The Basics of Systemic Coherence Regulation

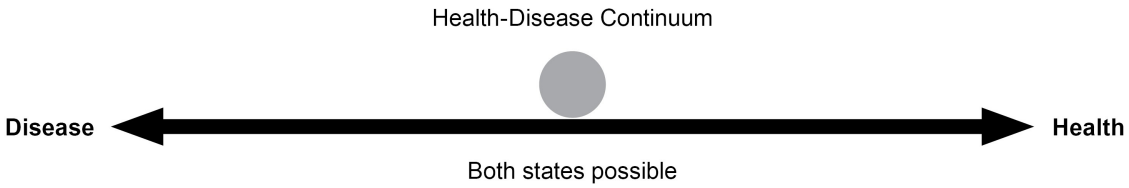
A Discourse on a Dynamic and Systemic Approach to Salutogenesis

Whenever salutogenesis is discussed in the context of human health, the main question is: How can human beings progress toward health?

That is the same question that results from Antonovsky´s idea of a health-illness continuum: No matter the stage in life, whether one is momentarily healthy, disabled or even on one´s deathbed, there is always the chance to develop toward a more comprehensive subjective health.

Salutogenesis – Healthy Development

Health – Healthy Development – Being Healthy as a Process



Dynamic definition of **"healthy"**: **"Healthy"** means being on a path to being healthy, characterized by both internal and external coherence (well-being).	**WHO Definition as Ideal State:** Health is a state of complete physical, mental and social well-being.

© Th. D. Petzold

Figure 1. Healthy development

Professionals in the health field are confronted with both the concrete and theoretical sides of this matter: What are the ways and means of healthy development? This concerns both groups and individuals, both of which represent general human systems embedded in their respective contