road traffic in the 1970s, and as people who were affected wanted to be treated by me, I felt a bit abandoned by the psychotherapeutic and medical specialities. A lot of knowledge and experience from psychology and other areas of the human sciences had not found its way into the world of psychotherapy. I found the separation between body and soul, which is common in the health system, particularly disadvantageous and professionally wrong. As I work in the field of research and teaching, with increasing demand for therapy, I felt the need to improve the professional situation of psychotherapy, including the somatically-oriented components, and tried to optimise details. Gradually, however, I stopped multiplying piecemeal improvements and tried to build an improved, self-contained professional system. Parallel to my own ideas, the professional development of psychotherapy as a whole took a remarkably positive course. My wishes for improvement and the professional progress initially led to internal recommendations for my own work.
Overall, I had the impression that the interaction of body and soul actually works like two people living together in a life partnership: One supports or hinders the other, occasionally a single partner takes the lead - but there are always connected through common but also separate targets. These targets can be constructive, but also destructive.

Ultimately, a somatopsychic concept for psychotherapy emerged from the considerations made.

Body and soul are a natural unity. The term “somatopsychic” is intended to make clear that the psyche with its involuntary, unconscious and conscious functions controls the whole human being. In some disciplines, this unity is hardly ever questioned without elaborating this view in professional detail. However, health care in Germany and also in other westernised countries makes a clear distinction between body and soul. For both areas, which are at the same time economic markets, there are responsible institutions and responsible practitioners: physicians for the body and psychologists for the soul. Time and again there are professional attempts to link the two worlds. These attempts are unsuccessful because there is nothing to link correlatively due to the unity of body and soul.
In the present treatise, those interested in the subject will find lasting suggestions, but not a mainstream presentation. It addresses curious and dissatisfied professional laypersons as well as developers, scientists and researchers who do not want to completely resign themselves to the evolved models, constructs and methods in the field of healing, especially psychotherapy. It is also addressed to psychotherapists and medical practitioners who would like systematic suggestions for professional improvements for their practical work.
Soma and psyche fundamentally work together. The subsidiarity approach in the present text offers a new conceptual orientation for this. If one considers psyche and soma as a unity (entity), the different scientific disciplines, especially those of psychology and medicine, with their respective methods and procedures, enable a respective and partial access to this entity. This treatise reorganises the relevant professional knowledge from psychology and partly from medicine. A system of therapeutic targets is developed so that therapeutic work does not only have to be oriented towards combating symptoms or disorders.

Combating illnesses has its purpose, but the promotion of self-healing powers through targeted health-promoting impulses should have priority in the prevention and treatment of diseases.
In the health sector, there must be a shift in research and development work from the interest-driven focus that has dominated up to now to a knowledge-driven focus. It must not be the case that research funding leads to accepting a foreseeable scandal because scientific principles have not been observed and thus claims about successes can no longer be upheld at some point.
Some previous separative ways of thinking about soma and psyche have developed historically without being challenged in whole or in part, and some practical limitations also result from compromise consensus in the highly regulated health care system of some states. The health system is dependent on the results from basic subjects, e.g. from chemistry (especially pharmacy), from biology (especially that of human functions), from physics (especially the technical developments based on it) and from psychology (especially the mental control processes). The health care system could work more effectively and efficiently from a medical, social, economical and operational point of view if it were to better integrate the professional yields from biology and psychology into its conceptual work and everyday application. The field of medicine should by no means abandon technical and chemical/pharmaceutical methods and procedures, but should continue to develop them with the help of certain ways of thinking that take into account a unity of psyche and soma.
This text continues the interaction between empirical or experimental research and construct or model building in a cooperative way. The professional world of science and the world of the health care market must not drift further apart. The scientifically trained reader is recommended to start reading the book with chapter A1 (Basics) in the appendix.

Wilfried Echterhoff

Summary

Somatopsychic is described as a system of the unity of body and soul and explained above all in its consequences for therapeutic work. The procedure of somatopsychic therapy is explained conceptually and by means of examples: diagnostics, definition of therapy targets, use of somatopsychic processes, of salutogenic (health-value) targets and also of cognitive-emotional modulations (especially cognitive biases). In this way, the principles of referential psychology and Referential Therapy are described.

The unity of soma and psyche is assumed as a professional basis in this text. Soma and psyche interact in somatopsychic processes. In order to enable a systematic approach to this unity, axioms and premises for experiencing, acting and for somatopsychic processes are defined. Three referential domains are distinguished: self-reference, social references, biological-technical references to the environment. The exchange between internality and externality takes place through accommodation and assimilation with autochthonous (independent) and allochthonous (external) influences.

Behavioural change on the basis of accommodation and assimilation is shown in learning psychology in formal and informal experience formation. Assimilation and accommodation are subject, among other things, to the influence of cognitive-emotional modulations, which consist primarily of selective perception, misinterpretations, errors and routines that do not always fit. Individual psychological or somatic symptoms of a disease do not generate one another, neither partially nor as a whole, but show an overall picture. Therefore, body therapy or body psychotherapy plays a fundamentally important role in the concept of Somatopsychic. The interplay of biochemical, electrochemical substances and of processes with experience and action reveals the structure, the systematics and the targets within the Somatopsychic of individuals. Common targets run through soma and psyche.

There is a supportive interaction (mutual subsidiarity) between soma and psyche, which is controlled by definable somatopsychic targets. These targets can be assigned neither to the salutogenic (health-value) nor to the pathogenic (disease-value) area. Within the concept of Referential Therapy, psychotrauma is described phenomenologically and therapeutically as the prototype of a somatopsychic disorder.

Eight components of somatopsychic health are defined: Being able to feel appetence within oneself, being able to experience dynamics, being able to experience calm and balance, being able to recognise internality in oneself, being able to practise understanding experience, being able to experience wish fulfilment, being able to live systematically, and being able to experience lightness and transparency within oneself. For the state of somatopsychic health, all eight components must be present to a certain degree.

The state of somatopsychic illness can contain the following eight components (or a subset of them): Constantly having to practice avoidance against one's own targets, constantly having to stay in disorganisation, having to practice combative defence as a precautionary principle, having to cover up one's own internality, constantly having to face imminent annihilation, having to force external events, having to practice dynamic unrelatedness, constantly having to be under emotional burden and in emotional darkness.

The components of somatopsychic health and illness are understood as targets of somatopsychic life. In the treatment of diseases, the pathogenic targets are to be weakened and best replaced by salutogenic targets.

Furthermore, principles of somatopsychic evaluation and diagnostics are described, including the dual orientation of somatopsychic diagnostics.

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Psychotrauma (ICD 10 to ICD 11)

Psychotrauma basically results from a sudden loss of control with an emotional plunge into helplessness. The extent of the damage (e.g. horror) is less important.
Outcome: Post-traumatic stress disorder (PTSD, F43.1 according to ICD 10, now 6B40 according to ICD11) After PTSD, further changes in experience and action can develop as disorders: e.g. adjustment disorders (F43.2 according to ICD 10), which are coded now as 6B43 in ICD 11.

PTSD may be followed by a personality change after extreme stress (F62.0 according to ICD 10), which may be permanent, now coded in ICD11 as Complex Posttraumatic Stress Disorder (CPTSD, 6B41 according to ICD11).

(The prolonged grief disorder is coded in ICD 11 with 6B42).

1 Behavioural change as a central somatopsychic process

1.1 Behavioural change as experiential education

Experiential education happens in dealing with the physical and social environment and with oneself. It is realised in different processes, e.g. in the acquisition of possibilities for action, but also of limitations to action, in getting involved with certain situations and people, in the development of habits, in trying out possibilities and actions, in participating and in everyday actions, in wanting to understand and understanding contexts, in empathising and comprehending, in accepting and familiarising, in suffering, but also in rejection and resistance.

Behaviour is formed, consolidated or changed by dealing with external and internal events. This means education through experience. Apart from autochthonous maturation processes, experience is often valued as an individually valuable accumulation of internally formed external circumstances, such as a "successful harvest" from a previous life. Up to now, experience has been an iridescent term, referring to perception, personal values, competence, individual empiricism or even the consequences of fate. Echterhoff (1992) developed a systematic analysis and a new interpretation of the term experience, so that "experience" is now available as a professional construct for the description and understanding of behavioural changes.

Experience can denote two states of affairs (Echterhoff, 1992, p. 89):
1. the process of experiencing, which in this work will be called experiential education, and
2. the result of experience.

The concept targeted at in this thesis understands experiential education as the somatopsychic-confrontation of an individual with the realities of their world and with themselves (see also chapter A1). Experiential education is defined as follows:
Experience formation is the reception, processing and linking of perceptual content as well as influences and arises in the context of motivational conditions (emotions, intentions) including associated somatopsychic learning processes. According to the approach of this text, experience formation takes place within behavioural domains and references, called referential domains.
In somatopsychic therapy, the focus is on targeted changes in behaviour (i.e. experience and action) in order to achieve changes in somatopsychic processes at the same time. Somatopsychic therapy is primarily applied learning psychology.

The behaviour (experience and action) of an individual takes place in the following referential domains:
Referential domain 1 (Autopoietic and self-referential functions of internality): Knowing and understanding oneself with one's own cognitions, motivations, emotions as well as one's own physical, chemical and biological matter and associated functions.
An individual can thus make himself an externality: When the individual interacts with themselves in one aspect, they are in this respect themselves an externality in referential domain 3 (e.g. in personal hygiene, in using the body as a tool or in medical self-care after somatic injuries).
The measures for body therapy and body psychotherapy are located in referential domain 1 (see also section 6.4).

Referential domain 2 (Empathic and social references to externality): Knowing and understanding other people with basically the same somatopsychic conditions as the individual, the working world, social as well as legal regulations, and material values such as money.

Referential domain 3 (references to nature and the structural-technical environment as externality): Know and understand the biological environment of the living matter of animals and plants as well as the physical, chemical environment (including the structural-technical environment) consisting of the dead matter.

Transcendental and religious behaviour can be assigned to referential domains according to religion or worldview (e.g.):
Dealing with death can belong to referential domain 1 for some people. Moral behaviour of an individual within a faith community can be attributed to referential domain 2. Behaviour based on, for example, pantheism belongs mainly to referential domain 3.

Within these referential domains, experience formation leads to changed ways of experiencing and to new readiness to act and can remain closed to the conscious access of the person concerned (see also “tacit knowlegde” according to Wagner and Sternberg, 1985).

The formation of experience can lead to both health-promoting and disease-promoting outcomes. In the case of health-promoting outcomes or results, it is necessary that stabilisation is achieved by embedding and reinforcing the results, e.g. through repetition.

1.2 Formal and informal experiential education

Formal experiential education (intentional, targeted, systematic and controlled) should lead to an objective result that is compared with the intended target. This contrasts with informal experiential learning (coincidental, accidental, incidental), for which there was no planned systematic procedure. Informal experience - from the point of view of the individual concerned - manifests itself in the certainty of the first sight, combined with individual interpretation, or also in the experience of being familiar with certain circumstances. Informal experiential education takes place continuously in everyday life. Formal experiential education, on the other hand, requires a structural framework with prospective targets and methods designed to achieve them. Experiential education presupposes the changeability of the individual concerned, if not in terms of subject matter, then at least in the intensity of willingness to act. Experiential education can extend over the entire period of life. It is easily measurable when the changes are large and the time span is small. Informal experiential education in particular, unlike formal experiential education, can be more spread out in time, such as in the form of everyday socialisation. The internal conditions that appear most important for informal experiential education can be briefly described as follows (Echterhoff, 1992, p. 115):

> Certainty has priority over objectifiable knowledge (primacy of certainty),
> The exemplary has priority over the general (primacy of the exemplary),
> Inappropriate information can be changed or even hidden (primacy of coherence), Events require explanation and are thus placed in a context. The search for connections takes

precedence over the acceptance of a lack of relationship. Missing information can be replaced by assessment (primacy of context). The experience and action associated with this is called explanatory behaviour.

Control behaviour includes the need to understand ("How is this all connected?"), interpret ("Where will this lead us?") and evaluate ("That was pretty useful.") experienced connections (contingencies). Causally definable connections may be the main part of the explanatory experience, but interpretations, evaluations and coincidences can also be the expression of an experienced rule or a supposed law. The explanatory need may help to interact with or understand the three referential domains, and it may facilitate living coherently within these referential worlds. The explanatory behaviour goes back to contingencies that have already been experienced (e.g. connections experienced as causal) and is also directed towards the future by expecting certain contingencies (e.g. "Then these flowers will bloom again.").

The selected internal conditions can realise experiential education in different ways: For example, the level of emotional involvement of an individual during experience formation can shape the internal conditions to different degrees.

Concepts of the regulation of behaviour, especially that of action, can be found in Volpert (1971, 1974), Hacker (2006) and Heckhausen and Gollwitzer (1987), among others. The regulation of behaviour includes somatopsychic processes, e.g. cardiovascular processes, endocrinological processes, neuronal processes, muscular changes, adjustments of skin temperature.

Experience formation can be described as a regulation process as follows (see also Figure 1): In the beginning, an initial motive exists in an environment with which the initial behaviour has to deal with its observable actions.

In the course of the behavioural stream, external and internal conditions can change in such a way that this can have repercussions on the execution of the action or on the choice of the action target. For example, obstacles can occur or new and better possibilities can emerge, but also autochthonous processes or further considerations or momentary impressions can influence the course of action.

The course of action and the result of action can be measured in particular against the set target or evaluated on the basis of other criteria. This can lead to a confirmation or also a rearrangement of values.

The regulation process that takes place in this way leads to a new situation in which a new initial motive is given, new initial actions begin and in which a new initial environment - possibly as a result of the previous action - is to be found.

The regulation process of experience formation applies to both intentional and incidential behaviour. Incidental behaviour can result, among other things, from opportunities that one can currently use. Incidental behaviour includes, among other things, the use of so-called take-away opportunities ("If this thing also presents itself, I can also use it."), in that an already existing, latent motive also comes to the fore.

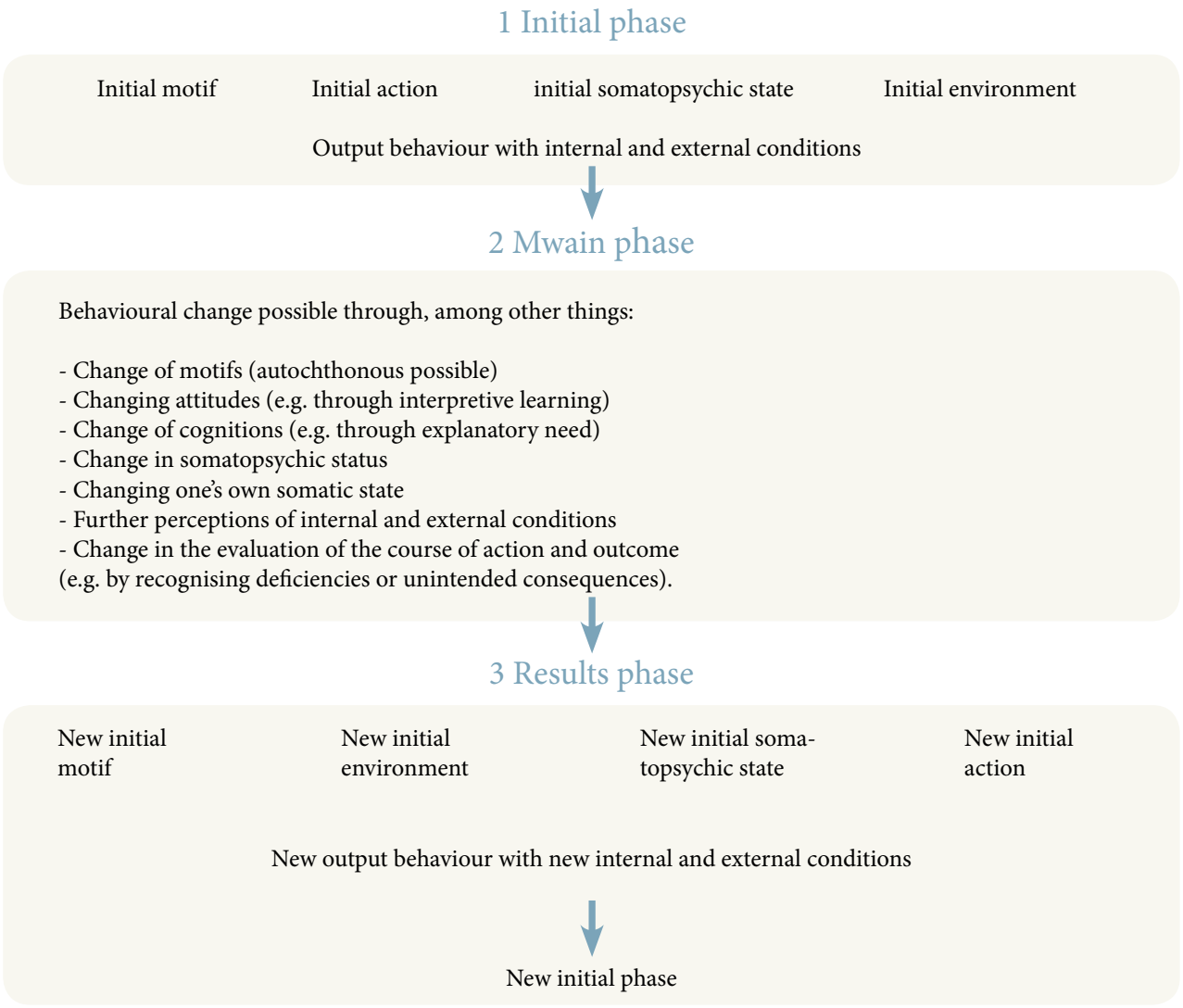

Fig. 1: Experience formation as a regulatory process

The formation of experience does not need to become recognisable after passing through a single regulation process, because the effects often remain too fleeting. The relative stability of the characteristics of the person and the environment will most likely trigger a further, similar regulation process, so that through the succession of several thematically and formally related regulation processes, a recognisable formation of experience can occur.

This regulation model offers the possibility to show in principle at which point specific influence can be exerted on the process of experience formation. The experience of control and the experience of self-efficacy are central targets in the formation of an individual's experience (see also Heckhausen and Heckhausen, 2010, p. 2). Even children show in their games and activities that they want to experience control and self-efficacy through trial and error and repetition.

1.3 Experience and action in external and internal references: The concept of referential psychology

The concept of referential psychology specifies three areas in which individuals can experience control and self-efficacy. Such experiential formation is naturally somatopsychic. Examples of this are: A positive experience can strengthen motivations and influence certain bodily processes, such as nutritional and digestive processes; an unsuccessful physical work activity can cause disinterest and make further movement processes during the work activity more difficult.

The experience of one's own effectiveness, the conviction of control, the illusion of control (Langer 1975, 1983) are described by Flammer (1990) as a central function of the experience and action of individuals. The special importance of the competence belief (related to oneself) based on this for the performance of individuals is clarified by Heinecke (2009).

Bandura emphasises the corresponding importance earlier:
"The research completed thus far has tested the predictive power of the conceptual scheme for efficacy expectations developed through enactive, vicarious, and emotive-based procedures. The theory states that psychological procedures, whatever their form, alter the level and strength of self-efficacy" (Bandura, 1977, p. 191).

The following overview shows different types of control or control beliefs (Figure 2).

Primary form of control	Meaning
Direct control	Own behaviour successfully leads to the target
Reactance	Increased effort is invested, defiant behaviour
Indirect control	Active use of help from third parties
Secondary form of control	**Meaning**
Predictive control	Avoiding disappointment through adapted prediction ("This will only succeed insufficiently anyway").
Illusory control	Belief that you can influence just about anything, including luck or fate
Surrendered (vicarious) control	Identification with actual control holders ("Let others do it")
Interpretative control	Re-interpretation of one's own demands ("This is/was not so important anyway")

Fig. 2: Overview of forms of control or control beliefs

The overview in figure 2 illustrates the importance of the behaviours contained therein and at the same time shows the relevance for therapeutic work in the column “significance”. The most important form of control in therapy isdirect control. If direct control regularly leads to the desired successes, there is confidence in the success of one’s own behaviour. This confidence can have a lasting positive effect on an individual’s attitude towards his or her own life, so that illusory control can occur in the form of so-called “rose-coloured glasses” or as a stable expectation of the success of one’s own behaviour. However, such illusory control is only salutogenic if failures and associated disappointments can also be endured.

According to Flammer (1990, p. 78), personal control includes the following aspects:
- To know an action target (and adopt it as a personal target),
- to know a way to this target,
- to be able to go this way themselves (and know that too),
- and to actually go this way.

Individuals refer to the three referential domains mentioned above when developing or enhancing control and self-efficacy according to the approach of the present text.

Assimilation and accommodation take place in all three referential domains. Assimilation is the adaptation of the internal world to the external world and is understood in this text essentially as experiential education: e.g. learning to know, understand and explain, learning to interpret and acquiring transfer competences. Accommodation is understood in this text as adaptation of the external world to the internal world of an individual:
e.g. shaping and changing, optimising, sorting out, also destroying and creating something new.

Through the individual, processes of exchange and imprinting take place between the three referential domains mentioned above with the help of information (e.g. within perceptions), substances (e.g. nutrients) and forces (e.g. through movements of the individual within its environment). Each referential domain has its own structures and rules that affect the individual. Perception, learning and maturation of an individual, assimilation and accommodation between the individual and the environment, and the interaction of the individual with itself shape the life of an individual. However, one’s own body and cognitions can also be part of an individual’s external world, e.g. when it comes to observable maturation processes, experiential formation through training and learning, or even diseased somatopsychic areas that the individual wants to act upon. Within interactions, the individual’s experience of efficacy (Bandura, 1977) is of particular importance. The experience of efficacy also includes the satisfaction of the need for explanation by finding contingencies that seem right or correct (e.g. in causal attribution, in explanatory behaviour, in the formation of attitudes).

In this text, this concept is called referential psychology. The concept of Referential Therapy was developed on the professional basis of referential psychology (Echterhoff, 2003).

1.4 Experiential education and cognitive-emotional modulations

The formation of experience basically takes place as assimilation and accommodation or in the interplay of assimilation and accommodation. Influences on the formation of experience can take

place through, among others:

- Change in the environment of an individual, thus the external conditions,
- changing internal conditions such as influencing emotional strength (e.g. with the help of focusing exercises or imagination exercises or with the help of target setting processes),
- guidelines for explanatory behaviour (e.g. with the help of attribution training),
- reduction of dissonance with the help of cognitive restructuring, and
- experience of effectiveness (Flammer and Scheuber, 1995).

The most important conditions of informal experience formation have already been described in section 1.2. Assimilation and accommodation can be impaired, among other things, by cognitive-emotional modulations (especially by so-called cognitive biases), by cognitive deceptions (Hell, Fiedler and Gigerenzer, 1993) and by misinterpretations, errors and mistakes (Gigerenzer, 2007 and 2009; Dörner, 2003; Krämer and Trenkler, 1996).
The following overviews (see figures 3 to 5) describe a variety of cognitive-emotional modulations that can shape experiential education.

The formation of an individual's experience can run through cognitive-emotional modulations in such a way that the behaviour develops maladaptively as a result. Cognitive-emotional modulations are worked on therapeutically in rational-emotive therapy (RET) according to Ellis (1996, 1997) and in cognitive therapy according to Beck (1999), if necessary, in order to reduce disorders (see also de Jong-Meyer, 2009). For this purpose, the "bonadaptive" behaviour of Jong- Meyer (2009) should have been specifically defined; however, this is not done.
The multitude of modulations was reduced by Hilbert (2012) to eight "human decision making biases". These are:

- "(Regressive) conservatism" (falling back on the tried and tested),
- "the Bayesian likelihood bias" (not correctly estimating conditional probabilities),
- "illusory correlations",
- "biased self-other placement" (feeling better or worse about oneself than others),
- "subadditivity" (underestimation of an overall effect),
- "exaggerated expectation",
- "the confidence bias" (being overconfident or underconfident),
- "the hard-easy effect" (inaccurately assessing extremes).

This synthesis can help to understand and apply the principles of modulation and to find the appropriate modulation more easily in individual cases. Depending on the outcome of a modulation, salutogenic or pathogenic processes can be set in motion or salutogenic or pathogenic results can occur. Pathogenic processes in modulations do not initially produce somatopsychic disorders worthy of illness, but can be regarded as prodromal (beginning of a still concealed pathogenic process).

Cognitive-emotional modulations are part of general modulations taking place in the somatopsychic area. In the biomechanical field, there are modulations during physical work (e.g. variable effects on the body depending on the state of training while external conditions remain the same). In the sensory-physiological area, there are superpositions of evoked potentials with different external physical influences (e.g. when tickling sensitive skin areas). In this area, known modulations are e.g. the primacy of actuality (recency effect), being anchored, the familiarity effect (mere exposure effect), and the preference for consistency.

The positioning of the individual modulations within the illustration has no semantic or technical significance.

Modulations in referential domain 1 (autopoietic and self-referential functions)

Elimination of cognitive dissonance
An experienced cognitive dissonance creates a strong desire to resolve it. However, resolution can also consist of creating a new cognitive disonance or other factual inconsistency.
(Festinger, 1957; Tavris and Aronson, 2010)

Generalisation error
Knowledge about details is generalised even if this is inadmissible.
(Kahneman and Tversky, 1973; Bar-Hillel, 1980)

Distortion due to cognitive-emotional blind spot
To fail to compensate for the erroneous effect of one's own cognitive-emotional blind spot.
(Pronin, Lin and Ross, 2002)

Confirmation of own preconceived ideas
Tendency to find suitable information or interpretations to confirm one's own preconceived ideas.
(Snyder and Swann, 1978)

Error due to searching for agreement with own assumptions
Error due to seeking confirmation of own assumptions without including possible alternative assumptions.
(Baron, Beattie and Hershey, 1988)

Déformation professionnelle
The tendency to look at events and objects according to professional conventions without considering the wider context.
(Langerock, 1915)

Upgrading effect
The fact that often more is demanded for giving away an object than would be used to acquire it.
(Kahneman, Knetsch and Thaler, 1991)

Avoid extremes
Tendency to avoid extremes, especially when it is a preliminary choice.
(Nakamura, 1987)

Focal point effect
Prediction error where a single aspect is overemphasised about the further course of an event.
(Legrenzi, Girotto and Lohnson-Laird, 1993).

Preference for a quick benefit
The tendency to prefer a smaller, but quick benefit to a larger, but long-term benefit if the advantage can be expected in the short term.
(Ainslie and Haslam, 1992)

Illusion of control
To assume that one can even influence events, although they are in fact beyond the actor's control.
(Langer, 1975)

Overestimation of future emotional states
The tendency to overestimate expected emotional states in length and duration.
(Gilbert, Pinel, Wilson, Blumberg and Wheatly, 1998; Mellers and McGraw, 2001; Wilson and Gilbert, 2003).

Modulations in referential domain 1 (autopoietic and self-referential functions)

Error due to subsequent improvement of a decision
Evaluating one's own earlier decisions more positively than they actually were.
(Mather, Shafir and Johnson, 2000)

Excessive search for information
The desire to seek information even if further information cannot affect the coming action.
(Baron, Beattie and Hershey, 1988)

Bear and use moral witness about oneself
The tendency to prove that one has no prejudice in order to be able to place a strong prejudice afterwards.
(Monin and Miller, 2001)

Subsequent rational justification of irrational decisions
The tendency to justify irrational decisions with earlier rational decision-making behaviour, or the tendency to rationally justify decisions already made after the fact.
(Staw, 1976)

Need to end a stressful issue
The need to get a decision on an important matter, to finally get an answer and to escape the feeling of doubt and uncertainty. An unfavourable personal context (time or social pressure) is likely to promote this insufficient behaviour.
(Dijksterhuis, van Knippenberg, Kruglanski and Schaper, 1996).

Misestimation of time during planning
The tendency to underestimate the time required to complete a job.
(Buehler, Griffin and Ross, 1994)

Subsequent rationalisation of a purchase
The tendency to convince oneself of the correctness of a purchase through rational arguments.
(Walchli and Landman, 2003)

Status quo distortion
The tendency to keep things in order to maintain one's state.
(Samuelson and Zeckhauser, 1988; Kahneman, Knetsch and Thaler, 1991; Legrenzi, Girotto and Lohnson-Laird, 1993).

Cryptomnesia
Falsification of memory contents by confusing reality with imaginations.
(Marsh and Bower, 1993)

Misjudgement of an omission
The tendency to judge a damaging action as negative or reprehensible, even though failure to act or inaction would have had comparably bad consequences.
(Ritov and Baron, 1990)

Pseudo security error
The tendency in decision-making to overestimate possible risks in the case of expected positive effects and to underestimate possible risks in the case of expected negative effects.
(Tversky and Kahneman, 1981)

Ego-related falsification Memories
of one's own past are falsified in one's own favour, e.g. memories of one's own examination performance or other achievements.
(M. Ross and Sicoly, 1979; Zuckerman, 1983)

Modulations in referential domain 1 (autopoietic and self-referential functions)

Misorientation to the effect that has occurred
The tendency to measure a decision by the effect it has and not by the quality of the decision at the time it was made. (Baron and Hershey, 1988)

Reactance
The urge to do the opposite of what someone expects of you in order to counteract the supposed attempt that someone wants to restrict your freedom. (Brehm, 1966; Wright, Wadley, Danner and Phillips, 1992)

Alteration of memories by subsequent information
Memory performance can be distorted, reduced or enriched by subsequently received information. (Echterhoff, Hirst and Hussy, 2005; Echterhoff, Groll and Hirst, 2007, Flammer and Grob, 1994)

Preference for consistency
Distorted memory of past attitudes and behaviours in order to bring them into line with present attitudes and behaviours. (Markus, 1986; Goethals and Reckman, 1973)

Von Restorff effect
Preference for an impressive, perhaps also painful thing in later memory. (Gumenik and Levitt, 1968; Restorff, 1933)

Selective perception
Expectations impair/limit perception. (Frey, 1981; Frey, 1986; Swann, 1983)

Beneffectance
To see oneself as responsible for desirable rather than undesirable outcomes. (Greenwald, 1980)

Zero risk bias
Preferring a reduction of an already small risk to zero risk over a comparatively larger reduction of risk at a high risk level. (Nakayachi, 1998)

Suggestibility
When a questioner expresses ideas, they can be misattributed in the memory (also possible in the form of misattribution). (Polczyk and Pasek, 2006; Gudjonsson, 1990)

Fig. 3: Overview of modulations in referential domain 1 (autopoietic and self-referential functions)

The positioning of the individual modulations within the illustration has no semantic or technical significance.

Modulations in the referential domain 2 (Empathic and social references to externality)

Actor-observer bias
The fundamental attribution error includes overestimating the influence of one's own situation (compared to one's own personality) on one's own behaviour.
(Jones and Nisbett, 1971)

Dunning-Kruger effect
When people are incapable of adopting appropriate strategies to achieve success and satisfaction, they carry a double burden: not only do they arrive at wrong conclusions as well as choices, but they don't even realise that they are behaving wrongly. On the contrary, they have to stick to their impression that they are doing everything right. (Kruger and Dunning, 1999)

Ego-related distortion
People tend to claim a larger share of the results in a joint activity than would be assessed by an outside observer.
(Ross and Sicoly, 1979; Schlenker & Miller, 1977)

Illusory consensus
Overestimation of agreement that others oneself.
(Ross, Greene and House, 1977)

Fundamental attribution error
Tendency to explain the behaviour of others mainly in terms of their personality rather than their situation (see also actor-observer bias)
(Jones and Harris, 1967).

Halo effect
Tendency to spread positive or negative traits from one area of personality to other areas of personality - from the point of view of other people, e.g. the emotional attractiveness of a person can also have a positive effect on the assessment of his reliability.
(Thorndike, 1920; Asch, 1946)

Illusion of asymmetrical insight One's own insight into people of equal status is overestimated compared to the insight of people of equal status into one's own person.
(Pronin, Kruger, Savitsky and Ross, 2001)

Illusory transparency
One overestimates one's own ability to have insight into other people and overestimates the ability of others to have insight into oneself.
(Gilovitch, Savitsky and Medvec, 1998)

Group membership bias
The tendency to favour others when they are seen as belonging to one's own group.
(Tajfel, Billig, Bundy and Flament, 1971)

Belief in Flattery (Lake Wo- begon Effect)
Tendency to report flattering assessments of oneself and to believe that one is above average compared to other people.
(Cannell, 1988; Klar, 2002)

Perception of homogeneity of a foreign group
Members of one's own group are comparatively seen as more different than members of other groups.
(Quattrone and Jones, 1980)

Distortion through projection
Unconscious assumption that others share the same or similar thoughts, consciences, values or positions as oneself.
(Thomsen, 1941)

Modulations in the referential domain 2 (Empathic and social references to externality)

Horoscope illusion (Forer effect, akaBarnumeffect)
Vague and general descriptions of a personality with associated assessments are mistakenly transferred to one's own person if they are perceived as tailor-made for oneself.
(Forer, 1949)

Emotional self-enrichment
The tendency to claim for oneself a greater share of successes than of failures. This includes the tendency to interpret ambiguous information in one's own favour.
(Bernstein, Stephan and Davis, 1979)

Herd instinct
Generaltendencytoacceptandadopt opinions and behaviours of a majority in order to feel safer and avoid conflict.
(Chen, 2008)

Self-fulfilling prophecy (SOP)
Behaviours are preferred (consciously or not) that lead to results that confirm our presuppositions.
(Rosenthal and Jacobson, 1966)

Just-World Faith
Tendency to believe in a just world: "People get what they deserve".
(Carli, 1999)

Justification of the existing system
Tendency to justify or even strengthen the status quo (e.g. the existing-
The social, economic and political system), even if this is at the expense of benefits for oneself or for the community, because of the refusal of alternatives.
(Jost and Banaji, 1994, 2004)

Explanation of the behaviour of othersthroughtheirtraits
One considers oneself to be quite flexible (in terms of personality, behaviour or mood) while judging others to be much more predictable.
(Chamber, 1982)

Tracking effect
Tendency to behave (experience and act) in the same or similar way as many other people to whom one feels a sense of belonging.
(Nadeau, Cloutier and Guay, 1993)

Fig. 4: Overview of modulations in referential domain 2 (empathic and social references to externality)

The positioning of the individual modulations within the illustration has no semantic or technical significance.

Modulations in the referential domain 3 (References to nature and the structural-technical environment as externality)

Assumption of a connection due to spatio-temporal proximity
Spatio-temporal proximity of two events can lead to the formation of causal, contingency/contiguity relationships.
(Hasselhorn and Gold, 2009, p. 39f)

Being anchored
Tendency to be too attached to a previous reference or detail of information when new decisions need to be made.
(Tversky and Kahneman, 1974)

Bias due to presumption of correlation
Relevant facts are disregarded as soon as a certain correlation or another certain connection is suspected (among other things through causal attribution).

Availability cascade
With increasing repetition in public discussions, the plausibility of collective beliefs is reinforced: "Repeat something long enough and it becomes the truth".
(Kuran and Sunstein, 1999)

Illusion of structure
The tendency to recognise structures even where there are none.
(Gilovich, Tversky and Vallone, 1985)

Influence of ambiguity
Avoiding possibilities about which information is lacking and whose probability of occurrence therefore seems to be unknown.
(Ellsberg, 1961; Frisch and Baron, 1988)

Player error
The tendency to assume that individual random events have something to do with previous random events, e.g. "I flipped the coin heads five times in a row: I have flipped the coin heads five times in a row, therefore the probability of flipping tails next time must now be greater than flipping heads again".
(Bar-Hillel and Wagenaar, 1993)

Hawthorne effect
People who are observed during a scientific study can change their behaviour because of this and during the observation period.
(Landsberger, 1958)

After-the-fact error
The tendency to judge past events as predictable: "But you should have known that."
(Hawkins and Hastie, 1990)

Game reality error
The tendency to falsely transfer probabilities from a game with clear rules to the more unsystematically functioning reality.
(Taleb, 2007)

Disregard of already known basic data
The tendency to disregard known probabilities as soon as associated expectations are tested on a weak data basis.
(Kahneman and Tversky, 1973)

Favouring a desirable outcome
Behaviour of a researcher who hopes for a certain result and designs a study or interprets the data in such a way that his expectation is confirmed.
(Rosenthal and Jacobson, 1966)

Modulations in the referential domain 3
(References to nature and the structural-technical environment as externality)

Availability heuristic
That which is more present in the memory, especially if it is vividly remembered, unusual or emotionally charged, erroneously appears more likely. (Tversky and Kahneman, 1973; Carroll, 1978)

Hubris
The tendency to overestimate one's own performance capabilities. (Lichtenstein, Fischhoff and Phillips, 1982)

Disregard of the tendency towards the mean
View that exceptional results or achievements endure and do not tend towards a mean state.
(Galton, 1886)

Stereotyping
The member of a group is assumed to have certain characteristics without further examination.
(Stone, Perry and Darley, 1997; McAndrew and Akande, 1995)

Specific takes precedence over general
The tendency to assume that specific conditions are more likely to occur than more general ones.
(Tversky and Kahneman, 1983)

Overestimation of the probability of a positive event
Tendency to overestimate the likelihood of something good happening to one (wishful thinking, optimism-induced expectancy bias).
(Rosenhan and Messick, 1966)

Memory consolidation
Tendency to remember events from adolescence and early adulthood more than from other periods of life.
(D. C. Rubin, Wetzlel and Nebes, 1986; Janssen, Chessa and Murre, 2005)

Distortion of a wholeness
The probability of occurrence of a whole is estimated to be lower than probabilities of its parts (e.g. damage to a boat engine is more likely than the sinking of the boat).
(Fox and Levav, 2000)

Faulty presumption of connection
Presumption that there is not just an experienced connection between two events, but that this connection is factual.
(Hamilton and Rose, 1980)

Primacy of the first experience (primacy effect)
The tendency to value an initial experience more highly than a subsequent one. (Gershberg and Shimamura, 1994; Eb- binghaus, 1913).

Pink review
Past events are more likely to be viewed positively in memory than at the time of the event.
(Mitchell and Thompson, 1994)

Subjective validity
An individually important belief is likely to lead to a corresponding perception of things or connections between things.
(This, 1972)

Overconfidence
If a certain result of an action is firmly expected, overconfidence can precede the result of the action.
(Rosenhan and Messick, 1966)

Primacy of recency (recency effect)
The tendency to value a current experience more highly than an earlier one. (Gershberg and Shimamura, 1994; Ebbinghaus, 1913).

Bias due to prior decisions
Data and results are distorted by prior and biased selection of data and methods.
(Tversky and Kahneman, 1974)

Telescopic action
Current events seem to have a low chance of happening and events of little significance seem to have happened more recently.
(Janssen, Chessa and Murre, 2006)

Modulations in the referential domain 3
(References to nature and the structural-technical environment as externality)

Self-deception through the search for a result
Impediment/prevention of a reliable result if the question is only selected or adjusted after the data has been selected.
(Gilovich, Tversky and Vallone, 1985)

Familiarity Effect (Mere Exposure Effect)
Tendency to exaggerate the positive attachment to something or a person, although one is merely familiar with them.
(Zajonc, 1968; Pliner, 1982)

"Much helps much"
For solving a problem, the effort to be made is measured by the degree of perceived difficulty rather than the actual difficulty.

Exaggeration of a difference
Tendency to value the difference between two choices more than the difference between two choices. when considering the options separately.
(Hsee and Leclerc, 1998)

Disregard of probabilities
Tendency to disregard the given probabilities when a decision is made exclusively under conditions of uncertainty. (Baron, 2000)

Narrowing down too much
Mistakes when a situation or issue is approached too narrowly.
(Kahneman and Tversky, 1981)

Reluctance to exchange "new instead of old"
Giving up an object tends to be more difficult than acquiring a new object.
(Kahneman, Knetsch and Thaler, 1991; Tversky, 1994; Idson, Liberman and Higgins, 2000).

Misjudgement due to contrast effect
The joint observation of different objects increases or decreases values and effects of perceived objects.
(DiLollo, 1964; Kenrick and Gutierres, 1980)

Orientation towards a given unit (unit bias)
The tendency to work through or finish a given unit or delimited part. This tendency is particularly evident when eating food.
(Geier, Rozin and Doros, 2006)

Fig. 5: Overview of cognitive-emotional modulations in the referential domain 3
(references to the material-biological nature and the constructional-technical environment as externality)

Analogous to the cognitive-emotional modulations in the mental sphere, modulations also exist in the somatic sphere (somatic modulations). The somatic modulations include the functions described by Weber-Fechner's psychophysical laws (exponential characteristics between signal and signal processing), the metabolic processes, which are fundamentally selective, the reactions of the immune system, which can also lead to allergies, the adaptation processes in the acceptance of unhealthy food, the regulation of body temperature (e.g. precautionary generation of increased temperature, even in the case of unhealthy food).The production and role of messenger substances as a result of habitual processes, the imprecise formation of body cells, the change and role of genetic material only due to permanent or intensive influences or the U-shaped connection between physiological excitation/activation level and behavioural probabilities.

2 Somatopsychic processes and basic processes

2.1 Somatopsychic processes

A somatopsychic system includes above all processes. Somatopsychic is to be described and understood as a system of processes (procedures, functions). A consideration of dynamic components enables an overall view of variously connected functions under the aspects of trigger, purpose, means, target, result or initiation of further processes. The biological substance of the soma serves as a carrier or moderator (in the sense of promoting, enabling or limiting) of the processes, as can be illustrated by the following examples:

- The movement of the human body through the skeletal muscles represents the process; the skeleton and muscles enable and moderate the processes.
- When testing hypotheses in perceptual processes, different sensory channels are used to reach a result. However, the sensory channels only represent the object of perception selectively and only approximately physically adequately.

A somatopsychic process includes:

- Its trigger , cause or target,
- the information transported therein via carrier substances or in transported messenger or active substances (e.g. of an endocrinological/biochemical or electrochemical nature) and the effect on somatopsychic actuators (e.g. on a muscle, on a nucleus, on a gland or on a motivation, mood or on a target determination of the behaviour) within the regulatory circuits involved.

Processes can consist of activities of biochemical, electrochemical impulses, of messenger substances and active agents or also of the absence or moderation of such activities:

- Through suppression (e.g. suppression of movement impulses through fear),
- through the absence of an impulse (e.g. with the consequence of increased expectation or with the consequence of phantom pain; habituation or acclimatisation to constant conditions or the absence of antibodies can also lead to reactions),
- by attenuation (e.g. superimposition of heart rate by slower external rhythms or inhibition of the reuptake of serotonin at the synaptic cleft or the attenuation of organic growth by sex hormone activities) or
- through structuring (e.g. influence of the parasympathetic nervous system on the resting or basic function of organs, growth of synapses through rhythmisation or by changing the combinatorial composition of several impulses such as pain perception, and
- by external influences.

It is not enough to expect and measure an impulse; rather, the absence of an impulse or a combinatorial composition of several impulses can also trigger or shape somatopsychic processes. A focus on processes prevents the individual from being broken down into isolated parts (e.g. organs), between which, however, connections (sometimes called correlations or connectivities) can be sought. Somatopsychic in the form of a process view focuses on the connections. Organs, neural pathways, synapses, motives, emotional resources and other initial, final or intermediate stations of connections all serve to explain, understand and perhaps change the processes.

A somatopsychic process extends over phases that can be divided into initial, main and outcome phases (see also section 1.2).

The initial phase contains the source, purpose or target of the somatopsychic process. A process can have multiple directed triggers and thus allow for different outcomes (e.g. in states such as anxiety) or it can be prematurely terminated when directed towards a single outcome (e.g. exercising muscles within a certain time and therefore being able to relax better) if the target or purpose (relaxation) is achieved immediately.

The main phase includes the nature (e.g. eating and drinking) and the location of the process (e.g. feeling light and free and locating this in the abdomen and chest). The main phase includes the instruments of action, which are bound to certain resources as well as to certain experience and can only be chosen freely to a limited extent (e.g. food, components and organs of the body). The main phase contains the process control mainly through control loops, through monitoring or through limiting the resources.
The result phase includes the effect of the actuators and is the initial phase for a new process. The result phase also includes an evaluation or assessment of the completed process.
Somatic and psychological dimensions belong together from the beginning of human life and in each case in a current situation, as can be illustrated by the example of a threat to an individual (see Figure 6).
A threat can arise from the expectation of a forced restriction of current and/or future integrity (e.g. of bodily functions or of desired life development opportunities). In Figure 6 and the accompanying explanations, the state of anxiety is described somatopsychically. Anxiety is about deanilg with the loss of freedom, the expectation of destructive experiences, the desire to prevent and/or the experience of harm.

In this text, illness is not seen as a rudderless or “degenerate” state, but rather as the painful result of undesirable regulatory processes. The state of health and the state of illness each develop through target-oriented processes. Both states are oriented and controlled by somatopsychic targets and sub-targets. The somatopsychic processes listed below can be oriented and controlled either pathogenically or salutogenically.

In the following overview (Figure 7), somatopsychic aspects are illustrated using different examples.

2.2 General characteristics and basic functions of somatopsychic processes

A somatopsychic system consists of mechanical, biomechanical, chemical and electrochemical processes of behaviour (experience and action), among others. A somatopsychic process uses the capabilities of organs, nuclei, nerve fibres and other carriers. The carriers of the processes enable and moderate (limit and modify) parts of the processes. This does not imply a neglect of psychological or medical (especially organ-related somatic) perspectives.

Phenomenological representation of a threat situation

Perception of a hot or sharp sensation in the stomach area

and/or	perception of a movement of this sensation upwards, as it often shoots up from the abdomen into the chest and head.
and/or	awareness ofmovement of this sensation as it slides down into the legs
and/or	increased heart rate.
and/or	dilatation of blood vessels
and/or	enhanced/ altered evocation of neuronal potentials

Perception of an actional readiness to escape or also the execution of escape by actuators

and/or	notice able tensing of muscles
and/or	changed posture
and/or	perception ofan actional readiness to eliminate the threat
and/or	elimination of the threat by actuators, perception of muscle tension, sometimes painful after a longer period of time
and/or	perception of ”having to stay” and paralysis.
and/or	perception of a strongly increased and very strong heartbeat
and/or	perception of increased skin moisture, experiencing the effect of the actuators

Expectation of a further, future threat, implementation of measures by actuators

and/or	perception of an actional readiness to avoid a threat

Time-shifted:

Possible intrusions in all perceptual areas

and/or	nightmares
and/or	”need to reflect” on the threat and variants of the threat and/or drop inblood pressure
and/or	relaxation ofmuscles

A threat also includes other things that are not always accessible to acute perception (among others):
Being surprised in disbelief

and/or	dissociation as splitting off of feelings and/or sensations of body regions and/or Fixation and selection of perception
and/or	numbness to feelings and/or sensations of body regions. fixation of bodily processes (e.g. stable muscle tension)
and/or	attribution processes (e.g. to the question “Why me?”), processes in the limbic system (e.g. networked neuronal and biochemical processes)

Fig. 6: Overview of somatopsychic aspects using the example of a threat

Processes in the somatopsychic system of an individual (Phenomenological presentation of selected areas)	Somatopsychic actuators included therein (Phenomenological presentation of selected areas)
Initiation of needs and drives	The id (sensu Freud, 1923/1940), individual drives
Actional connection to the environment	· Interest in specific activity and realisation with the support of the skeletal muscle apparatus for locomotion · Activity of the HPA axis1, influence by the limbic system possible · Contraction · Consumption of food-based substances · Volitional access to the environment
Somatopsychic effect of the limbic system on internal organs	Muscular apparatus for functions of internal organs · Heart activity and blood circulation · Contraction · Limited volitional access · Pump function · Flow and print function
Involvement of somatopsychic components in food intake and processing, influence possible through the limbic system	· Endocrinological system · Adrenal cortex · Secretions · Hormones and other messenger substances
Emotional and communicative connection to the social environment	· Mimic musculature of the face · Contraction oft he frontal muscles · Eyelid movement
Release of reflexes after the occurrence of appropriate demands (e.g. of a sexual nature).	· Medulla spinalis · Reflexes · Nonvolitional tasks · Pyramid track for volitional movements
· Formation of new synapses after the occurrence of new demands · Information storage · Dissemination of information	· Nervous system · Electrochemical signals, efferent and afferent nerve fibres · Synapses(e.g.formationofspines)

Fig. 7: Overview of somatopsychic processes (examples phenomenologically) presented [1] see. Section A1.1

The components (mostly sub-processes) of somatopsychic processes are functionally related to each other as follows:
1) Since somatopsychic processes are subordinate to a target, somatic and psychic processes are isofunctional to each other (e.g. stomach problems and disgust can serve to get rid of the disturbing stomach contents).

2) Sub-processes of somatopsychic processes are related to each other within tolerance ranges, i.e. not isometric, not deterministic or even monocausal (e.g. organ disorders and pain do not always run synchronously).

3) The function of one component does not explain the overall result of the interaction of all components. Even the failure of one component can often, though not always completely, be compensated for (e.g. anxiety can produce hypertension and hypotension; muscle weakness that occurs in the process can be compensated for by specific actions or skilful tactics).

4) If the states of the different components are recorded quantitatively (especially by scaled measured values), they can only be interpreted in the different combinations, as they only jointly indicate the system state (e.g. skin moisture, heart rate and blood pressure can only be correctly interpreted if it is known which objective the individual has).

Somatopsychic focuses on processes within an individual,
1) which run autochthonously, e.g. automatically, not always and not completely accessible to perception, but sometimes controllable, such as breathing,
or
2) which run intentionally, e.g. are planned and volitionally generated. Processes in Somatopsychic fundamentally contain somatic and psychological components. If the psyche and the soma are one entity, this also applies to the associated processes. The entity of psyche and soma belongs to this process entity.

In these two examples it becomes clear that psyche and soma each mutually support the achievement of targets. In general, however, it must remain unclear how somatopsychic targets arise: One cannot want what one wants to want and one only has such somatopsychic processes available as nature provides. It is particularly easy to understand the targets that are related to a deficit (hunger, thirst, insecurity, etc.) or that can establish something like a basic somatopsychic order such as harmony, ease, coherence, hope or a neurochemical balance between the system "positive state" (well-being as well as reward) and the "negative state" system (fear as well as punishment). The final orientation of somatopsychic processes (e.g.: "What is the purpose of life?") comes up against the limits of knowledge of psychology or medicine, since it is not possible to clarify specifically for each process how the target of the process comes about. The only clues are to be found in the overall structure of human life, but these could rather come from the fields of philosophy, theology or anthropology.

According to the specifications of the axioms and premises mentioned above (see section A1, in the appendix), it is necessary to find a technical order that leaves psyche and soma as a unit. The required unity of psyche and soma can only be realised technically if a new system with new nomenclature is created.
The somatopsychic processes of an individual are analogous to the regulation of action (see section 2.2), which logically represents a control loop, such as other somatopsychic processes which

are basically controlled by regulatory circuits. Well-known somatopsychic control circuits are, for example: Habituation to painful effects such as in martial arts, down-regulation of the effect of painkillers, habituation to slowly increasing sound intensities, disappearance of perception if there are no changes in the effect. Somatopsychic control circuits are naturally interconnected with other control circuits.

Examples of such control loop cooperations are:

- Nerve pathways only ever send impulses in one direction, so feedback within a separate nerve pathway is always required to control functions,
- the heart's pumping rate is regulated, among other things, by feedback on the flow rate of blood within the entire circulatory system,
- feedback on body temperature comes from all regions of the body and additionally results from influences on the body from the outside, such as through injuries or also through infections, as well as through influences that an individual can bring about through reflexive relaxation exercises, such as autogenic training,
- the body's heat output can decrease, e.g. under stress conditions, leading to cold hands and cold feet, and can increase under eustress conditions,
  -whenenergy consumption increases, fat reserves, among other things, can be reduced (e.g. whenchanging from a warm environment to cold water),
- hunger and thirst, waking and sleeping processes, the temperature of the outside air in the respiratory organs are also controlled by regulatory circuits,
- in addition, influencing factors for the control of regulatory circuits in a human body include substances currently ingested and substances deposited in body tissue.

Therapeutic processes influence regulatory circuits, if one follows the findings of Grawe, Donati and Bernauer (1994):
"The patient trusts his therapist more and more, the therapist feels valued by his patient and reassured in his competence. This in turn increases the therapist's appreciation for the patient and his willingness to support him in a committed way, as well as his feeling of competence in being able to do so. The induction of positive expectations thus leads to a self-perpetuating positive feedback process is set in motion, which leads to the patient actually being in a different place after some time. He does not just imagine that he is improving, he is actually better improving. Here, what is targeted for as the target of therapy is ecactly achieved." (S. 25) ... "Systematic desensitisation of phobic disorders is very likely a function of credible induction of expectancies of improvement and the positive feedback process." (S. 28)

Control loops in an individual consist of, among other things, measurement systems, actuators, a comparator and a set point. The orientation of the somatopsychic process to a setpoint serves to achieve a somatopsychic target or purpose (e.g. sustainable improvement of resources such as strengthening muscles and/or strengthening a motivation).
In an individual, control circuits are designed to be flexible and adaptive. The setpoint can be changed depending on the state (e.g. training state or motivational state), several actuators can exist in parallel and comparators can act in parallel at different points in the somatopsychic system (for example, a comparator can take effect via a conscious decision, such as when eating). The variable layout of an individual's control circuits allows for increased stability and compensation for deficiencies (e.g. due to apparently excessive demand for heat at partial hypothermia or

avoidance of certain dangers after anxiety-provoking experiences). The regulation of control circuits often takes place via nerve pathways, hormones, messenger substances and other signal carriers. This takes place within an order system that uses the actuators in a control circuit hierarchically superior/subordinate or in parallel depending on the objective of the somatopsychic system as a whole.

The basic logic of these control loop processes is hypothetically illustrated in Figure 8. In the future, more should be found out through research about somatopsychic correspondences with biological components (e.g. sensors, nuclei, synapses, nerve pathways, vascular pathways, biochemical and bioelectrical controls). However, the corresponding knowledge can mainly help to understand somatopsychic events in a descriptive and less explicative/explanatory way. Explicative understanding requires the presence of targets or at least reasons.

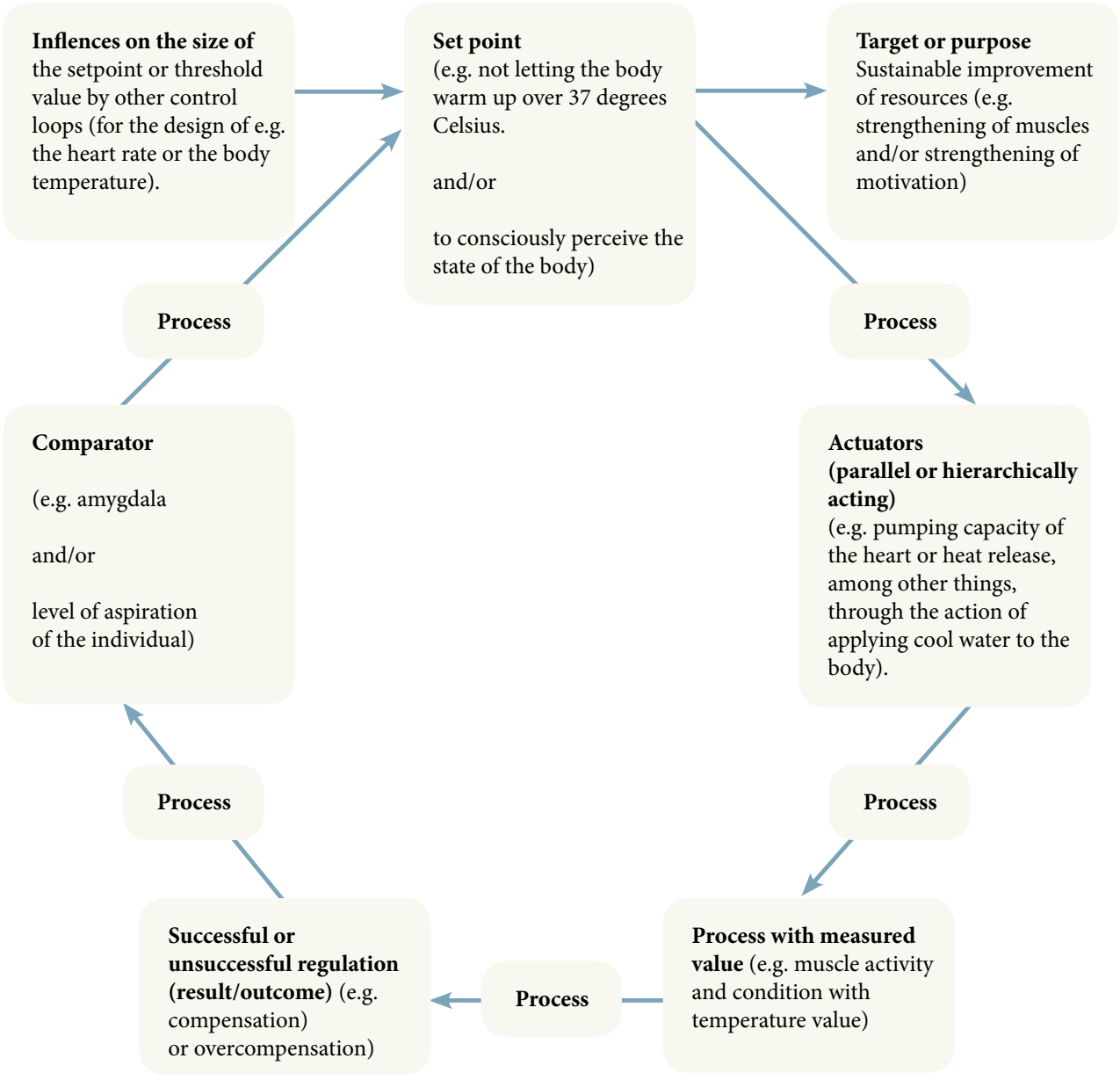

Fig. 8: Example of a somatopsychic control loop

Phenomenologically, the process described in the control loop always appears as a whole within the somatopsychic entity. Only analytically does the construct of the control loop emerge. The neurological system (especially nerve tracts, nerve cells, synapses) with the control focus on the brain, spinal cord and the tracts and cells of organs in the entire body forms a unit with perceptions, experience, reflection, competences, deficits, control possibilities as well as changes via targets and target values. The neurological system is inseparably connected with the blood circulation system, the endocrinological system (especially lymph, hormones, glandular secretions), the other body fluids and the other body tissues with autochthonous impulses, resources for action, increase in competences as well as with identity consciousness.

One of the fundamental effects of a somatopsychic control circuit can be well illustrated by the example of smelling, among others: In the case of a constant smell, even if it is very distinct, the olfactory system blocks out the perception of a particular smell after a relatively short time. Smells that may indicate danger, such as the smell of smoke or acids, on the other hand, remain in awarness.

The interaction of the information transmission systems and information stores can in turn be based on individual separate control circuits and overlapping control circuits, so that a somatopsychic process is fundamentally overdetermined.

The somatopsychic system of an individual obviously reacts primarily to negative deviations from target values. This enables appropriate reactions and prevents overfunctioning. Often the somatopsychic control circuits use threshold values that should not be fallen short of (e.g. coordination of blood volume through heart rate and blood pressure), which can be exceeded in somatopsychic disorders to the point of self-harm. Exceeding threshold values enables special performances, e.g. in sports, in the cognitive field or in coping with work tasks and impairments (e.g. with the help of fever or an overproduction of so-called killer cells in the blood). Therapeutically, processes in the neurochemical well-being and reward system (mainly characterised by serotonin and dopamine) and in the neurochemical fear and punishment system (mainly characterised by cholecystokinin and acetylcholine) are of particular importance. Both systems should - regardless of absolute values - be in a neurochemical state of equilibrium (according to Ewert, 1998, p. 158).

These two systems respectively control the health-relevant states of well-being (health) and suffering (illness) by controlling regulatory circuits. The comparator, the set point or threshold and the target or “purpose” are controlled (see Figure 9).
The target or “purpose” controls and evaluates the comparator via the target value or threshold value. The term “purpose” is omitted in the further course of this work, as purpose can also be understood as a target.
The well-being/reward system evaluates the respective outcomes according to the somatopsychic target or purpose and defines salutogenic or pathogenic states. Pathogenic states are often characterised by this,

- that the comparator makes the comparison between th target state and the actual state more tolerant or even less tolerant than before (e.g. with regard to their own acts of aggression),
- that the target or threshold value changes (e.g. in the case of fear-inducing stimuli) or
- that even the target (or purpose) is changed (e.g. taking addictive substances instead of improving emotionally supported communication with other people).

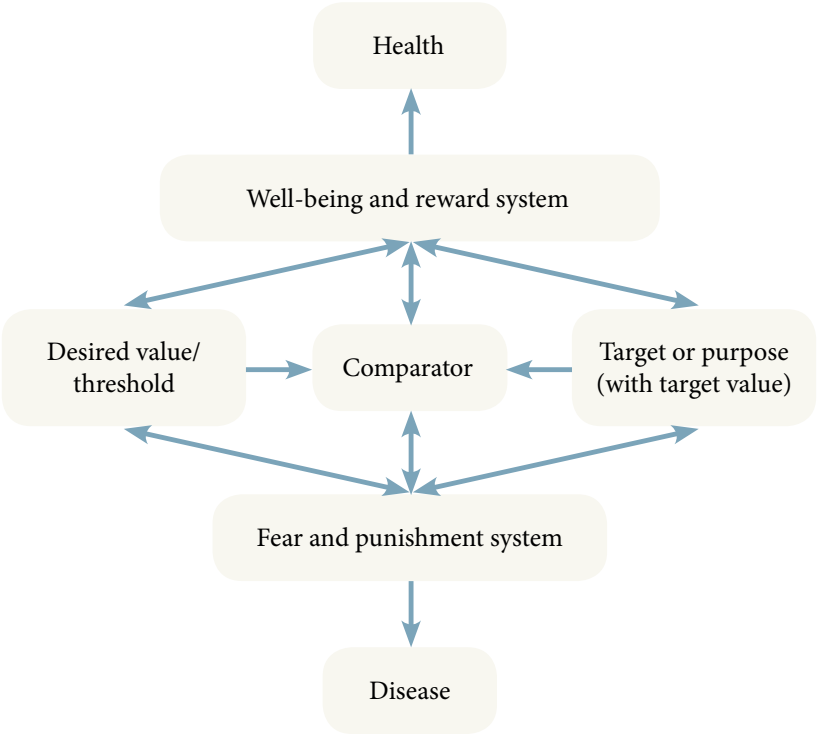

Fig. 9: Influence of the well-being/reward system and fear/punishment system on a somatopsychic control loop

These basic connections can be found in all somatopsychic processes.

2.3 Somatopsychic events

2.3.1 Basic somatopsychic process "Observing and functioning of somatopsychic basic life processes"

The basic somatopsychic process of "observing and functioning of somatopsychic basic life processes" contains a number of targets that are part of basic life processes. Simple examples of targets include maintaining a certain body temperature, experiencing well-being, experiencing coherence, reducing pain sensations, running a constant stream of thoughts and feelings, experiencing perceptions, experiencing a suitable environment for protected survival and expandable living, managing injuries and disorders adaptively and resiliently, feeding oneself, practising sexuality and generative behaviour, emptying the body, feeling life processes such as one's own breathing etc.

This basic process also includes the autochthonous maintenance of health through the immune system, through the maintenance of resilience and salutogenic resources such as the desire to experience one's own effectiveness or the further development of a positive opinion of competence (Heinecke, 2009).

2.3.2 Basic somatopsychic process “Maturing and Growing”

The somatopsychic basic process of “maturing and growing” reveals the following targets, among others: Length growth, muscle growth, organ growth, change of growth targets e.g. in pathologically controlled processes, building up new bodily functions, building up new cognitive competences, expanding scope for action, strengthening possibilities for action, controling healing processes through growth, developing and expanding generative behaviour.

2.3.3 Somatopsychic basic process “Moving (mechanical components and mechanical competence of the individual)”

The somatopsychic basic process “Moving (mechanical components and mechanical competence of the individual)” includes the following targets, among others: Actional behaviour such as running, climbing and other intentional movement, adapting one’s own environment through action, building up body statics and movement dynamics with skeleton, muscles, tendons and cartilage, effecting changes of place, effecting actional work results, improving and strengthening actional competences, using actional tools, compensating for movement restrictions, experiencing movements (examples).

2.3.4 Somatopsychic basic process “Experiencing and functioning of fluids and their vessels”

The basic somatopsychic process of “experiencing and functioning of fluids and their vessels” includes the following targets: Experiencing and functioning of blood and the vascular system (e.g. of blood pressure), lymph and lymphatics, cerebrospinal fluid, urine, controlling lymph and blood qualitatively, controlling lymph and blood quantitatively throughout the body, controlling lymphatic vessels, controlling blood vessels, controlling cellular fluid qualitatively and quantitatively, producing and releasing skin moisture and urine, compensating for disturbances in the body fluids, e.g. by drinking when thirsty.

2.3.5 Somatopsychic basic process “Experience of eating/drinking and functioning of the metabolism in processing nutrients and biochemical substances”

Targets of the somatopsychic basic process “Experiencing eating/drinking and functioning of the metabolism during the processing of nutrients and biochemical substances” are among others: Experiencing food intake, experiencing the processing of nutrients in connection with the biological conversion of food, vitamins and other absorbed substances, especially in life-supporting substances, mechanics of food (e.g. experiencing chewing), experience of fluids and gases in food passages, intestine and bladder, absorption and utilisation of nutrients for use in the body tissues and to produce well-being or experience of deficit sensations, control of the distribution of nutrients and substances in the body, use of nutrients to prevent disorders and to heal disorders, building up of resources (examples).

2.3.6 Somatopsychic basic process “Experiencing and understanding external and internal phenomena”

The somatopsychic basic process “Experiencing and understanding external and internal phenomena” contains the following targets, among others: Perceiving the present, remembering, expecting events and being motivated, building up memory for cognitions, building up one’s own signalling with information and communication, controlling and/or experiencing electrophysiological and electrochemical signals of the body’s own processes, controlling and/or experiencing endocrinological information through messenger substances, building up or changing synapses, experiencing, expanding or changing subsystems such as the HPA/HHN axis, ensuring and controlling visual and auditory perception and storing content, building up, retrieving, comparing and checking explanations and contingencies, utilising empathic perceptions, regulating and adapting pain perception, controlling the experience of coherence (examples).

2.3.7 Basic somatopsychic process “Experience formation”

In the somatopsychic basic process of “experience formation” or “experience shaping”, the following targets can be found, among others: Adaptation of cognitive, emotional, somatic and social competence through perception and practice, intentional and incidental changes in behavioural dispositions, selecting and interpreting perceptions, examining and reflecting on events, reflectively reviewing knowledge and cognitive schemata, applying and expanding problem-solving schemata, striving for pleasure and satisfaction and attributing these, controlling the experience of consistency, dissonance and explanations through adaptive behaviour, e.g. through preference or avoidance or through changes in evaluative behaviour (examples). The somatopsychic process of experience formation contains at the same time components such as neuronal functions including changes in synapses, imaginative conceptions with muscular impulses, feelings of disappointment or anger with endocrinological components (e.g. adrenalin), feelings of joy also with endocrinological functions (e.g. release of dopamine). Storage and control of signals in the amygdala are isofunctional with the experience of emotions associated with experiential formation.

2.3.8 Accessibility of basic somatopsychic processes and their targets

Somatopsychic basic processes and their targets are not always accessible to conscious experience and voluntary control. However, they are subject to the influence of training, therapeutic measures, damage such as injuries, and so on. Many biochemical, neurological or endocrinological basic processes can be measured, both in the macro area (e.g. blood pressure) and in the micro area of the cells.

2.4 Mutual subsidiarity of psyche and soma

Somatopsychic processes are characterised by different interactions between soma and psyche. One of the most important interactions is mutual subsidiarity. This means that soma and psyche support and complement each other in achieving common targets.

If, for example, posttraumatic stress disorder (PTSD or psychotrauma) causes anxiety, avoidance behaviour, functional changes in the prefrontal cortex, the hippocampus and the amygdala, this is all PTSD. The cause is an extreme experience and not a specific change in the amygdala or other isolatable functional parts. Rather, it is necessary to examine how everything involved interacts. For the interaction of psyche and soma, the present treatise postulates mutual subsidiarity to a particular degree. The interaction of psyche and soma takes place interactively primarily in the form of subsidiarity (see Figure 10).

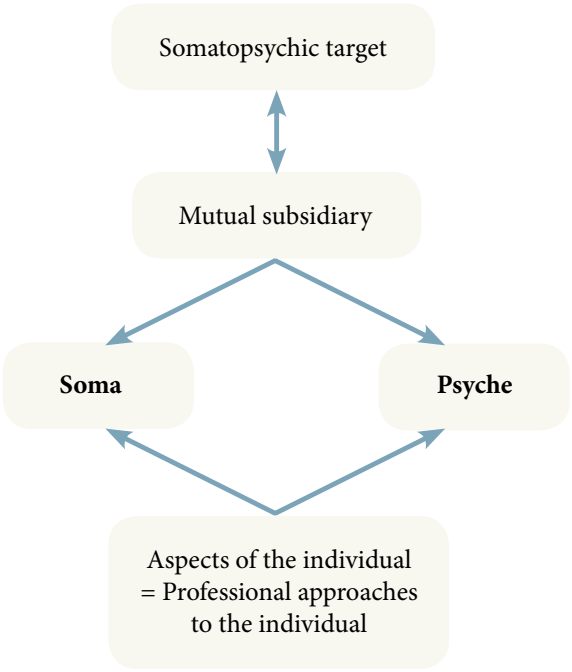

Fig. 10: Subsidiarity of psyche and soma to achieve a somatopsychic target

This interaction can be parallel, alternately causal or alternating (reciprocal) within a determinable range. Subsidiarity serves an overriding somatopsychic target (in the salutogenic field this is basically the best possible way of living or of surviving) and thus has to fulfil the associated requirements. Somatopsychic processes contain targets and sub-targets, which can be scientifically recorded by psychological methods and by somatic methods respectively. The somatopsychic processes for achieving the targets and the sub-targets are each subsidiary from the point of view of both approaches: In each of these two approaches it becomes clear that psychological and somatic processes can support, promote, but also block each other. There is no causality or other dependence between psychological and somatic processes.

The following examples will illustrate the connection between how psychological and somatic processes support each other subsidiarily in order to set in motion the achievement of somatopsychic targets (and their sub-targets).

Example 1 on the mutual subsidiarity of psyche and soma: Rescue from danger
An individual is in a dangerous situation. The heart rate increases in a flash, the danger is clearly visually perceived.
Target: Escape can bring rescue and begins as the appropriate path is visually recognised.

Sub-target 1: Use the possibility of escape
Subsidiarity of psyche and soma for the purpose of achieving sub-target 1:
The individual runs in the right direction with great acceleration and at an extremely high speed, because all the necessary somatic processes with corresponding resources are deployed, and feel that this escape behaviour is correct. However, an auditory signal points to a new danger.

Sub-target 2: Reduction of speed with search for a further path. Subsidiarity of
psyche and soma for the purpose of achieving sub-target 2:
The individual slides down a slope and has learned in the past to behave as safely as possible. The necessary somatic processes with corresponding resources take place. The target "rescue" is then achieved.

Example 2 on the mutual subsidiarity of psyche and soma: extension of behaviour
An individual is in a pleasant situation that allows expectations of an even more pleasant situation (for example: a young woman in love meets her lover).

Target: Experience emotional closeness for a long time and intensively
Sub-target 1: Be undisturbed
Subsidiarity of psyche and soma for the purpose of achieving sub-target 1:
The young woman communicates with her lover exclusively about their common interests, experiences physical touch and physical closeness. Her body is warm, breathing is gentle.

Sub-target 2: Realise emotional closeness also through action
The young woman's lover makes the proposal to go to his house. Subsidiarity of
psyche and soma for the purpose of achieving sub-target 2:
Images and emotions from previous pleasant meetings with him mix with a change of direction and a quickening in movement. Her heartbeat becomes clearer, her skin a little clammy and she shivers a little. Her perception very quickly isolates a taxi for which she - without having to do much calculation - has the money. She takes the taxi. The target is then reached in this example.

Example 3 on the mutual subsidiarity of psyche and soma in the case of distress
The mode of action of the somatic HPA axis during stress is also subordinate to a target. The perceptions selected and interpreted by fear possibly reinforce the mode of action of the HPA axis or set it in motion again, although the initial situation no longer exists (e.g. in the case of flashbacks or anticipatory fear). If perceptions from the external domain do not currently exist, perceptions from the internal domain (e.g. restlessness in the digestive tract after appropriate food intake) can be interpreted in such a way that the HPA axis becomes active to the full extent as in the case of the previous stress. Anxiety (and associated experience) then kicks in and takes over subsidiary tasks. If, however, the somatopsychic target consists of withdrawal ("disengagement"), primarily through avoidance of experienced content and through emotional numbness, the activity of the HPA axis, as

it performs subsidiary tasks in this target, also become weaker (measured by cholesterol levels in the urine, see Mason et al., 2001, p. 387 and p. 399).
Depending on the somatopsychic target, different somatopsychic processes can occur, e.g. in the case of so-called posttraumatic stress disorder, which also offer further possibilities for psychotherapeutic problem solving, e.g. with the help of psychological body therapy.

Example 4 on the mutual subsidiarity of psyche and soma: symptom displacement and somatic impairment

Somatisation disorders or pathological functional impairments of organs can "wander" in the body, the symptom shifts described in psychoanalysis (Freud, 1894/1969) can occur: The disorder disappears in one organ to affect another in a modified form. The soma behaves subsidiarily to the psyche according to the given somatopsychic target. According to Adler (Adler, 1907; Ansbacher and Ansbacher, 1995; Dreikurs 1997, Bruder and Bruder-Bezzel, 2006), the somatopsychic target can consist of concretely living and possibly justifying one's own supposed inferiority by means of a (supposedly justified) organ inferiority.
If the organ inferiority does not exist (e.g. through compensatory training), the given somatopsychic target can be achieved through subsidiary action, e.g. through subordination to supposedly stronger people using one's own given capacity, which may have been strengthened through compensation or through exaggerated compensation.
Individuals with destructive behaviour as a somatopsychic target (e.g. cynicism) significantly undervalue their own unhealthy behaviour (e.g. alcohol abuse) despite their own illness-worthy somatic problems, Almada et al. (1991, p. 172) assume when interpreting the results of their empirical study.

Example 5 on the mutual subsidiarity of psyche and soma: source of pain and perception of pain

After an occupational accident with severe somatic injuries, the individual concerned had been experiencing pain (on the pain scale with a severity of 7 to 8, out of 10) for more than a year in the injured parts of the body, with the sources of pain in the lumbar region and in the feet. The anchor point of pain perception (and thus the somatopsychic target) was found to be 7 to 8 over time. In a suitable lying body position, the pain intensity for all pain sources decreased to 2 to 3. In such a position, with pain values in the lumbar vertebrae of 2 to 3, the pain values in the feet gradually increased to 5 to 6 in the right foot and increased to 4 to 5 in the left foot.
In this way, the psyche subsidiarily supported the somatic sources of pain and the soma provided offers for an increased perception of pain.
The subsidiarity of psyche and soma can be massively disturbed if the soma or psyche is damaged by a strong external influence, such as an accident or an operation. In such cases, the somatopsychic system can be irritated to such an extent that adequate salutogenic subsidiarity can no longer be achieved and allochthonous treatment measures (e.g. immobilisation, relief and reassurance) are therefore necessary. The so-called pain memory stores somatic signals and sets the target value higher in the corresponding control circuit. This can later result in chronic pain or so-called phantom pain.

Example 6 on the mutual subsidiarity of psyche and soma: Emotional closeness to other people and alcohol abuse

To experience well-being through closeness, care and security from other people,drinking alcohol can be helpful. Repeating the supposedly successful method of "closeness through alcohol"

can lead to alcohol abuse and dependence. If one experiences closeness etc. to other people without alcohol playing a role, abuse of the relationship to or dependence on the other person can also occur: The somatopsychic target “well-being through closeness, care and security” is to be achieved subsidiarily either by a chemical substance or by a person.

Example 7 on the mutual subsidiarity of psyche and soma: stabilisation of a somatopsychic disorder

Somatopsychic disorders (e.g. anxiety and panic attacks, depression) stabilise by always returning to the old state (if left untreated or treated unsuccessfully). This is due, among other things, to the properties of somatopsychic processes (e.g. the soma repeatedly produces the type and amount of endogenous agents required for the disorder) and also to familiarity with the pathogenic state. This familiarity, combined with the illusion of being able to exert control over oneself when needed (“I know myself well and will manage on my own or together with other people”), enables and facilitates pathogenic stabilisation. In the same way, somatic target orientation enables and facilitates pathogenic stabilisation, so that the feeling of familiarity can arise again.

2.5 Other properties of somatopsychic processes

2.5.1 The primacy of the target

Somatopsychic processes are fundamentally final (or teleological): They pursue a target, be it a certain exchange with the external conditions, the achievement of a limit value, the adherence to a certain state, etc. Adherence to an individual muscle tension state in the neck-shoulder region proves that a certain myographic target value is constantly strived for. Phantom pain shows that a previous system state is not abandoned. Opposing or competing targets can exist alternately and occur in such a dense time sequence that the actually different targets are experienced as simultaneous phenomena by both the affected individual and an observer, and can thus lead to strong emotional confusion and restlessness.

2.5.2 Repetition and timing

Repetition and timing form rhythmicity, dichotomy and duality, controlled and controlled processes in time and enable life-historical identity as a process that can be experienced. Repetition and timing shape the course of many processes: Pumping of the heart, clocking by the “internal clock” of the suprachiasm or all body cells (Ewert, 1998), breathing, alternation of tension and relaxation (Freud, 1915/1969), regularity of intestinal peristalsis, repetition of earlier phases of life by means of regression or adoption of the rhythms of experienced music (see also Spork 2004/2011).

2.5.3 Multicausality, multifinality and multifunctionality

Somatopsychic processes are fundamentally interdependent. They have several causes and several effects. In this respect, systems theory and cybernetic modes of thought apply. Processes arise from temporally preceding causes (e.g. in deficit states) and from targets (e.g. in growth motives). The same transmitters or endogenous substances in processes can be multifunctional (e.g. depending on the type of experience, the substances can generate fear or pleasure, increase cardiac output or damage the circulatory system).

2.5.4 Dependence of processes on resources

Processes require somatopsychic resources that provide initial impulses, that provide carriers (e.g. endocrinological fluids, electrochemical or biochemical substances) and that hold reserves or substitute processes (e.g. processes of other neuronal connections in the cortex or possibilities of movements of other muscles).

2.5.5 Processes as control loops

Somatopsychic processes usually consist of control loops in which the target values (set values or threshold values) are adaptive according to other influencing variables (e.g. through internal reference values such as fear of a coming deficiency or through habituation in the case of pain). Control loop processes never end abruptly, but always with a lag.

2.5.6 The result phase is also the initial phase

If target values are reached, this is also a new starting point for somatopsychic processes. Until the end of life, this results in an almost endless stream of processes.

2.5.7 Individual and environment in a mutually formative exchange

Processes of Somatopsychic consist in the exchange between the individual and his or her environment via accommodation and assimilation.

2.5.8 Changing processes through the intrusion of external and internal subsystems

The system of Somatopsychic can be developed through penetration of subsystems (sensu Luhmann, 1987, p. 69) are changed or disturbed (e.g. by the integration of new insights into one's own life, by the integration of meditation contents, by exercise results, by continuously destructive influences such as pollutants, by extreme experiences, by bacteria or viruses).

2.5.9 Stability vs. alternation of expansion and contraction

Somatopsychic systems strive for stability and at the same time for the alternation of expansion and contraction. Stability results from the emergence of a target state. Expansion and contraction alternate as in muscle movements or in body cells with growth including cell division and with cell death (especially through apoptosis). Between stability and the alternation of expansion and contraction, the somatopsychic system must fundamentally and regularly establish a dynamic balance. Rapidly occurring and profound differences between stability and the alternation of expansion and contraction lead to stressful somatopsychic states of restlessness (e.g. in the case of repeated alternation of self-efficacy and helplessness experiences of an individual).

2.5.10 Equality of psyche and soma

The unity of psyche and soma (as a total system) implies the equality of the two subsystems: For example, states of well-being or discomfort can be promoted in the overall system via the psyche or soma. Similarly, symptoms and disorders can be observed in the soma subsystem that also belong to the psyche subsystem. Suffering in children can show itself somatically through pain or fever, among other things, without an infection being present. Somatic problems caused by physical injuries can also manifest themselves in psychological impairments such as misperceptions or fear.

2.6 Disadvantages and advantages of a process-oriented perspective

First, the disadvantages and advantages of a target- and process-oriented view are listed and then finally weighed against each other.
The disadvantages can be seen as follows:

Disadvantage 1
The ways of thinking and acting of professionals dealing with somatopsychic systems become more complex through a target and process orientation, because at the same time the known advantages of an element-oriented view have to be maintained and further developed. Accordingly, users may be overchallenged. The professional demands on actors in the health care system, especially on autonomous practitioners, are increasing noticeably and perceptibly. The corresponding qualification is associated with a higher effort, the practical realisation of which may not be guaranteed.

Disadvantage 2
The instruments for dealing with disorders are becoming more complex in research and application, so the systematic professional networking of disorders must be improved. Thus, health disorders that have so far been listed in isolation must be linked in specialised systems (such as ICD-10), medical and psychological diagnostic systems must be merged in some cases, treatment approaches must be designed multifocally already in the planning stage, and the different but interrelated treatment approaches must be organisationally interlinked in practice.

Disadvantage 3
The division of responsibility for treatment measures among the representatives of different disciplines involved becomes more difficult both in planning and in a later review.

Disadvantage 4
Establishing causal links between a health-damaging event (or process) and the behaviour of perpetrators and the associated question of who bears the costs becomes more difficult.

Disadvantage 5
Targets and processes are more difficult to observe or measure than somatic organs or volumes of substances.

The advantages of a target- and process-oriented view can be seen, among others, as follows:

Advantage 1
Somatopsychic conditions (e.g. biological organs or psychological actuators such as motivations) can be better understood through a target and process analysis:
By describing, analysing and understanding targets and processes, the interconnections of psychic and somatic components can in principle be represented more completely than by a separate consideration of partial elements in psyche and soma. It is factually more comprehensive to ask “What does the psychic instance of the ego do?” than to ask “What does the psychic instance of the ego consist of?”, just as it is factually more comprehensive to ask “What does the adrenal cortex do?”
For example, thinking methods such as clustering can be used to capture interrelationships and cluster images can be used to clarify them.

Advantage 2
In the case of health impairments, a target- and process-oriented approach improves the treatment strategy.
The target- and process-oriented approach in the treatment of health impairments improves, among other things:

- the search for multi-causal and interconnected relationships, and
- the establishment of several complementary treatment approaches.

The statement "The patient was well adjusted by the drug xy" must be put into perspective when viewed from a target- and process-oriented perspective, as it suggests a monocausal approach. Through a target- and process-oriented way of thinking, the multicausality of somatopsychic processes (including disorders) can be specifically and differentiatedly considered. With this way of thinking, the treatment of somatopsychic impairments can be shorter, more successful and more sustainable than with a monocausal approach and thus prevent e.g. shifts of symptoms and migration of disorders.

Advantage 3
The influence on targets and processes enables the sustainable improvement of the somatopsychic system.
The target- and process-oriented approach systematically enriches strategies to improve the somatopsychic system. For example, a sporting performance can be improved through strength or speed exercises as well as through mental exercises (e.g. imaginative movements, imaginative achievement of targets or through motivational training).
A condensation of processes, for example by increasing behavioural safety (e.g. through improved training), through increased rhythmisation (e.g. of tension and relaxation) can improve resources (e.g. strengthen organs or grow synapses).

Advantage 4
Content and issues in an individual's life can be better described, analysed and understood. Contents and subject matters in an individual's life are components of somatopsychic processes. A beneficial influence on content and subject matters (e.g. through psychoeducation) can change somatopsychic processes or a beneficial influence on somatopsychic processes (e.g. through changed diet or changed sporting activities) has an effect on content and subject matters in the life of an individual.

Advantage 5
Somatopsychic research can be enriched.
An increased orientation towards targets and processes can create research ideas and helps to find functional relationships between processes instead of postulating structural monocausal relationships with little meaningful correlation results.

Advantage 6
An individual can understand themselves better.
Lay people often try to causally bring together adverse life situations, somatic complaints and unfavourable sensitivities and interpret them comprehensively. Occupational stress, mood swings and headaches are examples of this. The view practised by lay people will be able to be enriched by a systematically founded somatopsychic way of thinking in the scientific field.

By comparing the above-mentioned advantages and disadvantages, it becomes clear that a target- and process-oriented view can lead to a modified way of giving a diagnosis, selecting therapy procedures and to a different therapy outcome. However, a target and process orientation forces a better attention to therapy-relevant information, therefore the therapy results will basically be more positive and sustainable than without a target and process orientation.

2.7 Accommodation/assimilation and well-being

Assimilation and accommodation control the formation of experience. The results of experience formation in the three referential domains lead to experiencing one's own given or lacking effectiveness, to perceiving the contingencies for the experienced effectiveness or experienced ineffectiveness and perhaps also to explaining them in order to develop a corresponding competence opinion (Bandura, 1997; Echterhoff, 1992; Flammer, 1990, p. 78, Heinecke, 2009). Attributions and attribution errors determine the explanations. Experience formation is essentially influenced by experiencing effectiveness or ineffectiveness with the possible consequence of the illusion of control (Langer, 1975) or the possible consequences of helplessness and also hopelessness (Seligmann, 1980). In each referential domain, the results of experiential education can be salutogenic or pathogenic. In referential domain 1 (autopoietic and self-referential functions), dealing with oneself can be constructive or destructive. In referential domain 2 (empathic and social relations to externality), interaction with other people can be satisfactory or disturbing and can also involve the individual being supported or hindered by other people. In the referential domain 3 (references to nature and the structural-technical environment as externality), it can come to experiencing the physical world (and also one's own body) as beneficial or as threatening.

The somatopsychic targets determine which of the processes are activated. However, through reflection, supported by the development of appropriate skills in somatopsychic therapy, an individual can learn to better control the selection of certain somatopsychic targets.

Results including compromise formation in assimilation and accommodation processes can - in relation to somatopsychic targets - be successful or unsuccessful. If they are regularly and/or forcefully considered successful, this promotes somatopsychic health (well-being). If they are regularly and/or insistently considered unsuccessful, this can be the beginning of a pathogenic development (suffering).

The extent to which somatopsychic targets are evaluated as achieved or failed is determined by the degree of experienced effectiveness or the degree of experienced control.
Somatopsychic targets themselves can be weakened or strengthened depending on the degree to which they are achieved. Weakening is fundamentally associated with the possibility of pathogenic development.

3 Health from a somatopsychic perspective

3.1 Well-being

In order to determine disease-value impairments, this text first attempts to describe the health-value state of individuals. This procedure is intended to make it understandable that disease-value states are also target-oriented and how they can be distinguished from a health-value state.

The publications on health psychology known so far describe the professional status including selected existing experiences with guidance on measures of psychological health promotion (e.g. Bengel, 2009; Camic et al., 2004; Knoll et al., 2005; Stroebe & Stroebe, 1998; Renneberg & Hammelstein 2006; Schwarzer 1997).

Health is a state of well-being (see section A1.4.2, in the appendix). An individual can basically perceive the state of health as well-being itself. Experienced well-being can apparently prolong life, even if somatically defined impairments such as high blood pressure, risk from smoking and chronic disorders) are present (see also Bopp. et al., 2012). It senses in itself the ability to experience and act in its own thinking, feeling, acting and perception (Schmitz, De Rosa and Anderson, 2009), and it experiences life-historical identity, unity and coherence in its own emotional world and also in its body. This state characterises the well-being listed above, which is postulated for the state of health. Well-being results above all from the alternation of tension and relaxation to which Freud (1915/1969) referred as a basic pattern of psychological processes. This alternation is defined in the present work as one of the somatopsychic targets. Well-being arises from salutogenic (health-valuing) somatopsychic processes, mainly through positively experienced familiarity and being familiar, as well as through constructively dealing with the external and internal realities. Because of an individual's ability to reflect, the internal world (including one's own body) can also temporarily belong to externality. Being familiar with the external world and dealing with the external world in a purposeful way makes it possible to experience effects and to experience one's own effectiveness, so that constructive control beliefs can develop (see also Flammer, 1990, pp. 101-105). The ability to experience and act can show itself in regulation processes of experience formation as positively toned competence opinions (Heinecke, 2009), which in turn provide the basis for stabilising and also increasing well-being. Positive feelings about life are likely to lead one's life reliably and constructively, e.g. one is even likely to suffer fewer accidents (Williams, Hogan and Andersen, 1993).
The connection between the external and internal world is established, among other things, through perceptions. Perceptual processes begin with the formation of hypotheses about the perceptual offer. If the hypotheses are positive and constructive or at least coloured in this way, positive and constructive new things can be perceived. Experiencing something positive and constructive new leads to the release of dopamine (in the neurochemical well-being and reward system, see Ewert, 1998, p. 158). A positive mood ensured by a certain amount of serotonin requires a repeated release of dopamine in the well-being/reward system in order to maintain a neurochemical equilibrium with a positive effect on the state of mind in interaction with the punishment and fear systems (especially with the neurotransmitters cholecystokinin and acetylcholine) (Ewert, 1998, p. 158). Punishment or reward is manifested as tension or relaxation.

The observable autochthonous tension and autochthonous relaxation in the somatopsychic overall system require rhythms for which neurochemically each individual so-called real cell (internal clock of the eucytes) and centrally above all the suprachiasmatic nucleus (SCN) are responsible. The SCN regulates itself to a 24-hour rhythm primarily through visual information. Such a circadian rhythm with light-dark as well as waking and sleeping phases provides the basic pattern for somatopsychic processes. Other rhythms with tension and relaxation show up in the heart's activity, through movements of the body such as walking or in sexual processes. Music often targets at experiencing rhythms and also at moving in these rhythms. Changes in somatopsychic rhythms can have a pathological effect on somatopsychic processes (e.g. dyscardia/cardiac arrhythmia, menstrual disorders, sleep disorders with disturbances of EEG frequencies, disturbances of the respiratory rhythm).
This text postulates, among other things, that the alternation of tension and relaxation leads to well-being if they basically occur within a basic circadian pattern and are repeated regularly. The publications on health psychology known so far describe the professional status including selected existing experiences with guidance on measures of psychological health promotion (Bengel, 2009; Camic et al., 2004; Knoll et al., 2005; Stroebe & Stroebe, 1998; Renneberg & Hammelstein, 2006; Schwarzer, 1997). The understanding of health as described by Hurrelmann (1999, 2010) summarises the previous state of knowledge when he emphasises that in a state of health both the subjective and the objective factors (mental, physical, social domains) are or could be productively combined. The cohesion of the factors according to Hurrelmann (1999, 2010) apparently takes place through a state of experienced and/or recognisable harmony, which can also release creative forces in a person.
In the present text, this interplay is expanded and systematised more specifically than in Hurrelmann (1999, 2010) via the definition of the three referential domains and the control- psychological functions that control the interaction of the three referential domains. Health is to be understood, explained and influenced within the three referential domains of an individual. An individual can basically perceive the state of health as well-being itself.

In terms of control psychology, well-being is characterised by the ability to experience and act (Libertas Actionis, LA).

Eight sub-targets of somatopsychic health are defined, each of which is regarded in this text as a prerequisite for achieving or maintaining the state of "well-being": Being able to feel appetence within oneself, being able to experience dynamics, being able to experience calmness and balance, being able to recognise internality in oneself, being able to practise understanding experience, being able to experience wish fulfilment, being able to live systematically, being able to experience lightness and transparency within oneself. These sub-targets are achieved through constructive, positively coloured experience and action of the individual in the three referential domains. Constructive and positively coloured interaction generates the experience of self-efficacy in the internal and external domains.
For the state of somatopsychic health, the achievement of all eight targets to a determinable level is required. Until specific somatopsychic instruments are developed, other methods must be used to measure the degree of expression of a sub-target in an individual. Psychological, psychosomatic or neuropsychological tests that also measure positive manifestations of experience and action, e.g. the predominant absence of disruptive anger and disruptive behaviour, are suitable for this purpose.

Anxiety, absence of excessive tension, a sufficiently high level of conviction, being able to exercise sufficient control over oneself and over one's environment, feeling able to sufficiently understand and explain one's own life and the world, being sufficiently sociable and tolerable, having sufficient self-confidence, experiencing satisfactory openness to new experiences, experiencing sufficient coherence and harmony, having hope in the future, being sufficiently satisfied with life, recognising possibilities to shape one's own life satisfactorily.
Using the concept of eight sub-targets, it is possible to develop a new test for somato-mental health.

In the following, these eight important health-value sub-targets, which promote the achievement of the target "ability to experience and act" individually or in combination, are described. No hierarchical structure is assumed within these sub-targets. For a single individual, however, there can be different levels of importance of sub-targets in specific phases.

The achievement of a sub-target provides health-valued (salutogenic) resources and can occasionally or temporarily bring about a state of health, perceptible through well-being, in an individual in this area. If sustained, these resources can be considered as resilience.

If all sub-targets have been achieved in a stable manner, i.e. the corresponding resilience is present, a state of health is given overall or can be produced again and again autochthonously. The state of the disease also develops through target-oriented processes.

The verbal designations developed for the salutogenic targets/sub-targets from Latin (as a dead language) serve to use terms that are not subject to change in a living language. The following are the sub-targets for the target "Well-being **(ability to experience and act), Libertas Actionis, LA".**

Sub-target 1
Be able to feel appetence within oneself: Being motivated and able to find something interesting in oneself (in the internality, referential domain 1) and in the environment (in the externality, referential domains 2 and 3); lively, interested striving for one's own connection to the world and for many possible appearances is desired.
Technical term: Appetentia Rerum Agilis (ARA)

Sub-target 2
Being able to experience dynamics: To be able to feel power within oneself and use it in a targeted way. Being able to experience a feeling of vitality, awareness of one's own power.
Technical term: Conscientia Virium (COV)

Sub-target 3
Being able to experience calm and balance: To be able to let confidence and equanimity arise from within oneself, to be able to experience peace and balance.
Technical term: Animus Aequus (ANA)

Sub-target 4
Being able to recognise internality in oneself: To be able to experience again and again that feelings can constantly generate themselves anew. To be able to live from within, to practise feeling for the life within.
Technical term: Sensus Vitae Interioris (SVI)

Sub-target 5
Being able to practise understanding experience: Being able to experience and understand oneself and the world to a satisfactory extent, being able to practise cultivated understanding of life, being able to practise understanding of oneself and understanding of the world.
Technical term: Intellectus Sui et Peritia Rerum (ISP)

Sub-target 6
Being able to experience wish fulfilment: The existing competences are experienced as sufficient to be able to fulfil important wishes largely without conflict; to be able to generate and experience pleasant wish fulfilment and fulfilled expectation.
Technical term: Vota Expleta (VEX)

Sub-target 7
Systematics can live: Behaviour exhibits continuity or undergoes change that is experienced as coherent, systematics and experienced coherence in behaviour, behaviour consists of a harmonious system that is in harmony with itself.
Technical term: Ordo Sibi Constans (OSC)

Sub-target 8
Being able to experience lightness and transparency in oneself: One's own behaviour is experienced as light and transparent in self-perception.
Technical term: Facilitas Et Perspicuitas (FEP)

These eight sub-targets allow for a comprehensive description of the construct "well-being", without this list representing an exhaustive catalogue. Once the sub-targets are achieved, they represent components of health. Sometimes well-being is impaired without a disorder being present, because an individual can basically free himself from mental impairments through his own volition (Heckhausen, 1989), if and/or external conditions change or he/she believes these can be changed. Sometimes the assessment as impairment only results from the social and cultural value framework, e.g. if an individual does not want to comply with a social demand, mental impairment of well-being may occur. In such a case, there is basically no mental impairment worthy of illness, although a disorder can arise from such a (prodromal) condition. In this context, it can be helpful to consider the work results of Hennig (1998) on psychoneuroimmunology.

Figure 11 shows the relationship in simplified form.

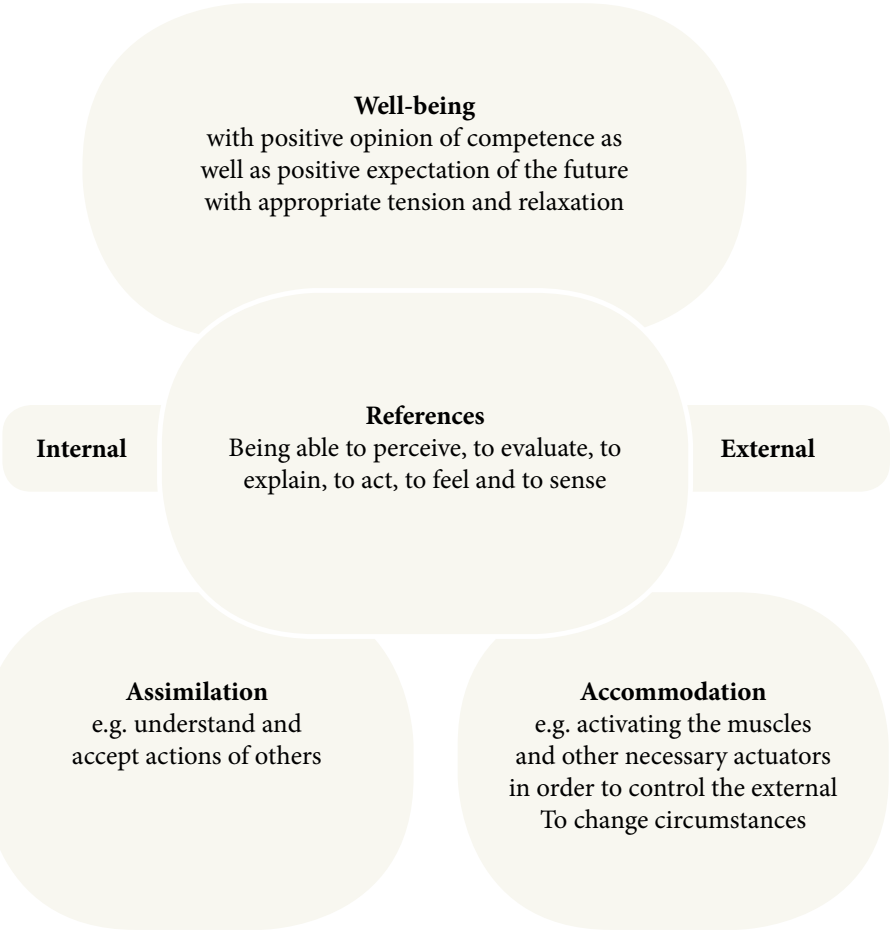

Fig. 11: Postulated prerequisites for well-being as an indicator of somatopsychic health

3.2 Maintaining well-being

3.2.1 Basic model for the maintenance of well-being

The prerequisites and resources for healthy behaviour are created early in life. Apart from favourable conditions during pregnancy and the birth process, constructive referential psychological experiences of a young individual are necessary for later healthy behaviour. At a young age, constructive interaction with oneself, with the social and material environment can be learned and successfully practised to strengthen the somatopsychic actuators. This leads to behavioural dispositions that are expressed in both favourable somatic and psychological resources (e.g. strengthening or multiplication of synapses, facilitated activation of positively acting messenger substances, strengthening of organs, of bone tissue, of muscles, experiencing effects and successes, strengthening of positive expectations, expansion of a constructive behavioural toolkit).

References in the three referential domains are constructive,

- if they can be integrated into already existing somatopsychic processes,
- if they can be positively assessed somatopsychically,
- if the explanations that emerge for this make it possible for the individual to experience his or her own effectiveness and thus positively support the competence opinion,
- when actional possibilities have been practised or can be used.

If assimilations and accommodations succeed in this sense, reward and thus well-being arise.

Appropriate internal and external conditions are part of the construction and maintenance of psychological well-being. Internal conditions concern the Somatopsychic of an individual, external conditions are in the environment of the individual: the sequence of accommodation and assimilation processes always leads to constructive results in such a case. Prerequisites for leading to constructive results - also in the case of illness - are above all:

1. A positive competence opinion (Heinecke, 2009) about one's own experience and actions, i.e. including bodily functions and actional possibilities within one's own environment and
2. a positive mood towards life and a positive expectation of the future (Rogner, Frey and Havemann, 1985) with regard to one's own experience and actions, i.e. including bodily functions and actional possibilities within one's own environment.

Well-being can also promote the further development of one's own resources, the activation of resilience and the strengthening of resilience. The insights and suggestions from positive psychology can be used for this development. The target of positive psychology is "to explore and cultivate what makes life most worth living" (Ruch and Proyer, 2011, p. 61). According to Ruch and Proyer (2011, p. 68), positive interventions can lead to the expression or strengthening of 24 virtues, which can be grouped into six character strengths, two of which are mentioned below.

For example, Ruch and Proyer (2011, p. 64) write:
"Virtue 1 Wisdom and Knowledge (cognitive strengths involving the acquisition and use of knowledge)" is subdivided as follows:
Creativity: finding new and effective ways of doing things
Curiosity: having an interest in the environment
Judgement and open-mindedness: thinking things through and looking at them from all sides
Love of learning: learning new techniques and acquiring knowledge
Foresight: being able to give good advice. ...

Virtue 6: Transcendence (strengths that bring us closer to a higher power and create meaning) is structured as follows:
Sense of beauty and excellence: valuing beauty in all areas of life
Gratitude: being aware of and appreciating good things
Hope (optimism): expecting the best and working to achieve it
Humour: appreciating laughter and humour, enjoying making people laugh
Religiosity and spirituality: having coherent beliefs about a higher meaning of life.

Ruch and Proyer (2011, p. 66ff) report on empirical studies that partly prove the effectiveness of corresponding behaviours.

Successful accommodation and successful assimilation make it possible to maintain well-being. Accommodation and assimilation are successful when the references “being able to perceive, evaluate, explain, act, feel and sense” are possible in the internal and external areas and lead to the development of a positive opinion of competence and a positive expectation of the future with appropriate tension and relaxation. For a comprehensive state of somatopsychic health, the presence of all eight components to a determinable degree is required.

Successful accommodation and successful assimilation positively bind the individual to the internal and external world. This means, for example, that it may well be more important for well-being to have positive feelings towards another person than to be liked oneself. People, animals, the plant world and all of nature can also be objects of affection resulting in well-being. From the results of “happiness research”, the studies on “subjective well-being” (see e.g. Diener, 2009) or from loneliness research (Weiss, 1975) it becomes clear that loving other people is more important than being loved oneself. This state can be achieved if the components of well-being listed in this text are present. For the state of well-being, being “emotionally fed” by other people or having life made easier with the help of material goods are only conducive, but not necessary conditions.
The state of somatopsychic health should enable an individual to behave as follows: To live affection, love or enthusiasm for one (or even several) people, for other living beings or for a cause and to experience the successful assimilation and accommodation thus achieved as transparent and positive for oneself. If an individual behaves in this way, it strengthens and differentiates the state of well-being, so that this target becomes increasingly important. Experiencing a flow (Keller & Landhäußer, 2011) as a fit between demands and abilities is likely to be more possible in the state of well-being than outside the state of well-being. A flow state and also the feeling of coherence (Antonovsky, 1997) can also strengthen the somatopsychic target of “well-being”.

Control-psychological well-founded recommendations for maintaining well-being can be found in Martens & Kuhl (2009).

The stable achievement of the health-value/salutogenic sub-targets represents the systematic prerequisite for the stable achievement of the state of “well-being” or “health”.

3.2.2 Compromised salutogenic regulations

Emotional relief in connection with shifted control options is offered by retreating to earlier proven behaviour (regression), by switching to alternative control options (instead of controlling one’s own limitations in referent domain 1, mainly controlling referent domain 2) and by reducing the scope of control options (in the sense of “it’s all in the hands of someone more powerful”).
A shift of control (e.g. over one’s own partner) may not help to achieve the actual target and may lead to relieving consequences, but also to other burdens (e.g. turning away from the partner). The shifting of control can also be described as compensatory control.

Fritsche, Jonas and Frey (2006, p. 91) write about such shifts in control: “In a general model of the maintenance of generalised control expectations in life situations with limited control possibilities (e.g. in cancer patients), Thompson (1993) emphasises that persons strive to increase their control expectations within a certain reality framework by making use of the high flexibility in the assessment of personal control possibilities. This flexibility is based, on the one hand, on the often ambiguous and probabilistic nature of control perceptions and, on the other hand, on the fact that persons in control-reduced life situations can strive for and gain compensatory control in areas of life not affected by the primary loss of control (e.g. the progression of an illness, e.g. control in the partnership).”

Occasionally, compromise salutogenic regulations can be temporarily used therapeutically, for example, when after an extreme experience a child is emotionally relieved by being able to play something that protects him or her, such as living in a “cave”. The transfer of control (trust) to close people or even the solution of some daily problems by the practitioner during a serious illness can also have a salutogenic effect. However, salutogenic regulations that involve compromise should be reduced in time so that they do not become a habit.

Disorders often carry salutogenic and at the same time compromising regulatory potential. This is shown in chapter 7 and section 9.7 using the example of the symptoms of psychotrauma.

3.3 Impairment of well-being after compromise formation or after disorders of assimilation and accommodation

Assimilation and accommodation always interact between the referential domains of the external environment (object reference) and the internal environment (self reference). The functions are shown in Figure 12. As soon as, for example, assimilation becomes too weak or too strong, impairments of well-being can occur. The same applies to the strength of the object reference (“losing oneself in something”) or the self reference (“egomania”, “narcissism”). Weak accommodation can be an expression of incipient helplessness. If one considers assimilation and accommodation in a somatopsychic context, different results for the somatopsychic system result from different strengths of the effects of assimilation/accommodation and object/self-reference, especially with regard to the controls by the well-being/reward or fear/punishment system. Depending on the outcome, assimilation or accommodation can lead to pleasant or unpleasant consequences in the reward or punishment system. Particularly permanently disturbed or unsuccessful assimilations or accommodations can lead to punishment, thus to anxiety and to a pathological state. Experiential education with experienced destructive results can thus cause a somatopsychic illness, which can be laid out, for example, in a new initial phase of prodromal behaviour.
Internal and external domains cannot generally be made fully compatible through assimilation and accommodation. Only in a state of strong illusion formation, such as in a state of intense infatuation or intoxication, can this complete compatibility be approximately experienced. Complete compatibility would presuppose that specific competencies of an individual would not be needed, i.e. that the positive experience of one’s own efficacy could not occur at all.

Fig. 12: Assimilation and accommodation in the somatopsychic context (postulate)

Explanation:
The connection is three-dimensional:
Assimilation and accommodation are at an angle to each other on a plane.
The dimension “object reference-self reference” is at an angle to the above-mentioned plane.

Normally, assimilation and accommodation lead to compromises or also to disruptions in the interaction of internal and external referential domains and thus in behaviour. In Freud’s sense (1923/1940), the ego is the “loser” because it must fundamentally compromise in its dealings with the external world. Compromise formations (including pathogenic states) need not be pathogenic with appropriate self-management, as soon as the desired or necessary behavioural possibilities of the individual are given. The experience of compromise formation can promote developments for optimising behaviour (learning or experience formation).

4 Somatopsychic nosology

4.1 Suffering

Well-being as a state of health finds its alternative in the state of illness in suffering. Suffering consists primarily in the fact that somatopsychic impairments are experienced and can be named. The individual is in a state of anxiety and fails to achieve targets because of the limitations. As a postulate in the professional system described here, the following can be formulated: Somatopsychic disorders are - according to the concept of this text - the result of failed assimilation and accommodation (see Figure 13).

Outside the circle:
Disease-value areas

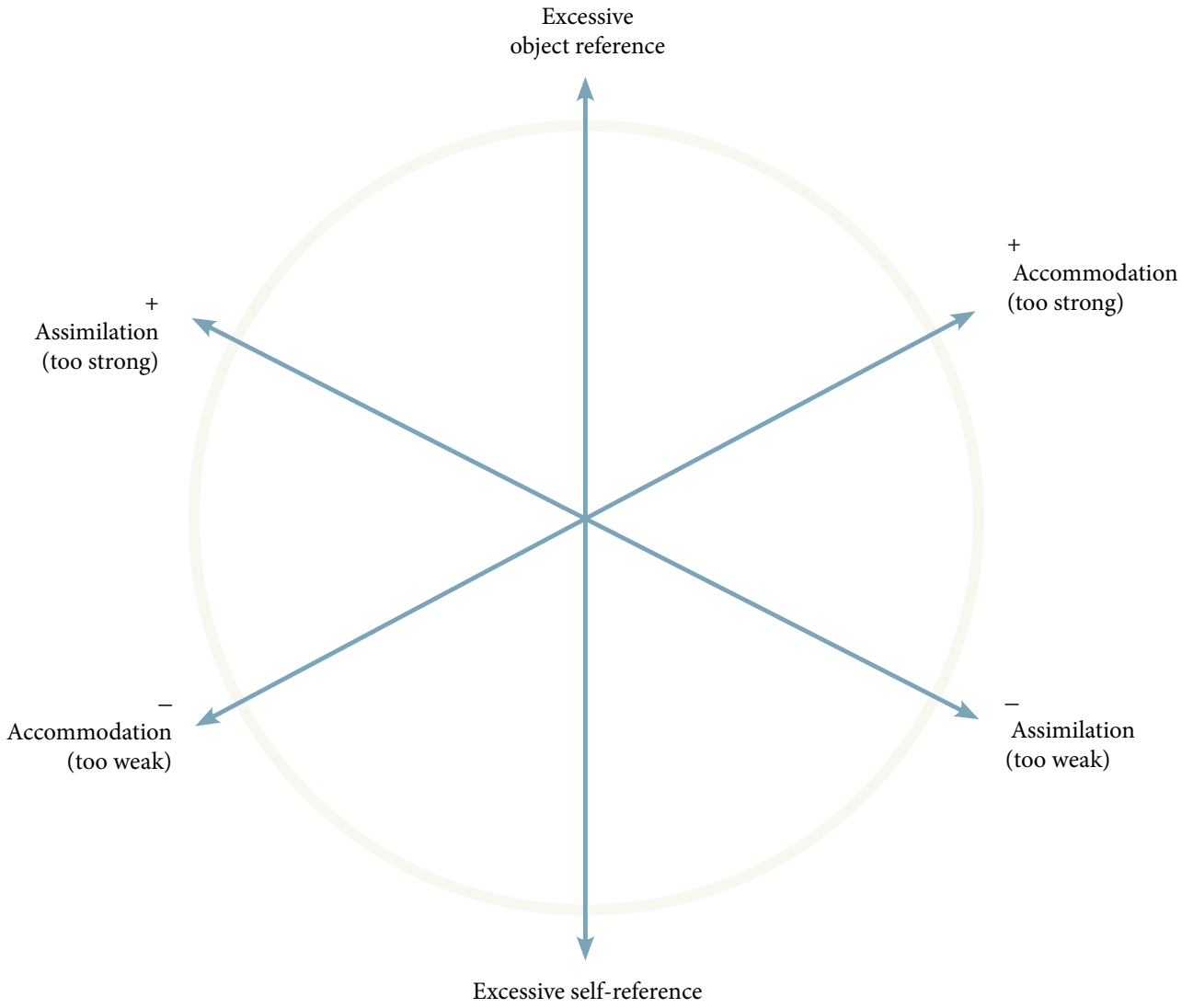

Fig. 13: Somatopsychic illnesses as a state of failed assimilation and accommodation (postulate)

Explanation: Outside the circle are somatopsychic areas worthy of illness,
e.g. in the case of too much self-reference, too much assimilation.

If such a condition persists, especially if the somatopsychic self-healing powers are not sufficient, a curative measure is necessary.

Mental impairments are pathological if the individual affected by them cannot free himself from this state of suffering through his own volition (Heckhausen, 1989) or other autochthonous impulses (e.g. from the field of resilience). Disorders require treatment when the necessary individual self-healing powers (e.g. resources) are not sufficient. Disorders can be objectified above all by expressed complaints of the individual, by observable or measurable symptoms and by habitual situations or adaptations with destructive references of the individual.

After the somatopsychic state of suffering has arisen - primarily through sustained failure of constructive accommodation and assimilation processes and the processes of experiencing one's own efficacy - anxiety represents a target of somatopsychic processes. In the somatopsychic sense, a health disorder is a target that the somatopsychic processes can strive for. Thus, an overarching process emerges by which this target of the disorder is to be achieved again and again. The achievement of the overarching target of "anxiety" (technical term angor, AN) is served by the fulfilment of sub-targets, each of which, or in combination, results in different somatopsychic disorders. Anxiety belongs to all somatopsychic disorders.

Important suffering-oriented somatopsychic sub-targets are listed below.
These partial targets support the achievement of the target "suffering" and are therefore pathogenic. Accordingly, somatopsychic processes are controlled in such a way that the partial target is achieved as far as possible. The achievement of a partial target produces pathogenic impairments. If they persist, these impairments can be regarded as disorders.
The achievement of a single sub-target may occasionally and temporarily cause a state of illness, perceptible through suffering, in an individual in this field.

In terms of control psychology, suffering is characterised by anxiety (Angor, AN). Based on the concept of the present text, the sub-targets are formulated as postulates.

Sub-target 1
Constantly having to practice avoidance against one's own targets: Having to ignore or avoid internal and external events (e.g. events, cognitions, emotional states), preparing avoidance out of fear.
Technical term: Contentio Anxie Evitandi (CAE)

Sub-target 2
Having to constantly stay in disorganisation: Having to experience agony and a violent state of torment, disregarding actually existing contingencies in internal and external events.
Technical term: Cruciatus Vehemens (CRV)

Sub-target 3
Having to exercise combative defence as a principle of precaution: having to defend oneself against perceived dangers, long-lasting destructive unrest.
Technical term: Perturbatio Delens Pertinax (PDP)

Sub-target 4
Having to cover up one's own internality: creating/seeking out excessive external influences, e.g. through intoxication: having to counteract externality with something better in one's own internality, having to practice substitutes for life in the referential domains 2 and 3.
Technical term: Compensatio Vitae (CPV)

Sub-target 5
Constantly having to face imminent annihilation: Having to expect the termination of important contingencies, internally conditioned state of threat that befalls one alone - not together with others, sole fear of imminent annihilation.
Technical term: Interitus Imminens Dissors (IID)

Sub-target 6
Forcing external events to happen: Acting against the given external contingencies by destroying and replacing expected processes.
Technical term: Compensatio Delens (COD)

Sub-target 7
Have to practise dynamic unrelatedness: Having to experience and act detached from the given external contingencies.
Technical term: Licentia Irreverens (LII)

Sub-target 8
Having to be constantly under emotional burden and in emotional darkness: To fear or have suffered heavy losses, in the two emotionally important perceived, the two external referential domains (- especially in the social field -) to feel immobile and incapable of action, to have to experience the state of a gloomy burden, a black substance dwelling in a dark hole.
Technical term: Onus Atrum (ONA)

These eight sub-targets allow for a comprehensive description of the construct of suffering, without this list representing an exhaustive catalogue. No hierarchical order is made within these sub-targets.

In the state of somatopsychic illness, there is usually a reduction of behaviour to the demanding fulfilment of one's own needs and usually a withdrawal to oneself. At the same time, one's own somatopsychic health is often experienced as being at risk, e.g. in the form of somatisation disorders.

Sub-targets can influence each other, so that the disease may change. However, suffering as a target remains. Disorders can fluctuate, nomadise; in psychoanalysis a change of a disturbance pattern (e.g. symptom shift), in special cases called conversion disorder (Freud, 1895/1969); in the ICD-10 this appears, among others, as somatisation disorder (F45.0).
For a single individual, however, there can be different levels of importance of sub-targets in specific phases. The disorders that can be described by sub-targets may develop different phases in which a different sub-target temporarily dominates. Therefore, each of these phases may require a change of treatment methods and procedures.

4.2 The psyche-soma entity in empirical health research

4.2.1 Criteria for the selection of the empirical studies evaluated

The regular treatment of somatopsychic topics has a long tradition, as the history of the periodical "Psychosomatic Medicine" alone shows. In 1939, Franz Alexander wrote the text "Psychological Aspects of Medicine", in which he attributes a positive influence to psychoanalysis on the attention paid to somatopsychic issues: "The main contribution of psychoanalysis to medicine was to add to the optical microscope a psychological microscope, a psychological technique by which the emotional life of the patients can be subjected to a detailed scrutiny" (Alexander, 1939, p.18). Decades later, pleas were still being made again and again in this journal - partly on the basis of individual case descriptions - to include the psychological realm in the consideration and treatment of somatic disorders (e.g. Berblinger and Greenhill, 1954; Ehrentheil, 1959; Bertalanffy, 1964; Graham, 1967). Gradually, more somatopsychic studies on samples (mostly casual samples) were published, from whose results correlations between soma and psyche should be discernible. All articles in the journal "Psychosomatic Medicine" were examined to see to what extent they could contribute to the understanding of the relationship between soma and psyche on an empirical basis. The methodological selection criteria had to be set very weakly, as otherwise hardly a single publication could have been included in the selection - measured against the research standards that have long been customary in psychology. However, it is worthwhile for hypothesis formations or for the further development of hypotheses to sift through the topics dealt with and the associated results or result conjectures. In the following, statements from the selected articles are presented in order of the basic somatopsychic processes described above. The sometimes imprecisely presented concerns of the studies do not always allow for a reliable assignment to the somatopsychic basic processes. Overall, however, the yield was disappointing.
The complete evaluation of the journal articles is available in the internet version of this text as supplementary chapter E.

4.2.2 Summary evaluation of the results from the selected articles in the journal "Psychosomatic Medicine"

In the early years of the journal "Psychosomatic Medicine" (volume 1 in 1939), the articles were often psychoanalytically influenced and thus pursued a theory-based somatopsychic approach. The already low proportion of psychoanalytic texts with empirically based data material decreased, with the consequence that the proportion of theory-guided research approaches was hardly recognisable in the further volumes of the journal.
Of course, the evaluated articles cannot be clearly assigned to a single somatopsychic basic process. However, it is noticeable that the basic processes of "maturing and growing", "moving" and "experience formation" were only numerically very weakly dealt with in the articles of the journal "Psychosomatic Medicine". This can certainly be explained above all by the clinically oriented view - i.e. with a focus on the outcome of a disease-value development - of the authors. Of course, these three basic processes with a low number of participants contain enough potential for disease-value developments.
In relatively many medically dominated contributions, the psychological tests served as a supplement in order not to miss psychological aspects or to find biological characteristics that could replace the psychological variables. Theoretical concepts are lacking, therefore

sometimes test batteries are compiled that are administered by “experienced clinicians”. Conceptually important, however, is a theory-guided procedure, especially forming hypotheses within a professional concept (e.g. theory or construct) that have to go through the process of refutation (Popper 1935,1993). Research-logically correct procedures are often missed, as they are demanded in all basic subjects, but frequently disregarded in the applied field, as they are apparently unknown or judged to be inconvenient. Numerically dominant are contributions in which individuals are to be understood mainly through their disorder. This leads to mainly retrospective analyses or interpretations. This approach is logically unsuitable for the discovery of causal relationships between soma and psyche. The vast majority of studies delivered at best correlational results (without explanatory possibilities), quantitatively localised conspicuousness about correlations (without proof of significance or without the possibility of making statements about ranges of results) or inferentially statistically insufficiently controlled (e.g. without alpha adjustment and without control of the inferential statistical independence of the characteristics) multivariate analyses from occasional studies with a professionally uncoordinated test selection (without the possibility of generalisation). Retrospective studies dominate in terms of numbers and often come to trivial results, such as that people after or with a life-threatening illness show a higher anxiety burden than people who do not have the illness. Prospective studies with a hypothesis-driven approach and randomised study design were rarely found: Basic and actually quite simple requirements for empirically correct procedures were often clearly disregarded. Despite a pre-selection, almost all evaluated contributions suffer from methodological and procedural deficiencies. If research-logically correct criteria had been taken into account, the majority of the cited studies would not have been carried out or published. The demands made on medicine in recent years for evidence-oriented research or evidence-based professional results (see chapter 14) were long overdue, since research in biology or psychology, for example, was traditionally empirical and hypothesis-driven. However, there have been research-logically useful studies in the journal Psychosomatic Medicine. For example, Benedek et al. reported on a useful hypothesis-driven approach as early as 1939, which was taken up again in studies by Silbergeld, Brast and Noble (1971).

Unfortunately, the overall picture shows that a lot of data is presented, but hardly any insights are developed.

It is necessary to develop theories and constructs that define relevant parameters in order to build appropriate prospective studies on them (Scheier and Bridges, 1995). Following a meta-analysis of coronary heart disease and HIV-related illnesses, these two authors describe a psychosomatic model that helps to explain the genesis of disorders. Scheier and Bridges name “Anger and Hostility”, “Emotional Suppression”, “Depression”, “Pessimism and Fatalism” as disease- oriented variables.

They write:

“ ... persuasive evidence exists associating hostility and anger to a variety of CHD-related health outcomes. Indeed, the evidence is stronger for this particular connection than for any other connection that was examined.

The evidence involving depression, fatalism, and pessimism is more impressive. As a group, these variables clearly showed the widest effects of any of the variables surveyed. Merging these variables with fighting spirit, active coping, and vital exhaustion into a ‘disengagement cluster’ . . . yields even a wider set of effects.” (S. 263)

According to this meta-analysis, Scheier and Bridges understand the recorded disorders as "disrupters of life targets and activities" and schematise the associated logic in Figure 14 below.

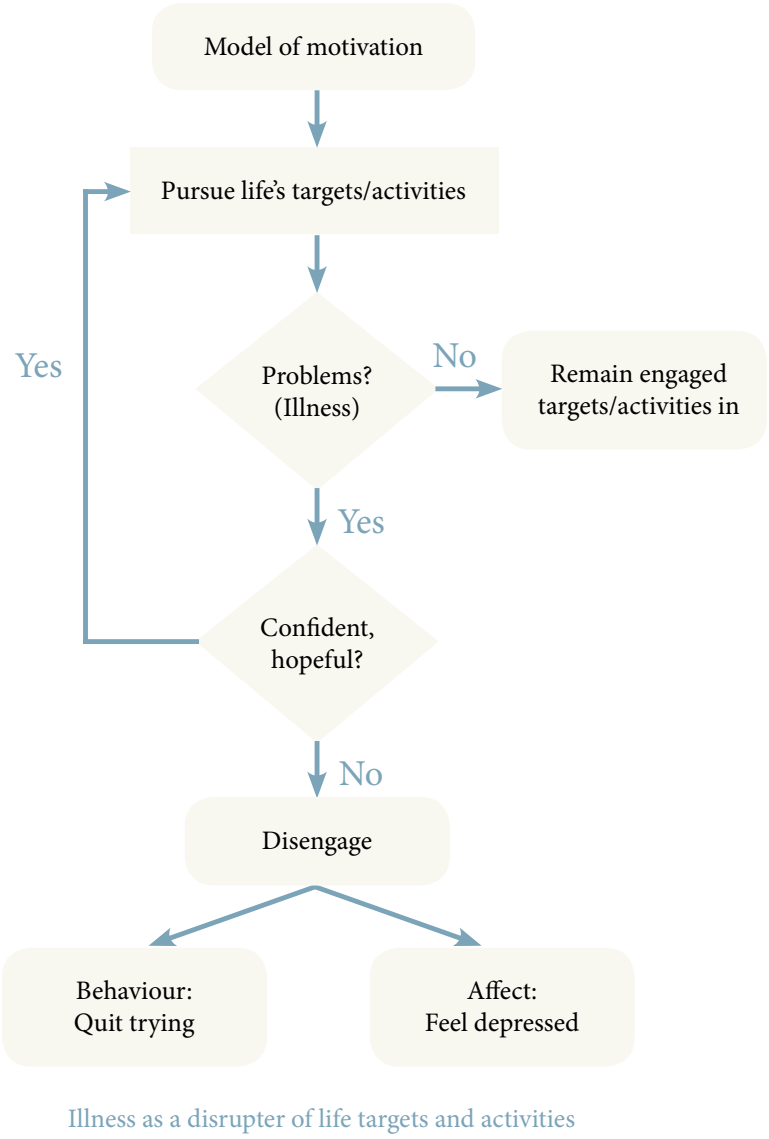

Fig. 14: "Disengagement" (disengaging from previous life) as a consequence of loss of confidence or hope (from Scheier and Bridges, 1995, p. 261).

Unfortunately, the volumes of the journal evaluated hardly contain any other impulses comparable to this one.

The disengagement approach of Scheier and Bridges (1995) can formally be seen as the starting point of hypothesis-guided somatopsychic research. In terms of content, the concepts from Scheier's working group are closely related to motivation-oriented and control psychology topics in health psychology (e.g. Bandura, 1997; Lazarus, 1966; Lehr, 1982; Scheier and Carver, 1985; O'Leary, 1985; Schwarzer, 1994, 2002; and the corresponding compilations in the textbooks by Jerusalem and Weber, 2003; Schwarzer, 2004; Faltermeier, 2005; Hurrelmann, 1999, 2010).

4.3 Systematics of somatopsychic disorders

The sub-targets for well-being are contrasted in Figure 15 with the respective disease-value sub-alteratives that lie in the area of suffering. Within the domain of suffering, somatopsychic disorders are given a new nomenclature. Figure 15 contains and describes the allocation of salutological characteristics to pathological characteristics on an axiomatic basis (see also Chapter A1).

The components of somatopsychic health and illness are understood as partial targets of somatopsychic life. In the treatment of illness, the pathogenic targets are to be weakened and best replaced by salutogenic targets. The state of somatopsychic illness may contain the following eight components (or a subset thereof): Constantly having to practice avoidance against one's own targets, constantly having to stay in disorganisation, having to practice combative defence as a principle of precaution, having to cover up one's own internality, constantly having to face imminent annihilation, having to force external events, having to practice dynamic unrelatedness, constantly being under emotional burden and in emotional darkness.

The achievement of these pathogenic sub-targets or the path towards them can be seen above all in the somatic restrictions, stressful experiences and restricted or even destructive actions (so-called dysfunctional behaviour) of the individual in the three referential domains. This pathogenic interaction produces the experience of insufficient or missing self-efficacy in the internal and external domains and leads to a state of passivity, helplessness or hopelessness with the possibility of an inappropriate compensation of these limitations, e.g. a reduction of behaviour to an exaggerated fulfilment of one's own needs and mostly a withdrawal to oneself.

In the state of somatopsychic illness, sub-targets are active up to a definable level. Until specific somatopsychic instruments are developed, other methods must be used to measure the degree of expression of a sub-target in an individual. Psychological, psychosomatic or neuropsychological tests or measuring instruments that measure pathogenic manifestations of experience and action are suitable for this purpose, e.g. somatic dysfunction, disturbing anger and anxiety, excessive tension, a lack of conviction of being able to exercise sufficient control over oneself and one's environment, feeling unable to adequately understand and explain one's own life and the world, disturbing sociability and agreeableness, limiting self-confidence, being closed off to new experiences, experiencing little or no coherence and harmony, having little or no hope for the future, being dissatisfied with life in a stressful way, hardly recognising any possibilities to shape one's own life in a satisfactory way. With the help of the concept of the eight sub-targets, it is possible in the long term to develop a new test for somato-psychological illness.

In the area of suffering, fear dominates, which fundamentally belongs to all disorders or to the clinical picture. In order to avoid the shifts in meaning of living languages, the individual sub-targets are given designations from the Latin language.
Anxiety is usually associated with stressful ideas in different sensory areas and problematic issues. Such anxiety content often allows a conclusion to be drawn about the cause of the anxiety.

	Well-being: Health	Alternative: Suffering
	Belongs to the well-being/reward system	Belongs to the fear/punishment system
	Target: Ability to experience and act	Target: Fear
	Libertas Actionis (LA)	Angor (AN)
	Behavioural Freedom	Anxiety Tightness, shortness of breath, crying
	Important resources or resilience as sub-targets (1 to 8)	**Important impairments or disturbances as sub-targets (1 to 8)**
1	Be able to practise appetence	The alternative: having to practice constant avoidance against one's own targets
	Being motivated and able to find something interesting in oneself and in the environment	Having to ignore or avoid internal and external events (in referential domains 1, 2 and 3 e.g. events, cognitions, emotional states), preparing avoidance out of fear.
	Name of the salutogenic sub-target: Appetentia Rerum Agilis (ARA)	The name of the corresponding disorder: Contentio Anxie Evitandi (CAE)
	Eager Curiosity/Eagerness Lively, interested striving for one's own connection to the world and for many things that seem possible.	Anxious Avoidance Avoidance due to fear, preparation of avoidance due to fear, escape impulses
		Description
		e.g. specific phobias

2 Being able to experience dynamics

Feel the power within and be able to use it in a targeted way:

Name of the salutogenic sub-target: Conscientia Virium (COV)

Sense (Experience) of vitality
Feeling of vitality, awareness of own power

The alternative: Having to constantly be in disorganisation

Being attacked in agony and having to experience a violent state of agony, disregarding actually existing contingencies in internal (referential domain 1) and external events (referential domain 3).

The name of the corresponding disorder: Cruciatus Vehemens (CRV).

Feeling of Assault and Agitation
Being attacked in agony, violent state of torment

Description

Examples: Shock of life, rigidity, destructive agitation, dissociative disorders, acute stress reaction and posttraumatic stress disorder (psychotrauma).

3 Be able to experience peace and balance

Being able to let confidence arise from within oneself

Name of the salutogenic sub-target: Animus Aequus (ANA)

Equanimity

The alternative: having to exercise combative defence as a precautionary measure

Having to defend against perceived threats from referential domains 2 and 3, long-lasting destructive disorder

The name of the corresponding disorder: Perturbatio Delens Pertinax (PDP).

Persisting destructive unrest

Description

Examples: Long-lasting panic attacks, feeling torn, aggression, borderline.

4

Be able to practice internality

Experiencing again and again that feelings can constantly recreate themselves

Designation of the salutogenic sub-target: Sensus Vitae Interioris (SVI)

Experience of internal vitality
Life from within, feeling for the life within

The alternative: having to cover up one's own internality by creating/seeking out excessive external influences, e.g. with intoxication.

In one's own internality (referential domain 1) having to contrast externality with something better in order to find a substitute for life in referential domains 2 and 3

The name of the corresponding disorder: Compensatio Vitae (CPV)

Compensatory external/somatic vitality substitute for life

Description

Examples: Psychoform[1] disorders caused by substances and by somatic changes

5

Being able to practise understanding experience

To be able to experience and understand oneself and the world to a satisfactory extent.

Name of the salutogenic sub-target: Intellectus Sui et Peritia Rerum (ISP)

Comprehensive Experience of Self and Reality
Cultivated understanding of life, understanding of oneself and understanding of the world

The alternative: constantly having to face imminent annihilation

Expecting the termination of important contingencies, internally conditioned state of being threatened alone - not together with others, sole fear of imminent annihilation from the referential domain 2

The name of the corresponding disorder: Interitus Imminens Dissors (IID).

Fear of imminent Extinction/Annihilation
Internal conditional threat (alone, not together with others), sole fear of imminent destruction

Description

Examples: Schizophrenia, paranoid disorders (endogenously and exogenously caused).

6

Being able to practise pleasant wish fulfilment

The existing competences are experienced as sufficient to be able to fulfil important wishes largely without conflict.

Name of the salutogenic sub-target: Vota Expleta (VEX)

Wish Fulfilment (Achievement)
Fulfilled Expectation

The alternative: forcing external events to happen

Act against the given external contingencies by destroying and replacing expected processes in referential domains 2 and 3.

The name of the corresponding disorder: Compensatio Delens (COD)

Destructive Compensation Destructive Replacement

Description

Examples: Adjustment disorder, sociopathy, negation of facts, somatoform disorders, aggression.

7

Being able to create and experience systematics and Behaviour shows continuity or undergoes a change that is

experienced as coherent

Name of the salutogenic sub-target: Ordo Sibi Constans (OSC)

Behavioural Coherence and Harmony
Harmoniously structured system, system in harmony with itself

The alternative: having to practise dynamic unrelatedness

Have to experience and act detached from the given external contingencies

The name of the corresponding disorder: Licentia Irreverens (LII)

Obsessive detached Freedom
Smooth freedom, demanded unboundedness

Description

Examples: Histrionic behaviour, Manic, Hypomanic disorder, Narcissistic personality disorder.

8

Being able to experience lightness and transparency within oneself

The self-perception of one's own behaviour is experienced as easy and transparent.

Name of the salutogenic sub-target: Facilitas Et Perspicuitas (FEP)

Sense of Ease and Transparency

Lightness and Transparency

The alternative: having to be constantly under emotional burden and in emotional darkness

Have to fear heavy losses in the two emotionally important perceived, the two external referential domains - especially in the social field, and /or have suffered, feel immobile and unable to act there, have to experience the state of a gloomy burden, a black filling, a stay in a dark hole

The name of the corresponding disorder: Onus Atrum (ONA)

Burdened Somberness Gloomy load, black filling

Description

Examples: Depression (endogenous and exogenous)

Fig. 15: Suffering (illness) with definition of impairments/disorders in contrast to well-being (health) with definition of resources/resilience

[1] Psychoform impairments or disorders of experience or other mental functions can be caused by somatically induced effects, e.g. produced by alcohol, drugs or medication, but also by injuries or other physical losses.

The fear content can also indicate a faulty attribution such as with the statement “All people are bad” or through the misjudgement of contingencies such as “Now I will lose my job”. If a specific fear contingency is missing, this may have occurred through an overwhelming multitude of experiences or through denial or repression. Specification of fear (AS) occurs through content-related or thematic expansion of fear, e.g. through the inclusion of new triggers or through the emergence of anticipatory fears. Compensation and further processing of anxiety (AW) occur, among other things, through negation and denial of anxiety, through certain accentuations of the personality, such as acting and reacting without specific attention to the situation, aggression, reduced empathy, excessive and socially destructive striving for power, through the use of psychotropic substances and through withdrawal, as well as through depression as psychoform transformations.
An associated somatoform compensation is known as cardiovascular complaints, gastrointestinal disorders or neck-shoulder pain and also back pain, among others. For clarification, the AS and AW disorders in the list below are assigned some F diagnoses of the ICD-10.

The ICD-10 and DSM IV classification systems developed historically. This has led to inconsistencies or contradictions within a single classification system as well as in the comparison of both systems (e.g. in the definition and description of acute stress disorder (308.3 in DSM IV) or acute stress reaction (F43.0 in ICD-10) and also in posttraumatic stress disorder (F43.1 in ICD-10 and 309.81 in DSM IV). The following disorder system targets to be internally consistent, so that it is difficult to reconcile this new order with the existing orders of the ICD-10 or the DSM-IV. The disorders already mentioned above are described in detail below.

Disturbance group AS
Disorders with specification of anxiety can hypothetically be classified as follows (points 1 to 3):

1 Contentio Anxie Evitandi (CAE)
Avoidance because of fear, efforts to avoid because of fear, impulses to flee.
This disorder belongs mainly to referential domain 1.

Description (examples): mainly specific phobias, muscle tension including muscle shortening, back pain with spinal misalignments, gastritis, some endocrine hyperfunctions, headaches. **Causation (examples):** Life-historically anchored experience of helplessness, life-historically anchored experience of lack of structure, ego weakness in the depth psychological sense, e.g. according to Adler.
The life-historical process of the individual’s experiential formation causes limitations of assimilation and accommodation or prevents effective assimilation and accommodation. These failures caused by restrictions or by prevention and the experienced distress lead to the references to the referential domains being wholly or partially absorbed or carried by the fear and punishment system and thus becoming dominant. At the same time, the formation of experience stabilises this disturbance in the well-being and reward system, primarily because of selective successes of avoidance behaviour (in referential domains 2 and 3) and the repeatedly selectively successful (illusory) undoing of hazards in referential domain 1.

Examples of F-diagnoses from the ICD-10 that can be fully or partially assigned to CAE are: All phobias (F40), especially agoraphobia (F40.0), acute intoxication, harmful use of substances with dependence syndrome (F10.0 to F19.9), dissociative amnesia (F44.0), depersonalisation, derealisation syndrome (F48.1), non-organic sleep disorders (F51), dependent personality disorder (F60.7).

Somatopsychic consequences if the disorder is not observed (examples):
Restrictions in behaviour due to past experience in conjunction with anticipatory anxiety, unnecessary and detrimental avoidance of important areas of life and constructive ways of living, especially in dealing with other people, suffering from dissonances and exaggerations in behaviour, possibly obesity, possibly weakening of the immune system, possibly development of a dependent/dependent personality.
Connection with other somatopsychic disorders: CAE can develop into Perturbatio Delens Pertinax (PDP, long-lasting destructive agitation) (see disorder 3).

2 Cruciatus Vehemens (CRV)
Experiencing being attacked in agony

Description (examples): Somatopsychic shock due to extreme experience (including hypo- and later hypertensions), shock to life, psychotrauma, restlessness (including hypervigilance), avoidance behaviour, dissociative disorders, painful muscle tension.
Causation (example): Suffering of a specific extreme experience (external and by its own disturbed body function, such as after a stroke).
An extreme experience influences the associated formation of experience in such a way that the previous salutogenic functioning of assimilation and accommodation is restricted in at least one of the three referential domains. These restrictions lead to a stable pathogenic or pathological formation of experience, i.e. to a state worthy of illness.
The formation of experience stabilises this disorder primarily because of selective successes of avoidance behaviour (due to hypervigilance or dissociative splitting) in referential domains 2 and 3 and the repeatedly selectively successful (illusory) undoing of hazards in referential domain 1.
Examples of F-diagnoses from the ICD-10 that are fully or partially assigned to CRV
can be:
Acute stress reaction (F43.0), PTSD (F43.1), other reactions to severe stress (F43.8), depersonalisation, derealisation syndrome (F48.1), reaction to severe stress (F43.9), dissociative amnesia (F44.0), multiple personality disorder (F44.81), dissociative disorders (F44.88), persistent personality change after extreme stress (F62.0), anorexia nervosa (F50.0, F50.1).

Somatopsychic consequences if the disorder is not observed (examples):
Unnecessary and detrimental avoidance of important areas of life and ways of living, especially in dealing with other people, overbuilding or tedious replacement of previous behaviour, suffering dissonance and exaggeration in behaviour, weakening and disruption of basic somatopsychic processes in the area of well-being, cardiovascular activity, breathing, gastrointestinal functions.
Connection with other somatopsychic disorders (examples): CRV can result in Develop Compensatio Delens (COD, Destructive Replacement, Disturbance 6).

3 Perturbatio Delens Pertinax (PDP)
Long-lasting destructive agitation

Description (examples): Long-lasting and recurring panic attacks, long-lasting and recurring inner restlessness, incontinent behaviour, aggression, motor restlessness, states of exhaustion, somatic dysfunctions (e.g. dyscardia, increased cortisol production).
Causation (examples): Suffering repeated or long-lasting extreme experiences in one's life history may lead to strong restlessness and aggression. Extreme experiences are also caused by overprotection in childhood, when normal problems become unbearable and unsolvable (this can possibly lead to the so-called attention deficit hyperactivity disorder - ADHD). Similarly, highly gifted children suffer psychotraumas when they are not understood by others and themselves and do not learn problem-solving skills.
Continuous extreme experiences influence the associated formation of experience in such a way that the previous salutogenic functioning of assimilation and accommodation is restricted at least in the three referential domains. The continually restricted functions of assimilation and accommodation stabilise a pathogenic or pathological formation of experience, i.e. they lead to a state worthy of illness.
Examples of F-diagnoses from the ICD-10, which are completely or partially assigned to the PDP can be:
Panic disorder (F41.0), posttraumatic stress disorder (F43.1), borderline personality disorder (F60.30, F60.31).

Somatopsychic consequences if the disorder is not observed (examples):
As disorder 2 and additionally:
The affected individual is helplessly at the mercy of destructive behaviour and constantly finds current external causes for the disorders; increased vulnerability to disorders such as neurodermatitis, asthma, allergies, menstrual cramps may arise; failure, withdrawal and crankiness may occur.
Relationship with other somatopsychic disorders (examples): PDP can result from Contentio Anxie Evitandi (CAE, see disorder 1). PDP can develop into Interitus Imminens Dissors (IID, experienced threat, see disorder 5) and Compensatio Vitae (CPV, substitute for life,
s. disorder 4) arise.

Disorder group AW: Disorders with further processing of the state of anxiety are structured as follows (items 4 to 8):

4 Compensatio Vitae (CPV)
Substitution for Life

Description (examples): Psychoform disorders caused by psychoactive substances (e.g. addiction) and somatopsychic changes caused by them.
Causation (examples): Destructive action as compensation for experienced helplessness, especially in connection with rejection by emotionally important persons experienced as aversive. The formation of experience mainly takes place via stabilised pathogenic or pathological accommodation in referential domain 2 (empathic and social references to externality): The selection and shaping of referential domains for salutogenic experience formation cannot be done. According to the definition (of referential domain 2) this impairment include, disease-valued assimilations (e.g. habituation to psychoactive substances).

Failures and self-harm in the formation of experience can produce the state of suffering in the fear and punishment system.
Examples of F-diagnoses from the ICD-10 that are fully or partially assigned to CPV can be:

Behavioural disorders caused by psychotropic substances (F10 to F19), harmful use of non-dependence-producing substances (F55), bipolar schizotypal and delusional disorders (F20 to F22), eating disorders (F50).

Somatopsychic consequences if the disorder is not observed (examples):
The affected individual constantly finds or searches for ways out or alternatives for the supposedly unlivable behaviour. Further expansion of helplessness; somatopsychic functions are overloaded and take damage due to one-sided orientation.
Connection with other somatopsychic disorders (examples):
CPV can arise from Perturbatio Delens Pertinax (PDP, destructive restlessness, see disorder 3). CPV can give rise to Compensatio Delens (COD, destructive substitution, see disorder 5) and Onus Atrum (ONA, gloomy burden, black filling, see disorder 8).

5 Interitus Imminens Dissors (IID)
Experienced threat, experienced as externally caused, but acutely internally caused

Description (examples): Schizophrenia, paranoid disorders (endogenous and exogenous), sociopathy in the form of hatred and aggression (with danger to others), sometimes neurological abnormalities of brain functions (but possibly a consequence of the stressful behaviour).
Causation (examples): Interaction of person and environment with (between individuals) variable endogenous/psychogenic as well as external parts; events experienced as intensely threatening, anxiety-producing and aversive oneiroid (dream and reality merging) substances, parts may have genetic conditions.
The individual's experience formation leads to stable impairments of accommodation in referential domains 2 and 3 (references to nature and the structural-technical environment as externality), so that the fear and punishment system dominates the somatopsychic control circuits. Experience formation after aggressive behaviour can always lead selectively to the activation of the well-being/reward system and thus stabilise the pathological state ("I am being threatened and my defensive behaviour was successful.").
Examples of F-diagnoses from the ICD-10, which can be completely or partially assigned to IID, are:
Schizophrenia (F20), acute transient psychotic disorder (F23), paranoid personality disorder (F60.0), dissocial personality disorder (F60.2), mental and behavioural disorders caused by psychotropic substances (F10 to F19), persistent delusional disorder (F22), manic episode (F30), harmful use of non-dependent substances (F55), emotionally unstable personality disorder (F60.3).

Somatopsychic consequences if the disorder is not observed (examples):
The affected individual constantly finds or searches for current external causes for what is experienced as terrible. Feelings are suppressed or not perceived. Somatopsychic functions are overloaded and suffer damage due to one-sided orientation (e.g. somatisation disorders).
Relationship with other somatopsychic disorders (examples): IID may result from
Perturbatio Delens Pertinax (PDP, long-lasting destructive disorder, see disorder 3) develop.

6 Compensatio Delens (COD)
Destructive Replacement

Description (examples): Somatoform disorders, adjustment disorder, aggression, reactance, sociopathy (e.g. hostility), negation of facts, somatoform disorders, among others as a result of destructive behaviour.
Causation (examples): Destructive experience and action as compensation for experienced Helplessness and perceived hopelessness, especially in connection with rejection by emotionally important people experienced as aversive.
The state of excessive anxiety can be reduced through excessive compensation. In this process, selective successes occur again and again, which can lead to a stable state in the context of experience formation. There is an excess of pathogenic or pathological accommodation in the referential domains 2 and 3 as a stable result of experience formation, because assimilation is avoided or can hardly take place. Disadvantages and damage that have occurred activate the fear and punishment system and thus generate suffering.
Examples of F-diagnoses from ICD-10, which are completely or partially assigned to COD can be:
Adjustment disorders (F43.2), somatoform disorders (F45), schizophrenia (F20), dissociative disorders (F44), obsessive-compulsive disorder (F42), eating disorders (F50), harmful use of non- dependent substances (F55), dissocial personality disorder (F60.2), pyromania (F63.1), trichotillomania (F63.3).

Somatopsychic consequences if the disorder is not observed (examples):
The affected individual constantly finds or seeks quick and direct ways out or alternatives for areas of behaviour in which helplessness or supposed hopelessness is expected. Due to disregard of interpersonal rules and needs, there is danger to self and others. Somatopsychic functions are overloaded and suffer damage because of one-sided orientation (e.g. because of diabetes II).
Connection to other somatopsychic disorders (examples): COD can develop from disorder 2 (Cruciatus Vehemens, CRV, agonising being attacked) and from CPV (Compensatio Vitae).

7 Licentia Irreverens (LII)
Smooth freedom, demanded unboundedness

Description (examples): Histrionic behaviour, manic/hypomanic disorder, narcissistic personality disorder, autistic traits, hallucinoses, sometimes strong mood swings (after experienced rejections/failures). Principle: “The world serves me - I demand everything I need”.
Causation (examples): interaction of person and environment with (between individuals) variable endogenous/psychogenic as well as external components; components include processes experienced as intensely protective and events that threaten this protection, manic oneiroid substances. After stabilised destructive experience formation, assimilation is avoided in referential domains 2 and 3, although it would be possible in a salutogenic way. Only in referential domain 1 (autopoietic and self-referential functions) does assimilation regularly take place (primarily through optimisation or maximisation of somatopsychic targets). Accommodation in referential domains 2 and 3 takes place only sporadically or illusorily. The well-being/reward system is activated again and again and thus maintains the somatopsychic processes worthy of illness. The fear and punishment system is activated when the disadvantages and damage become clearly noticeable.

Examples of F-diagnoses from the ICD-10 that can be fully or partially assigned to LII are: Histrionic personality disorder (F60.4), narcissistic personality disorder (F60.8), manic episode (F30), possibly also various forms of autism (e.g. F84.-).

Somatopsychic consequences if the disorder is not observed (examples):
Unnecessary effort is forced, especially because of the uncompromising avoidance of other people with whom the affected individual should actually deal; one's own inner world (referential domain 1) can only be put in a positive mood by intensive positive experiences from referential domains 2 (and also 3), development of cynicism and hostility in the case of experienced rejection. Due to disregard of interpersonal rules and needs, there is a danger to self and others.
Connection with other somatopsychic disorders (examples): Suppression or prevention of narcissistic or manic experience basically leads to onus atrum (gloomy burden, black filling, see disorder 8, depression, see also Fiedler, 2007, p. 207).

8 Onus Atrum (ONA)
Gloomy load, black filling

Description (examples): Depression (endogenous and exogenous), also self-harm, withdrawal into oneself, physical inactivity, generally lack of serotonin.
Manifestations of Onus Atrum: Disappointment and bitterness about the unjust and dangerous world (including people), futile search for security in a world into which one has been thrown, repeatedly the attempt not to act as badly oneself as "the world" in connection with an accusation of the "badness" of the world. This can sometimes turn into a recognisable arrogance/self-righteousness. Again and again, soothing, protective retreat into one's own inner dark world, which is nevertheless familiar and in which one can always feel safe.
Causation (examples): Interaction of person and environment with endogenous/psychogenic as well as external components (variable between individuals); genetic conditions, events experienced as intensely threatening, anxiety-producing and aversively oneiroid substances, experienced helplessness and supposed hopelessness, especially in connection with disappointments experienced as aversive by events and by emotionally important persons, maintenance or reinforcement by confirmed negative expectations. Due to ongoing stabilised experience formation, no accommodation takes place in referential domains 2 and 3, so that disadvantages and failures occur or are feared. The fear and punishment system thus controls behaviour. No assimilation takes place in referential domains 2 and 3, which could possibly offer new possibilities for accommodation. In referential domain 1, assimilation and accommodation can take place, sometimes providing the well-being/reward system with opportunities for control (e.g. when illusory world-improvement ideas can be lived or when the individual experiences his gloomy world as familiar).
Examples of F-diagnoses from the ICD-10 that can be assigned in whole or in part to ONA are: Depressive episode (F32.-), recurrent depressive disorder (F33), dysthymia (F34.1), schizoaffective disorder, currently depressed (F25.1), anxiety and depressive disorder mixed (F41.2), bipolar affective disorder (F31.-). Incidentally, reference should be made here to the "Depression Guideline" (2009), which contains a wealth of treatment suggestions, but without providing any reference to a theory of depression or to an overarching disorder system.

Somatopsychic consequences if the disorder is not observed (examples):
The affected individual does not seek ways out or alternatives for behavioural areas where helplessness or supposed hopelessness is expected. Somatopsychic functions are overloaded and take damage because of the one-sided orientation. Helplessness and supposed hopelessness and the associated suffering are accepted as the exclusive reality of life. It is not possible to actively and positively shape one's life in the long term; cynicism develops; there is a danger to self and others because of disregard for one's own condition and interpersonal rules and needs; somatopsychic functions are disturbed (e.g. heart functions) or overloaded (e.g. because of high blood pressure) and are damaged because of one-sided orientation; somatisation disorders.
Relationship with other somatopsychic disorders (examples): ONA may result from
Licentia Irreverens (LII, Smooth Freedom, see disorder 7), if the LII behaviour is permanently prevented. LII can also develop as compensation/relief from ONA and occur cyclically or as a bipolar disorder.

The presented reclassification of somatopsychic disorders can be used to improve the ICD classification system:

1. Some disorders with the same technical background are scattered throughout the ICD-10, e.g. those related to extreme experiences (acute stress reaction F43.0, posttraumatic stress disorder F43.1, adjustment disorders F43.2 and personality disorders F60.0), making diagnoses difficult. This also applies to symptoms of a depressive nature.

2. In the ICD-10, against the background of the reclassification of disorders, narcissistic personality disorder and histrionic behaviour with contingencies of pathogenic imprints seem to have been given too little consideration. Behaviour such as pathological hatred and pathological aggression (e.g. sociopathy or pathologically deficient empathy) are also not sufficiently represented in the ICD-10.

3. In the ICD-10, illness-valent ways of dealing with oneself, such as emotional numbness towards oneself and neglect of one's own life needs, are poorly represented.

4. The F-group in ICD-10 should be scientifically substantiated more precisely than before in order to improve the professional consistency of the system, e.g. it would be better to combine ABR (F43.0) and PTSD (F43.1) under the designation psychotrauma.

4.4 Somatopsychic life

There is a hierarchy of somatopsychic targets in which subordinate targets are a necessary but not sufficient condition for achieving the hierarchically higher target, since external events and other triggers are also involved. A hierarchical order as a postulate is shown in Figure 16.
The two states of "well-being" and "suffering" belong to somatopsychic life, which consists not only of health but also of illness.
The sub-targets in the area of suffering describe the disease valence of a somatopsychic condition, the sub-targets of well-being describe the health valence of a somatopsychic condition.

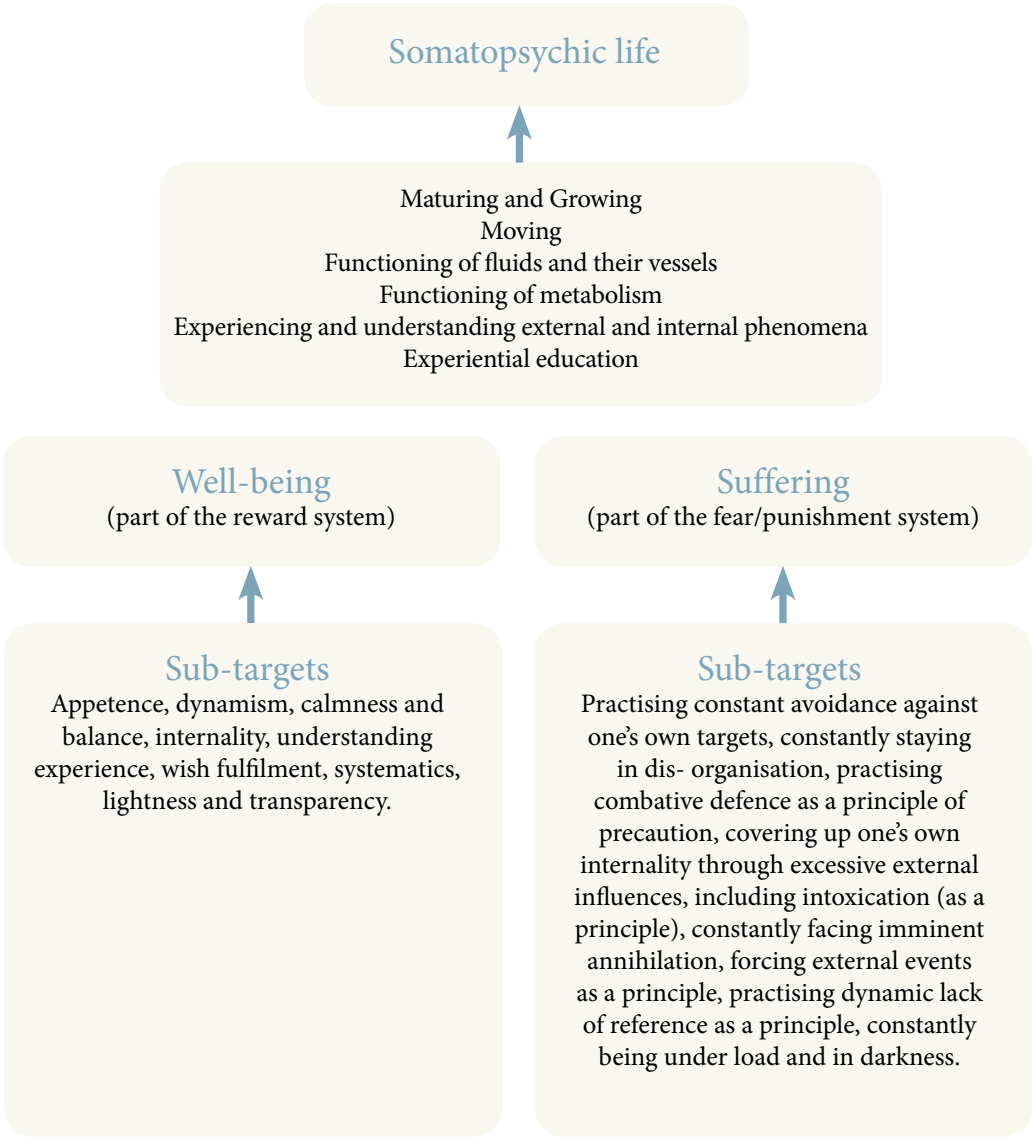

Fig. 16: Postulated hierarchy of targets of somatopsychic life

To promote the highest target (somatopsychic life), there are sub-targets that express the appropriate presence and strength depending on the phase of life or the life situation. Not all targets are always fully active at the same time. Health and also illness can each be the highest somatopsychic target. Each target requires its own regulatory circuits, which are controlled and supported by other regulatory circuits.

The highest target - the functioning of the somatopsychic basic processes already described in section 3.3 - can be achieved if the sub-targets are achieved. The interaction of sub-targets makes it possible to safeguard the stability of processes, especially because of the overdetermination of processes associated with it.

4.5 Transitions between somatopsychic health and somatopsychic illness

Transitional forms exist between health and disease, which arise, among other things, when prodromal conditions have become prominent or when pathogenic components have already become latent. Figure 17 shows some of these transitional forms as illustrative examples.
The order of somatopsychic disorders concretised in Figure 17 leaves room for the concepts of behavioural therapy, psychodynamic approaches, conversational psychotherapy, psychiatry and neurology and individual special forms (such as psychoeducation).

4.6 Aetiology of somatopsychic disorders

Three lines of development for somatopsychic illnesses are postulated, following the pattern of experiential formation (see above).

1. Long-term, continuous impairments

Long-term, continuous impairments can develop from prenatal and not necessarily because of biological-genetic conditions. They can develop primarily in childhood, e.g. due to continuous disturbance or prevention of appropriate accommodation and appropriate assimilation, prevention of the development of necessary and salutogenic illusion of control as well as positive control opinion, forced dependence on emotionally powerful persons, having to tolerate one's own disadvantages and own damages.

2. Long-term, continuous development of impairments, but with the possibility of compensation

Long-term, continuous impairments sometimes offer the possibility of pathological compensation, e.g. undermining suffered disadvantages through lies or misrepresentations, practising substitute behaviour (avoiding other activities), preventing the ability to love another person, reactance.

3. Short-term, strong destructive experiences

Short-term, strong destructive experiences (shock or extreme experiences) can force an individual into helplessness and helplessness with parts of hopelessness. The processes of becoming healthy as well as becoming ill develop in most cases in the course of an incubation period of up to several years. Health-promoting (salutogenic and curative) measures sometimes need just as much time to establish themselves in the somatopsychic system of an individual. In the same way, pathogenic events (e.g. leading to chronic dysfunctions) usually take similar periods of time.

1 Health (well-being)	2 Persistent individual variants, not pathogenic	3 Situationally conditioned preceding variants, possibly pathogenic	4 Mild suffering, morbid	5 Severe suffering, disease-value
1 Appetence Appetentia Rerum Agilis	s. Personality models in psychology that can be used to describe, analyse and understand the different characteristics of personality traits.	e.g. acute love-hate relationship	e.g. specific phobia	1 Avoidance Contentio Anxie Evitandi
2 Dynamics Conscientia Virium		e.g. nervous breakdown	e.g. ABR F43.0	2 Disorganisation Cruciatus Vehemens
3 Tranquillity and balance Animus Aequus		e.g. crisis after job loss	e.g. crisis due to impending separation from family	3 Combative Defence Perturbatio Delens Pertinax
4 Internality Sensus Vitae Interioris		e.g. withdrawal because of meditation	e.g. addiction to smoking	4 Covering up one's own interna- lity Compensatio Vitae
5 Understanding experience Intellectus sui peritia rerum		e.g. compassion	e.g. susceptibility to conspiracies of others	5 Soon to be destroyed Interitus Imminens Dissors
6 Wish Fulfilment Vota Expleta		e.g. obtaining an advantage	e.g. targeted execution of a theft	6 Forcing external events Compensatio Delens

7 Systematics Ordo Sibi Constans		e.g. euphoria, enthusiasm after "wonderful" event	e.g. arrogance, fundamental acceptance of harm to others	7 Dynamic Referencelessness Licentia Irreverens
8 Lightness and transparency Facilitas Et Perspicuitas		e.g. acute grief after loss	e.g. Complicated grief	8 Burden and Darkness Onus Atrum

Fig. 17: Examples of transitional forms between health and illness

5 Somatopsychic therapy system

5.1 Context of the therapy system

5.1.1 Agreements between patient and practitioner

In somatopsychic therapy, the following should be clarified in agreement between the patient and the therapist:

1.The reason from the patient's point of view is often expressed spontaneously or the therapeutically applicable reason for the utilisation is also recognised and named by the practitioner at an early stage. The reason for the patient can be e.g. headaches.

2. The patient can demand that the practitioner finds the professionally appropriate reason for his or her suffering. The therapeutically applicable reason for the suffering in the example of point 1 may be a malposition of the cervical vertebrae.

3. The patient can expect the practitioner to point out possible other adverse health consequences of the technically correct reason.
In the example under point 1, he/she may possibly refer to the danger of the onset of tinnitus or to the danger of dysfunctions in the back. The tinnitus or the back dysfunctions are therefore prodromal.

4. The practitioner has an obligation to the patient to show these connections and suggest appropriate treatments or behavioural changes.
It may therefore be that the patient's reason for therapy is not sufficient for this.

5. The patient's access motivation "elimination of headaches" should now be extended by an additional recovery motivation.
This is where the practitioner should help the patient.

6. The practitioner can carry out a manual cervical spine treatment (with the corresponding diagnosis) according to the example under point 1 and let the patient learn behavioural changes (e.g. not to carry out several work tasks at the same time in the future) in the form of counselling or coaching. In this way, a patient can become a client or coachee. The reverse is also possible: a counselling concern can become a treatment motivation.

The treatment contract between the patient and the practitioner cannot be based on a stable contract, since the motivation and cooperation of the patient must be variable, depending on the cause of the deficiency, the symptoms or the suffering. This also applies to the strategy, methods and techniques of the practitioner.

5.1.2 Phase structure

Somatopsychic therapy consists of weakening the pathogenic targets and ultimately replacing them with salutogenic targets. Therapeutic measures become effective via somatopsychic subsystems.

Through an integration of new, salutogenic subsystems or through the strengthening or weakening subsystems can change the overall system.

This can be done, for example,

- via an integration of a salutogenic thought-stop method (above all, consciously stop destructive thought processes),
- through reshaping interpretations using changed, salutogenic attributions (finding salutogenic evaluations or explanatory contexts),
- through targeted salutogenic reflection (e.g. creating objectified clarities) about oneself if one wants to change oneself,
- through allowing a different, salutogenic environment in the form of “mere exposure” (Grush et al., 1978; Grush, 1980),
- through training salutogenic somatic competences (e.g. muscles or mobility),
- through training salutogenic internal information processes, such as through increased body mindfulness,
- through adjuvant salutogenic medication,
- through adjuvant salutogenic medical surgery or
- through prosthetics such as visual or hearing aids that enable or reinforce salutogenic developments.

A salutogenic approach methodologically requires that the “where to” and “what for” of a somatopsychic process be asked. Somatopsychic processes pursue targets that are essentially predetermined by nature, i.e. arise autochthonously. These targets control the consistency in the mutual subsidiarity of psyche and soma. The ultimate target is somatopsychic life, including health and illness.

A direct, volitional influence on somatopsychic targets is basically not possible. Only a change in the processes that are used to achieve the targets can be brought about, e.g. through volitional training. Often somatopsychic targets are changed by external overpowering influences, especially in intensity, e.g.:

- By somatopsychic damage (especially prenatal and obstetric),
- by violent impacts,
- due to life-historical, cumulative developmental disorders
- by lifelong one-sided unfavourable habits (such as excessive allowing of cognitive-emotional/somatic modulations resulting in failure of assimilation and accommodation).

There can be specific therapeutic measures for each subsystem. The therapeutically produced change in one subsystem has an effect on other subsystems and thus also on the system as a whole. Health and illness, according to the connections shown in this text, arise from the effects of assimilation and accommodation, mainly because of the experience of control or loss of control in the referential domains in the context of

- the well-being or anxiety system, and
- the targets of basic somatopsychic processes.

Health is created or maintained by assessing assimilation and accommodation (see section 3.6) as successful according to the standards of the well-being/reward system (see section 3.2).

A health disorder arises or is maintained because assimilation and accommodation are judged to be unsuccessful by the standards of the fear/punishment system. Assimilation and accommodation affect all basic somatopsychic processes.

As soon as the targets have been precisely and comprehensively achieved at each level of the hierarchy, the entire hierarchy and thus the state of health or disease is appropriately stabilised. Higher targets stabilise hierarchically lower targets and vice versa. Therefore, curative measures should try to achieve as many health-promoting targets as possible. Treatment measures require incubation periods, for which sufficient time must be given to allow the resilience and salutogenic functions of an individual to unfold. Depending on the phase of a disease and the phase of a treatment measure, the forms of therapy can be different. For example, at the beginning of a somatopsychic therapy, medication can be given to relieve the patient. This medication should then be stopped when feelings need to be worked on. If disorders related to the patient's life history become apparent during the treatment of PTSD (F43.1 according to ICD- 10), the following forms of therapy can be used
e.g. depth psychological therapy methods become additionally useful. When treating a specific phobia (such as sociophobia), after a behavioural therapy sequence, it can be very useful to proceed with talk therapy in the sense of Rogers or logotherapy in the sense of Frankl.

In principle, all therapy methods, procedures and methods of treatment can be included in the treatment of disorders, however they must have the following professional qualifications:

1. Professional embedding of the somatopsychic intervention in an empirically tested theory (e.g. behavioural theory approaches; control psychology approaches; medication with somatopsychic impact analysis) or at least embedding in an axiomatically consistent and an internally consistent theory with empirical plausibility (e.g. approaches according to Adler's individual psychology; approaches based on Gestalt psychology).
or
2. professional embedding of the somatopsychic intervention in an empirically tested construct (e.g. learning by conditioning; medication by SSRI - "selective serotonin reuptake inhibitors") or at least embedding in an axiomatically consistent construct or in a conclusive construct with empirical plausibility (e.g. imaginative procedures, hypnosis, relaxation procedures, body therapy, paradoxical intention/intervention).

3. Methods, procedures and techniques that can cause undesirable side effects (e.g. medication with conventional sleeping pills; unmediated confrontation with an extreme emotional situation) are not suitable.

The selection of somatopsychic interventions is always hypothesis-driven against the background of a theory or construct.

A course of therapy can enter into phases of different professional requirements:
For example, after a phase of emotional relief controlled by behavioural therapy (including medication) in connection with an extreme experience (with cruciatus vehemens as a consequence), a life-historical problem can come to the fore, which is best treated in a depth-psychological way, e.g. or Adlerian. After this phase, salutogenic developments should possibly be promoted, e.g. through body therapy or exercise procedures such as relaxation procedures. In the next phase, psychoeducational measures to improve the current lifestyle may be necessary (e.g. through exercise, by salutogenic nutrition or through solution-oriented approaches).

Depending on the salutogenic development, different treatment approaches may be required in phases within a somatopsychic therapy. Each individual phase is to be completed with a specific therapy target. However, there may be adjuvant approaches that can accompany several phases (e.g. relaxation procedures, pain medication, solution-oriented procedures). A useful overview of psychotherapeutic methods and procedures can be found in the textbook by Capuzzi and Gross (2007), among others.
Selected somatopsychic treatment methods and procedures are also included below in this.
The application of several methods and procedures is necessary for the professionally appropriate implementation of somatopsychic therapy. This can be achieved by one practitioner knowing and mastering several methods and procedures or by several practitioners carrying out the somatopsychic measures together in agreement with the individual to be treated.
The selection of treatment measures is based on the disorder with the underlying model or construct. For this purpose, a corresponding hypothesis-guided diagnosis is necessary, which serves, among other things, to help delineate individual phases (see figure 18).

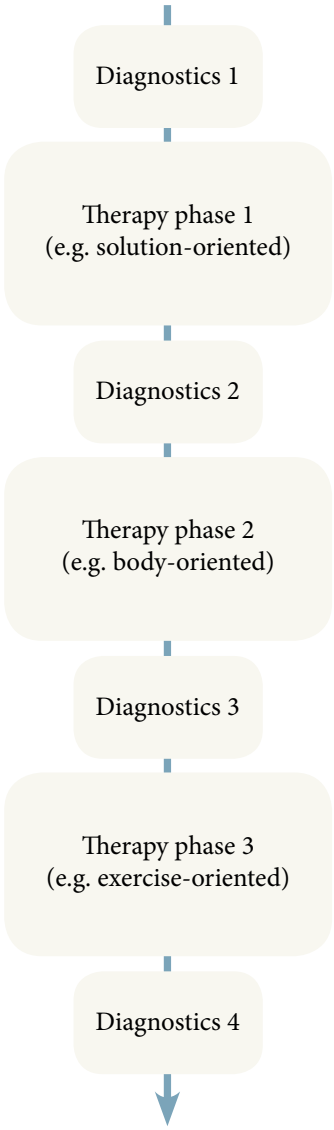

Fig. 18: Typical phase structure of somatopsychic therapy

Diagnoses can be derived from the following observations (incl. scale point values or measurements):

1. By embedding the reports of the ill individual in a somatopsychic theory or construct or
2. from the picture of symptoms
3. by embedding the picture of symptoms in a somatopsychic theory or construct, or
4. by embedding the results of observations (incl. scale scores or measurements) in a somatopsychic theory or construct, or
5. by combining the information from points 1 to 4.

The selection of the somatopsychic diagnostic procedure is always hypothesis-guided against the background of a theory or construct that fits the disorder. The treatment measures result from such a background. Clusters of findings of a disorder and clusters of treatment must fit together. In the following section, clusters of findings and treatment are brought together by means of examples.

5.2 Findings and treatment clusters using three examples

Knowledge of the clusters of findings of a disorder provides indications for measures to regain or maintain health and enables measures to weaken or eliminate disorders in the form of treatment clusters.

Findings and treatment cluster (example 1): Somatopsychic damage due to a short-term and weakly acting external event
This example belongs to somatopsychic disorder 1 (Contentio Anxie Evitandi, avoidance of situations because of fear, flight impulses).

The following examples are used to illustrate the cluster of findings of a disorder: Open injury on the body's surface with bleeding, contamination of the wound, pain, fear of treatment, anger at the causative process, anger about the damage, fear of permanent damage.
Findings (examples): Cut in the shin area due to falling on a sharp edge, painfulness, specific phobia, restlessness.

There are correlations between these impairments mentioned in the findings. The impact and the cut are 100% related to the pain, and the phobia and the restlessness are partially or 100% related to the harmful event (see figure 19).
The diagnosis in this example 1 is, among others, Acute Stress Reaction (ABR, F43.0 according to ICD-10). ABR belongs to the somatopsychic disorder Cruciatus Vehemens. Treatment for the disorders in Example 1 includes the following: Psychological and medical first aid, psychoeducation on the healing action, stopping the bleeding, cleaning and closing the wound, reduction of pain through medication with transition to adaptation of pain perception through adaptation exercises, emotional relief with parts of cognitive behavioural therapy, e.g. (re)establishing beliefs of internal control (see Figure 20).

	Fall	Cut injury	Pain load	Specific phobia	Unrest
Fall	Not applicable	Connection 100%	Connection 100%	Partial connection, at least damage as a trigger	Connection 100%
Cut injury		Not applicable	Connection 100%	Partial connection, at least damage as a trigger	Connection 100%
Pain load			Not applicable	Partial connection, at least damage as a trigger	Connection 100%
Specific phobia				Not applicable	Partial connection, at least damage as a trigger
Unrest					Not applicable

Fig. 19: Somatopsychic correlations for example 1

	Fall	Cut injury	Pain load	Specific phobia	Unrest
Fall	Not applicable	Stopping bleeding, cleaning and closing the wound			
Cut injury	Psychological and medical first aid, psychoeducation for curative treatment	Not applicable			
Pain load	Stopping bleeding, cleaning and closing the wound, reduction of pain through medication with transition to adaptation of pain perception through adaptation exercises.	Stopping bleeding, cleaning and closing the wound, reduction of pain through medication with transition to adaptation of pain perception through adaptation exercises.	Not applicable		

	Fall	Cut injury	Pain load	Specific phobia	Unrest
Specific phobia	Emotional relief with parts of cognitive behavioural therapy (e.g. (re)production of overconfidence in ternal control).	Emotional relief with parts of cognitive behavioural therapy (e.g. (re-)establishing beliefs of internal control).	Emotional relief with parts of cognitive behavioural therapy (e.g. (re-)establishing beliefs of internal control).	Not applicable	
Unrest	Psychoeducation for curative treatment	Stopping bleeding, cleaning and closing the wound, reduction of pain through medication with transition to adaptation of pain perception through adaptation exercises.	Reduction of pain through medication with transition to adaptation of pain perception through adaptation exercises.	Emotional relief with parts of cognitive behavioural therapy (e.g. (re-)establishing beliefs of internal control).	Not applicable

Fig. 20: Correlations to the somatopsychic treatment cluster for example 1

Findings and treatment cluster (example 2): Somatopsychic damage caused by an intense external event
This example belongs to the somatopsychic disorder 2 Cruciatus Vehemens, restlessness and rigidity due to extreme experience.

The following examples are used to illustrate the cluster of findings of a disorder: Inner chaos, state of overload, withdrawal from people, sleep disturbances, perception disturbances, avoidance of action, weakness and instability also towards oneself, fear of heavy losses, pain. Findings (examples): anxiety, avoidance behaviour, sociophobia, helplessness, painful muscle tension.
There are correlations between these disorders mentioned in the findings. There is a 100% correlation between avoidance behaviour, sociophobia, painful muscle tension and anxiety; helplessness is related to anxiety, avoidance behaviour and sociophobia (see figure 21).

In the treatment cluster for example 2, the following contexts, among others, are taken into account: Mental exercises, discrimination exercises and gradual exposure exercises should make the avoidance behaviour irrelevant. The painful muscle tension can be temporarily reduced by medication, but generally by body therapy and mental exercises, e.g. with the help of biofeedback or neurofeedback (see figure 22).

Findings and treatment cluster (example 3): Life history development of a withdrawal from active life
This example belongs to somatopsychic disorder 8 (Onus Atrum).

The following examples are used to illustrate the cluster of findings of a disorder: Emotional powerlessness, expectation of disadvantages, withdrawal from other people, recurrent impulses of hopelessness or stably occurring hopelessness, avoidance of movement, somatic weakening. Findings (examples): listlessness, withdrawal from active life, stabilisation of experience only through expectation of negative events and failures, somatopsychic decline, depression. From the case history (examples): In primary school, bedwetting, no friendships; in adolescence, extensive absences from school; malnutrition; due to long stays with the grandparents, characterised by laissez-faire parenting behaviour.
There are correlations between these disorders mentioned in the findings. The lack of drive is reinforced by somatopsychic deterioration and in turn reinforces the withdrawal from active life. Experienced own failures reinforce the expectation of destructive contingencies. In this way, the behaviour becomes stable over a long period of time, thus resulting in a chronified disorder.
The diagnosis in this example 3 is, among others, depressive episode (F32.-). A depressive episode belongs to the somatopsychic disorder Onus Atrum. The cluster of findings of the disorder is shown in Figure 23.

	Fear	Avoidance behaviour	Sociophobia	Helplessness	Painful muscle tension
Fear	Not applicable	Connection 100%	Connection 100%	Partial connection, at least damage as a trigger	Connection 100%
Avoidance behaviour		Not applicable	Connection 100%	Partial connection, at least damage as a trigger	Weak correlation
Sociophobia			Not applicable	Partial connection, at least damage as a trigger	Weak correlation
Helplessness				Not applicable	Partial connection, at least damage as a trigger
Painful muscle tension					Not applicable

Fig. 21: Somatopsychic correlations for example 2

	Fear	Avoidance behaviour	Sociophobia	Helplessness	Painful muscle tension
Fear	Not applicable				
Avoidance behaviour	Mental exercises, Discrimination exercises, Gradual exposure exercises	Not applicable			
Sociophobia	Mental exercises, Discrimination exercises, Gradual exposure exercises	Mental exercises, Discrimination exercises, Gradual exposure exercises	Not applicable		
Helplessness	Mental exercises, Discrimination exercises, Gradual exposure exercises	Mental exercises, Discrimination exercises, Gradual exposure exercises	Mental exercises, Discrimination exercises, Gradual exposure exercises	Not applicable	
Painful muscle tension	Relief through medication, body therapy, psychoeducation, mental exercises, discrimination exercises, gradual ex-positional exercises.	Mindfulness exercises, body therapy	Mental exercises, Discrimination exercises, Gradual exposure exercises	Improve body rhythm (e.g. breathing, heart rate, sleep rhythm).	Not applicable

Fig. 22: Correlations to the somatopsychic treatment cluster for example 2

	Drivelessness	Withdrawal from active life	Stabilisation through expectation of negative events and failures	Somatopsychic deterioration
Drivelessness	Not applicable	Connection 100%	Partial connection, at least as a trigger	Connection 100%
Withdrawal from active life		Not applicable	Connection 100%	Partial connection, at least as a trigger
Stabilisation through expectation of negative events and failures			Not applicable	Weak correlation
Somatopsychic deterioration				Not applicable

Fig. 23: Somatopsychic correlations for example 3

Treatment of the disorders in example 3 includes the following: Relief from depression through medication (temporarily), finding contradictions and transferring them into cognitive dissonance (e.g. withdrawing and still wanting to live constructively), finding and gradually achieving small targets worth living for, body therapy (e.g. feeling good through massage and through water), slowly building up somatic condition, finding and practising personal protective measures, long-term finding of targets with a colouring of world improvement, long-term building of salutogenic habits with establishing beliefs of internal control.

This therapeutic approach allows the formation of a treatment cluster (see figure 24).

5.3 Starting points for interventions

5.3.1 Types of interventions

In practice, somatopsychic therapy requires starting points for interventions. All therapeutic measures and work are interventions (e.g. psychoeducation, manual exercises, problem-solving conversations, creating and dissolving cognitive dissonances, imaginations as well as mental exercises, see also Jacob & Tuschen-Caffier, 2011, reflections, diagnostic conversations, solution-oriented, argumentative conversation content).

There are different possibilities or necessities for interventions that result from the life situation and the life course of an individual.
The following starting points can be seen:

1. Preventive intervention (e.g. stress inoculation according to Meichenbaum, 2003)

2. Protective intervention (especially psychological first aid, emotional relief, medication)

3. Supportive intervention (e.g. somatopsychic methods such as symptom reduction, salutogenic structure, problem solving)

4. Implementative intervention (especially preparation and accompaniment of the return to private and professional everyday life)

5. Confirmatory intervention (especially counselling after returning to private and professional life)

6. Recursive intervention (e.g. catamnestic interviews, follow-up interview with comparative retrospection)

7. Palliative intervention

These types of interventions are described in more detail below.

	Medication	Reducing dissonance and building targets	Body therapy	Protective measures	Long-term targets including long-term habits
Medication	adjuvant, subsidiary				
Reducing dissonance and building targets	Relief	Not applicable			
Body therapy	Create conditions	Mental exercises, discrimination exercises, gradual exposure exercises	Not applicable		
Protective measures	Create conditions and provide protection if necessary	Mental exercises, discrimination exercises, gradual exposure exercises, development of constructive life strategies	Mental exercises, discrimination exercises, gradual exposure exercises	Not applicable	
Long-term targets including long-term habits	Voraussetzungen schaffen	Improve body rhythms (e.g. breathing, heart rate, sleep rhythm), establish constructive explanatory behaviour.	Within the depression, expansion of one's own protective space to feel good	Mental exercises, mindfulness exercises, establishing constructive life strategies	Not applicable

Fig. 24: Correlations to the somatopsychic treatment cluster for example 3

5.3.2 Preventive intervention

With the help of a preventive intervention, it should be possible to prepare an individual to cope with (in the sense of coping with) upcoming destructive events or to enable the individual to reduce the damage and the consequences of a destructive event. In hazardous, high-risk areas of life and work (e.g. transport industry, electricity and energy industry, police, military, fire brigade, security services) it can be useful to prepare not only organisationally but also emotionally for an extreme experience.

Emotional preparation can be achieved through so-called stress inoculation (Meichenbaum, 2003). Preventive intervention includes empathising with an extreme experience and ways of dealing with oneself and others in an extreme situation in a salutogenic way.

Preventive intervention includes ensuring that the individual at risk is psychologically robust. Robustness can be measured by the extent to which the salutogenic sub-targets are achieved. If all eight salutogenic sub-targets are well developed (close to 100%) and stable (lasting over time) according to the methodology of therapy target definition, it takes less effort to achieve the salutogenic sub-targets after an extreme experience resulting in cruciatus vehemens or after another high somatopsychic stress (e.g. permanent distress).

5.3.3 Protective intervention

Patients occasionally try to realise a so-called illness gain from their situation, e.g. to enforce claims on the employer or those on the family, if they suffer from mobbing or are affected by internal dismissal.
Protective intervention serves the somatopsychic protection of the individual. Protective intervention includes psychological first aid immediately after the extreme experience or after a severe crisis. A psychological first aider can convey to the affected individual that they will find protection and help and will not be left alone until they are in an emotionally safe place (e.g. at home or with a psychotherapist). The task can be carried out by lay helpers.

Furthermore, protective intervention includes the emotional relief of the affected individual. In this phase there can be no stabilisation, as is often erroneously strived for or demanded. Emotional relief is a therapeutic task that can also lead to an initial reorientation of the individual.

In this phase, the following steps, among others, are taken:
- The participants can systematically retrace the experience of the extreme or stressful event together (for emotional relief, not for confrontation),
- make diagnoses and secondary diagnoses,
- develop common targets,
- planning the further organisational procedure together with the patient.

During this phase, depending on the individual problem and target situation, the following work is carried out, among others:
- Catching and dealing with anxiety (emotional relief especially by letting people report and relive),

- preventing the spread of anxiety (e.g. through paradoxical intention or intervention) and processing anxiety issues and images, including their past or new consequences for behaviour ,
- work through feelings of guilt and expectations in an experiential way (e.g. agree with some feelings of guilt; consistently act out negative expectations),
- supporting short-term important decision-making and preventing current wrong decisions (e.g. going through upcoming problems and possibly building up targeted cognitive dissonances that can be resolved in an appropriate way to promote sustainable developments),
- if the individual can allow this emotionally, body therapy (e.g. feel-good massage) is also part of it, and
- learning relaxation techniques (e.g. PMR).

With the emotional relief of the affected individual, the treatment of an individual in a very stressful situation begins. The term “stabilisation” for this procedure is - as mentioned above - not correct enough, as it is generally not a stabilisation of psychic vital functions, but a reduction of somatopsychic tension and calming down.

5.3.4 Supportive intervention

Individuals often and temporarily need protection and support from other people. The psychotherapist should take this on specifically and selectively with the patient and, in consultation with the patient, remedy or help solve the patient’s difficulties and problems through interventions (e.g. with the employer or the funding agency).
The supportive intervention should provide targeted help to the individual and also empower them to use the constructive opportunities that come with it.
After this emotional relief, the phase of rebuilding and reconstruction begins, among other things, through

- strengthening internal control opinion through personal experience (mental practice of simple courses of action) and practical practice of small tasks in different areas of life to strengthen the experience of effectiveness,
- identify remaining areas of helplessness and develop countermeasures,
- enable the creation or enhancement of well-being by activating current perceptions and finding good experiences (e.g. according to the recommendations of Ellis, 1996; Schmidt Traub, 2001),
- detecting and allowing to be detected misattributions, inapplicable explanatory patterns and dissonances, and
- addressing the need for explanation and finding emotionally appropriate causal attributions (e.g. also by offering relevant facts such as reasons why someone takes their own life).

5.3.5 Implementative intervention

With the implementative intervention, the return to private and professional everyday life is prepared, among other things through

- a careful, therapeutically accompanied inspection (also possible mentally) of the place of

the extreme experience (confrontation in a gradual or stepped manner) to reduce dissonance as well as to develop appropriate casal attributions and its (partial or complete) acceptance, massive confrontations with aversive stimuli or unpleasant surprises are not recommended against the professional background of Referential Therapy (RT),

- strengthening emotionally important life targets,
- partial abandonment of “bad” habits and improvement of experience and action to experience effectiveness, and
- practical trials, work trials (e.g. according to the Hamburg model of the employers’ liability insurance associations in Germany) or driving trials to regain positive emotional references to everyday work and to strengthen the experience of effectiveness.

Professional reintegration often takes place in close coordination with the company (e.g. according to the Betriebliches Wiedereingliederungsmanagement - BEM - of the German Social Code).

5.3.6 Confirmatory intervention

A confirmatory intervention confirms, in the context of possible criticism, the therapeutic procedure so far and improvements that have occurred. After returning to professional and practical everyday life, the patient can sometimes fall back on the support of a company counselling centre (e.g. social counselling) or have further discussions with the company doctor or the psychotherapist in charge.

5.3.7 Recursive intervention

The recursive intervention targets at a final evaluation of what has been achieved and thus has a preventative effect. After returning to private and professional everyday life, it can be useful to conduct a retrospective in order to clarify the affected individual’s own achievement in a factual way and to positively attribute the salutogenic development, e.g. in the sense of a competence opinion about one’s own salutogenic development.
From about half a year after completion of treatment, patients should be invited to a catamnestic consultation. This follow-up consultation serves, among other things, to review the patient’s development and situation and thus to arrive at statements about the stability of the development, e.g. whether renewed accidents could even be overcome under one’s own steam. Positive and constructive (but also negative) evaluations and interpretations - including those of the therapy - should be reviewed and possibly modified by the affected individual together with the practitioner.

5.3.8 Palliative intervention

Palliative intervention has the task of alleviating somatopsychic disorders in a lethal phase. Severe physical damage caused by somatic injury or somatic disease can bring the individual close to death in the short term. In such a case, where the individual’s somatopsychic system is on the verge of final collapse, somatic and psychological interventions must be closely coordinated to achieve the best possible compromises for the individual.

Palliative interventions - if the individual wants to allow them at all - are to be designed as follows:

1. Enable and also give as much emotional attention from the referential domain 2 as the individual is willing and able to receive

2. Psychoeducation: Emphasising and practising the positive behavioural possibilities

3. Offer and use palliative medication

4. Explore needs
a) Are there emotional omissions (e.g. a dispute that could still be settled)?
b) Are there important topics that should be discussed thoroughly (e.g. important agreements with close people, transience of life, transcendental topics)? If possible, professionals, family members or friends should be involved. These persons should be given recommendations on how to deal with the individual (e.g. on the duration and the result to be achieved of the conversation).

5. Psychoeducation
Increased living in the moment (e.g. intensively experiencing and reliving the things of the moment). Continuous turning of the individual towards the referential domain 1 (knowing and understanding oneself, strengthening one's own positive experience of oneself)

6. Give as much emotional and physical closeness as the individual allows. However, this closeness must be limited by the palliative therapist in extent and also in time. It is best to give regular, appropriate and limited impulses that the individual can relive

7. Salutogenic regulations, which are actually subject to compromise (see section 3.2.2), can bring about emotional relief for the patient

During the dying process, the therapist should give up his or her place to a close relative or to a friend of the individual in order to allow the individual to experience the continuity of life. The therapist should end his work before the dying process for his own protective reasons in order to be able to experience the palliative work as still successful.

5.4 Tasks of a medication

Interventions in the form of pharmaceutical products are particularly widespread because they are usually very easy to use and rarely require the patient to perform anything beyond the treatment decision. Moreover, the widespread distribution of pharmaceuticals is actively pushed by the health care market. Alternatives to pharmaceutical treatment are, or sometimes appear to be, comparatively more action- and time-consuming, so that the particular salutogenic possibilities associated with them do not always appear convincing.

The tasks of medication in the context of somatopsychic therapy are as follows:

1. Maintenance of vital somatopsychic functions (e.g. stabilisation of the circulatory system) or support of motivation (e.g. by controlling serotonin),

2. Bridging crises due to shocks or acute panic attacks

3. Establishment and maintenance of therapeutic capacity (e.g. through reduction of pain)

4. Strengthening resilience (e.g. increasing the concentration of messenger substances such as serotonin, supporting the biological immune system)

5. Palliative functions (e.g. pain reduction)

Medication must not be used primarily to increase well-being, as this can weaken resilience and salutogenic resources and can lead to substance abuse. Furthermore, medication always produces undesirable side effects that can lead to new somatopsychic difficulties. Content-related or thematic problems (e.g. pathogenic behaviour) cannot be substantially solved by medication. Medications can also lead to the learning of a wrong strategy in dealing with oneself, since finding a solution to a problem is replaced by chemically induced changes in experience, i.e. the building up or restoration of the experience of self-efficacy is prevented. A sustainable solution of a problem in the matter or the creation of suitable somatopsychic conditions for a problem solution by the patient is the task of psychologically oriented psychotherapy.

6 Transformation of the state of disease into the state of health

6.1 Self-healing powers

No doctor, no therapist heals, because practitioners only create favourable conditions and useful possibilities for healing or improvement by the individual's own power. Every somatopsychic healing measure requires self-healing forces, as therapy can only liberate, strengthen or protect self-healing forces. No healing measure heals itself, but only enables self-healing. Psychological self-healing forces are primarily resilience (resistance to a disease), resources (available emotional, cognitive or social competences) and strength in the pursuit of targets (e.g. intrinsic motivations). Patients who, for example, believed that their accident was unavoidable, had hardly developed any feelings of guilt of their own and actively supported their healing process, showed a good healing process and required a shorter hospital stay than the less positive control group (Frey et al. 1987).

Self-healing forces can develop their effect autochthonously without their functioning being perceived, because they are activated by the somatopsychic system itself (e.g. avoidance behaviour, additional appetite or by the desire for a certain activity). Self-healing forces can also be triggered allochthonously by a certain behaviour, e.g. being motivated to do sports with joie de vivre, to shape eating behaviour positively, to experience joy in discovering new things, to experience successively appropriate successes.

Self-healing forces are the essential basis for successful somatopsychic therapy. The strengthening of self-healing forces can support psychoimmunological processes. Resilience should also include the development of a healthy behavioural world that can largely compensate for the pathological processes (e.g. through intensive practice or automatisation of salutogenic behaviours).

6.2 Intentional transformation of the state of illness into the state of health

6.2.1 Adaptive targets

Somatopsychic therapy is a systematic method of moving from the state of illness to the state of health through targeted transformation, taking into account the axioms and premises (see Appendix A1). The target is the restoration, the production of health or the improvement of the individual's state of health, the achievement of which is intended by the patient and the psychotherapist. Treatment includes procedures and techniques depending on the model, method and target from a somatopsychic perspective. The system and the targets do not have to be fixed from the outset, but can be adaptively redefined in the course of the therapeutic work. Somatopsychic disorders can be caused by a long-term life history and by short-term acute experiences. A somatopsychic disorder is indicated by the fact that an individual is not free enough in some important areas of experience and action: thinking, feeling and acting of a somatopsychically ill individual are subject to restrictions or fixations from whose occurrence and consequences the individual and the person affected by them suffer. Somatopsychically ill individuals lack autochthonous well-being.

According to Freud, the focus and target of therapeutic work is an improved access of the instance of the ego to the contents of the id instance: “What is id shall become ego” (Freud, 1923/1940). This transformation essentially involves a change in the meaning of experience and action as well as a learning process on the part of the patient, through which the internal control or ego in the Freudian sense gains more influence. By changing one’s own perspective (e.g. cognitive restructuring), by psychoeducation, by changing the experience of one’s own feelings and by retuning one’s own emotional states, the patient can take a favourable development.
With the teleological question of the purpose (“What for?”) and the means to achieve the target (e.g. lifestyle analysis), Adlerian psychology enables the patient to influence the function of his disorder cognitively, emotionally and actionally. Among other things, Adlerian therapy encourages the patient to ask new questions like “What do I really want? “How do I feel better?”, “I could do differently, couldn’t I?”. Post-Adlerian therapy in particular (Ansbacher and Ansbacher, 1995; Ackerknecht, 1997; Bruder and Bruder-Bezzel, 2006) places special emphasis on encouraging people to choose new targets or to build up new means of achieving targets, i.e. also to replace a so-called disease gain.
Somatopsychic therapy must also be oriented towards tasks resulting from somatic disorders, e.g. from bodily injuries, somatic functional disorders such as heart valve defects, oncological diseases. In the case of somatic disorders of this kind, somatopsychic therapy has the following tasks (examples):

- Psychoeducation for professional understanding of the disorder (e.g. being able to explain contains the possibility of intervention),
- strengthening of references independent of disorders (e.g. salutogenic structuring of social relationships, improvement of the experience of coherence),
- overall, strengthening of internal control beliefs and positive competence opinions, or
- supporting somatic treatment, e.g. by arguments, by encouragement or by strengthening hope for a positive future.

In somatic disorders, somatopsychic therapy has the task of strengthening resilience as well as resources and possibly having a palliative effect.

6.2.2 Account-valid therapy and criterion-referenced testing

It follows from the concept of this text that it is not enough to eliminate disorders including symptoms. Rather, the state of well-being and thus health is to be targeted at through the achievement of partial targets.
The therapy should enable the individual to build up the appropriate salutogenic competences to achieve these sub-targets, thereby building up or regaining the necessary resources and resilience. Each of the above-mentioned somatopsychic sub-targets of well-being/health can include content: Appetence can, for example, be aligned with beautiful landscapes or beautiful melodies. Dynamism can be associated with running or driving fast, for example.
Peace and balance can come, for example, with quiet togetherness with a particular person. Internality can be developed or strengthened when one experiences introspective meditation, for example.

Understanding experience can occur, for example, through involvement with natural phenomena. Wish fulfilment can be experienced, for example, when one has successfully negotiated with another person in such a way that the result is convincingly consensual.
An individual is able to experience systematics by, for example, currently understanding himself and also being able to consider suitable changes for himself.
Lightness and transparency make it possible, for example, to report spontaneously and in detail about one's own emotional states.

In the state of somatopsychic disorders, contents also play a role, e.g. anxiety states are generally provided with concrete expectations or images.
Content can belong to each of the somatopsychic sub-targets of suffering/illness. An individual with avoidance behaviour senses which external or internal situation must be avoided (even in advance) (be it people or objects). Individuals in a state of disorganisation stand in a cascade of possible images or contents without being able to adequately order or weight them.
However, destructive developments are always combined with realistic conditions that are not pathogenic themselves, but can successfully use pathogenic targets:

- Combative defence, for example, is often practised very concretely in training sessions.
- There are a number of concrete and realistic fears of annihilation, which can, however, be judged by outsiders as exaggerated or even almost unreal.
- In most cases, concrete actions (e.g. distractions) can be used to cover up one's own internality, or appropriate substances are available for this purpose.
- If something is to be enforced, the means are usually obtainable and the procedures are often easy to practise.
- An individual with a dynamic lack of reference can try out his or her own actions or the way in which he or she acts in a concrete way without any immediate disadvantages.
- Emotional burden and emotional darkness combine with terrible feelings or images and also sometimes with pleasant standstill as well as with hedging.

In psychology, there are various fields of work that deal with target-oriented behavioural changes. Educational psychology, in conjunction with empirical educational science, has developed methods of thought and instruments to describe behavioural targets and their achievement in an empirical way (Klauer 1987, 1974; Echterhoff 1978, 1981, S. 51).
The targets of somatopsychic therapy can be derived from the salutogenic (well-being/health) as well as from the pathogenic sub-targets (suffering/illness).

The definition of a therapy target (analogous to a teaching target) includes:

1. The content of the target, i.e. what the patient should achieve or what task he/she should face after completing the treatment

2. under which conditions of the environment (situational framework) this should happen, i.e. which possibilities and which limitations are given,

3. how the target behaviour (experience and action) is to be shaped, i.e. the behaviour associated with the content and the situational framework,

4. by what the correctness of the behaviour or the behavioural product is to be recognised, i.e. which characteristics of the experience and action are to be demanded as a minimum or as a maximum,

5. how the intensity of target achievement or the degree of competence for achieving the target must be pronounced, i.e. how safe or how maximally disruptible the behaviour should be, measured as probability of occurrence.

Example 1
The student K. M. suffers from a driving phobia when he is supposed to drive a motor vehicle himself. The therapy target could be mutually agreed with the patient as follows:

Content and situational framework:
The patient shall move a motor vehicle on the usual routes and through the usual traffic.

Target behaviour (experience and action):
The patient should be able to correctly experience, use and translate his or her already existing competences as a road user into actions (without fearing his or her own failure).

Correctness and degree of competence of the behaviour to be tested after completion of therapy: Since the patient is not forced to drive at all times, it is sufficient that he uses emotionally appropriate internal and external situations for driving. If he uses these situations, a behavioural safety of approximately 100% must be given.
This therapy target can be considered an intermediate target that can be built upon later.

Example 2
Mrs. E. W. (49) suffers from a moderate depression. The therapy target could be agreed upon with the patient as follows:

Content and situational framework:
The patient should want to look into the future; to orientate her own thoughts mainly positively; to provide for herself; to take up a simple occupation,

Target behaviour (experience and action):
To be able to stop negative thoughts volitionally; to be able to build up and maintain a stock of positive emotional states; to be able to test oneself in a planned and careful way in selected areas of behaviour (e.g. through constructive communication); to develop and maintain somatic powers (e.g. also through “feel-good massage”) and to be able to monitor and adjust the disturbed hormone balance.

Correctness and degree of competence of the behaviour to be tested after completion of therapy: Over 50% of the time, the behaviour must be practised correctly.

Example 3
The young, single woman T. C. is perplexed by the fact that she cannot make friends and acts accordingly incapable of action. The therapy target was agreed upon with the patient as follows.

Content and situational framework:
The patient should understand the reasons for the lack of friendships that lie in the patient's person and also know the reasons for the lack of friendships that lie in other people.

Target behaviour (experience and action):
Knowing oneself, especially one's own targets in life. Being able to understand and accept oneself; being able to draw boundaries with other people.
Being able to share your own experience with other people.

Correctness and degree of competence of the behaviour to be tested after completion of therapy: Over 90% of the time, the behaviour should be practised correctly (to keep the number of wrong decisions small).

The achievement of therapy targets can be empirically tested in the same way as teaching targets. For this purpose, a sample of items (e.g. in a behavioural observation or via a scale for measuring emotional states) is to be derived from a population in analogy to the teaching target concept. The items are to be evaluated criterion-oriented (criterion achieved or not achieved) and can thus be classified inferentially with the help of the binomial model as in the case of a test of a teaching objective (Klauer 1987, 1974; Echterhoff 1978, 1981).
This is also an adequate approach for empirical research.

6.3 Experiencing efficacy and the illusion of control: Referential Therapy

Therapy targets are account-valid if they are in accordance with the therapy model (construct-valid) and with the patient's resources (explicit or implicit). Depending on the course of therapy, interests and therapy targets can change, e.g. when the solution of current problems has brought about an initial emotional relief and afterwards a depth-psychologically oriented processing of life-historically generated disorders appears to be target-oriented.

A target is salutogenic if one knows a way to the target or the solution to a problem and at the same time is also able to put the necessary measures into practice. The knowledge can take place in the context of therapy through a proxy (e.g. the therapist). It is important that the patient is able to find explanations for the successful processes in his or her own behaviour that also satisfy him- or herself emotionally.

A target is uncontrollable if one either cannot find a solution or cannot carry out the necessary target-directed measures (e.g. because of pain or a somatic injury) or if one cannot find explanations for the processes related to the patient's person.

Based on referential psychology, there is a corresponding form of therapy, Referential Therapy (RT, Echterhoff, 2003). The systematic therapeutic use of the control psychology concept with the help of RT has the following possibilities:

1. With the striving for control and the desire to experience self-efficacy, fundamental and comprehensive needs are taken into account. The corresponding professional concept is

well elaborated and well empirically founded (see among others Flammer 1990). When using this concept, a therapist can basically check for him/herself whether his/her methods are in accordance with the professional basis. The professional concept and the associated methods and techniques can also be communicated to a patient in a convincing and motivating way.

2. The time for relationship building between patient and psychotherapist is comparatively short, as therapy can set concrete tasks for the patient early on.

3. As soon as the experience of control or self-efficacy has been therapeutically established, restored or strengthened, the central behavioural domains "somatopsychic interaction with oneself" (referential domain 1) and "somatopsychic interaction with the external world" (referential domains 2 and 3) can be satisfactorily and successfully developed.

4. The target in point 2. can be achieved and permanently established through targeted therapeutic exercises with graduated degrees of difficulty.

5. Therapeutic exercises (according to point 3) can also be adopted from other therapy models without there having to be a professional collision of different therapy worlds. Exercises from psychodynamic psychology, psychoanalysis, RET, behavioural therapy, body therapy, etc. can be used for dealing with oneself. For dealing with the external world, exercises from the cognitive- behavioural therapy field including RET are particularly suitable. With the help of the therapist, the exercises in dealing with the external world can gradually spread successfully to private and professional everyday life, so that the success of the therapy can be experienced by the patient step by step.

6. Control or self-efficacy is immediately experienced by the treated individual as positive and encouraging without the therapist having to interpret this to the patient in a professionally convincing way.

7. The patient can repeat most of the therapeutic exercises themselves and thereby stabilise his salutogenic behaviour.

8. As soon as the patient feels a sense of control or self-efficacy, the salutogenic development can quickly take on a life of its own and be reinforced autochthonously.

9. The results of RT can be objectively evaluated both in the individual case catamnestically and in study groups on the basis of verifiable behaviour.

The focus of RT is the renewed or new experience of one's own effectiveness with improvement of the conviction of control, the opinion of competence and thus the experience of coherence (Antonovsky, 1997; Vaihinger, 2002) through the restoration or improvement of emotional and cognitive relationships within internal and between internal and external conditions (including through adequate explanations for contingencies). Relationships are to be established above all

- to attributions (external - internal, global - specific, stable - variable),
- to control (direct, illusory, secondary control, including explanatory behaviour),
- to experience one's own emotions including one's own body, and
- to experience their own effectiveness (see also Flammer, 1990).

As a reminder of what has been said above, it is pointed out that emotions can belong to the external referential domain when one makes oneself an object in reflection processes (“Why do I feel like this?” Or: “This is how I can calm myself down.”).

RT uses the knowledge from control psychology for therapeutic purposes and is based on establishing relatable and comprehensible connections between the patient’s own (disturbed and predominantly negatively perceived) experience and actions as well as the perceptible external events and the patient’s own perceptible states. It is a somatopsychic form of behavioural therapy.
All therapeutic exercises and measures in RT should enable the patient to learn the necessary somatopsychic services carefully, gradually and with sufficient reliability. In this way, a steadily progressing learning process takes place, which is underpinned again and again by repetition of what has already been acquired. In RT, the patient is always given the opportunity by the therapist to understand the therapy work and himself.
The patient’s development during therapy is determined by building on small successes in each case, which are regularly secured. Mental preparation of exercises ensures that only what the patient feels confident about is done. In this way, the necessary conviction of control develops, from which, through continuous confirmation, a familiarity with one’s own conviction of control grows, which can gradually become an illusion of control.

Since RT can influence disturbed ways of experiencing salutogenically by reorganising or rebuilding attributions in connection with careful behavioural successes, there is by no means an action drill, as behavioural therapists are sometimes accused of lacking.

RT is - due to the specific professional approach - generally not applicable especially in cases of psychoses such as schizophrenia, acute abnormal experiential reactions (e.g. “nervous breakdown”), dementia or acute addictive disorders. People with a lack of or impaired capacity for introspection or reflection (e.g. people who have taken psychotropic substances) should not be treated with RT as a matter of principle.

The concept of RT is well compatible with Ellis’ (1997) rational-emotive therapy (RET) and Adlerian individual psychological psychotherapy (see Ansbacher and Ansbacher, 1995; Dreikurs, 1997; Bruder and Bruder-Bezzel, 2006).

The psychological connection of RT to Adler’s psychotherapeutic approach is, among other things:

- In the similarity of feelings of inferiority with too little experience of effectiveness, and
- in the similarity of the finality of experience and action with attributions.

Other psychotherapeutic methods should in no way be made more difficult by the use of RT. RT is suitable for the treatment of psychotrauma, among other things. In the context of psychological accident management, 95% of patients were able to find their way back into a private and professional everyday life (Echterhoff, 2009).

6.4 Body therapy, body psychotherapy

Body therapy (also called body psychotherapy) can provide a somatopsychic approach to the whole therapy process (see also Marlock & Weiss, 2006; Müller-Braunschweig & Stiller, 2009; Johnson & Rytz, 2012). The working field of body therapy is unfortunately influenced in some areas by esoteric impulses, which by their very nature have not been empirically founded. Even in the case of plausible and convincing procedures, which can certainly help in individual cases, there is sometimes a lack of evidence about effect correlations and about the scope of validity (the range) of the measure.

Body therapy is primarily intended to do the following:

1. Somatic actuators influence (among other things): Muscles of the locomotor and respiratory system, limbs and the heart are stimulated to perform functions that can produce relaxation, a pleasant feeling or pleasant warmth, stimulate somatopsychic functions with ultimately salutogenic consequences (e.g. with the help of acupuncture), noticeably relieve the blood circulation, produce a pleasant rhythm through movement, cause a pleasant physical posture or allow tension and relaxation to alternate in a pleasant way.
By loosening and relaxing the muscles in the neck and shoulder area, pain in this area and some types of headaches can be eliminated while improving the mobility of the head.

2. Producing induced effects (among others): allowing a pleasant state of warmth to be experienced in parts of the body, e.g. through external heat sources, allowing pleasant skin and muscle movements to be felt through touch such as massage or manual therapy (e.g. myoreflex zone therapy), causing pleasant body movements, e.g. through exercises according to Feldenkrais (2006), according to the eutony method (Alexander, 2011).

3. Training and improvement of the somatic level (among others): By improving physical endurance, muscular performance, breathing, body dynamics (among others to strengthen recognisable self-assertion) and somatopsychic functions in general.

The development of the therapeutic offer in German psychosomatic clinics for rehabilitation measures shows that body therapy (including exercise) has received an increasing share. Somatopsychic therapy fundamentally calls for the use of body therapy, as it can have a curative effect as well as strengthen the self-healing powers and resilience. The choice of body therapy measures depends on the therapeutic targets and the possibilities of the patient.

6.5 At the end of therapy: Stabilisation

As soon as it becomes apparent that the targets of somatopsychic therapy have been achieved (e.g. the diagnostic test values drop to normal), a phase of stabilisation should be provided in order to firmly establish the target states in the somatopsychic control circuits. Stabilisation is also a post-therapeutic process that always achieves stability of a salutogenic state. It is necessary that the target values are conditioned in such a way that they have a very high probability of being effective. In general, somatopsychic stabilisation can be achieved through behavioural repetition and the experience of success, especially in connection with the conscious experience of one's own effectiveness and with the conscious experience of one's own competence.

The therapeutic outcome should have achieved at least relief or the previous salutogenic state before the disease. It is best if the post-therapeutic state is superior to the salutogenic situation before the disease. In such a case, postpathogenic growth has occurred (see also posttraumatic growth (Tedeschi & Calhoun, 2004). Postpathogenic growth is generally associated with an improvement in resilience and resources, so that recurrences in particular are less likely than usual to occur.

7 Psychotrauma (Cruciatus Vehemens) as a prototype of a somatopsychic disorder

Psychotrauma contains such a broad somatopsychic pathological potential that many somatopsychic disorders can be caused by it (see also Echterhoff, 2009). However, psychotrauma contains not only pathogenic but also salutogenic components or effects. Using the example of posttraumatic stress disorder (PTSD, F43.1 according to ICD-10), it is shown below which destructive effects and which constructive effects can occur. The symptoms mentioned below can be isolated descriptively (phenomenologically), but functionally (ontologically) belong together. Some of the symptoms can manifest themselves in independent clinical pictures, e.g. sleep disorders or high excitability.

Psychotrauma is an anxiety disorder because fear is recognisable in all complaints. Fear can be destructive when it limits competencies, but it can also be constructive when it prevents harm or awakens motivations that promote competencies.

Destructive effect (of fear): The individual is unnecessarily and unduly hindered in the performance of life processes, according to his own and sometimes also according to others' assessment. The fear that has arisen may prevent constructive engagement (including confrontation) with the problem and thus prevent the possibility of overcoming it. There may be a strong regret of supposedly better times before the extreme event. Somatopsychic disorders can include: Cardiovascular stress with states of weakness, painful tension including headaches with changes in the body structure (e.g. in the cervical vertebrae with the consequence of tinnitus), trembling, incorrect posture and incorrect breathing (e.g. a lack of abdominal breathing), gastrointestinal disorders, impotence/frigidity, extreme night sweats, bio-/neurochemical changes in processes (e.g. noradrenaline production, serotonin transport, thyroxine production) and specific activation of brain areas (e.g. in the amygdala area).
Constructive effect (of fear): Fear assumes a protective function and prevents a renewed excessive demand. However, it also forces one to pause and reflect on the limiting conditions, which are recognised anticipatively. The restrictions are thus available for cognitive, emotional and actional processing: The affected individual considers causes and causal chains for hazards, examines alternative actions, possibly examines improvement of his or her competences, anticipatively experiences his or her feelings in possibly dealing differently with future hazards and perhaps examines improvements in his or her own actional, e.g. physical, competence in dealing with anticipated hazards.
If anxiety-triggering conditions are nevertheless to be allowed in future actions, a change in behaviour that improves competence can be anticipated and secured through trial action (internal and sometimes also external).

Initially, the somatic characteristics often include a reduction in pain. Later, the somatic impairments often force a change in behaviour (e.g. a reduction in actions) as well as sparing and can thus trigger the search for treatment options.

1. The symptom “re-experiencing”

An extreme experience usually causes a re-experiencing and an associated confrontation with the event experienced. An individual experiences parts of the extreme experience again and again involuntarily and compulsively in the waking state, so-called flashbacks. These are visual, auditory, olfactory or other sensory intrusions (also in the experience of one’s own body). They also include compulsive brooding and dissociative re-experiencing (e.g. experience of strangeness and depersonalisation).
Destructive effect: Re-experiencing parts of the extreme experience leads to psychological stress with restlessness and misjudgement of current situations in which re-experiencing takes place. This can lead to danger for others and oneself in activities involving danger. Re-experiencing supports the feeling of helplessness, as the individual cannot defend himself against the occurrence.
Constructive effect: Above all, the unavoidable intrusion of the threatening during rather calm phases of experience (e.g. when resting) frightens the affected individual. Re-experiencing forces one to pay attention to the threat and to do something about it. The affected individual is thus urged to anticipate and avoid the threat or to eliminate the problem.

2. The symptom “emotional numbness”

Emotional numbness leads to perceptual and concentration disorders as well as somatopsychic experience and function disorders.
Destructive effect: An affected individual loses the relationship to him- or herself and to other people, as perception is reduced or distorted. This results in alienation from oneself and from other people. The affected individual therefore often doubts his or her own ability to think and remember.
Libido is impaired, and internal as well as external erotic impulses are averted. Emotional numbness can prevent useful experiential formation and the experience of resource-enhancing emotions.
Constructive effect: Emotional numbness protects against the perception of extreme as well as negative states (especially pain, extreme fear and helplessness) and can thus provide the prerequisite for improved action in the future from this protective space.

3. The symptom of “loss of faith in one’s own effectiveness”

The loss of belief in one’s own efficacy is actually the loss of the illusion of control and is associated with the feeling of helplessness. Passivity with statements like “I can’t cope with my life anymore” is often strong.
Destructive effect: The individual experiences negative emotions such as particularly clear feelings of inadequacy and inability to act accompanied by their own reasons (inappropriate misattributions) for their behaviour. Feelings of guilt can arise because of involvement in the extreme event (“Why was I even there? I didn’t have to go there”).
Constructive effect: In such a state, the individual can become aware of his or her own weaknesses that need to be improved and can therefore be prompted to seek protection, to get help or to develop something constructive from it. This can lead to a process of competence improvement, which, for example, enables insights into other interrelationships of events and actions (such as the recognition of new possibilities of practical intervention by the affected individual).

4. The symptom “avoidance behaviour”

Avoidance behaviour shows itself in the omission of intended or purposeful actions. Some parts of the former behaviour are no longer allowed.
Destructive effect: avoidance behaviour narrows the scope of action, impairs
everyday life, activates disturbing somatopsychic reactions (e.g. painful tension or excessive sweating).
Constructive effect: Avoidance behaviour possibly prevents re-traumatisation, so that fear and associated destructive reactions are reduced and thus security is gained.

5. The symptom “sleep disorders and nightmares”

Sleep disorders can consist of difficulty falling asleep, difficulty staying asleep and hypersomnia. Nightmares lead to the intense experience of threats and often to fear of death. Nightmares after extreme experiences often coincide with the subject matters of the intrusions or can be derived from the semantic content of the extreme experience.
Destructive effect: Subject matters from the extreme experience can appear so strongly, that a somatopsychic weakening can occur because of an experienced threat to one’s own body and one’s own life. Such an experienced threat is accompanied by confusing brooding and a lack of concept of one’s own behaviour.
Constructive effect: Sleep disorders and nightmares can build up such a strong pressure of suffering that the affected individual is intensely preoccupied with the feared threats and searches for solutions.

6. The symptom “high excitability”

High excitability in the sense of dis-stress can usually be recognised by excessive irritability (and high readiness for aggression) as well as hypervigilance. Affected individuals themselves, but at the latest when they receive a hint, experience inner chaos.
Destructive effect: High excitability is an aversive state that is detrimental in everyday life. and dangerous. The somatopsychic system can be overloaded to such an extent that somatic damage (e.g. in the cardiovascular system) can occur.
Constructive effect: This state leads to an increased level of activity with special attention and to better readiness to react, which can thus allow more security to be experienced.

7. The symptom of “breaking down one’s own value system and understanding of values

The breakdown of one’s own value system and understanding of values can be seen, for example, in the loss of trust in social rules, in physical-technical processes or in a world order. This development can also spread to one’s own cognitive schemata (especially unexamined certainties) as well as to schemata of experience and action.
Destructive effect: This can cause the values that have been lived and respected so far to disintegrate.
The feeling arises that they have been unfairly discriminated against. Mistrust and fear come to the fore. A suitable perspective for the future is not seen because of this loss of understanding and because of perceived social isolation. This can lead to depression and bitterness.
Constructive effect: One’s own vulnerability and the finiteness of one’s own life must be admitted, so that life priorities may be changed. It can be recognised that better or better understood

opportunities for new life satisfaction have now emerged. Treatment of pre-morbidities and co-morbidities can support the development of appropriate or improved schemas that bring about salutogenic accommodation and assimilation.

The constructive processes of a somatopsychic illness pursue targets of a salutogenic nature. A psychotrauma, for example, often leads to an increased need for control as compensation for the feeling or even the certainty of losing control. However, this compensation can also restrict life considerably, because constructive processes are unfortunately sometimes subject to compromise and can therefore only have a limited salutogenic effect (see also section 3.2.2). Salutogenic aspects of PTSD in connection with pathogenic aspects allow for careful therapy planning in which targets, methods and procedures can be optimally used and adapted depending on the course of therapy.

The treatment of psychotrauma is presented in section 9.7.

8 Therapeutic use of somatopsychic basic processes, properties of somatopsychic processes, salutogenic sub-targets and cognitive-emotional modulations

8.1 Therapeutic work within somatopsychic basic processes

Therapeutic interventions are always in the context of the referential domains and the somatopsychic basic processes. The resulting order is shown in figure 25.

8.2 Therapeutic use of properties of somatopsychic processes

Somatopsychic therapy has to use the somatopsychic processes as autochthonous forces in the selection and application of methods and procedures. Somatopsychic therapy has to facilitate the functioning of these autochthonous forces.
The primacy of the target can be used therapeutically to bring developments to a stable conclusion, e.g. Grawe (1998) can be quoted on this: “As a central mechanism of action ... of therapeutic change is assumed to be the change of expectations. ...” (p. 21) (translation by the author).
The most important characteristic of somatopsychic processes is the **mutual subsidiarity of psyche and soma**. Therapeutic work on feelings (through psychotherapy) changes the physical state and therapeutic work on the body (through somatherapy) changes feeling states. Somatherapy within the framework of somatopsychic therapy includes above all:

- Adjuvant medication (e.g. with a psychopharmaceutical or with painkillers),
- manual therapy, such as in the form of physiotherapy and osteopathy,
- harmonising or calming effects on the body such as heat, staying in warm water, relaxation exercises, light exercise,
- nutritional optimisation,
- optimisation of environmental conditions such as acoustic and optical effects.

The subsidiary interaction of psyche and soma is oriented towards the contents of somatopsychic targets.

Somatopsychic therapy should build up regularities in the form of **repetition and pacing**. The alternation of tension and relaxation and rhythmic behaviour are of great therapeutic benefit. This can be achieved, for example, by changing therapy topics, by regularity of therapy appointments, by changing therapy tasks and by the therapy tasks themselves (such as rhythm through music).
Multicausality, multifinality and multifunctionality demand a multiple anchoring of new behaviour, e.g. based on different motivations, because a single reason is generally not sufficient to change behaviour. Behaviour is always overdetermined (e.g. Salber , 1965). Somatopsychic therapy has to overdetermine new behaviour. Therefore, repetition of exercises and different embedding of topics and tasks are therapeutically necessary.

The **dependence of the processes on resources** prompts a check or also the building up of somatopsychic resources in the form of sufficiently efficient actuators (e.g. hormones, neuronal systems, muscle tone).

	Referential Domain (RD)		
Basic Somatopsychic Process (SB)	**RD 1** Referential domain 1 (Autopoietic and self-referential functions)	**RD 2** Referential domain 2 (Empathic and social references to externality)	**RD 3** Referential domain 3 (references to nature and the structural-technical environment as externality)
SB 1: Basic life processes Somatopsychic basic process "Observing and functioning of somatopsychic basic life processes" The somatopsychic basic process of "observing and functioning somatopsychic basic life processes" consists of autochthonous movements and processes of organs, autochthonous movements and processes of thoughts and feelings (e.g. interpretations and reflections) within the information pathways and communication centres with cortex, nerve pathways, synapses, processes in subsystems of the central nervous system and spinal cord, processes in signal transmitters and storage of information and information-bearing substances such as endocrinological substances (e.g. internal communication). The nervous system, syntexes, subsystems of the central nervous system and spinal cord, processes in signal transmitters and storage of information and information-bearing substances such as endocrinological substances (e.g. internal communication), creating a suitable environment for life and survival with possibilities for protection and well-being, being able to feed oneself, emptying the body (especially excrement, urine), maintaining health and curing disorders, maintaining body temperature, injury and illness. adaptively and resiliently, living sexuality (examples)	Meditative introspection and imaginative methods (autogenic training, yoga, training of body experience through singing, feel-good massage, biofeedback, among others Experience, maintain/promote and train bodily functions Improve assimilation Respecting and strengthening one's own psychological and somatic states (among other things with methods and procedures of depth psychology). Giving space to the body's own forces Psychoeducation (e.g. about dangers and how to avoid/cope with them)	Experience, foster and train empathic communication with other people (including methods and procedures of Adlerian psychotherapy and psychoanalysis) Experience, nurture/promote and train assimilation and accommodation in these contexts Mental simulation of assimilation and accommodation Problem-solving therapy (including behavioural therapy) Psychoeducation (e.g. about dangers and how to avoid/cope with them)	Maintain/promote and train experiencing and acting in incidential and intentional contexts Experience, nurture/promote and train assimilation and accommodation. Psychoeducation (e.g. about dangers and how to avoid/cope with them)

	Referential Domain (RD)		
Basic Somatopsychic Process (SB)	**RD 1** Referential domain 1 (Autopoietic and self-referential functions)	**RD 2** Referential domain 2 (Empathic and social references to externality)	**RD 3** Referential domain 3 (references to nature and the structural-technical environment as externality)
SB 2: Maturing and growing Basic Somatopsychic Process "Maturing and Growing Length growth, muscle growth, organ growth, change in growth targets e.g. in pathologically controlled processes, building up new bodily functions, building up new cognitive competences, expanding scope for action, strengthening possibilities for action, controlling healing processes through growth, expanding generative behaviour (examples)	Experience, care for/promote and train bodily functions Respecting and strengthening one's own psychological and somatic states Giving space to the body's own forces Psychoeducation (e.g. about dangers and how to avoid/cope with them)	Experience, foster/promote and train empathic communication with other people Experience, nurture/promote and train assimilation and accommodation in these contexts Mental simulation of assimilation and accommodation Problem-solving therapy Psychoeducation (e.g. about dangers and how to avoid/cope with them)	Maintain/promote and train experiencing and acting in incidential and intentional contexts Experience and tolerate oneself as part of living nature Psychoeducation (e.g. about dangers and how to avoid/cope with them) Improve accommodation
SB 3: Move SB 3: Move Somatopsychic basic process "Moving Running, climbing and other intentional movement, general actional behaviour, adaptation of one's own environment through action, body statics and movement dynamics with skeleton, muscles, tendons and cartilage, effecting changes in location, effecting work results, improving and strengthening competences, and being able to use tools, compensating for movement restrictions, controlling well-being and deficit sensations including pain sensations (examples)	Develop or strengthen positive body awareness Reduce or compensate for movement restrictions through self-testing Reduce or compensate for pain through self-experimentation Learn or experience which movements are good for the body and which are needed for well-being	Develop or strengthen positive body awareness To perceive one's own body as an object with possibilities for improvement Create or improve positive body awareness with other people, e.g. with the help of dance. Improve assimilation and accommodation	Experience contingencies from the interaction of one's own movements with nature and the structural-technical environment Learning or experiencing how to influence one's environment through movements of the body

	Referential Domain (RD)		
Basic Somatopsychic Process (SB)	**RD 1** Referential domain 1 (Autopoietic and self-referential functions)	**RD 2** Referential domain 2 (Empathic and social references to externality)	**RD 3** Referential domain 3 (references to nature and the structural-technical environment as externality)
SB 4: Fluids and vessels Somatopsychic basic process "Experiencing and functioning of fluids and their vessels" Control blood and vascular system, lymph and lymphatics, cerebrospinal fluid, urine, control lymph and blood qualitatively, control lymph and blood quantitatively throughout the body, control lymphatics, control blood vessels, control cellular fluid qualitatively and quantitatively, produce and release skin moisture and urine, compensate for disturbances in body fluids, control perceptions and well-being and deficit sensations including pain sensations (examples)	Feel the blood circulation and control it a little, e.g. with the help of a biofeedback system Improve assimilation	Maintain or improve the salutogenic composition of body fluids Learn or experience what other people do to have a positive effect on their fluids and vessels	Learn or experience how one's own bodily fluids can be positively influenced by sunlight or other influences of nature Improve accommodation
SB 5: Eating/Drinking Somatopsychic basic process "Experience of eating/drinking and functioning of the metabolism during processing of nutrients and of biochemical substances" Experiencing food intake, experiencing the processing of nutrients, biological conversion of food, vitamins and other ingested substances, especially in life-sustaining substances, mechanics of food, fluids and gasses in the	Learn or experience which foods are good for the body in the long term	Learn from others or experience from others which nutrients your own body needs Learning or experiencing what other nutrients other people eat	Learn or experience how one's own body can be positively influenced by food or by influences of nature Improve accommodation

	Referential Domain (RD)		
Basic Somatopsychic Process (SB)	**RD 1** Referential domain 1 (Autopoietic and self-referential functions)	**RD 2** Referential domain 2 (Empathic and social references to externality)	**RD 3** Referential domain 3 (references to nature and the structural-technical environment as externality)
alimentary canals, intestine and bladder, absorption and utilisation of nutrients for use in body tissues and to produce well-being or deficit sensations, control of distribution in the body, use of nutrients to prevent disease and to cure disease (examples)			
SB 6: External and internal phenomena Somatopsychic basic process "Experiencing and understanding external and internal phenomena" Perceptual and sensory system, perception of the present, remembering, expecting and being motivated, memory for cognitions, signalling, information and communication, electrophysiological and electrochemical processes, endocrinological information through messenger substances, synapses, sub-systems such as HPA/HHN axis, Ensuring, controlling and storing visual perception, ensuring, controlling and storing auditory perception, retrieving and checking explanations and contingencies, evaluating empathic perceptions, controlling the experience of consistency and dissonance, regulating and adapting pain perception (examples)	Experiencing how one perceives, how one interacts with information, which perceptions are a burden and which perceptions are good for one Shaping the functional conditions positively through assimilation for internal phenomena	Learn or experience how other people perceive, how other people interpret information, which perceptions are a burden for others and which perceptions are good for others: compare these experiences with one's own behaviour	Learn or experience how external phenomena take place and how they can be shaped through accommodation

	Referential Domain (RD)		
Basic Somatopsychic Process (SB)	**RD 1** Referential domain 1 (Autopoietic and self-referential functions)	**RD 2** Referential domain 2 (Empathic and social references to externality)	**RD 3** Referential domain 3 (references to nature and the structural-technical environment as externality)
SB 7: Experiential education Somatopsychic basic process "experience formation (incidential and intentional learning)" Improving cognitive, emotional, somatic and social competence through perception and practice, intentional and incidental changes in behavioural dispositions, selecting and interpreting perceptions, examining events, reflectively, reviewing knowledge and cognitive schemata, applying and extending problem-solving schemata, attributing pleasure and satisfaction, controlling the experience of consistency and dissonance (examples)	Experiencing how to change through assimilation and accommodation To be able to reflect on one's own changes through assiciation	Experiencing and understanding how you learn and the effect this has on you Experience and understand how other people learn and what effect this has on them Can act through accommodation	Experiencing and understanding how external phenomena are processed by oneself and how to find a suitable environment through assimilation and how to shape a suitable environment through accommodation

Fig. 25: Therapeutic use of the somatopsychic basic processes in the referential domains (examples)

Somatopsychic therapy can make use of the fact that somatopsychic processes function as control loops. If certain salutogenic thresholds or salutogenic states are reached through learning or assimilation, adaptation or habituation, they are gradually incorporated into the measurement system, the actuators, the comparator and the setpoint (or threshold). Controlled repetitions of salutogenic measures serve to strengthen the relevant control circuit and to strengthen the interaction of this control circuit with other control circuits. By successfully strengthening the control loop, a stabilisation of salutogenic behaviour can be achieved.
This stabilised state can in turn be used for further therapeutic development work, as an outcome phase can also be an initial phase for further salutogenic processes. These further salutogenic processes arise from assimilation and accommodation, which keep the individual and the environment in a continuous, mutually formative exchange. New external offers and new behaviours support and steer such an exchange, which in turn can lead to a new salutogenic outcome.
Somatopsychic therapy can be understood as changing processes through the intrusion of external and internal subsystems. Practised alternative behaviours or the appropriate resolution of cognitive dissonances (e.g. “Everything was safe, but the accident still happened”) can develop into salutogenic subsystems that are able to penetrate the existing pathogenic overall system. Somatopsychic therapy has to bring about the demise of pathogenic somatopsychic processes (e.g. the dissolution of a process to maintain a so-called disease gain). From such a demise, a new stability emerges, which, however, can be endangered by further destructive experiential formation (e.g. adaptation to new conditions with pathogenic potential such as emotionally difficult social externalities). Therefore, salutogenic therapy has to provide for appropriate resilience such as the capacity for cognitive restructuring (Wilken, 1998) or so-called posttraumatic growth (Tedeschi and Calhoun, 2004). In this way, difficult somatopsychic differences between the state of stability and the state of alternating expansion and decline are reduced so that unnecessary stress due to states of unrest is avoided.
As long as the characteristics and functions of somatopsychic processes are correctly identified in therapeutic procedures, the partial targets of health and the possibilities of experiential education are used, the conditions for successful therapy work are fulfilled according to the concept of this text.

8.3 Therapeutic use of salutogenic sub-targets

Interventions with somatopsychic methods and procedures should be oriented towards salutogenic targets. For the three referential domains, the following overview (Figure 26) names therapeutic focus topics that can be transformed into curative somatopsychic methods and procedures. The therapeutic use of the above-mentioned salutogenic sub-targets (see section 3.1) is explained on the basis of six examples with different variants of somatopsychic therapy.

In a therapeutic process, salutogenic sub-targets can be approached in a different order depending on the somatopsychic clinical picture.
The use of the sequence of salutogenic sub-targets for somatopsychic therapy is explained with three examples.

	RD 1 Referential domain 1 (Autopoietic and self-referential functions)	RD 2 Referential domain 2 (Empathic and social references to externality)	RD 3 Referential domain 3 (references to nature and the structural-technical environment as externality)
Sub-target 1 **Feel the appetence within you:** Being motivated and able to find something interesting in oneself (in the internality) and in the environment (in the externality)	Know and describe own pleasant emotional states and motivations (as distinct from unpleasant states). See, for example, the following example of therapy no. 1 (experiencing emotional contexts) and no. 4 (Meditative Introspection).	Experience and seek out pleasant behaviours in other people. See, for example, the following therapy example no. 5 (experiencing alternative behaviour).	To intensively perceive something pleasant in nature. See, for example, the following therapy example no. 3 (Dialogical Foot Walk).
Sub-target 2 **Be able to experience dynamics:** eel the power within oneself and be able to use it in a targeted way	To perceive one's own purposeful processes in the ways of experiencing within oneself. See e.g. the following example of therapy no. 2 (induction of positive emotions).	Improve interactions and communication with other people. See, for example, the following therapy example no. 5 (Experiencing alternative behaviours).	want to experience self-efficacy in the use of the natural environment and the structural-technical environment. See, for example, the following example of therapy no. 6 (therapy for fear of flying).
Sub-target 3 **Experience peace and balance:** Being able to let confidence arise from within oneself	Finding emotional places within oneself that have a positive effect in a calm way. See, for example, the following examples of therapy no. 1 (experiencing emotional contexts) and no. 4 (Meditative Introspection).	Steer yourself positively and surround yourself with likeable and positive people. See, for example, the following examples of therapy no. 2 (induction of positive emotions).	Expose oneself emotionally to a quiet and secure situation in nature or in a building.
Sub-target 4 **Knowing internality about oneself:** Experiencing again and again that feelings can constantly generate themselves anew	Observe your own emotional states again and again over a period of days and record them for yourself.	Observe, describe and communicate own emotional states in an empathic context. See e.g. the following therapy examples no. 1 (Experiencing emotional contexts), no. 3 (Dialogical foot-walking) and no. 4 (Meditative introspection).	Observe and describe own emotional states in a RD 3 context. and reproducing them in comparable contexts.

	RD 1 Referential domain 1 (Autopoietic and self-referential functions)	RD 2 Referential domain 2 (Empathic and social references to externality)	RD 3 Referential domain 3 (references to nature and the structural-technical environment as externality)
Sub-target 5 **Practising understanding experience:** Be able to experience and understand oneself and the world to a satisfactory extent.	Reliably and validly feel one's own feelings, one's own actions, one's own bodily states and one's own changes, See, for example, the following therapy example no. 3 (Dialogical Foot Walk).	Perceive the environment, especially the processes, in RD 2 in detail, engage constructively with other people or also with works of art, see e.g. the following therapy example no. 5 (experiencing alternative behaviour).	Perceive the environment, especially the processes, in RD 3 in detail, See, for example, the following therapy example no. 6 (therapy for fear of flying).
Sub-target 6 **Experience wish fulfilment:** existing competences are experienced as sufficient to be able to fulfil important wishes largely without conflict.	Experiencing successful interaction with oneself, feeling good about oneself.	Experience the successful handling of circumstances and possibilities in RD 2, See, for example, therapy example no. 5 below (experiencing alternative behaviour).	Experience the successful handling of circumstances and possibilities in RD 3. see e.g. the following therapy example no. 6 (therapy of fear of flying).
Sub-target 7 **Living systematically:** Behaviour shows continuity undergoes a change that is experienced as coherent.	Experiencing continuity in oneself and one's own identity over long periods of time, See, for example, the following therapy example no. 3 (Dialogical Foot Walk).	Experience continuity in RD 2 and identity with conditions and opportunities in RD 2 over long periods of time, have a sense of social belonging, see e.g. therapy example no. 5 below (experiencing native behaviour).	Experience continuity in RD 3 and identity with conditions and opportunities in RD 3 over long periods of time, have a sense of geographical and social home.
Sub-target 8 **Experience lightness and transparency within oneself:** Self-perception of one's own behaviour is experienced as easy and transparent.	To have easy and quick access to one's own somatopsychic states, to sense which somatopsychic states can develop from a previous one, See, for example, the following examples of therapy no. 1 (Experiencing emotional contexts) and no. 4 (Meditative introspection).	Verbalising one's own somatopsychic states easily and accurately, feeling which somatopsychic states in other individuals can develop from one's own previous one (and vice versa), see e.g. the following therapy example no. 5 (experiencing old behaviour patterns).	Knowing and feeling one's own somatopsychic states in interaction with the conditions and possibilities in RD 3, e.g. in dealing with the beautiful things in nature or in architecture.

Fig. 26: Therapeutic use of the referential domains for achieving salutogenic subline (examples)

Example 1
In the case of psychotrauma (CRV, section 4.1), for example, it may be useful to first:

1. Strengthen or rediscover one's own internality (salutogenic sub-target 4, section 3.1) in small steps, then
2. to experience wish fulfilment in a cautious form (salutogenic sub-target 6), subsequently
3. gradually experience dynamics (salutogenic sub-target 2),
4. since psychotrauma is often accompanied by internal disorganisation, the next salutogenic target 7 (being able to live systematically) can be tackled by means of simple exercises, this could possibly result in
5. autochthonously developing some calm and balance (salutogenic sub-target 3), so that in connection with this
6. own interests (appetence, salutogenic sub-target 1) are promoted, and
7. if the previous sub-targets have been sufficiently achieved, lightness and transparency (salutogenic sub-target 8) can be experienced through appropriate exercises (e.g. imaginative exercises, body therapy).

Example 2
The influence of the pathogenic sub-target "...emotional burden, emotional darkness..." (ONA, section 41.) can, for example, be weakened or eliminated by approaching salutogenic sub-targets in the following order:

1. Increase the area of "being able to feel the appetence within oneself" by linking to existing appetence (salutogenic sub-target 1, section 3.1),
2. expand the competence "being able to recognise internality in oneself" (salutogenic sub-target 4),
3. improve the area of "being able to live systematically" (salutogenic sub-target 7)
4. Repetition of therapeutic measures or variants thereof to consolidate the results of points 1 to 3,
5. expand parts of the existing experience of dynamism (salutogenic sub-target 2),
6. learning to experience fulfilment of simple, existing wishes (salutogenic sub-target 6),
7. from the experience of successes/partial successes to point 6 "Being able to experience and live systematically" (salutogenic sub-target 7),
8. repetition of therapeutic measures or variants thereof to consolidate the results of points 5 to 7,
9. be able to practise understanding experience with oneself (and later with the referential domain 3) in small, low-impact areas,
10. being able to experience peace and balance in small steps and in small time intervals (salutogenic sub-target 3),
11. allow the experience of lightness and transparency (salutogenic sub-target 8) in small areas and in small periods of time, and
12. further expansion of the competences from points 9 to 11.

Example 3
For the treatment of the disorder "Having to practice dynamic referencelessness" (sub-target 7, section 4.1), the sequence could be chosen as follows:

1. Being able to experience internality in oneself (salutogenic sub-target 4, section 4.1): Learning to feel oneself correctly and reliably,

2. improve understanding of oneself and the world in the referential domain 3 (salutogenic sub-target 5),
3. being able to experience peace and balance (salutogenic sub-target 3), and
4. depending on the individual's resources and readiness, address the other sub-targets.

Depending on the disorder or the individual importance of a particular salutogenic sub-target, the order in which the individual sub-targets are approached must be determined. Individual sub-targets can be pursued therapeutically several times at intervals or iteratively.

Somatopsychic therapy should be guided by the process of salutogenic experience formation, especially by therapeutically selected or adapted assimilation and accommodation, leading the actuators in their regulatory circuits to new enduring target formation of somatopsychic processes. If successful, the individual receives a new or strengthened self-efficacy or control conviction including an improved competence opinion.

8.4 Therapeutic use of cognitive-emotional modulations

Cognitive-emotional modulations play an important role in the formation of an individual's experience. This important role can be used therapeutically by triggering change processes through cognitive-emotional malprocessing.

Example 1
Therapeutic use of cognitive dissonance
A cognitive dissonance (e.g. contradiction between an individual's near and far targets) can be discovered or recognised by the individual himself or in the context of somatopsychic treatment. Cognitive dissonance is hard to bear. If the practitioner has guided the individual towards the recognition of the existing cognitive dissonance, the following possibilities exist, among others:
· Leave the resolution of cognitive dissonance to the individual themselves, if they have the appropriate resources, or
· to give the individual a solution-oriented and motivating impulse.

After resolution of the cognitive dissonance by the individual, the important contexts and contingencies are to be weighed against the background of the health targets to be achieved in order to achieve salutogenic progress in this way.
Salutogenic development is supported by the use of consistency experience as a cognitive-motional modulation.

Example 2
Therapeutic use of the primacy of topicality (recency effect)
Concisely experienced successes of therapeutic exercises are to be secured (e.g. through follow-up work or repetition) in order to bring current, salutogenic experiences to the forefront of behaviour as opposed to earlier pathogenic experiences.

The primacy of topicality can be supported by the modulation "Specific takes precedence over general" when specific behaviour is practised with examples.

Example 3
Therapeutic use of a faulty presumption of association
A faulty correlation assumption is an attribution error that is to be weakened or replaced by playful or systematic search for other attribution possibilities. For example, a patient may interpret his situation in such a way that only other people and unfavourable situations have caused his predicament. In this case, it must be worked out what pathogenic advantage (e.g. a so-called gain in illness) the erroneous assumption of connection means for the individual. The pathogenic advantage is to be replaced by a salutogenic embedding (e.g. in an experienceable, sustainable development possibility).

Example 4
Therapeutic use of the self-fulfilling prophecy (SOP)
Pre-assumptions are therapeutically transformed (e.g. through imagination exercises, see Jacob & Tuschen-Caffier, 2011) into behaviourally concrete expectations in order to align the individual's resources accordingly. Through this alignment, the realisation of the target to be achieved becomes more likely.

8.5 Scope of somatopsychic therapy

The somatopsychic therapy described in this text according to the referential-psychological approach is claimed to have the following scope:

1. The focus of the therapeutic work is on the way the individual deals with him/herself. The focus is on therapy in the referential domain 1.
2. Based on this, somatopsychic therapy has a positive effect on interacting with referential domain 2, especially when practice-related measures are included.
3. As soon as the therapy has a constructive effect in referential domains 1 and 2, there are salutogenic effects on the experience and action in referential domain 3, which can be shaped through exercises.

Since somatic and psychological symptoms or components form a holistic symptomatology, the scope of a somatopsychic therapy is to be regarded as more comprehensive than therapies which remain only with the psychological or only with the somatic treatment approach. The result of a somatopsychic therapy is likely to be more comprehensive because it uses the principle of mutual subsidiarity, among other things, due to the specific treatment approaches for both psyche and soma, and thus has a more stable and lasting effect. However, comparative empirical studies do not yet exist.

The temporal range results from the intensity of the target attainment and from the achieved or expandable competence of the individual to generate salutogenic processes in a sustainable and adaptive way. The temporal range increases when the individual has experienced salutogenic growth.

Limitations of somatopsychic therapy are seen as follows:

1. In principle, the somatopsychic approach does not give any specific indications about the way in which a relationship between therapist and individual is built up.
2. In principle, the somatopsychic approach does not give any specific indications for the corresponding design of psychoanalytic work.
3. In practical application, there will be professional and organisational difficulties in considering both the somatic and psychological aspects of an individual at the same time.

Empirical research will have to verify to what extent the above claim and limitations apply or to what extent modifications of this scope derived from the model need to be seen.

9 Examples of somatopsychic therapy

9.1 Somatopsychic therapy example 1: Experiencing emotional contexts

A Target

The individual should name, describe and get to know his or her feelings better than before and make them more accessible to him or her.
Depending on the outcome of the exercise, the procedure provides the individual with more certainty in self-assessment than before and the psychotherapist with possibly new and for the individual convincing thematic approaches.
It is an adjuvant therapy procedure.

A.1 Content and situational framework

1. The individual should experience and describe his emotional processes without interference from his environment.

2. The individual should experience and evaluate his emotional processes under different aspects without interference from his environment.

3. The individual should also be able to somatically localise the contents of points 1 and 2.

A.2 Target behaviour (experience and action)

The individual should be able to verbally describe their current emotion in detail in such a way that it can be empathically understood by another person.

A.3 Correctness and degree of competence of the behaviour to be tested after completion of therapy

The individual uses descriptive words to convey their emotion to the therapist. The majority of this behaviour allows for empathic and plausible attribution: 50% may be sufficient as an intermediate target, but at least 90% should be achieved in the final state.

B. Therapeutic procedure

B.1 Duration of a single exercise

10 up to 20 minutes

B.2 Instructions

As soon as the individual names feelings, they are asked to describe this feeling in more detail, e.g. with the following words:
“Can you describe this feeling in more detail and more clearly?”
Or: “What can you compare your feeling with?”
If the individual has little practice or skill in recognising or describing feelings, they can engage in descriptions of feelings for practice, e.g. using a circle of feelings (see Figure 27).

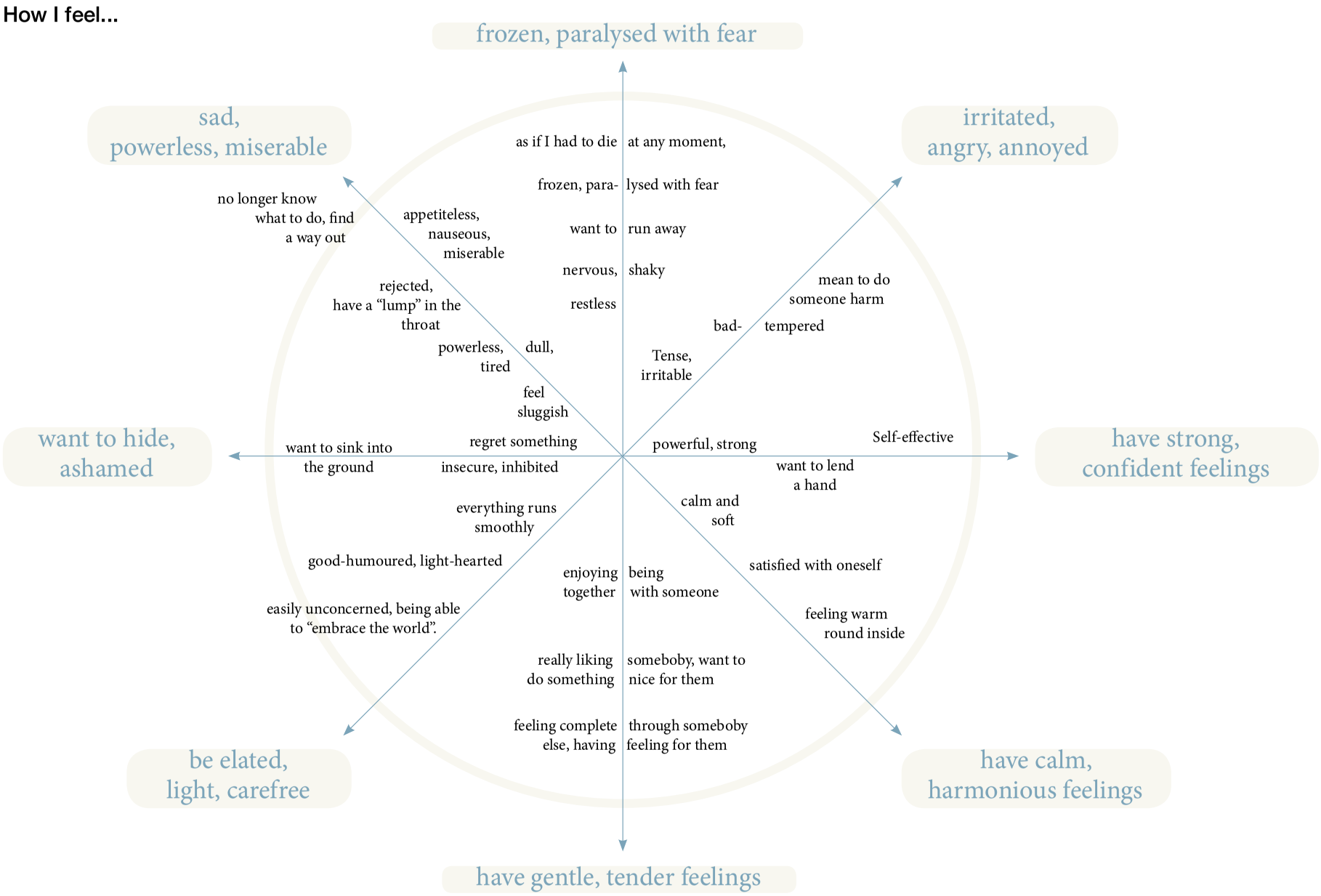

Fig. 27: Naming emotions for therapeutic exercises (examples)

The individual may be asked to do the following:
“You just said (the feeling is named): How does this feeling feel?” Or “Where is the feeling in your body?” “Is it immobile there or does it move?” “From where to where does it move?”
The exercises are designed to enable the individual to describe their feelings quickly and in detail and in a semantic context.

C Evaluation

The psychotherapist can take up the individual’s descriptions of feelings and use the contents topically or in planning.

Variations on example 1:
Use of imaginative procedures with or without therapeutic guidance (e.g. imaginative walking on emotionally positive landscapes).

Imagination of positive emotional states already experienced
With therapeutic guidance and control: transport of local positive states in the body to another part of the body through imagination.

9.2 Somatopsychic therapy example 2: Manual and instrumental induction of positive emotions

A Target

The individual should experience positive emotions better than before or be given more space for positive emotions. With the help of manual therapy (e.g. through a “feel-good massage”), positive somatopsychic states should be created and made tangible.
The process provides the individual with more experience in generating and experiencing positive emotional processes, depending on the outcome of the exercise.

A.1 Content and situational framework

1. The individual should experience his positive emotional processes without interference from his environment.
2. The individual should experience his positive emotional processes as feasible without interference from his environment.
3. The individual should also be able to somatically localise the contents of points 1 and 2.

A.2 Target behaviour (experience and action)

The individual should be able to experience positive emotional processes undisturbed and be able to verbally describe their current emotions in detail in such a way that they can be empathically comprehended by the practitioner.
The individual should be able to have positive emotional processes induced.

A.3 Correctness and degree of competence of the behaviour to be tested after completion of therapy

The individual shows through somatic expression that positive emotional states are occurring and uses descriptive words to communicate their emotion to the therapist. The majority of this behaviour allows for empathic and plausible attribution: 50% may be sufficient as an intermediate target, but at least 90% should be achieved in the final state.

B Therapeutic procedure

B.1 Duration of a single exercise

10 to 50 minutes

B.2 Instructions

As soon as the individual identifies or names appropriate emotions, they are asked to describe this feeling in more detail, e.g. with the following words:
“Can you describe this feeling in more detail and more clearly?”
Or: “What can you compare your feeling with?”
If the individual has little practice or skill in recognising or describing feelings, they can engage in descriptions of feelings for practice, e.g. using a circle of feelings (see Figure 27 for Example 1 of somatopsychic therapy).
The individual may also be asked to do the following:
“You just said (the feeling is named): How does this feeling feel?”
Or “Where is the feeling in your body?” “Is it immobile there or does it move?” “From where to where does it move?”
The exercises are designed to enable the individual to describe their feelings quickly and in detail and in a semantic context.

C Evaluation

The psychotherapist can pick up on the individual’s feeling states and descriptions of feelings and use the contents topically or in planning.

Variants on example 2:

After preparation and under therapeutic control: Float under water with breathing apparatus without movement and intensively experience the supporting, warm water.
After preparation and under therapeutic control: Progressive Muscle Relaxation (PMR). After preparation and under therapeutic control: Autogenic training (AT) with feel-good exercises. Hypnosis by psychotherapists: Helping to establish pleasant feeling states and hypnoid support of salutogenic assimilation and accommodation (e.g. salutogenic interpretation/attribution of experiences as well as encouragement of salutogenic accommodation such as seeking out or designing pleasant places to stay).
After preparation and with therapeutic implementation: biofeedback and neurofeedback to

generate positive emotions, e.g. for muscle relaxation with biofeedback support, relief of heart and circulatory stress (e.g. lowering of increased blood pressure through abdominal breathing and with a cold drink, lowering or stabilising the heart rate, producing more alpha waves in the EEG).
Medication to induce positive emotions, e.g. administration of SSRIs, to support the reorientation of somatopsychic processes.

Cycling (approx. 2 to 3 hours) on a therapeutically suitable route with therapeutic guidance and accompaniment: experiencing physical tension and relaxation; experiencing beautiful landscapes three times by describing what is coming a few minutes before, experiencing the corresponding place in detail (approx. 10 to 15 minutes) and later (after approx. 5 to 15 minutes) by re-experiencing (the individual reports with therapeutic support). Walking (about 30 minutes) on a route where there are no disturbances or negative emotional influences. After therapeutic preparation, the individual walks alone (without other people, without animals, without music, etc.) rhythmically evenly at a slightly greater speed than usual and allows thoughts and feelings to run free. This procedure can also serve as emotional relief after an extreme experience.

9.3 Somatopsychic therapy example 3: Dialogical foot walk

A Target

The therapeutic conversation in the therapy room between the individual and the psychotherapist should be given complementary possibilities through flexible environmental conditions.

During a Dialogical Walk
- the environment gradually changes so that new contexts of perception can arise,
- eye contact between the interlocutors becomes less important, so that pauses in conversation are easier than with a counterpart position,
- emotionally relieving interjections about the environment or the physical strain can be interjected,
- the agreed task of walking can develop into an emotional alliance between the two participants,
- embarrassing and stressful topics can be addressed more easily,
- more time is available as agreed than in the standard context of the therapy room.

A.1 Content and situational framework

If the above-mentioned possibilities can be used therapeutically, blockages can be loosened, healing impulses can be set anew or intensified and healing processes can be accelerated. The procedure possibly provides the psychotherapist with new thematic access to the patient and can offer the patient more security in the assessment of the therapeutic procedure.
Depending on the phase of the therapy work, it is a primary or an adjuvant therapy procedure (depending on the function of this exercise within the therapy process).

A.2 Target behaviour (experience and action)

The individual should be able to experience and bear emotional processes in a protected way. They should always be able to describe their emotional processes to the psychotherapist. The individual should indicate that he/she feels emotionally relieved.
The individual should have found satisfactory approaches or solutions for the moment that can be used constructively for later problem solving.

A.3 Correctness and degree of competence of the behaviour to be tested after completion of therapy

The individual should continuously participate in the conversation during the dialogical walk. The individual should participate in the conversation for at least 50% of the half walk time. The best would be 90% of the half walk time.
About 30 minutes after completing the walk, the individual should be able to state, when asked, that he or she experienced more positive than negative impulses during the walk and thus saw a positive perspective in at least one important problem area.

B Therapeutic procedure B.1 Duration

120 - 240 minutes

B.2 Instructions

Walking should be possible (undisturbed by roads, traffic and noise) through a landscape with minor changes (e.g. woodland or open countryside) and with minor perceptual stimuli (i.e. not walking through a wildlife park with animals) and should not create orientation problems.
The Dialogical Walk is emotionally prepared with the patient in therapy sessions. The appointment is also kept in case of bad weather, as long as no health damage or communication impairment is to be feared.
The psychotherapist does not take notes during the Dialogical Walk, but creates a memory log based on the key points that she/he has specifically stored in his/her memory during the walk. After the hike, the psychotherapist sits down with the patient for a final discussion to record the most important impressions of the hike.

C Evaluation

In the therapy sessions following the walk, the experiences from the Dialogical Walk are to be evaluated with the usual therapeutic methods.
Since many issues usually arise during the Dialogical Walk, but cannot be fully dealt with, these should be taken up in later therapy sessions.

Variant (without walk):

Structuring of problem areas and solution-oriented therapy discussions

Psychosomatic states of restlessness, chaos (e.g. due to tormenting brooding thoughts with somatic tensions) overload an individual.
A fact-oriented structuring (e.g. presentation of a chronological sequence of development or hierarchisation of problems) and solution-oriented therapy discussions (with direct consequences for practical action) can have a salutogenic effect.

9.4 Somatopsychic therapy example 4: Meditative introspection

A Target

The individual is to be reduced to his or her own internal information.
1. The individual should experience and describe a part of his or her internal processes in order to provide the psychotherapist with diagnostically useful material.
2. The individual should experience a part of his internal processes in order to experience how his mental state changes when there are no external stimuli.
It is an adjuvant therapy procedure.

A.1 Content and situational framework

Freely running mental processes permanently produce scraps of thoughts, memory material, fleeting parts of dialogue, associations, emotional impulses and other introspectively perceptible contents such as sensations from body areas.
If the individual is placed in a low-stimulus environment, e.g. in a plain, bright room without pictures, a situation analogous to a projective process can arise. The individual should let his or her thoughts and feelings run uninfluenced by external stimuli or intellectual tasks. This task can frighten some individuals, as they believe that they will end up in a distressing inner situation, such as depression or panic, because of the reduction of internal control associated with it.
If possible, the individual should do this exercise alone in an emotionally protected space (e.g. therapy room) and close their eyes.

A.2 Target behaviour (experience and action)

The procedure provides the individual with more certainty in self-assessment than before and possibly opens up new thematic approaches for the psychotherapist that are convincing to the individual.

The individual should be able to experience that they have access to their internal processes.

A.3 Correctness and degree of competence of the behaviour to be tested after completion of therapy

1. When asked, the individual can state that there was a sequence of events with different contents (e.g. initially a lot of restless thought fragments with gradual slowing down). At least one clear statement is required.

2. When asked, the individual can describe that their mood has changed during the exercise (e.g. from “neutral” to “depressed” or from unclear to lighter than before).
At least one clear statement is required in this regard.

B Therapeutic procedure

B.1 Duration of a single exercise

10 to 20 minutes

B.2 Instructions

The individual should adopt a comfortable sitting posture that does not require muscular tension. The head should therefore be held by a head cushion or pillow.

The individual is literally given the following task:
“I would like to find out together with you how you feel and what you think when nothing outside influences you. This exercise can tell you something about your own important feelings or about important moods.
Please sit down without tension and try to be as relaxed as possible. Please sit without tensing any muscles, your head should also lean comfortably.
Please withdraw into yourself and pay attention to nothing here in the room, no objects, no noises, please just stay with yourself. I will give you 10 to 20 minutes. Please do not speak, but observe your inner process so closely that you can report to me after the exercise what has happened inside you. The best thing would be for you to close your eyes.
I would like to leave you alone for this exercise. If you can’t stand being alone any more, please finish the exercise on your own and come and get me.
However, if you wish, I will also stay with you and pretend that I am not present.”

C Evaluation

Generally, individuals cannot remember all the details. Many report snippets of thoughts that initially run restlessly through the mind with changing subject matters. Later, the thought sequences often become longer and calm down. This slowing down is often evaluated positively by the individuals (“am now less afraid of my inner life”). Some individuals get lost in unpleasant and depressive thoughts and subsequently need problem analysis or uplifting problem-solving conversations.

A positive evaluation by the psychotherapist should be given to the following in particular:
1. A reassuring interpretation of the experience by the individual themselves.
2. A lack of mood deterioration during introspection.
3. A positive change in mood during introspection.
4. A calming/slowing down of mental processes during introspection.
5. The emergence of impulses for activity or tangible targets.
6. A better understanding of one's own inner world.

A negative evaluation by the psychotherapist should be given to the following events in particular:
1. An uncertain interpretation of the experience by the individual themselves.
2. A deterioration of mood during introspection: A deterioration towards a depressive mood should trigger a psychosis-relevant diagnosis.
3. An acceleration of mental processes as well as an increase in stressful issues during introspection.

The psychotherapist can take up the individual's self-interpretations and use the contents as well as the progressions topically or in planning.

Variants

1. Free, paced walking

The individual walks slightly faster than usual and as steadily as possible on a protected low-information path (without road crossings or other disturbance) for 15 minutes, then turns around and continues the way of walking. The person walks alone (even without animals), without listening to music and without a specific thinking task. Thoughts, feelings and ideas should be released during the walk. Generally, the person's initially restless "inner life" is noticeably reduced at the end of the exercise. Beforehand, the individual is given the task of reporting on the development to the therapist.

2. Reduction of action

Keep a few hours completely free for yourself and wait to see if interest in a venture grows.
The individual is given the task of reporting to the therapist on the development beforehand.

3. Perception reduction

The individual sits down comfortably for 10 to 15 minutes (preferably leaning his or her head) in a room that is as free of information as possible ("white room") and lets thoughts, feelings and ideas run free with open eyes. Beforehand, the individual is given the task of reporting to the therapist about the processes.

4. Perceptual deprivation

If exercises with introspective meditation have already been carried out successfully, the eyes can be covered light-proof to further intensify the exercise (an absolute dark situation in the room

is equivalent) or the ears can be acoustically closed. This exercise should initially be started with a duration of only one to two minutes. The exercise should not last longer than 10 minutes.

The individual is given the task beforehand to report to the therapist about the development during the exercise.

9.5 Somatopsychic therapy example 5: Experiencing own alternative behaviours

A. Target

Psychological impairments are often characterised by the fact that the impairing experience and action is resistant to change. Some individuals avoid new behaviour because, among other reasons, they are afraid of unexpected consequences associated with this change. Other individuals are so unfamiliar with new behaviour that they would not even know how to practise it.

The target of the procedure is to allow selected individuals to try out emotionally important, new behaviour without obligation.
Depending on the phase of the therapy work, it is a primary or an adjuvant therapy procedure (depending on the function of this exercise within the therapy process).

A.1 Content and situational framework

To this end, typical behaviours are selected that individuals may feel comfortable with after completing the exercise, including initiating or deflecting communication (e.g., for individuals with social avoidance tendencies) or sharing emotions and desires (e.g., for individuals with life histories of enduring experiences of anxiety-provoking rejection).

For the selection, the individuals should have the following options, among others:
1. At least temporarily have some emotional stability (e.g. from therapy).
2. About rudimentary imaginative competences.
3. About a positive evaluation of the therapeutic work done so far.

The procedure may provide the psychotherapist with new thematic access to the individual and may offer the individual more certainty in the assessment of the therapeutic procedure.
The task for the individual is to create, practise and experience new behaviours under guidance within an emotional space. The practical guidance is best provided by a professional theatre teacher who has his or her own acting experience in order to be able to set a good example that can be imitated. The development or trying out of alternative ways of behaviour is prepared emotionally with the individual in therapy sessions.
The exercise is carried out in a separate room without the possibility of visual or auditory observation by uninvolved persons.

A.2 Target behaviour (experience and action)

The following behaviour is targeted for:

1. Initiate communication with a known person.
2. Averting communication with a known person.
3. Initiate communication with an unknown person.
4. Averting communication with an unknown person.
5. Communicate own emotions and wishes to a known person.
6. Communicating one's own emotions and wishes to an unknown person.
7. Imagine something pleasant (e.g. a nice meal) and illustrate this verbally and pantomimically.
8. Imagine something unpleasant (e.g. the sight of a threatening-looking animal) and illustrate this verbally and in pantomime.
9. Practising non-verbal communication (previously practising conscious awareness of non-verbal communication and its emotional meaning).
10. Give a short speech of six to 10 sentences in 2 minutes to guests: Introduce yourself and explain your own relation to the matter (e.g. I am the sister/brother of ...), discuss the actual matter (e.g. congratulate), conclude by calling for something in common (e.g. raise glasses or applaud).

Further behaviours can be derived from the personal therapy subject matters.

A.3 Correctness and degree of competence of the behaviour to be tested after completion of therapy

Of the target behaviour, at least three behaviours should be practised in such a way that the individual is satisfied with him/herself because he/she feels identical to the role.

B Therapeutic procedure

B.1 Duration

50 to maximum 100 minutes

B.2 Instructions

The psychotherapist should prepare the individual emotionally and in terms of content for these exercises. For this purpose, it is useful if the individual is supported by the drama teacher.
The psychotherapist should only participate in the exercises in an observational capacity when a sustainable working alliance has been established between the individual and the drama teacher. If a positive relationship has not developed between the two within the first 20 minutes, the exercise should be terminated.
After a few days, repeat the exercises to further differentiate and reinforce the behaviours.

C Evaluation

The drama teacher prepares a description and commentary of the exercise for the psychotherapist.
In the therapy sessions following the exercise, the experiences from the exercise are to be evaluated with the usual therapeutic methods.

9.6 Somatopsychic therapy example 6: Therapy for fear of flying

A. Target

The individual should reduce or lose his experience of action-restricting fear of flying. At the beginning, the basic question of why flying in an aircraft, which is to be classified as a dangerous process, is so important to the individual must be clarified ("What is so important about flying to you or when is flying so important that one wants to endanger one's life?").
The process gives the individual more control over their anxiety experience. This leads to an experience of internal control over anxiety and an autochthonous positive competence opinion about oneself.
It is a therapy method in its own right.

A.1 Content and situational framework

The illusion of control is to be further developed through physically supported attributions about safe flying (adaptation of explanatory behaviour).
The individual should internally re-evaluate part of their experience of fear of flying and experience internal processes in detail in order to find out where and how their mental state could change positively. If possible, the individual should carry out this exercise in an emotionally protected space (therapy room) and close his/her eyes again and again. Based on this, gradual mental/imaginative exposure exercises are to be carried out.
The individual should also experience for himself practically that air can carry an aeroplane. The psychotherapist points out that one clearly notices how the aeroplane is always softly picked up and caught by the air, just as waves in the water can move a person up and down.

A.2 Target behaviour (experience and action)

The individual should not experience unnecessary fear in a commercial aircraft and thus be able to fly usual routes as a passenger.
Before, during and after the flight, the individual should be able to perform his or her purposeful actions.

A.3 Correctness and degree of competence of the behaviour to be tested after completion of therapy

The individual shows through somatic expression that common emotional states are occurring and uses descriptive words to communicate their emotions to the therapist. The individual thereby shows that he/she is sufficiently capable of action.

The individual should

1. virtually experience a scheduled flight lasting about 50 minutes without mental blocks,
2. be able to positively evaluate the world below and flying above on at least one flight in a small aircraft with an instructor lasting approximately 30 minutes,
3. at least on a scheduled flight of approx. 50 minutes duration, do not experience unnecessary anxiety and remain capable of acting in the usual way.

B Therapeutic procedure

B.1 Duration

Duration of the mental exercise 20 to 60 minutes and duration of the practical exercise 50 to 70 minutes (flight time) plus time spent in airport buildings.

B.2 Instructions

B.2.1 Mentally reproducing the experience of fear

The individual should describe a part of his or her experience of fear of flying in order to provide the psychotherapist with diagnostically and therapeutically usable material.

The individual is supposed to let his or her fear experience run free as far as possible, uninfluenced by external stimuli. This task can frighten some individuals, as they believe that they will end up in a distressing inner situation with an increased perception of fear due to the associated reduction of internal control.

B.2.2 Working out flight physics together

Provide explanations on the following circumstances:

1. Common explanation: The airflow is divided by the wing. Due to the curvature of the wings, the upper airflow has a longer path compared to the lower airflow - in this way, a negative pressure is created above the wing, which sucks the aircraft upwards. The usual pressure differences in the air when flying often noticeably (sometimes jerkily) raise or lower the aircraft. With the help of a children's book or similar, the individual should familiarise himself with the world of flight.

2. Non-standard explanation: Just as the water molecules (because of their inertia) cannot be displaced quickly when water skiing below the ski surface, the air molecules below the wing, when directed upwards at a slight angle, also hold together inertially and slow down the descention

of the aeroplane (which can be seen during the landing process when the wings are often at an angle to the airflow).

3. “Steering movements” in the air: As with a boat in the water, flaps (e.g. tail rudder or rudder) can “steer” the aircraft to the right, left or, with the elevator, also up or down.

4. Machine, equipment or air noises when flying: e.g. turbines howling, landing gear retracting and extending, audible shaking of mechanical parts of the aircraft (an aircraft must be elastic and pliable to softly absorb air resistance and touchdown on the runway).

B 2.3 Exercises

Practical

When driving the car, the target is to experience how “strong” air can be from the side window or from the open sunroof with the flat of the hand.
From a slightly greater distance (e.g. from the observation deck on an airport building), the landing (and taking off) of normal passenger aircraft is to be experienced and analysed by the individual: among other things, it can be experienced and understood that aircraft touch down with the rear landing gear first.
The observations can be complemented by a visit to a small airport with take-offs of small aircraft (sports planes).
Duration of the exposures approx. 10 landings.

Mental

The individual listens to real flight sounds through headphones. Verbal repetition of positive experiences 3 to 5 times.

B 2.4 Exposure Flying with Instructor

The procedures described below should include regular pauses of about 1 to 3 minutes during which the individual can engage only with him/herself.
Together with a flight instructor (who explains his professional and experience background to the individual), a flight with a small machine is prepared at the machine’s location. The individual should understand the descriptions of the machine and the explanations and touch the aircraft. The double safeties (e.g. in the engine ignition system, sailing characteristics without engine power) are to be explained. The conditions of the weather are explained in detail and possible flight routes are suggested from which the individual can choose.
It is agreed and shown where the individual sits and where the psychotherapist sits. It is agreed in which way physical contact is held or established between the individual and the psychotherapist (e.g. holding the hand or touching the shoulder). Physical contact also allows access to checking somatic symptoms such as muscle tension, pulse rate and skin moisture.

The psychotherapist describes the coming flight in detail like a slow-motion sequence (among other things): “From here we taxi the plane along this path back there to the runway. Then everything will be checked. The tower will be informed from there and they will give instructions.”

The flight instructor confirms (among other things): “The tank is sufficiently filled, I have already checked the technology of the aircraft”.

The boarding is done with great care for the body so that a harmonious connection can develop between the individual and the aircraft. Every movement and action is done consciously with clear awareness in all sensory areas. Feedback on the perceptions (of external and internal events) should be given in detail by the individual.
The flight instructor accompanies all his actions and his decisions with detailed verbal explanations.
Everything that will be done or that will happen is announced verbally and through gestures in such a way that the individual can clearly anticipate what is coming emotionally. It should also be anticipated that, for example, the noisy engine in the start phase can be frightening.
The individual should say which facilities or functions of the aircraft they would like to try or have tried.
During take-off and climb, physical contact between patient and therapist is usually important.
The flight sequence is kept as simple as possible to facilitate the individual’s perception of the procedures. The flight instructor explains the radio traffic, the position and the landscape. The psychotherapist asks whether the smooth flight movements have been perceived and asks the patient to observe the actions of the flight instructor and to make a connection to the aircraft movements.
The individual should experience that the control stick works parallel to that of the flight instructor.
The control stick should be touched carefully by the individual to feel the movements.
Perhaps it is possible for the individual to briefly move the control stick himself (target: experience control).
After this flight exposure, the experienced process is briefly discussed in a few minutes. In the next few hours and in one or two days, the individual should positively structure his or her inner world by his or her own efforts.
In the next therapy session, the follow-up takes place.
If the individual is in a positive frame of mind, positive perceptions from the flight exposure should be mentally/imaginatively repeated and consolidated. Requests for changes in the repetition of the flight exposure should be prepared in detail as far as possible together with the individual for practical implementation.

B 2.5 Exposure Flying with scheduled aircraft

Preparing for a flight with a scheduled aircraft is first done by jointly selecting an emotionally suitable route and flight duration, including the size of the aircraft. Medium-sized aircraft, routes of no more than one hour’s flight and destinations that have a positive emotional colouring are often suitable. The individual should be made aware that anxiety can increase when the inevitable return flight is imminent.
If possible, booking and payment are done by the patient themselves to allow for active emotional involvement.

The psychotherapist, in consultation with the individual, informs the airline in writing of about the upcoming exposure. Assistance from a service (escort service, often chargeable) may be required at the destination airport to shorten waiting times/check-in procedures for the return flight.
The journey to the airport is always made separately. The psychotherapist meets the individual at the check-in counter. There, too, the staff is told the reason for the flight in order to obtain optimal seating conditions (e.g. increased space for the legs, proximity to the boarding staff, free access to the aisle) and to inform the boarding staff in advance. The psychotherapist and the individual maintain continuous communication contact and stay in close physical proximity. Physical contact also allows access to check somatic symptoms such as muscle tension, pulse rate and skin moisture. When boarding the aircraft, the psychotherapist contacts the purser and asks him to inform the pilots. Only after all or most of the passengers have taken their seats do the individual and the psychotherapist go to their seats. If possible, the individual should describe, analyse and emotionally evaluate the events before and during the flight themselves. Offers from a pilot to have the cockpit or, on arrival at the destination airport, the aircraft explained to them should be accepted.
Otherwise, the therapeutic contact is comparable to the contact in a sports aircraft. The positive experiences of flight exposure should be imaginatively relived in a therapy session. Before repeating a flight exposure, the expected flight should be imaginatively experienced in advance from the departure at home to the arrival at the destination (with visual imaginings and almost in real time with time stretches in emotionally complex situations). As soon as blockages in the imagination arise, the flight exposure cannot be carried out.

C Evaluation

A therapeutically positive evaluation by the psychotherapist should above all be given to the following:
1. A reassuring interpretation of the experience by the patient himself.
2. A lack of mood deterioration during the exercises.
3. A positive change in mood during some of the exercises.
4. A calming/slowing down of the mental processes during the exercises.
5. Emergence of activity pulses during flight exposure.
6. A better understanding of one's own inner world and the world of flight.

A therapeutic negative evaluation by the psychotherapist should receive the following in particular:
1. An uncertain interpretation of the experience by the patient himself.
2. A deterioration in mood during the exercises.
3. An acceleration of mental processes as well as an increase in stressful issues during the exercises.

The psychotherapist can pick up on the individual's self-interpretations and use the contents as well as the progressions for current or planning purposes as needed.
Since anxiety/phobia is very rarely limited to a small area of life, the evaluation has to take into account the overall behaviour of the individual.

Variants:

The gradual approach (above all inform, mentally produce, act, practice, expose, reflect) can also be transferred to the treatment of fears in other areas of life with motor-driven vehicles (e.g. cars, lorries, buses, trams, railways, work machines, cable cars, ships).

In addition, among the usual therapy methods and procedures (see, among others, the textbook by Capuzzi and Gross, 2007), there are many procedures that are suitable for somatopsychic application. Particularly suitable are those therapy methods and procedures that are congruent with the essential guidelines of this text, especially with regard to the referential-psychological orientation as well as the target system of health.

9.7 Somatopsychic therapy example 7: Coping with psychotrauma (Cruciatus Vehemens)

A. Target

Extreme experiences can lead to somatopsychic disorders (psychotrauma). The experiences with different possibilities and attempts to treat psychotrauma are reported and evaluated by Echterhoff (2009).
The illness caused by a psychotrauma is basically so concise that a uniform therapeutic procedure can be recognised across the different schools of therapy. All therapeutic approaches have a three-step process in common: emotional relief, processing of the somatopsychic disorders in connection with the processing of the problem issues, preparation and support for the return to private and professional everyday life. Acute stress reaction (ABR, F43.0 according to ICD-10) and posttraumatic stress disorder (PTSD, F43.1 according to ICD-10) do not differ in principle, so that the suggestions for the treatment of psychotrauma apply to both ABR and PTSD.

A.1 Content and situational framework

Treatment focuses on the generation and restoration of perceived self-efficacy and thus the beneficial and also protective function of the belief in one's own competence, the experienced control over traumatising conditions and their consequences (see e.g. Benight and Bandura, 2004). One's own admitted guilt can help to explain an extreme event, because in this way the affected person can hope to have cognitive control over the event afterwards and actional control over future events. The admission of guilt or co-responsibility can help to cope with an extreme experience better than without admission (Bulman & Wortman, 1977). From regained conviction of control, illusion of control can arise, which can have a salutogenic effect (Echterhoff, 2003, 2009).
An affected individual should basically not return to the former somatopsychic state after successful completion of therapy, but should be able to partially produce new salutogenic behaviour. This new behaviour can be called growth or post- or psycho- traumatic growth (Tedeschi and Calhoun, 2004). From this, an altered somatopsychic target with new behaviour emerges individually.

	Loss of ... (among others)	Referral therapy: making references to ... (among others)	Effect of the therapy (among others)
Extreme experience with psychotrauma	... the illusion of control	... the course, causes and consequences of the extreme event	Restoring/creating the experience of efficacy
	... the experience of self-efficacy	... one's own feelings, one's own reactions to experiences and one's own attempts to act	This may create an illusion of control by itself
	... of important explanatory habits	... the reactions of other people	Emotional stabilisation
	... of emotional stability and of emotionally protective expectations	... communications with other people	Return to private and professional everyday life

Fig. 28: Referential therapeutic procedure in the treatment of psychotrauma (Cruciatus Vehemens)

A schematic overview of the structure of RT in the treatment of psychotrauma is shown in Figure 28.

A.2 Target behaviour (experience and action)

The following behaviour is targeted for:

There should be three main outcomes for the person at the end of the treatment:
1. The symptoms that occurred with the experience are said to have become inconspicuous or to have receded completely.
2. The person concerned should have acquired new solutions and new ways of acting for themselves that strengthen them.
3. The person concerned should perceive him/herself as being able to work under pressure again.

A.3 Correctness and degree of competence of the behaviour to be tested after completion of therapy

The individual must be able to do the following (90% of the time): Make

references to, among other things, ...
1. ... the course and causes of the extreme experience,
2. ... one's own feelings and reactions to experience,
3. ... the reactions of other people,
4. ... the possible consequences of the extreme experience,
5. ... own attempts to act,
6. ... the communications with other people,
7. ... the experience of self-efficacy (above all internal control), based on which the autochthonous illusion of control arises.

B Therapeutic procedure

Somatopsychic therapy mainly includes the following:

Protective intervention

Above all, psychological first aid, emotional relief by giving protection and by accompanying, accentuating as well as structuring the process and by psychoeducation, first attempts to explain what is happening, body therapy and steady, undisturbed walking, Experiencing and explaining one's own feelings, preventing undesirable developments (such as hasty decisions, hasty change of activity, reliance on medication as a solution to problems, substance abuse, hasty separation from one's partner), objectification and comprehension of anxiety and pain processes (see below for information on anxiety and pain processes). see below for information on anxiety and pain tomography), possibly temporary medication.

Supportive intervention

E.g. somatopsychic methods such as symptom reduction, body therapy, structuring inner processes by reducing action to a single process (i.e. not doing several things at the same time) and by experiencing self-efficacy in small exercises, meditative introspection, rhythmisation and calming of referential domain 1, detailed processing of the course of the extreme event with further attempts at explanation in order to gain control over the event afterwards, gradual mental and in vivo confrontation, e.g. within an emotionally careful accident site inspection (see hints below), salutogenic build-up of feelings by e.g. ending the detailed discussion of the extreme event, practical solutions.e.g. within an emotionally cautious accident site inspection (see notes below), salutogenic build-up of feelings by e.g. ending the detailed discussion of the extreme experience, practical solutions to current problems.

Implementative intervention

Above all, helping to fundamentally clarify how to deal with injury, illness and death, finding the limits of one's own responsibility, preparing and accompanying the gradual return to private and professional everyday life.

Confirmatory intervention

The focus is on counselling after returning to private and professional everyday life, including affirmation of successful behaviours and results, optimisation of behavioural details (e.g. experiencing and perceiving the moment).

and

Recursive intervention

e.g. catamnestic talks, follow-up talk with review for further stabilisation.

B 1 Duration

For each of these six points under B. 100 to 250 minutes each (mean values with large individual variance).

B 2 Instructions

Detailed knowledge of control psychology and Referential Therapy is required for the treatment of psychotrauma. The instructions to the patients result from the different therapy procedures.

C Evaluation

The therapy targets achieved are to be checked (monitored and generalised) to ensure that the associated new or regained behaviour is stable and sustainable. After returning to private and professional everyday life, it can therefore be useful to conduct a joint review with the individual in order to report back on the affected individual's own successful performance in a relevant way.

9.8 Special therapy methods for the treatment of psychotrauma (examples)

Exposure: The therapeutic accident site inspection (or inspection of the place of the extreme experience).

The accident site visit is conducted under the supervision of the psychological psychotherapist.

The approach to the accident site is cautious and should always be questioned by the therapist ("We don't have to go there").
The target of the accident survey is:

- Familiarising with the terrible
- Finding subjective explanations
- Correction or specification of memories
- Conclusion/ending the intrusions/flashbacks

During and after the inspection of the accident site, the feelings and impressions at the accident site are discussed between the patient and the therapist.

If the accident site inspection is positive (to be checked only on the following day), the date for a work trial can be arranged.

Analogous to this are the places with other extreme experiences (e.g. assault).

Anxiety tomography, pain tomography

The target of anxiety or pain tomography is to relieve the patient: It should be experienced as in slow motion where/how the fear and where/how the pain arises, moves, changes and passes in the body. For this purpose, a large, rough drawing (scale almost 1:1) of the patient's body is made and the different states and changes are shown in different colours. The patient is asked to show where he or she can possibly change something. The patient can also practise to weaken or even prevent the occurring state by anticipating unpleasant states. Provocation of a disturbing state or corresponding paradoxical intention can prevent the further occurrence of anticipatory anxiety.

Change in the psychosomatic experience

Through mindfulness exercises, mental exercises, imaginative processes and through emotional control of the patient's imagination by the psychotherapist, changes in the way of experiencing and emotional processing can gradually be produced (see also therapy example no. 4).

Reduction of the pain experience

The patient should describe a part of his pain experience in order to provide the psychotherapist with diagnostically usable material.

The patient should re-evaluate part of his pain experience internally and consciously experience the processes taking place in order to find out where his somatopsychic state could be positively changed.
The procedure gives the patient more control over their pain experience. This leads to an experience of internal control over the pain. This therapeutic approach can complement other types of pain treatment.

Nightmare treatment

Many patients suffer from recurring nightmares as a result of an extreme experience. Psychotherapy offers the possibility of influencing the content of the nightmare imaginatively in such a way that less fear occurs or the nightmare even disappears completely.

Learning and experiencing one's own alternative behaviours

Psychological impairments are often characterised by the fact that the impairing experiences and actions are resistant to change. Some patients avoid new behaviour because, among other reasons, they are afraid of unexpected consequences in connection with this change. Other patients are so unfamiliar with a new behaviour that they do not even know how to practise it. The target of the procedure is to allow selected patients to try out emotionally important, new behaviour without obligation in a safe space (see also section 9.5).

Visual exercise to improve concentration

Mental impairments are often characterised by the fact that the impairing experience and actions are characterised by restlessness. Some patients complain of memory and concentration problems which, among other things, are supposed to be compensated for by excessive controlling or are actually compensated for with great effort.
The target of the procedure is for patients to look at emotionally unimportant and simply structured everyday objects such as a biro or a single key in detail and at length, describe them in drawings as well as verbally and then critically compare the reproduction with the original.
Through this exercise, the patient should pay more attention to external things and feel that he or she can concentrate to a clearly recognisable extent despite all the problems.

Ending the traumatising subject matter

At the latest when all details of the extreme event and the extreme experience have been treated therapeutically in detail, the patient has classified the extreme experience explanatorily and a future-oriented behaviour can be recognised, these successes may no longer be disturbed externally. The patient must no longer talk in detail about the extreme event suffered and about his extreme experience outside the therapeutic setting; only answers with little content such as "That was really difficult for me" or "I am working well on improving my condition" are therapeutically desirable.

The treatment of psychotrauma described above confirms assessments made by Hobfell, Watson et al. (2007) with the help of a meta-analysis. According to them, the following intervention tasks ("five essential elements") should be at the core of the treatment of psychotrauma: A sense of safety, calming, a sense of self-efficacy and community efficacy, a sense of connectedness, and a sense of hope.

10 Evaluation of somatopsychic therapy

Empirical research according to the well-known principles of scientific work, especially in psychology (Bortz, 2005; Popper, 1993), is essential for systematic testing of somatopsychic treatment measures. In the medical field, the term “evidence-based” is intended to help consolidate the empirical validation of results and findings. General concepts and practical instructions for an empirically based evaluation can be found, among others, in Wottawa and Thierau (2003) and for criterion-oriented evaluation in Echterhoff (1978).
In the meantime, there are guidelines for evidence-based research or empirically based research in the medical field. These include free publications and guidelines from public bodies that allocate research funds. These guidelines and specifications that have been produced so far sometimes do not reveal the simple, basic requirements for research, as they are often overloaded with specific guidelines for the approval of medicines and with professional and ethical regulations.

Guidelines for the evaluation of somatopsychic therapy are formulated below.

Guiding principles for the evaluation of somatopsychic treatment interventions are:

1 Somatopsychic evaluation is the criterion-oriented, empirical testing and review of a treatment intervention and the hypothesis-driven interpretation of the results Somatopsychic evaluation can serve the following purposes in particular:

1.1 Testing the specificity of a treatment intervention.

1.2 Testing the discriminant nature of a treatment intervention (e.g. by comparing the main effect with side effects).

2 In somatopsychic evaluation, a distinction is made between the following tasks, among others:

2.1 Evaluation of the results of an individual’s treatment.

2.2 Evaluation of the generalisability of the treatment results.

2.3 Summative evaluation (evaluation of change from pre to post).

2.4 Formative evaluation (evaluation of the sequence of successive steps in the treatment, with the possibility of using intermediate results for subsequent steps).

3 Somatopsychic treatment can be assessed according to the following aspects, among others:

3.1 Degree of effectiveness (measured against the given objective).

3.2 Degree of efficiency (effort required to achieve the target, e.g. economic, organisational, time and emotional effort).

4 The treatment intervention to be assessed must be able to be placed professionally in the context of a theory or construct according to the nosology of a disorder.
The nosology of a disorder for which a treatment measure is intended describes and analyses the etiologically important correlations for the evaluation work, which are already theoretically and empirically secured.

5 Evaluation work has to distinguish between (a) gaining professional knowledge (especially the generalisability of results obtained in a hypothesis-driven manner) and (b) the generalisability of results obtained in a hypothesis-driven manner.
(b) the development of the marketability of a product (especially the implementation possibilities in the health market through optimisation and adaptation). The criteria by which the successes of (a) and (b) are measured differ fundamentally.

6 The specifications for sampling result primarily from the population of the target group to be defined, the hypotheses set up (see guiding principles 4 and 6) and the significance level to be selected (depending on the importance of the research question and depending on the reliability of the current state of knowledge).

6.1 In principle, a population in the sense of this text consists of a group of people with a defined disorder (infinitely large and independent of time in the inferential statistical way of thinking). The sample from this is to be drawn according to random principles, resulting in a so-called randomised sample. A homogeneous sample can also be randomised. Quota samples and non-randomised samples can - from an inferential statistical point of view - only serve to generate hypotheses.

6.2 The required sample size results primarily from inferential statistical considerations (e.g. with regard to desired effect sizes).

6.3 A statement about effect sizes is mainly obtained by comparison with an expected value (e.g. from control groups or a threshold value such as the probability of spontaneous remissions).

6.4 Opportunity sampling only allows a statement to be made about the service provided to date by a treatment facility defined by this or about an undefined probability of success.

Somatopsychic evaluation work has to achieve for practice that the examined treatment measure can be generalised and thus implemented with a certainty that is recognisable for all actors involved.

11 Somatopsychic diagnostics and assessment

11.1 Dual orientation of somatopsychic diagnostics

Somatopsychic diagnostics must be both norm-oriented and criterion-oriented, as both aspects are important for the significance of illness and health. In this text, a combination of both aspects is proposed rather than a single criterion.
“Either-or”.
The dual orientation of somatopsychic diagnostics includes:

1. The evaluation of diagnostic results within a normal distribution (especially a normal distribution).
2. The evaluation of diagnostic results in relation to content-related criteria.

Diagnostic tests generally provide reference values within a normal distribution (so-called normal values), from which it can be seen which range around the mean value can still be considered normal or usual.
The proposed procedure checks whether a characteristic lies within a so-called normal range (mostly +/- 1 σ) of a reference group, and if not, it checks whether a certain content-related, disease-value or health-value criterion is reached. A dual orientation enables the use of two reference systems in order to be able to answer the diagnostic questions on the expression of characteristics not only according to collective measures, but also according to account-specific, i.e. criterion-oriented, points of view.
As soon as one uses diagnostic procedures that comply with the standards (see e.g. Häcker, Leutner and Amelang, 1998; Testkuratorium, 2007), the mean range is defined. Outside the mean range, content criteria based on sub-targets are to be applied. In the healthy range, it may be that all sub-targets are stably given or have only been partially achieved.
If the salutogenic sub-targets do not become fully and stably diagnostically recognisable, psychotherapy may be necessary.

In many cases, the use of existing tests is only possible with compromises, since somaotopsychic therapy often pursues different targets than the existing tests measure. With the help of the dual orientation of somatopsychic diagnostics, it is possible to show which salutogenic sub-targets have been achieved and which pathogenic sub-targets have been weakened or dissolved. However, the tests based on this still need to be developed.

11.2 Somatopsychically based assessment

11.2.1 Principles of a somatopsychic appraisal

Assessments generally start from a question in connection with a practice-related problem. The problems include, for example, disputes between patients and cost units as well as social court tasks, processes relevant to traffic therapy, problematic therapy planning, family court disputes and forensic clarifications in criminal proceedings. From these problems, individual hypotheses arise via questions, the refutation of which is a matter of scientific theory. However, workable hypotheses arise exclusively in the context of theories, models or constructs, from which the

professional-systematic context is derived from this. Becker (2008) and Echterhoff and Heinecke (2010), among others, describe basic principles for the work of experts in the context of social law. The general procedures are explained and defined by the Testkuratorium (2007) and Westhoff and Kluck (2008), among others. All concepts for professionally based assessment have in common the principle that an assessment is a comprehensive examination procedure consisting of a combination of tests in which - in the context of criteria - both salutogenic and pathogenic somatopsychic processes can play a role.
The ICF (International Classification of Functioning, Disability and Health of the WHO) can help to describe the effects of mental and somatic damage via a catalogue of impairments of participation (independent of the causes) in private life and working life. The ICF offers suitable possibilities to summarise the impairments found in a standardised way. A German long version is available (see bibliography under ICF) as well as a short version for the effects of mental impairments (Linden, Baron & Muschalla, 2009).

In the two following sections, recommendations are formulated for somatopsychic assessment in the field of social law (see also Versorgungsmedizin-Verordnung, 2009) and for the purposes of therapy planning.

11.2.2 Somatopsychic assessment in the field of social law

A typical question in social law can be: “Is the reduction in earning capacity (MdE) or the degree of injury (GdS) of person X so high or such that it is no longer possible to carry out the previous work activity?”

A somatopsychic approach for the assessment in the field of social law usually looks as follows:

1. Phenomenological description of the disorder

As far as possible, a value-free and interpretation-free description of the disorder should be written independently of the classification systems for disorders. If person X says, for example, that he or she is afraid, it should be asked how this fear is to be recognised in detail in experience and action and what possibilities person X has lost as a result. Both psychological and somatic phenomena - in interaction with the social and material environment - are to be asked about and recorded. A high degree of phenomenological clarity can be achieved with the help of corresponding examples, which do not only have to come from person X, in the form of small episodes.
Using the characteristics of somatopsychic basic processes, the phenomenological description can be completed and structured.

2. Formation of assessment hypotheses

Within the phenomenological material, various connections (e.g. accumulations of processes, strength characteristics, coincidences, similarities) can usually be recognised. In the exploration, assumptions about connections can be worked out.

Example a:

If contact with people is avoided by person X, it can be asked in a somatopsychic sense: “Do you experience muscle tension in the neck-shoulder area?” And if so:
“Are these painful?” Or: “What do you not like at all?” Or: “Do you take medication for your cardiovascular system?”

Example b:

If intense activities are reported, one can ask in a somatopsychic sense:
“Do you ever forget anything?” Or: “What is really important to you in your life?” Or: “How long do you usually sleep?” Or: “What and how do you eat?” Or: “Do you have difficulties in the stomach and intestines?”
The phenomena found are ordered, whereby individual phenomena can be given several assignments. A practical organising tool can be a two-dimensional matrix, which lists the phenomena in one input as well as in the other input, which are technically linked or commented on in the cells (see also Figure 29).

Phenomena	Muscle tension in the shoulder-neck area	Sleep duration 4 hours	Intestinal unrest	Aversion to waiting
Muscle tension in the shoulder-neck area	Bright, pulling pain in the neck, almost permanent	connected with each other?	connected with each other?	connected with each other?
Sleep duration 4 hours		Problems falling asleep and high susceptibility to disturbance (anticipatory anxiety?)	miteinander verbunden?	connected with each other?
Intestinal unrest			Diarrhoea almost daily: Somatopsychic characteristics changed?	connected with each other?
Aversion to waiting		Difficulties in referential domain 1?		Must frequently break off waiting, also to his own disadvantage

Fig. 29: Matrix with examples of ordering phenomena on an assessed individual (basic pattern)

The extent to which characteristics of somatopsychic processes are impaired or particularly noteworthy must be determined. The individual characteristics of cognitive-emotional modulations within the framework of accommodation/assimilation are to be enquired about or recorded. It may be that some modulations are lived particularly weakly or particularly strongly. Useful indications for the formation of assessment hypotheses can also be worked out from the function of salutogenic sub-targets. If certain salutogenic sub-targets are neglected,

this could show up in an activation of pathogenic sub-targets relevant to the content. The focal points or correlations of the phenomena that become clear in the cells of the table in Figure 29 are compared in terms of content with the eight pathogenic sub-targets in order to see which sub-targets are particularly affected. The particularly relevant sub-targets provide the content for the assessment hypotheses. The assessment hypotheses are to be refuted within the framework of tests and other test procedures according to the usual inferential statistical procedure.

3. Development of criteria for decision-making

The decision is made by comparing criteria that result from the requirements of the work activity of person X with the findings that can be derived from the descriptions and data on person X determined by the expert. It is usually difficult in practice to determine the requirements of the work activity. If the situation is unclear, enquiries must be made with the employer or with relevant professional bodies (e.g. Chamber of Industry and Commerce or Labour Office or authorised Internet sites). Especially in the case of safety-relevant activities, the approximate 100% fulfilment of criteria is required (e.g. gripping safety or resistance to irritation). In many cases, a high level of somatopsychic endurance is required, e.g. for employees of call centres, who have to be able to results, among others, from appropriate functions of speech, hearing, gastrointestinal, cardiovascular and constructive cognitive-emotional modulation. The three referential domains are each to be specifically considered.

4. Decision-making

The basis for decision-making is, as usual, the results of the file analysis, the exploration and the tests. For the tests, there are no specific somatopsychic procedures in the sense of this text. However, tests available on the market can be selected according to somatopsychic aspects, so that a somatopsychic concept can be taken into account at least in part. Until specific somatopsychic tests are available, it will be necessary to optimise the selection and combination of tests according to somatopsychic requirements. In most cases, it will be necessary to include somatic-oriented tests and examination procedures at the same time, e.g. blood pressure measurements, measurements of muscle tension (electromyogram), movement function tests, pain analyses, endocrinological analyses, which are either carried out by the assessor himself or commissioned to be carried out.
If necessary, diagnoses are developed from the findings like MdE (reduction in earning capacity) or GdS (degree of disability), and in comparison with the criteria it is determined how the question posed is to be answered.

The formal structure of the expert opinion is based on the specifications of the requesting body.

The hypothesis formation and hypothesis testing in a somatopsychic assessment initiated under social law is to be clarified by means of an example.

a. The initial problem and the questions prompted by social law
After the accident at work on xx.xx.xx, physical and psychological consequential damage occurred which prevented the insured person from resuming his work activities as usual. The accident occurred when Mr XX was carrying out work on a roof. He took a step backwards and

stepped on a plexiglass cover with one foot. This gave way underneath him, causing him to fall about 8 metres and hit a concrete floor.

Among the questions prompted by social law was the following:
Can the person to be assessed return to the previous work activity, either fully or with restrictions?

b. For the classification of impairments: The general disease and disorder concept

As consequences of the injury, the main physical impairments are the continuous, severe discomfort in the right arm due to the elbow injury and the restriction in the range of motion with accompanying pain. The nature and severity of the occupational accident lead to the assumption that a psychotrauma occurred.

In the case of psychotrauma, the following problems basically arise for the person affected: Re-experiencing, emotional numbness, loss of belief in one's own effectiveness, avoidance behaviour, sleep disorders and nightmares, high excitability, breaking down of one's own value system and understanding of values.
In the present case, the following impairments from the problem areas of re-experiencing, avoidance behaviour, sleep disorders and nightmares, high excitability are expected. Within these problem areas, specifiable impairments are suspected, the occurrence and severity of which are to be examined in the assessment process:
Difficulty falling asleep and sleeping through the night with event-related nightmares (e.g. dreaming of falling), waking sweaty from sleep, periods of insufficiency, restlessness, depressive feelings, suicidal thoughts, fears (that something might happen to family members), fears before and during public transport journeys, fears about the future, mood swings, difficulties in feeling pleasure, inability to relax, inability to let friends and family get close, intrusions in various areas of perception, Distortions of perception, lack of drive, concentration difficulties, memory problems, self-reproaches, increased tendency to brood, circling of thoughts, persistent avoidance of situations and stimuli with an affinity for accidents, avoidance of groups of people, flattening of general reactivity, irritability or outbursts of anger, increased arousal, hyper vigilance, increased need for control, jumpiness, excessive body tension with or without pain, tightness in the thoracic region, trembling.

c. Requirements for somatopsychic competences

For the previous work activity (industrial cleaning in a defined area), the following mental and psychosomatic competences were required in particular:
Reasonable physical fitness and strength (including for holding high-pressure cleaners with up to 1000 bar, working at heights, etc.), sustained concentration and alertness.

d. Social-law induced questioning and scientific hypothesis formations

The socio-legally induced question (see point a.) is transformed into scientifically workable hypotheses H_0 and H_1. According to the scientific system, the hypotheses are H_0 are to be falsified in order to accept or maintain the alternative hypotheses H_1. In somatopsychic reports, qualitative facts such as symptoms (expressed or observable impairments) can and must also be

included in the attempt to refute H_0. Qualitatively defined criteria are required for the assessment of qualitative facts, e.g. the nature and permanence of the symptoms or the assessed person's opinion of competence with regard to his or her own future work activity. It is important to check whether somatopsychic impairments are present that fit the disease and disorder concept. As soon as quantitative facts (especially measured values from performance tests or other somatopsychic tests) are used, limits (e.g. cut-off values) are necessary to assess the results. The quantitative limits should be norm-oriented (related to a comparison group) or better criterion-oriented (related to future requirements).

The formally formulated hypotheses are:

H_0 (A) = The previous earning capacity is present.
H_0 (B) = There are sufficient somatopsychic competences needed for the former work activity.
H_0 (C) = The currently found earning capacity cannot be improved.
H_1 (A) = The former earning capacity cannot be restored.
H_1 (B) = The somatopsychic competences needed for the former work activity are not present.
H_1 (C) = The currently found earning capacity can be improved.

e. Result of the hypothesis tests

In the present case, the hypotheses H_0 (A) and H_0 (B) were refuted against the background of the disease or disorder concept including the work-related demands on somatopsychic competences. The alternative hypotheses H_1 (A) and H_1 (B) should be maintained.
No comprehensive barriers to improving the currently found earning capacity could be identified, so that hypothesis H_1 (C) should also be upheld.

11.2.3 Somatopsychic assessment for the purposes of therapy planning

For example, a health care payer asks the following typical question: "What treatment measures are required to restore the health of insured Y?" For this purpose, the following is to be done:

1. Phenomenological description of the disorder

s. Section 11.2.2, point 1

2. Development of a database for therapy planning

Within the phenomenological material, various correlations (e.g. accumulations of processes, strength expressions, coincidences, similarities) can usually be recognised. Possible somatopsychic connections are to be suspected and can lead to questions for the insured person Y.

Example a:

Weakness and sadness are reported from the insured person Y.
Somatopsychically oriented questions from the therapist related to this can be, for example: “How long do you usually sleep?” and if very long: “What is your blood pressure?” or: “Do you often have headaches, which ones?” “Do you do sports?”, “Do you drink alcohol, how much?” or: “Do you have friends, how do they treat you?”, “How strong are your sexual interests?”.

Example b:

If the patient reports about the unpleasant influence of people on him/herself, it can be asked in a somatopsychic sense, for example, as follows: “Do you have hobbies or strong interests of your own?” or: “What have you ever changed in your life?” or: “Describe your present physical condition in as much detail as possible”. The phenomena found are ordered in a matrix as above in section 11.2.2 and described in context in the individual cells.

1. Decision-making

see also section 11.2.2.
The facts and data found are transferred into somatopsychic findings (see also section 5.2) and related to the salutogenic and pathogenic sub-targets. This results in the hypotheses (about the disorders or health-relevant resources), which are subjected to an inferential statistical test for refutability with the help of tests (see section 11.2.2). The results of this test on the pathogenic sub-targets are used to determine a diagnosis and the results of the test on the salutogenic sub-targets are used to explore constructive resources and resilience.

2. Therapy recommendation

The recommended therapeutic procedure includes the description of the specific criterion-oriented therapy targets in the individual therapy phases and the respective specific treatment methods.
The therapeutic role of the individual somatopsychic processes found, including their possibly individually formed characteristics, as well as important, individually practised cognitive-emotional modulations, each related to the three referential domains, should be pointed out.

The formal structure of the expert opinion is based on the specifications of the requesting body.

12 Somatopsychic therapy and coaching

Taking into account the axioms and premises (see Appendix A1), coaching is a systematic method for achieving a state of sufficient competence through
targeted transformation from a state of lack of competence to a state of sufficient competence. This transformation includes the target of the coachee's ("client's") desired competence, the achievement of which is intended by the patient and the coach (see Figure 30).

	Somatopsychic therapy	Coaching
Problem/Deficiency	Behaviour worthy of illness	Task-related behavioural limits
Target: Enhancement of behavioural skills	Gesundes Verhalten	Optimised professional behaviour
Process	Transformation of behaviour	
Role of the individual	Patient	Coachee (client)
Professional requirements	Existence of appropriate healing methods and procedures.	Existence of appropriate coaching methods.
Prerequisites for the individual	Suffering pressure, therapy motivation, therapy ability (internal resources), economic resources (e.g. from an insurance company), social resources (e.g. from the family).	Motivation to succeed, ability to learn and change (internal resources), economic resources (e.g. assumption of costs by a company), time-bound resources (e.g. release from a company).
Review of the achievement of objectives	Achievement of salutogenic targets, freedom from symptoms, comparison of the achieved behaviour with healthy behaviour, experience of effectiveness.	Experiencing one's own effectiveness by entering into and experiencing professional success or by comparing the achieved behaviour with the desired optimised professional behaviour.

Fig. 30: Comparison of somatopsychic therapy and coaching.

In somatopsychic therapy and coaching, individuals experience a constructive transformation of their behaviour. With both target groups, it is possible to work with most of the methods and procedures that originate from somatopsychic therapy, although the targets are different. Only methods and procedures that have an autochthonous effect on the client can be considered for coaching. Allochthonous methods and procedures such as medication or psychoactive substances are not part of coaching.

13 Research

Quality standards for research and development in medicine have only been systematically thought through in recent years. Psychology as a basic subject, on the other hand, can look back on a much longer tradition, since psychology has a defined object of observation and processing, while medicine is composed of several disciplines and areas of application.

Depending on the source, the quality levels of evidence-based medical research are described as follows (Wikipedia 2011, Das Deutsche Cochrane Zentrum 2011, Deutsche Diabetes Gesellschaft 2011):

Level 1: There is sufficient evidence of efficacy from systematic reviews of numerous randomised controlled trials.

Level 2: There is evidence of efficacy from at least one randomised controlled trial.

Level 3: There is evidence of efficacy from methodologically well-designed studies, without randomised group allocation.

Level 4a: There is evidence of efficacy from clinical reports.
Level 4b: Represents the opinion of respected experts based on clinical experience or expert committee reports.

However, all descriptions of quality levels of this kind ignore

1. the methodological definition of “good” or “sufficient” (see levels 1 and 3) and
2. The need for hypothesis-driven studies (model-construct validation studies, efficacy studies according to the if-then principle).

Psychotherapeutic research should be somatopsychically oriented and has above all the following
to consider:

1. Psyche and soma are - ontologically - to be understood as an entity. If this entity is disregarded in research work, methods and procedures can no longer establish this unity, so that hardly more than correlations that are difficult to interpret can be worked out from the research data. However, a deficient research-logical approach often allows the formation of hypotheses that can be subjected to an inferential-statistical attempt at refutation in research that takes the entity into account. The somatopsychic model presented in this text enables the entity of psyche and soma to be observed for such research work.

2. Because of the unity of psyche and soma, an individual must not be understood through separable properties of individual organs, individual modes of functioning or even through specific treatment methods or procedures. The effects of a psychopharmaceutical do not explain the somatopsychic characteristics or the somatopsychic targets of an individual.

3.Somatopsychic therapy promotes resilience and resources and is not limited to combating disorders or even symptoms.

4. Somatopsychic research has to include the whole range of somatopsychic-based treatment methods more systematically than before.

5. In line with the treatment methods, diagnostic procedures in the sense of criterion-oriented tests have to be developed, which have to meet the known test-theoretical requirements - especially validity - better than before.

Somatopsychic research should improve practice. If it does not, it may optimise marketable products, but it may also reproduce realities of outdated thinking or thinking that needs to be supplemented. A long-term research strategy in the somatopsychic field that allows only hypothesis-guided work is urgently needed to improve the practice of psychotherapeutic treatments. Hypothesis-guided research requires the existence of models and constructs. The present text on somatopsychic correlations is intended to support appropriate hypothesis formation with the models and constructs presented.

14 Implications for current practice

At present, psychotherapy has many useful and proven treatment methods at its disposal, some of which are professionally plausible and have been partially or fully empirically substantiated, and which are suitable for promoting resources as well as resilience.
At the same time, however, important psychological expertise has not been sufficiently exploited for psycho-therapeutic purposes at present. Among others, this applies to the following areas of expertise including the related therapy research:

1. Control psychology (see Experiencing self-efficacy, as this can lead to a strengthening of control psychology-based psychotherapy such as Referential Therapy),
2. motivational psychology (such as the expectancy-value concept),
3. depth psychology (e.g. imaginations),
4. perceptual psychology (including body experience),
5. general psychology (e.g. body-mind issues),
6. biology and Biological Psychology, and
7. learning psychology (e.g. experiential education), which has to professionally design and evaluate the areas listed above for the purpose of improving somatopsychic therapy.

If the neurologically or brain physiologically oriented approaches were to go beyond the already established psychological findings in the future, complementary somatopsychic impulses could possibly be used for therapeutic purposes.

Even if a somatopsychic therapy should initially cause orientation difficulties, the minimum requirement for a somatopsychic therapy is to apply methods and procedures for the psychological as well as for the somatic area. On this basis, a step-by-step approach to a somatopsychic therapy system can take place.

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Appendix

A1 Basics and approach

A1.1 The concept of a unity of psyche and soma

Placebo effects proved early on that there is an intimate connection between body and soul. But nevertheless, some professionals in the health care system still find it difficult to understand psyche and soma as a unity. Sometimes it seems as if psychotherapy patients themselves clearly feel the connection between body and soul and are therefore bothered by the fact that in the health care system body and soul are often and willingly separated organically as well as therapeutically. Earlier terms such as “vegetative disorder” or “vegetative dystonia”, nowadays often called “somatisation disorder”, helped to describe and explain conditions when nothing pathological could be found in bodily organs, in the nerve tracts and other somatic elements, but the diagnostician nevertheless had to accept a condition. This type of previous nomenclature was based on an understanding that the actually healthy body was made ill in an unknown way from an unknown source of disturbance. This source of disturbance seemed to be the “soul”. Psychotherapy on a psychological basis and somatherapy on a medical basis can in principle have common targets. Both disciplines are fundamentally independent and do not cooperate in any adjuvant way.
Terms such as “psychosomatic”, “psychophysiological” or “psychovegetative” are conceptually classified under “somatopsychic” in this text, unless there is a special emphasis on the somatic. The conceptual definition refers to the professional approach of the present text, which is guided by empirically based theories and constructs of psychology. The theories and constructs used describe and explain comprehensive functional areas of the human being, e.g. the regulation of experience and action, perception in all areas, the processes of accommodation and assimilation, the motivational system, maturation or learning, often including somatic correlations. The methods of thinking and the results of psychology enable a comprehensive life-scientific view as a guiding principle, into which the knowledge and findings of human biology can be well integrated for the benefit of a nosological, aetiological and therapeutic approach. Already in a publication by Ganz, Gurland, Deming and Fisher from 1972, the terms “somatopsychic” and “somatopsychics” were used consistently - derived from the psychologically guided task of the study. In the meantime, a new professional development has begun with the term “somatopsychology” (Kasten, 2010), in which the consequences of somatic impairments on the psyche are examined.

The division into body and soul is favoured by introspection and by reflection on oneself, because reflection makes it possible to distance oneself from one’s own body by perceiving one’s own body like an outside world. The assumption of such a separation is likewise favoured by the idea that the soul would leave the body intact in the process of dying, leaving it behind as a transient carrier. The soul is thus as an independent functional part capable of surviving independently of the body. In line with this, some religions formulated a reservation of ownership for the souls of their followers, and the organisations belonging to them (especially churches) sometimes succeeded in incorporating this reservation of ownership into the secular legal system (e.g. people are said to have been punished who searched for a soul in the bodies of people).

The word “soul” understood as a religious term does not have to coincide at all with its meaning in a psychological or medical context.
Some discussions take up the Descartes problem again neurologically with the solution of the time “cogito ergo sum” and find as a new solution the farewell to free will with the control dominance of the soma over the psyche (Singer, 2003). However, one might ask how a scientific book can be written if the author is somatically controlled. If the soma controls the psyche, thoughts, feelings and desires are only a functionless adjunct or a kind of decoration of somatic characteristics and functions, thus actually unnecessary. With this approach, the problem of the connection between soma and psyche has only been put aside. The explanations of Metzinger (2000) and Bennett and Hacker (2003) also lead to more questions than answers because of their assumption of a dual relationship between psyche and soma. The tracing of historically significant approaches to the so-called mind-body problem by Wright and Potter (2000) represents a valuable documentation, which, however, provides different suggestions. Understanding body and soul as an entity was apparently difficult in the European cultural area, for in European philosophy thinkers repeatedly tried in vain to abolish or at least mitigate the alienating separation of body and soul. One of these attempts to technically overcome the division of the human being consisted in the assumption that body and soul run in parallel without any recognisable connection - if at all, then via a fitting intervention of God - just as the time runs in parallel on different clocks (Leibniz, 1714/1998). Psychophysical parallelism or dualism, as presented by Descartes (1641/1993), assumes the essential difference of body (the physis, the soma) and soul (the psyche). This parallelism denies a mutual interaction of body and soul. If one separates body and soul in this way, it is difficult to find explanations for the obvious interaction of the two. Pinel and Pauli (2007) report vividly on the development of the problematic dichotomy of body and soul.
Since the beginning of empirical research, attempts have sometimes been made to relate the processes of body and soul to each other substantially and causally by means of elaborate methodological and procedural methods. Let us take an example to illustrate this approach, which does not lead to the desired result: If one were to record all horses and also all empty carriages and establish a correlation between the two elements on this basis, the correlation coefficient would be approximately zero. Only if one considers the horse-drawn carriage as an entity does one arrive at findings about the vehicle and about the interaction between horse, coachman and a passenger. Transferred to humans, this means that there must first be a theory about the interaction of soma and psyche if one wants to measure and understand correlations between the two areas.

If one considers psyche and soma as two entities, methods and procedures of any kind cannot overcome this ontologically created separation. Paradoxes and pseudo-problems can be the consequence of such an approach. One of these paradoxes is, for example, that the same physiological processes can often be interpreted differently. Pale skin, for example, can be interpreted as the result of prolonged hypotension, as the momentary result of a shock reaction or as uncompensated hypothermia. Visibly well perfused skin can be interpreted as a consequence of eustress or also as a consequence of distress.

One of the basic bogus problems, for example, is the question of what force or organ connects the soma and the psyche. Some kind of life force with the help of nervous systems distributed throughout the body, or the amygdala perhaps? Or the active substance cortisol? Or is the HPA/HHN axis[1] even an "objective window into the psyche" (Mason et al., 2001)? Above all, neurotransmitters repeatedly and rightly attract a lot of interest.

Neurotransmitters of the central nervous system excite or inhibit action potentials. Other messenger and agent systems, such as electrical impulses or hormonal substances, also control the Somatopsychic of an individual. Neurotransmitters include above all (Pinel and Pauli, 2007, p. 119)

Amino acids
glutamate, aspartate, glycine, GABA (gamma-aminobutyric acid),

Monoamine
catecholamines (dopamine, adrenaline, noradrenaline),
indolamines (serotonin),

Soluble gases
nitrogen monoxide,
carbon monoxide,

Acetylcholine

Neuropeptides
endorphins,
other neuropeptides.

In their textbook, Pinel and Pauli (2007) do not even attempt to establish a system of correlations between neurotransmitters and emotional states, as they are obviously aware that they cannot establish a comprehensive and coherent functional structure beyond doubt. Important somatopsychic states can also occur as a result of the lack of inhibition, i.e. some neurotransmitters remain passive and thus do not provide any measured values. In addition, there are other messenger and agent systems, such as electrical impulses or hormonal substances, which can also be attributed to the somatopsychic control of an individual. Previous neuropsychological attempts to establish biopsychologically based contingencies, connectivities, correlations or causalities between psyche and soma have been in vain or are not scientifically possible because of the approaches used, Schmalohr (2007) explains comprehensibly. Gigerenzer confirms this criticism: "I am convinced that one can learn a lot about the physiology of the brain through fMRI. As far as human behaviour is concerned, the colourful images have so far shown me very little for my field of research. It is also typical that neuro-decision research has so far hardly taken note of the modern state of psychology." (Gigerenzer, 2011, p. 310).

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[1] HPA/HHN axis Hypothalamic-pituitary-adrenal axis (HPA)/hypothalamic-pituitary-adrenal (HHN) system.
Example process in simplified form in the case of disstress: hypothalamus stimulates pituitary gland, which releases ACTH (adrenocortic-tropic hormone) into the bloodstream; the adrenal gland then produces cortisol, which has an intensive effect on the hippocampus, the associated anxiety (perhaps also depression) forces the amygdala to become overactive, which therefore blocks action and positive emotions in the prefrontal cortex.

In the field of so-called “functional magnetic resonance imaging” (fMRI), functional magnetic resonance tomography (fMRT) in particular is used in practice in the cerebral area. Schleim (2011), Hommel (2010) and Vul et al. (2009) rightly confirm the criticism of the current performance of neuroscience. An fMRI only records the blood volume in blood vessels and by no means neuronal functions or even causal correlations. Moreover, the probability of finding significant correlations - even without an actual connection - grows, calculated solely via a considerable sample size, i.e. the number of examination elements, the so-called voxels (“three-dimensional pixels”).
These analyses also neglect the nerve subsystems in the spinal cord, in the stomach and intestinal area and in other regions of the body. These nerve subsystems outside the brain can also store, react and control.

However, if one understands soma and psyche as an entity, there is obviously no epistemic value from the fact that, for example, cerebral phenomena do show up in the imaging process after an extreme experience, but they also do not always appear in the same places. The fascination of the pictorial must not deceive the observer in terms of scientific logic (Jäncke and Petermann, 2010). The correct approach would be to view the psychological and somatic phenomena as a cluster or syndrome, so that, for example, emotional numbness, increased occurrence of neuropeptides, anxiety and increased levels of acetylcholine can together show a disorder syndrome of an individual. Depending on the individual constitution, the same disorder syndrome can show different manifestations in the individual phenomena. The quantitative methods of cluster analysis can be useful in extracting clusters from a collection of functionally similar phenomena. However, there are no systematically found results in the somatopsychic field (see also supplementary chapter E in this text as an internet version).

There seem to be some focal functional connections that always stand out when one tries to condense the representations in the specialist literature in terms of content:

- Neuropeptides (especially endorphins, morphine-like peptides) have, among other things, a pain-reducing effect, control blood pressure, regulate intestinal peristalsis, body temperature, hormone secretion or influence body movements.
- Acetylcholine connects neurons with the motor end plates of the muscles and is thus also related to the state of fear (Ewert, 1998, p. 158), as is corticotropin releasing hormone (CRH), which mobilises cortisol (hydrocortisone) via the release of corticotropin (ACTH) and can thus cause fear and anxiety (Ewert, 1998, p. 151).
- GABA (γ-aminobutyric acid, gamma-aminobutyric acid), which apparently restrains or represses the “natural anxiety potential”;
- Noradrenaline regulates, among other things, mental arousal or resilience;
- Serotonin (especially for the regulation of well-being, e.g. good sleep),
- Dopamine produces a distinct feeling of happiness or well-being in connection with new experiences or knowledge.)

In some non-European cultural areas (e.g. in Asia), body and soul are not treated as separate objects, but are understood as a unity even today. This is why a different understanding of human beings, their behaviour and their illnesses generally developed there. This is how independent constructs such as the energy flow Qi or the system of meridians, which are important for acupuncture, among other things, came into being. The human being, who has remained conceptually undivided in traditional Chinese medicine in such a way of thinking the patient is viewed, diagnosed and treated in the context of his or her living environment.

Maturing processes, such as those of puberty or pubescence, show that the soma releases new qualities of experience and action (e.g. desires and new interactions with other people) and that experience and action enable new somatic qualities (e.g. partner-related changes in blood circulation, secretions and muscle contractions). It is inaccurate or even wrong to suspect mental disorders simply because no pathological cause for a disorder has been found in the somatic realm. It is also an error if somatic disorders are assumed simply because nothing serious could be found in the mental area. Individual borderline impairments in the soma and in the psyche can, however, represent a disease-value disorder through their interaction.

Significant references to the unity of psyche and soma were often ignored in the past. For example, as early as the middle of the 19th century, the physiologist Carpenter described the Carpenter effect named after him, which was generalised by Hellpach (1933, p. 48) to the Ideoreal law. This process described in this way shows, among other things, that a conscious or even unconscious idea can trigger or control corresponding physical movements. It can be so strong that it can be useful in sports training and in the therapy of movement-disabled individuals. The search for a professional explanation at that time mistakenly led to looking for a connecting organ or a connecting switch point between psyche and soma.

A historically and professionally important contribution to the understanding of the unity of psyche and soma was made by Freud (1895/1969), e.g. with his models of “conversion neurosis” (e.g. a conflict can be expressed and at the same time neutralised by bodily symptoms) and “actual neurosis” (consciously perceived events can include bodily symptoms),
e.g. a strong but not dissipated arousal can at the same time present itself as panic anxiety).
Freud’s constructs “conversion neurosis” and “actual neurosis” imply the unity of psyche and soma. This approach by Freud shows that from a joint consideration and explanation of psyche and soma, new conceptualisations (e.g. conversion neurosis) emerge at the same time. Servan-Schreiber (2008) reports on the development and effect of a person’s cancer on the basis of somatopsychic effect correlations and clarifies on the basis of research results and plausible correlations that only a holistic view of the entire human system provides a complete and action-relevant understanding of cancer and cancer therapy.
Adler’s individual psychology also includes a somatopsychic view: Actual or perceived organ inferiority is accompanied by a feeling of inferiority (Ansbacher and Ansbacher, 1995; Dreikurs, 1997).
The theory of behaviourist psychology sensu Skinner (1973) does not require a separation of psyche and soma, as it understands observable behaviour as part of neuronal (i.e. intrapsychic) processes.

The unity of psyche and soma can be illustrated using the example of food intake and food utilisation by means of overlapping regulatory processes. Initially, a feeling of hunger may occur. Subsequent food intake and utilisation give rise to biochemical and mechanical processes that can be associated with the feeling of satiety or unpleasant fullness. Knowledge of correct and incorrect nutrition implies an evaluation of the food ingested and the nutritional options available. This belongs to the nature of food absorption in connection with the possibilities of intervention of the immune system.

The desire for food intake with the associated pictorial (e.g. the image of the desired food) and experiential targets (e.g. the expected process of chewing and the expected experience of tasting) demonstrate the unity of physical and mental processes. The experience and processes of food intake can lead to a special sense of well-being. If, on the other hand, the image of impure or bad food arises before the intake of food, this can lead to a turning away from the intake of food, the mechanics of swallowing could fail, the chemistry of the gastrointestinal tract could change or a disgust-driven flight movement could arise. Emotional and physical states can also be induced by specific chemical substances, e.g. by psychotropic drugs or by psychotropic stimulants. Experiments have shown that induced states can even be causally attributed to other influences (e.g. perceived persons) than to the given substances (e.g. Schachter and Singer, 1962).

European identity theories are based on the thesis that psyche and soma are one and the same (Feigl, 1958; Weizsäcker 1943), that their differences only arise from different approaches to knowledge and thus only represent different sides of one and the same object (Spinoza, 1677/2007). In this text, the psyche and the soma are understood as different sides of a human being, for each of which suitable approaches to knowledge exist, especially in the form of specific methods, e.g. as the recording of mental performance through intelligence tests, behavioural observation or as narrative procedures. The psyche and the soma form an ontological unity in interaction with the environment. From this follows the existence of a corresponding system in which there are processes with influences, needs, information and interpretations. For a proper further development of psychosomatics, Uexküll and Wesiack (2008, p. 9) rightly demand the inclusion of constructivism, sign theory or semiotics and systems theory.

The term “individual” for the human being documents the entity “psyche-soma”. Individuals can be understood as systems with different subsystems. In the present case, subsystems are, for example, bodily organs such as the heart or intestines, nerve tracts, the brain, the limbic system, the sensory organs, bodily limbs and movements, cognition, metacognition and abstraction, emotion, language comprehension and communication, sexuality, reflection and biographical identity, digestion and internalisation of the environment.

Individuals are systems that function both autochthonously and also allow or seek out allochthonous influences. A scientific approach to a system requires the elaboration of its rules and laws.

The extent to which the entity “psyche-soma” is or is not an autopoietic system does not need to be fully discussed in this text. However, the entity “psyche-soma” is autopoietic insofar as it constantly and independently maintains its own system operatively and constantly and independently develops it further. This process may well be understood as a salutogenetic process (Antonovsky, 1997; Uexküll, 2008, p. 1344). The entity “psyche-soma” is “self-referential” in the sense of Luhmann (1991), since it continually controls, steers, optimises or even deteriates itself through regulatory processes that also run into the external environment of the individual and through cognitive or metacognitive reflection. The entity “psyche-soma” reproduces itself with recognisable self-similarity. The behaviour of an individual is in each case a reduced and partial copy of the original object (the entity “psyche-soma”). In this respect, the entity “psyche-soma” can also be understood as a fractal system (Mandelbrot, 1987). If psyche and soma are viewed as a unity in interaction with the environment, some paradoxes and pseudo-problems dissolve. Paradoxes exist, for example, in a state of external calmness with simultaneous inner restlessness, in high performance motivation and simultaneous underperformance despite proven performance potential, the competence of reliable introspection with simultaneous anxiety reduction or the low suicide rate.

They also exist in the case of experienced somatopsychic health with simultaneous evidence of disease-value characteristics (e.g. if the disadvantages of a disease can be comfortably compensated).
Bogus problems arise, among other things, from the "orthodox" assumption that everything that cannot be explained must have psychological causes, as well as from the demand that physiological parallel processes take place to psychological processes, or from the assumption that a single cause is sufficient to explain somatopsychic processes.

Unfortunately, in many published medical studies the statements made are not always adequately substantiated because simple basic rules of empirical research are not observed (see also the evaluation of psychosomatic publications from the journal "Psychosomatic Medicine") in the internet version of the present text, supplementary chapter E.

Failures in medical research to date have included:
1. The lack of definition or description of the population and thus the lack of derivation of the randomisation and the size of the sample as a prerequisite for inferential statistical tests (instead, opportune samples are often used).

2. The lack of definition of a theory or construct to derive research hypotheses and the data to be selected (rather, often available and not necessary data on symptoms or disorders are brought into quantitative analyses).

3. The use of (somehow) tangible data leads to retrospective analyses (in which correlations are already taken as given that are actually supposed to be verified, such as the fact that people with cancer are naturally more likely to be depressed than healthy people).

4. Point 3, but also points 1 and 2, are often associated with a false assumption of causal connections.

5. The incorrect use of inferential statistical testing procedures (e.g. disregarding the scale properties of characteristics or disregarding the connectedness of samples or characteristics).

6. The use of an excess of inferential statistical testing procedures without knowing or taking into account the technical independence ofthe tested facts (rather, only hypothesis-based inferential statistical tests derived from theories or constructs may be carried out, see points 1 and 2). Important deficiencies in medical publications and important erroneous interpretations of medical work results can be found with justifications in Gigerenzer (2009).

7. There are repeated attempts to confirm hypotheses in empirically designed studies, but this is not possible in terms of scientific logic, as only falsifications are permissible.

A focus on somatopsychic connections opens up new possibilities in the understanding and treatment of health disorders. However , it does not lead to a dismantling of good pharmacological, medical-technical, surgical or other successful treatment methods and procedures. Strictly speaking, it is actually surprising why an individual is split into psyche and soma, although already the layman's understanding of the indivisibility of an individual (see also the Latin original meaning of this term) is clear and elementarily correct (see figure A1).

The target of this study is to develop a psychotherapy with the participation of somatic conditions with the help of psychological, empirically based research logic and psychological-scientific thinking methodology.
A detailed description of neuropsychological correlations, which at the same time is a plea for a holistic view of psyche and soma and consistently makes corresponding therapy suggestions, has already been given by Grawe (2004).

A1.2 Basic model of the new somatopsychic

The basis of this text is briefly described in the following figure as a basic model.

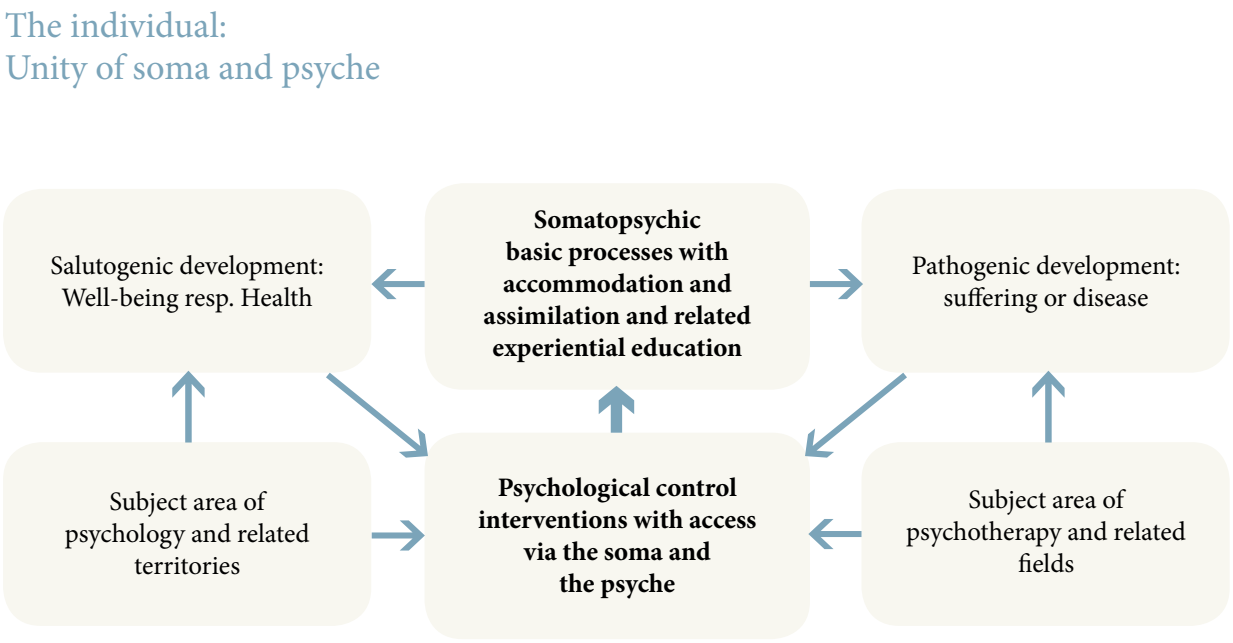

Fig. A1: Basic model of the new Somatopsychic

Figure A1 shows the thought process of the present treatise on new Somatopsychic, taking into account the basic somatopsychic processes, the salutogenic and the pathogenic developmental possibilities of an individual with the basic therapeutic approach.
The equal power of psyche and soma (see section 2.4) causes the formation of new interrelationships in the case of illness, which intervene in the overall system. In the healthy case, this also applies to the formation of well-being clusters in the psyche-soma entity of an individual: e.g. permanently experienced well-being can become somatically recognisable in a longer life span (Bopp et. al. 2012).

A1.3 Assimilation performance of genes

Biological-genetic research proves that genetic information can change through current external influences, i.e. also through behaviour. Moffitt, Caspi and Rutter (2005, 2006) again accentuate

the necessary research-logical procedure of gene-environment interaction research, which is to be hypothesis-guided. They elaborate a new conceptual system. Caspi and Moffitt (2006, p. 585) recommend including neuroscientifi c processes in gene-environment interaction research as follows (see Figure A2) because interactive functional relationships between substrates of neuronal processes and the genes or genotypes.

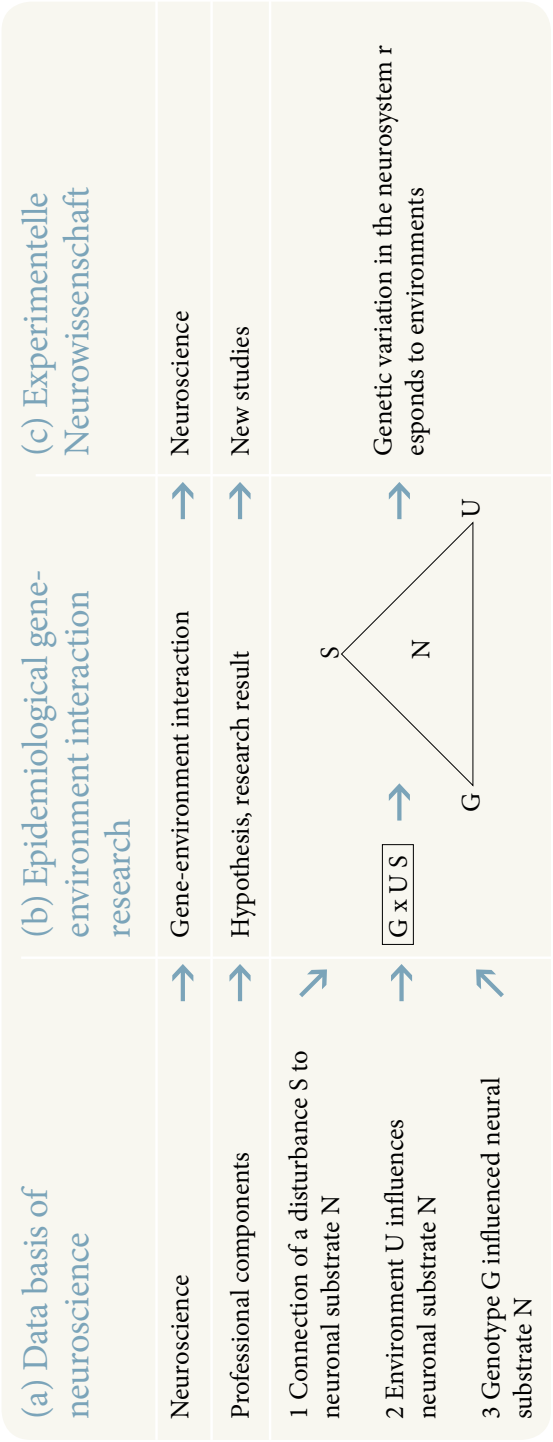

Fig. A2: Integration of neuroscience and gene-environment interaction research

Explanation: Neuroscience provides the technical components for forming hypotheses about gene-environment interaction (see column a), which are tested against collected data (see column b), to constantly stimulate new studies to shed light on the black box of biology (see column c) between the genes (G), the environmental pathogen (U) and the disorder (S).
From: Caspi and Moffitt, 2006, Figure 1, p. 584)
(Original illustration abridged, translation by the author of this text)

The gene COMT , which is responsi ble for the enzyme catecho l-O- methylt ransfera se (with the two isoform s MB- COMT and S- COMT), plays an increasi ng role in gene-environ ment interact ion researc h. Among other things, the enzyme COMT degrade s endoge

Gene-environment interactions are also suspected via the enzyme monoamine oxidase A (MAOA), via the serotonin transporter 5-HTT and via the glucocorticoid receptor, which interacts with the gene FKBP5 (Caspi and Moffitt, 2006). In this way, genes can contain vulnerabilities for the development of psychologically recognisable disorders or, in combination with other genes, form genotypes that allow pathogenic or protective effects on behaviour. In interaction processes, genes can be changed by current processes. Not only can current genetic variations occur through interaction processes between genes and the environment, but also through interactions - including functions of gene regulation - within DNA molecules, new genetic constellations can arise in humans through retrotransposons (McClintock, 1983). So-called transposons provide a substance that gives rise to new genes and regulatory mechanisms in a random process. Since all cells of the body initially have the same genome equipment, all cells can experience specific changes in their genomes through exchange with the external world. In epigenetics, the changes are explained by the presence of epigenomes (Spork, 2009). It is known that severe experiences have direct effects on genes, for example, when severe experiences change heart activity, circulation, muscle tension, skin moisture, dreams and readiness for aggression.

Particularly for the psychological sphere and also for somatic performance, it can be assumed as probable that a range of changeable possibilities is passed on biologically-genetically rather than that deterministic determinations bind a human being. Depending on the strength of the life environment or the individual motivation to shape it, the biological possibilities for development are more or less exhausted and the assimilation capacity of the biological genes is also used. The concepts and findings of epigenetics in particular should be taken into account more consistently than before. Most of the time, the given biological resources are only partially used.

In addition to the biological heritability mentioned above, there is a heritability that is to be defined psychologically. Psychological heritability includes the influences during pregnancy on the experience of a foetus or the influences in the perinatal and postnatal period on the experience of the young person.

Again and again, assertions or supposed proofs are spread about genetically determined causes of impairments and health disorders. Of course there are laws and rules of heredity, but these connections are - with quantitatively small exceptions - by no means monocausal or even deterministic. Biological-genetic conditions offer possibilities or wide ranges of shaping. This can be observed, among other things, in children of the same parents, because the differences between their children can be considerable. A posteriori examinations of samples in which there is already an impairment worthy of the disease convey the erroneous conclusion of a supposedly secure connection. So-called anchors, determinations or even determinisms exist in the biological-genetic field only in exceptional cases (e.g. haemophilia). Otherwise, biological-genetic influences mostly follow the probability ranges of Mendelian laws. The difficulties in this area are increased by the fact that in practice congenital diseases can hardly be causally distinguished from congenitally or perinatally acquired peculiarities or health impairments. “So it is with our knowledge of the genome: we know nothing.” (personal summary by US genome researcher Craig Venter, 2010). The collection of individual facts is, however, necessary and only represents the preliminary work for new conceptual systems (models, theories).

A1.4 Axioms and premises of somatopsychic therapy

A1.4.1 Axioms for the scientific approach of somatopsychic therapy to an individual

The mental inner world of an individual (internal domain) becomes at least as large as his or her experienced outer world (external domain) in the course of his or her life. The internal domain is subject to orders and rules that psychology deals with. In this text, psychology is understood as a natural science: The nature of the individual provides the psychological researcher with describable phenomena that are given a scientific order. There are connections between some phenomena that are detectable, repeatable, explainable and representable independently of a particular observer.
For the scientific approach of psychology to an individual, axioms are to be disclosed as is usual or necessary in other fields of science. An axiom is supposed to be a self-contradictory proposition that is immediately obvious and may not be derived from other axioms or from other disciplines, but may be related to other axioms or other disciplines. An axiom is thus not refutable and also not provable. If a theory follows the axioms, it will inevitably encounter the underlying axioms again at the end of a completed chain of knowledge. However, this is no proof of the correctness of the axioms. They may only be upheld as long as they do not contradict each other and as long as they do not create contradictions within a theory based on them.

Axioms should serve above all to,
1. justify and limit a subject area,
2. enable knowledge gains in the field by helping to build the structure of a theory needed for empirical research, and
3. To provide decision support for the selection or development of approaches in practice in order to remain thematically and methodologically within the discipline.

The somatopsychic axioms are as follows:
Axiom 1: Somatopsychic is a scientific subject.
Axiom 2: The psyche and the soma represent different aspects of an individual that require different professional approaches.
Axiom 3: Psychology looks at Somatopsychic from the aspect of behaviour with the associated sub-aspects of experience and action.
Axiom 4: Somatopsychic processes comprise experience (especially perception) and action including life processes such as physiological processes, neurological cardiovascular processes, metabolic processes, endocrinological processes) of an individual.
Axiom 5: Methodically specified approaches to knowledge open up experience and action as well as other life processes as a scientific object.
Axiom 6: Somatopsychic captures the totality of an individual's life processes. Axiom
Axiom 7: The somatopsychic processes of an individual can change.
Axiom 8: Somatopsychic has a recognisable ontological structure in the sense of Kant (1781/1986) and shows recognisable differential characteristics between individuals.

The axioms mentioned above can be specified by premises for the field of somatopsychic therapy.

A1.4.2 Presuppositions for somatopsychic therapy access to an individual

Premises serve to methodically pre-structure professional ways of thinking and proceeding for the professional work based on them in the form of constructs, models and practices. The

following premises are seen in this text for somatopsychic therapy:

Premise 1: Somatopsychic therapy causes changes in behaviour (experience and action).

Premise 2: Behavioural changes are autochthonous, but can be allochthonous (i.a. through psychotherapy) can be arranged and supported.

Premise 3: Scientific approaches to behaviour change (by describing, systematising and explaining) can be created with the help of psychological, somatic or somato-psychological thinking and research methods.

Premise 4: Action is both actional action (primarily through bodily movements and through processes of internal organs) of the soma and rehearsal action of the psyche primarily through cognitions.

Premise 5: An individual's experience and actions operate in three reference domains (called referential domains):
1) Internality (references to own experience)
2) Externality of references to other people (empathic and social references)
3) Externality of references to nature, to one's own body and to the structural-technical environment

Premise 6: Mentalhealth is the state of well-being.
The World Health Organisation defines health in 1946 as follows: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (p. 1).
Well-being in these three areas is the necessary condition for well-being as the perception and experience of well-being.

Premise 7: Well-being is characterised above all by the feeling of one's own freedom and thus of coherence, which is lived and experienced autochthonously. Freedom concerns one's own experience and actions (coherence in Antonovsky, 1997, and the ease in dealing with one's own experienced and lived identity (current, retro- and prospective).

Premise 8: Well-being occurs in an individual when he or she is able to deal with himself or herself (internal conditions) and with his or her environment (external conditions) in a consistent and purposeful way and also experiences it in this way over the long term.

Premise 9: Well-being contains different thematic contents (e.g. partnership, economic activity, involvement in a community) and different strength characteristics of well-being depending on the personality and life situation of an individual.

Psychological methods (see premise 3) include psychological diagnostics and psychological treatment concepts (e.g. carried out in behaviour therapy or in deep psychological procedures). Somatic methods originate from the fields of chemistry and pharmacy, electronics, opto-electronics or precision mechanics, among others. Psychotherapeutic methods can be, among others: Diagnostics of the experience and understanding of one's own environment, experiencing inner worlds of the body, experiencing new body perception during a manual treatment, through biofeedback or through exercise procedures such as gradual exposure.

Accommodation and assimilation are used as terms in several disciplines. Piaget (1978) uses them in a context of learning and developmental psychology. In the present text, accommodation and assimilation describe the processes of an individual to establish new, changed and thus appropriate behavioural references (references) to his environment, of the environment to him as an individual and to himself. With the process of accommodation, the externality is adapted to the internality. With the process of assimilation, the internality is adapted to the externality.

A1.4.3 Use of axioms and premises in the present context

Axioms and premises enable a systematic review and scientific further development of a subject area in research. For practice, premises and axioms have the advantage that methods, procedures and ideas relevant to practice can be systematically developed, advanced, applied and improved.

Axioms and premises make it possible to clarify the misuse of professional systems or concepts. Thus, with the help of the axioms and premises mentioned above, esotericism and dogmas of faith can be excluded for the practice of psychotherapy.

The practical reality of our health system in the western world fixes the way of thinking of a separation of psyche and soma through classification schemes for diseases such as ICD-10 of the WHO (Dilling and Freyberger, 2007) or DSM IV (Saß, Wittchen, Zaudig and Hauben, 2003) as well as in Germany through regulations of competences of physicians and psychological psychotherapists. This division into two areas is promoted and protected by corresponding market and financial regulations. Compliance is enforced primarily by formal sanctions imposed by the system of SHI-accredited physicians.
If a new scientific way of thinking about the somatopsychic unit has proven itself professionally, it will unfortunately only show its effect in practice in decades. This is evidenced by the protracted integration of psychological therapy into practice and also the delayed practical consideration of the circumferentially small field of work of the so-called shock cases with posttraumatic stress disorder (even the name of this disorder looks like a naming for a residual category).

A1.5 Both soma and psyche

If soma and psyche are professionally separated, this leads, a m o n g o t h e r things, to disorders not being fully recorded, understood and treated, and to the task of identifying and professionally understanding the interplay between the two worlds being unsolvable. Figure A3 shows the concept of a unity of psyche and soma.
Insofar as soma and psyche are understood as a unit, the symptomatology of a disorder, for example, consists of both somatic and psychological conditions, which can interact with each other within a cluster.

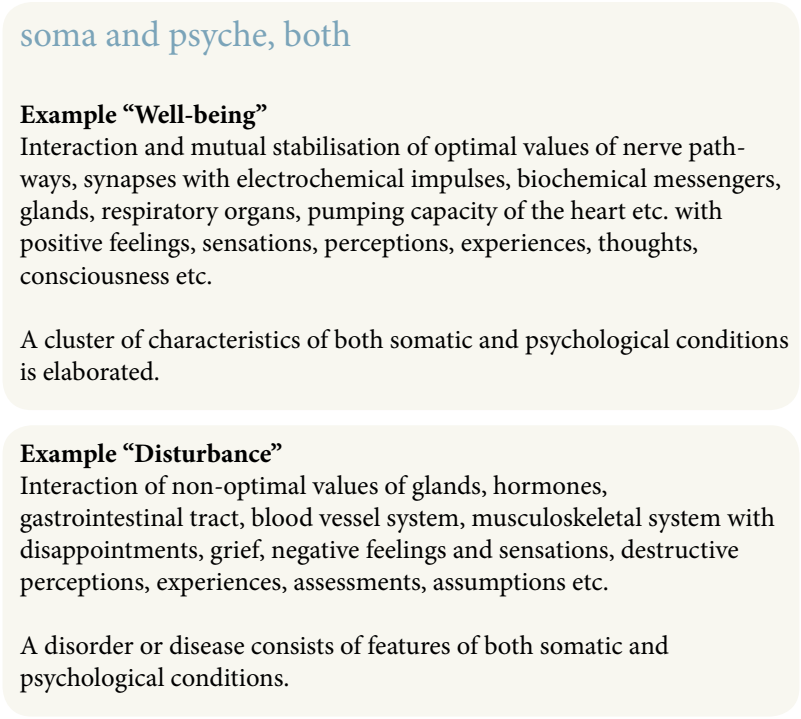

Fig. A3: Concept of a unity of soma and psyche

A1.6 Definitions

The following basic definitions are used in this text:

1. An individual (the human being) consists of the unity of soma and psyche.

2. The behaviour of an individual consists of the experience (e.g. the realities of perceptions and emotions) and the action, the so-called observable behaviour.

3. Assimilation is the adaptation of the internal world to the external world. In this text, assimilation is essentially understood as experiential education: e.g. learning to know, learning to understand and explain, learning to interpret and acquiring transfer competences. Accommodation is understood in this text as adapting the external world to the internal world of an individual: e.g. shaping and changing, optimising, sorting out, also destroying and creating something new.

4. Somatopsychic describes, organises and explains the target-oriented interaction of soma and psyche in models, constructs and interactions.

5. Health is well-being with definable somatopsychic, target-oriented resources and resilience.

6. Disease consists of definable somatopsychic, target-oriented disorders. Findings serve to determine disorders and are defined via qualitative and/or quantitative facts (e.g. symptoms) and/or measured values (e.g. results of neuropsychological tests).

7. Somatopsychic therapy promotes a target-oriented salutogenic development of the unity of soma and psyche and uses mainly findings from learning psychology for this purpose.

The above-mentioned axioms, premises and definitions, taking into account the empirically obtained results, especially from control psychology (see the review by Flammer, 1990), form the basis of the technical systematics of this text.

Supplementary Chapter E

Connection between psyche and soma? Evaluation of the articles in the journal “Psychosomatic Medicine”

E1 Criteriafor the selection of the empirical studies evaluated

The regular treatment of somatopsychic topics has a long tradition, as the history of the periodical “Psychosomatic Medicine” alone shows. In 1939, Franz Alexander wrote the treatise “Psychological Aspects of Medicine”, in which he attributes a positive influence to psychoanalysis on the attention paid to somatopsychic topics: “The main contribution of psycho-analysis to medicine was to add to the optical microscope a psychological microscope, a psychological technique by which the emotional life of the patients can be subjected to a detailed scrutiny” (Alexander, 1939, p.18). Decades later, pleas were still being made again and again in this journal - partly on the basis of individual case descriptions - to include the psychological sphere in the consideration and treatment of somatic disorders (e.g. Berblinger and Greenhill, 1954; Ehrentheil, 1959; Bertalanffy, 1964; Graham, 1967).

Gradually, more somatopsychic studies on samples (mostly casual samples) were published, from the results of which correlations between soma and psyche should be discernible. All articles in the journal “Psychosomatic Medicine” were examined to see to what extent they could contribute to the understanding of the relationship between soma and psyche on an empirical basis. The methodological selection criteria had to be set very weakly, since - measured against the research standards of psychology as a basic scientific subject that have been common for a long time - hardly a single publication could have been included in the selection.
If one uses the meanwhile recognised quality levels of evidence-based medical research, no topic reached level 1 or level 2. There were works with level 3 in the early period of the journal’s publication, when theories or constructs provided a model-based system of investigation. There were such approaches, especially from psychoanalysis.

The quality levels of evidence-based medical research are described in Chapter 13.

The evaluation of the journal can be worthwhile for the formation of hypotheses and for the further development of hypotheses. In the following, statements from the selected articles are presented according to the somatopsychic basic processes described in the main work “Somatopsychic”. The sometimes imprecisely presented concerns of the studies do not always allow for a reliable assignment to the somatopsychic basic processes. A commentary on the evaluation follows the presentation of the content.
In order to simplify the presentation, the present chapter, in contrast to the other chapters, reduces the often large number of authors of individual contributions in the citation style to one author by adding “et al”.
To improve the reader’s orientation, the following sections containing the evaluations of the articles from the journal Psychosomatic Medicine are pragmatically subdivided as follows, insofar as these topics were examined: Respiratory Domain, Sensory Organ Domain, Stressful Life Events, Genital, Generative and Sexual Domain, Personality and Experiencing/Acting, Neurotic/ Anxiety Disorders and Experiencing/Acting, Depression, Psychotic disorders and experiencing/ acting, body surface disorders.

The special nature of the topics in the journal required a specific technical structure in order to be able to create a roughly orderly overview.

E2 Somatopsychic basic process “Paying attention to and functioning of somatopsychic basic life processes” in articles of the journal “Psychosomatic Medicine”

E2.1 Respiratory tract

The connection between asthma symptoms and psychological stress caused by anger or anxiety was investigated by Tal et al. (1976) in 35 male and 25 female children. Stressful emotions were produced, among other things, by mental arithmetic under exaggerated time pressure, by criticising and by films with bloody operations. The amount of air that could be forcefully exhaled in one second (FEV1) was used to determine asthma symptoms. Resting phases with sweets were used to create relieving situations. Relaxation improved exhalation, anger worsened exhalation more often than fear.
Twenty-one persons each with asthma, with psychogenic respiratory disorders and normal persons received a bronchoconstrictive substance and were examined for airway resistance, among other things. The respiratory capacity is often correctly estimated by sufferers, and the role of psychological components appears to be particularly important to the authors (Heim et al., 1972).

E2.2 Sensory organ area

Wulsin et al. (1991) tried to find correlations between low visual impairment and psychosocial characteristics in a longitudinal study with 31 patients (with “proliferative diabetic retinopathy”). In the ophthalmological area, the authors measured visual acuity and in the psychosocial area, the authors used the following scales: The Psychosocial Adjustment to Illness Scale (PAIS), The Symptom Checklist 90-Revised (SCL 90) and The Ways of Coping Checklist- Revised. They assume a causal relationship between psychological impairments and the development or worsening of visual impairment.

E2.3 Stressful life events

Using the Holmes-Rahe Life Schedule of Recent Events scale and personal interviews, Jacobs et al. (1980) studied 25 children with cancer and 25 children without cancer. In families whose children had cancer, “important life events” (e.g. unwanted pregnancy, problems at birth, frequent illnesses) were found more frequently than in families of children without cancer.

The Schedule of Recent Experience (SRE) questionnaire and biographical data are used to represent “life changes”, which were correlated with 42 characteristics of 232 clinic patients with different disorders (Wyler et al., 1971). The authors found a significant correlation for chronic diseases and for the severity of the disease.

People who can cope well with life change stress (good copers) have a higher number of natural killer cells in their immune system than bad copers (Locke et al., 1984). The authors conclude from their results on 114 healthy students that anxiety and depression impair the performance of the immune system.

Kiecolt-Glaser et al. (2002) summarise the state of knowledge on psychoneuroimmunology, mainly from contributions to the journal Psychosomatic Medicine since its inception (1939), as follows. Psychosocial stressors, feelings or interventions can influence current health changes, especially with regard to infectious diseases and wound healing, the production of cytokines (intercellular mediators), dysregulation of the immune system and the risk of disease.

E2.4 Genital, generative and sexual area

According to Kemeny et al. (1989), recurrences of genital herpes in 30 female and 6 male patients were associated with distress, negative (especially depressive) mood and the state of the immune system (measured by the emergence of corresponding cells), determined over a period of six months.

Ehrenkranz et al (1974) found increased testosterone levels in criminals in aggressive (at the same time less fearful) persons and also in socially dominant men, who, however, did not show aggressive behaviour (12 persons per category). But men with below-average testosterone levels can also be fundamentally aggressive if they feel they are being treated wrongly.

Suspected side effects of the contraceptive Enovid were studied by Silbergeld et al. (1971) in comparison with a placebo in eight women over four menstrual cycles. These suspected side effects included: 120 menstrual symptoms, mood, behaviour and biochemical characteristics. The authors report the following results, among others: Shorter and more regular periods, some relief from menstrual symptoms, calming and elimination of period-synchronous anxiety.

Gruba et al. (1975) linked menstrual difficulties and personality traits in a study of 60 young women (“undergraduates”) using the Moos’ Menstrual Distress Questionnaire (MDQ) and the Minnesota Multiphasic Personality Inventory (MMPI). Based on a number of conspicuous features, they suspect that psychological characteristics play a special role in menstrual symptoms.

Tam et al. (1985) investigated the extent to which menstrual processes (via “platelet 5-HT uptake”) afectmood - measured with the Moos’ Menstruation Distress Questionnaire (MDQ) and the Spielberger State Anxiety Scale - in six people. They did not find any continuous correlation over time.

E2.5 Personality and experience/action

162 older men were examined for the trait “dependent personality” (Greenberg et al., 1981). According to the authors’ results, this trait is associated with a later occurrence of benign tumours, high blood pressure, gastrointestinal ulcers and cancer. No specific clustering of cancers was found.

In samples of 58 and 104 subjects, Greenberg et al. (1981) found no correlation between dependent personality (measured with the Minnesota Multiphasic Personality Inventory, MMPI) and cancer, although they suspect an increased vulnerability to disease in general.

Frankle (1952) related suppression of feelings (represented by the construct "introversion/ extroversion") and complaints about one's own impaired condition or impaired health within a sample of 75 social work students. The author used the introversion/extraversion scale Minnesota T-S-E Inventory and the list of complaints from the Cornell Index, form N-2 and reported that introverts mentioned somatic complaints more often than extroverts, but did not differ with regard to psychological complaints.

Lehrer (1980) used the Social Readjustment Rating Scale on 40 colorectal cancer patients, 14 gastric cancer patients and 10 unremarkable persons. He suspects that "emotional stress" predisposes cancer in the gastrointestinal tract.

In order to examine the extent to which psychological conditions influence infectious diseases, Kasl et al. (1979) examined the course of the disease mononucleosis infectiosa (syn. Pfeiffer's glandular fever, lymphoid cell angina) in a 4-year longitudinal study of 1400 cadets of a military academy. Extensive psychosocial data were available from the cadets' life histories and families of origin, their educational data, their performance data and data on their somatic status. Some of the results were interpreted by the authors as follows: The risk of infection increases in cadets who had fathers with "overachiever" characteristics (e.g. occupational status above educational status), who emotionally very strongly aspired to a military career, who were very strongly convinced of values of military training and career, who showed weak academic performance, or who had weak academic performance despite high motivation.

E2.6 Neurotic/anxiety disorders and experiencing/acting

As early as 1947, Mitchell et al. attempted to support the statement found in the specialist literature that allergy-related illnesses had significant psychological components. With the help of simple quantitative procedures, they came to the conclusion, among other things, that a psychological maladjustment is related to allergy-related suffering.

50 neurodermatitis patients were compared using the Rorschach test with 50 comparable individuals from an aircraft manufacturer who had suffered work-related skin damage. Neurodermatitis patients tended to show more repressed hostility and psycho-neurotic stress with hysterical symptomatology (R. J. Levy, 1952). However, the author also notes that the control group differs from psychologically healthy people.

Rief et al. (1998) compared 58 patients with somatisation syndrome with 21 healthy individuals using heart rate, blood volume pulse on the finger, electrodermal activity, electromyography, cortisol levels, well-being in resting and stressful situations, selective attention performance and memory performance for disease-oriented terms. Compared to the healthy group, the somatisation group had a higher morning cortisol concentration in saliva, a higher heart rate, a lower blood volume pulse.

During stressful situations, the somatisation group felt stressed more often compared to the healthy group and showed a higher heart rate.

In a longitudinal study over 35 years, Russek et al. (1990) examined the illness histories of 126 former college students. Among other things, results from frustration tests and self-reports of feelings (e.g. anxiety, anger) were recorded. The characteristic “severe anxiety” prospectively showed a particularly close connection to coronary heart disease and also to other diseases. This form of anxiety was often associated with hostile impulses.

E2.7 Depression, psychotic disorders and experience/action

Perrin et al. (1959) conducted a joint review of previously published results on the connection between cancer and psychological factors. They assume a higher cancer burden in hospitalised psychotic patients, in neurotic persons, especially with depression and with feelings of guilt, in persons with an emotional trauma as well as in “immature” people. In contrast, they suspect slower cancer growth in people who are less emotionally inhibited than usual.

Among other tasks, Caroll (1976) compared secondary depression of schizophrenic patients with primary depression of depressive patients on the basis of psychological and endocrinological parameters (“hypothalamo- pituitary-adrenal - HPA”) in 21 depressive and 10 schizophrenic patients. The schizophrenic patients had a normal endocrinological picture despite the massive disturbance of the ego (“severe ego defence breakdown”) including the depressive symptoms. The depressed group, on the other hand, showed increased cortisol levels in the urine and in the cerebrospinal fluid, incomplete suppression of limbic systempituitary-adrenal activity by dexamethasone. Caroll (1976) recommends distinguishing between primary and secondary depression.

In a longitudinal study over 10 years, Brown et al. (2003) examined the survival chances of 205 cancer patients depending on psychological impairments. Above all, depressive symptomatology shortens survival time.

From the data of a longitudinal study over 17 years on a 2020 large male sample, Shekelle et al. (1981) concluded that depression (measured with the Minnesota Multiphasic Personality Inventory, MMPI) was associated with an increased probability of the development and spread of various types of cancer. A follow-up was still ongoing, so that the analyses could be continued after 20 years on 2018 persons (Persky et al., 1987). The interpretations made earlier were found to be confirmed. The personality trait “Suppression” (of feelings) was not considered relevant.

Somatic illnesses and psychiatric diagnoses were correlated by W. D. Ross et al. (1950) on 1608 patients from Canadian psychiatric hospitals in order to link emotion patterns with physical disorders. Relationships were found, among others, between an ulcer in the digestive tract and the manic part of a manic-depressive psychosis, between increased blood pressure and involutional melancholia (older patients) and with a negative correlation between increased blood pressure and epilepsy.

Ninety-seven patients with chronic mild back pain were compared with 49 healthy individuals on diagnostic scores regarding their tendency to somatise ("described as somatizers") from various scales (Bacon et al., 1994). These scales included Diagnostic Interview Schedule III-A (DIS), Beck Depression Inventory (BDI), Hamilton Rating Scale for Depression (HRSD), McGill Pain Questionnaire (MPQ), Sickness Impact Profile (SIP) and Pain and Impairment Relationship Scale (PAIRS). 25.8% of patients versus 4.1% of healthy individuals report lifetime somatisation complaints. Majore depression and alcohol dependence occurred more frequently with increasing severity of somatisation.

Simon et al. (1996) attempted to find a comprehensive correlation between somatic and psychological factors using an international sample (5438 patients from 15 regions) of the World Health Organisation (WHO). The authors used the "28-item General Health Questionnaire (GHQ)" and the "Composite International Diagnostic Interview (CIDI)" scale for the study. They report that in all regions, somatic symptoms were strongly associated with acute psychological distress (especially anxiety and depression).

E2.8 Body surface disorders

Gupta et al. (1994) correlate pathological skin itching (e.g. due to dermatitis, psoriasis) with depression. They studied 252 patients and see the relationship as follows: The more severe the skin itch, the more pronounced the depression.

The psychological connectivity of the lupus disease ("systemic lupus erythematosus") of 68 clinic patients was recorded by Ganz et al. (1972) with 179 items of a structured interview questionnaire and compared with the results of 36 rheumatoid arthritis patients treated as inpatients. The lupus patients were more severely burdened than the rheumatism patients with depression and symptoms from the schizophrenia group.

E3 Somatopsychic basic process "Maturing and growing" in articles of the journal "Psychosomatic Medicine"

Under the above-mentioned conditions, only one contribution was found on "maturing and growing". Schorer (1964) sees a connection between muscular dystrophy and, for example, the limited ability to draw pictures of people, catastrophising ideas, autism and hyperkinetic behaviour.

E4 Somatopsychic basic process "Moving" in contributions to the journal "Psychosomatic Medicine"

Somatic fitness (measured by the amount of oxygen absorbed) strengthened by physical training coincided with an improvement in depression and anxiety states as well as feelings of alienation in 112 study subjects, report Roth et al. They deny a causal connection to a stressful development of these emotional states with stress, but confirm a causal connection to the reduction of these stressful states after stress.

According to the study by Williams et al. (1993) on 82 sports learners, positive feelings about life reduce the risk of injury from sports accidents.

A correlation between reported physical complaints of 72 cashiers of a supermarket chain and identified somatic symptoms (e.g. high blood pressure, measured muscle tension in the neck-shoulder area) is seen by Lundberg et al. (1999).

E5 Somatopsychic basic process “Experience and functioning of fluids and their vessels” in articles of the journal “Psychosomatic Medicine”

E5.1 Stressful life events

After analysing 12 patients, Reiser, Rosenbaum et al. (1951) found a close correlation between emotionally stressful events and pathological high blood pressure.
In 83 healthy males, Wientjes et al. (1994) examined somatic complaints in daily life, situational (state) and persistent (trait) anxiety, the estimated baseline of CO2 in the blood and heart rate. Trait anxiety explained about one third of the variance in somatic complaints. The authors conclude that psychological influences are likely to be stronger than somatic influences.
According to Naliboff et al. (2004), stressful burning in the heart area (“heartburn”) is significantly related to persistent stress with vital exhaustion after a longitudinal study with 60 heartburn patients.

E5.2 Genital, generative and sexual area

W. D. Ross (1947) examined 30 male patients with proven or, from the patient’s point of view, supposed urethritis for psychological abnormalities. He saw connections to reactive depression, anxiety, hysteria, pre-psychotic and psychopathic personality.

E5.3 Personality and experience and action

In 1939, after reviewing studies published from 1919 onwards, Alexander published the assumption that essential hypertension must have definable psychological causes (p. 173). Cardiovascular disease and morbid hypertension, including problematic fluctuations in blood pressure, had long been associated with psychological impairment. He concludes that essential hypertension is an expression of exceptionally strong and repressed hostile impulses. Psychotherapy can, in his opinion, help to reduce the blood pressure problem (p. 178).

Blumenthal et al. (1987) report on the relationship between coronary heart disease in type A persons (characteristics mentioned include smoking, elevated cholesterol, elevated blood pressure) and perceived social support: Smokers, elevated cholesterol, elevated blood pressure) and perceived social support. They studied 113 patients and found, among other things, that social support reduces the risk of coronary heart disease in type A persons.

Negative emotional states similar to neuroticism and those of type A persons and repressive coping styles were found in pronounced form in 178 heart patients (Denollet, 1991).

Coronary arterial disease was found in 37 Type A individuals, mainly with high job involvement among 53 routinely studied patients (Kahn et al., 1982).

Using propranolol ("a beta-adrenergic blocker"), isoproterenol ("a beta-agonist") or a placebo ("saline"), Krantz et al. (1987) tried to influence cardiovascular activity (heart rate, blood pressure) in 12 healthy men in order to influence psychological characteristics of type A behaviour. They conducted a structured interview and a difficult calculation test before and after the administration of the drug. Propranolol, like isoproterenol, affected heart rate, systolic blood pressure, performance on test tasks and states of anxiety and hostility. However, the trends were contradictory or not homogeneous.

Type A constellations, however, do not lead to higher blood pressure values within a bypass operation (Kornfeld et al., 1985).

E5.4 Neurotic/anxiety disorders and experiencing/acting

Pain, fear and anger were induced by Schachter (1957) in 48 subjects and associated with numerous physiological values (e.g. respiration, skin temperature, skin moisture, blood pressure). The physiological values changed with the stress of pain, fear and anger. Persons with pathological high blood pressure showed higher anxiety and anger levels than persons with healthy blood pressure.

Friedman et al. (1977) investigated the extent to which depression and high blood pressure are related in 1101 Caucasian men ("outpatients"), but only found a significant correlation between anxiety levels and high blood pressure.

Dressler et al. (1986) investigated socio-cultural factors and high blood pressure worthy of illness in 147 Mexicans. The higher the support from a close social environment (especially from so-called compadres) was perceived by Mexicans, the more normal their blood pressure was. Blood pressure values tended to rise with the number of social contacts. Young Mexican women tended to have higher blood pressure values with social support, while social support lowered blood pressure in older Mexican women.

Costa et al. (1985) tested 83 patients for their relationship to chest pain. Coronary stenosis and neuroticism, among others. Coronary stenosis was mainly present if some of the complaints mentioned also occurred when walking. Otherwise, the complaints were mainly related to neuroticism.

E5.5 Depression, psychotic disorders and experience/action

J. A. Wagner et al. (2006) assume that depressed women significantly often have problems with the endothelium (mainly expansion of the inner wall tissue of blood vessels) and that these women lose part of their protection against coronary heart disease after menopause. They found this association in 39 women without heart disease (20 women with and 19 women without previous depressive illness).

E6 Somatopsychic basic process “Experience of eating/drinking and functioning of the metabolism in the processing of nutrients and of biochemical substances” in articles of the journal “Psychosomatic Medicine”

Depressive symptoms are associated with increased arterial blood pressure, increased body mass index (BMI), increased waist-to-hip ratio (WHR), increased blood triglycerol and glucose levels (McCaffery et al., 2003). These results are based on studies of 87 monozygotic and 86 dizygotic twins.

Unpleasant and difficult life events from professional and private life, recorded by 43 items of the Schedule of Recent Events (SRE), cause an unfavourable change in diabetes according to Grant et al. (1974). They followed the development of 37 diabetes patients over 8 to 18 months.

According to the study by S. Rubin and Bowman (1942), an ulcer in the digestive tract (in 100 sick men) is associated with increased EEG wave activity, which is supposed to be related to passive, receptive and elementary need-oriented (“fundamental”, “dependent”) personality imprinting. The wave activity of this diseased group of persons is “dominant” (about three to three and a half times as often as in normal persons).

Stomach complaints (especially stomach pain) decreased when the word “up” was often understood as a hopeful signal in psychotherapy sessions and increased when the word “down” was often mentioned as a stressful signal for the patient. The study was conducted on 20 male college students (Fisher et al., 1977).

E7 Somatopsychic basic process “Experiencing and understanding external and internal phenomena” in articles of the journal “Psychosomatic Medicine”

E7.1 Respiratory tract

28 patients with hyperventilation problems were given CO2-enriched breathing air in combination with pleasant or unpleasant odours (van den Bergh et al., 1997) to show that hyperventilation problems can be influenced by odours via learning processes. Breathing frequency and volume (including expressed discomfort) could be significantly altered by conditioning of this kind.

E7.2 Sensory organ area

Weak tinnitus exposure is associated with better coping behaviour than increased tinnitus exposure (Kirsch et al., 1989).

E7.3 Stressful life events

Arterial hypertension showed a recognisable connection to emotionally stressful life events in the study with 230 patients by Reiser, Brust et al. (1951). The authors assume that a good doctor-patient relationship helps to reduce emotional stress and blood pressure.

Suls et al. (1985) found that dealing with one's own experience (measured with the Private Self-Consciousness Inventory) protects against somatopsychic illness. In a prospective study of 120 people, it was shown that stressful life events (measured with a scale) produce more symptoms (measured with a scale) in those people who deal with their own state of mind to a lesser extent than people who practice this to a greater extent.

Psychotrauma can trigger physiological activities and pathological processes (Pennebaker, 1985). He reports on the results of his own research and that of others and presents the following concept:

1. Suppressing behaviour is fundamentally associated with dis-stress and with illness.

2. If individuals cannot express their thoughts and show their feelings, the traumatising experience often dominates thoughts and feelings excessively and increases the risk of long-term health damage.

3. Confiding the traumatising experience to someone or translating it into speech often reduces the activities of the autonomous nervous system (e.g. skin conductivity) and the risk of illness in the short term.
163 members of a submarine training unit were given the Life Experience Survey (LES), Social Support Questionnaire (SSQ) and the Health Questionnaire to find out how life events and social support affect health (Sarason et al., 1985). Negative, stressful life events, especially with low social support, promote the developmentof health disorders.

The flight crew (121 persons) on an aircraft carrier deployed in the Vietnam War received the Schedule of Recent Experience (SRE) scale, which asks about current stressful life events, mainly in the private sphere (R. T. Rubin et al.,1972). A higher number of disorders were concentrated in a small group of persons with current emotional stress, especially at times of combat operations. Thirty Vietnam war veterans hospitalised for posttraumatic stress disorder (PTSD), diagnosed using the Structured Clinical Interview for DSM-III-R, had their urinary cortisol measured for the Mason et al. (2001) study. Further data came from a battery of psychological tests ("Mississippi Scale for Combat-Related Posttraumatic Stress Disorder, CAPS-2 = Clinician-Administered PTSD Scale, measurements included the BPRS = Brief Psychiatric Rating Scale, the HDS = Hamilton Depression Scale , the BDS = Beck Depression Scale, and the DEQ = Depressive Experiences Questionnaire. Measurements available to us from the hospital admission period included the CES = Combat Exposure Scale and the MMPI- 2 = Minnesota Multiphasic Personality Inventory, including the Clinical, Harris-Lingoes, Content, and Supplementary Scales "*, Mason et al. p. 387 and 389). The authors report, among other things, that cortisol levels were not elevated when patients were emotionally withdrawn. This withdrawal ("disengagement") was associated with emotional numbing ("numbing") and depression with guilt-related shame ("shame-laden depression").

E7.4 Genital, generative and sexual area

Araujo et al. (1998) found in 1265 men aged 40 to 70 years that male erectile dysfunction (MED) was associated with the burden of depression. To determine this result, a large number of somatic values (e.g. BMI = body mass index, HDL = high-density lipoprotein cholesterol, heart disease, diabetes) and personal/psychological characteristics (e.g. assessment of depression with a scale of the Center for Epidemiological Studies-Depression, CES-D) were correlated.

Severe sexual abuse in childhood was reflected in the women's adulthood in somatisation disorders, lifelong panic disorders, drug dependence and chronic pelvic pain (Walker et al., 1992). This was shown by the results of a study on 100 female patients. Walker et al. (p. 662) point out that patients with these disorders often do not experience control over their world, but rather feel at the mercy of other forces (including people).

59 female clients with high-grade squamous intraepithelial lesions and 163 female clients of a family planning counselling centre with low-grade squamous intraepithelial lesions were compared with a control group of 160 clients with an unremarkable cytological status of the cervix with regard to stressful life events (scale "Stressful life events"). After eliminating the influence of the variables age, infection with an aggressive papilloma virus ("high-risk human papilloma virus") and number of previous sexual partners, it became clear that divorce, infidelity, increased lamentability, physical and psychological violence by the partner increased the risk of "squamous intraepithelial lesions" in white women - but not in women with an Afrogenetic background (Coker et al., 2003).

Schopbach et al. (1952) linked false pregnancies of 27 women with somatic and psychological characteristics. Somatic measures (e.g. administration of hormones) and medical information about the true diagnosis rarely led to the resolution of the false pregnancy. Psychotherapy to deal with psychological conflicts, e.g. psycho-analytically interpreted connections (such as sexual desires/feelings of guilt and desire for a child), was particularly helpful.

75 women were assessed for factors influencing labour pain in relation to the birth of their child. Pain levels tended to decrease when women wished to address labour pain and the birth process independently (Davenport- Slack et al., 1974).

Chertok et al. (1977) report on 55 female patients with urethral complaints. They state that there are often irritations in the self-perception of the urethrogenital area and that urethral complaints occur after distress (especially separation from the partner). Psychotherapeutic treatments were very difficult but often successful.

Benedek et al. (1939) bring together psychodynamic and ovarian processes on the basis of a study of 125 menstrual periods of 15 people. The authors recorded the contents of dreams as well as questioned emotional contents (e.g. sexual subject matters, fears, aggression) and combined these over time with biochemical and physiological characteristics (e.g.

vaginal smear, body temperature, hormone progesterone) together. The authors see themselves confirmed in the fact that psychoanalytical processes and biological activities can be interpreted together.

E7.5 Personality and experience/action

Almada et al. (1991) examined the somatopsychic role of neuroticism and cynicism in 1871 employed men, for whom health data were available from earlier periods, using the Minnesota Multiphasic Personality Inventory (MMPI).
included data on systolic blood pressure, cholesterol, cigarette consumption, alcohol consumption, death from coronary heart disease, among others. In contrast to neuroticism, the authors found a significant correlation of health problems with cynicism. According to the authors, cynicism is also the reason for underestimating actions that are harmful to health, such as smoking or alcohol consumption.

Lautenbacher et al. (1994) investigated the extent to which acute depression reduces the perception of pain in 20 patients with major depression (control groups were also included). Pain was produced by skin contact heat, among other things. No correlation was found with the reaction time of the subjects or with the influence of naloxone (morphine antagonist). The threshold for the perception of pain in major depression was higher than in the other subjects, regardless of the type of symptomatology.

Using the example of sickle cell disease, a disorder of the red sickle cell blood cells, Edwards et al. (2001) investigated the role of self-efficacy beliefs with regard to somatic symptoms, psychological symptoms, pain and the number of visits to the doctor over a period of 12 months in 104 African Americans. The results of the standardised survey showed that the stronger the self-efficacy belief, the lower the number of reported symptoms.

E7.6 Neurotic/anxiety disorders and experiencing/acting

Patients with anxiety disorders who are also burdened with comorbidities request or receive services from somatic healthcare services (“nonmental healthcare utilisation”) more frequently than patients who only suffer from anxiety disorders (without comorbidities). This was the result of analyses of records of 1,041 patients (A. G. Levy et al. 2007).

On 162 patients who visited a hospital, Noyes et al. (2003) investigated the question of whether hypochondria (according to the model of Stuart and Noyes) is associated with anxious behaviour as shown by the increased number of illness-related enquiries. The procedures used were: Somatic Symptom Inventory, Relationship Scales Questionnaire, Inventory of Interpersonal Problems, NEO-Five-Factor Index, and “measures of physician-patient interaction”. The Structured Diagnostic Interview for DSMIII-R Hypochondriasis. The authors report that hypochondriacal as well as other somatic symptoms are positively correlated with the following: Anxious and anxious behaviour, self-reported interpersonal problems, neuroticism and a disturbed relationship with medical staff.

E7.7 Depression, psychotic disorders and experience/action

40 schizophrenic patients were compared somatically and psychologically with non-schizophrenic patients, each with inflammation of the colonic mucosa. Schizophrenic patients more often showed a more difficult course of the disorder than the patients in the comparison group. There was a significant correlation between the degree of reported emotional disturbance or the reported severity of symptoms and the severity of colon disease (O'Connor et al., 1966).
Using a structured questionnaire (179 items), Ganz et al. (1972) compared psychiatric symptoms of 68 patients suffering from systemic lupus erythematosus (systemic L.E., butterfly lichen) with psychiatric symptoms of 36 patients with rheumatoid arthritis. Patients with L.E. showed comparatively more psychiatric symptoms (including depressive and schizophrenic symptoms) and more organ-related complaints.

Brodman et al. (1947) examined 270 white and 292 black patients with respiratory diseases in three army and navy hospitals using the Cornell Service Index in order to find out whether psychological impairments ("personality disturbances") influenced the duration of recovery. The following were diagnosed in hospital 3: anxiety with somatopsychic and hypochronic complaints (in 75% of cases), bodily disturbances associated with anxiety but without complaints, problematic values ("poor morale"), anxiety, depression, psychosis. Depending on the disorder, the decision of the medical staff and the hospital, longer stays in the wards correlated with the listed psychological impairments (from an average of 15% to an average of 40% longer stays).

E8 Basic somatopsychic process "experiential learning (incidential and intentional learning)" in articles of the journal "Psychosomatic Medicine"

No contributions were found in the journal "Psychosomatic Medicine" on the somatopsychic basic process "experience formation (incidential and intentional learning)". However, contributions that were assigned to other basic processes could be assigned to this basic process, e.g. studies on hypochondria, on the psychological burden of somatically conspicuous complaints such as in the urethrogenital area.

E9 Evaluate the findings from the selected articles in the journal. "Psychosomatic Medicine"

In the early years of the journal "Psychosomatic Medicine" (volume 1 in 1939), the articles were often psychoanalytically influenced and thus pursued a somato-psychological approach. The already small proportion of psychoanalytic texts with empirically based data material decreased, so that the proportion of theory-led research approaches was hardly recognisable in the further volumes of the journal.
Of course, the articles analysed cannot be clearly assigned to a single basic somatopsychic process. However, it is noticeable that the basic processes of "maturing and growing", "moving" and "experience formation" were only very weakly dealt with in the articles of the journal "Psychosomatic Medicine". This can certainly be explained by the clinically oriented perspective of the authors - i.e. with a focus on the outcome of a disease-value development. Of course, these three low-populated basic processes, however, have sufficient potential for pathogenic developments.

In relatively many medically dominated contributions, the psychological tests served as a supplement in order not to miss psychological aspects or to find biological characteristics that could replace the psychological variables. Theoretical concepts are lacking, which is why test batteries are sometimes compiled that are carried out by "experienced clinicians". Conceptually important, however, is the theory-based approach, especially hypotheses within a professional concept (e.g. theory or construct). Research-logically correct procedures are often missed, as they can be found in all basic subjects, but are often disregarded in the applied field, as they are apparently unknown or judged as inconvenient. However, there were also research-logically useful studies in the journal "Psychosomatic Medicine". For example, Benedek et al. reported a useful hypothesis-driven approach as early as 1939, which was taken up again in studies by Silbergeld, Brast and Noble (1971).

Numerically dominant are contributions in which individuals are to be understood through their illness. This leads to retrospective analyses and interpretations. This approach is logically unsuitable for the discovery of causal relationships between soma and psyche. The vast majority of studies delivered at best correlation results (without explanatory possibilities), quantitatively localised discrepanciesabout correlations (without proof of significance or without the possibility of saying anything about the range of results) or inferentially statistically insufficiently controlled (e.g. without alpha adjustment and without control of the inferential statistical independence of the characteristics) multivariate analyses from occasional studies with a professionally uncoordinated test selection (without the possibility of generalisation). Retrospective studies dominate in terms of numbers and often come to trivial results, such as that people after or with a life-threatening illness show a higher anxiety burden than people who do not have the illness. Prospective studies with a hypothesis-driven approach and randomised study design were rarely found: Basic and actually quite simple requirements for empirically correct procedures were often clearly disregarded. Despite the pre-selection, almost all of the evaluated contributions suffer from methodological and procedural deficiencies. The consideration of research-logically correct criteria would lead to the fact that the majority of the cited studies would not have been carried out or would not have been published. The demands made on medicine in recent years for evidence-oriented research or for evidence-based professional results were long overdue, since research in other fields, e.g. biology or psychology, has traditionally been conducted empirically and hypothesis-guided.
It is necessary to develop theories and constructs that define relevant parameters in order to build appropriate, prospectively designed studies on them (Scheier and Bridges, 1995). Following a meta-analysis of coronary heart disease and HIV-related illnesses, these two authors describe a psychosomatic model that helps to explain the genesis of diseases. Scheier and Bridges name "Anger and Hostility", "Emotional Suppression" and "Depression" as disease-oriented variables, "Pessimism and Fatalism".
You write:

> "... persuasive evidence exists associating hostility and anger to a variety of CHD-related health outcomes. Indeed, the evidence is stronger for this particular connection than for any other connection that was examined.
> The evidence involving depression, fatalism, and pessimism is more impressive. As a group, these variables clearly showed the widest effects of any of the variables surveyed. Merging these variables with fighting spirit, active coping, and vital exhaustion into a ‹disengagement cluster'... yields even a wider set of effects." (S. 263)

According to this meta-analysis, Scheier and Bridges understand the recorded illnesses as “disrupters of life targets and activities” and as disengagement from the previous way of life.
The disengagement approach of Scheier and Bridges (1995) can be seen as a basic pattern of hypothesis-guided somatopsychic research (see section 4.2.2, figure 14).

Biography on Supplementary Chapter E

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Subject index

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The author, Prof. Dr. Wilfried Echterhoff, university lecturer for psychology at the University of Wuppertal and head of an institute for psychotherapy and coaching until 2012, continues his series of new scientific and practical impulses with this book.

This book …

… understands psychotherapy as building up a person and not as an attack against diseases

… puts together the modern state of knowledge to a new picture of body and soul

… views the interaction of body and soul like the behavior of a couple: one encourages the other and has common constructive or sometimes destructive goals

… clarifies a wealth of hitherto neglected modes of action between body and soul

… explains in detail how body and soul work together

… describes for the first time in detail the state of health with the help of eight characteristics on the basis of the general definition of the World Health Organization

… develops a new disease system for the overall body/soul system on a professional basis and thus stands out from the mainstream

… introduces a new concept of somatopsychics, in which the origin, the connections and the treatment possibilities of illnesses are made comprehensible

… gives manifold practical instructions for the treatment of selected diseases

… imparts a new way of thinking that can be put into practice immediately, and explains the scope and limits of knowledge and practical handling

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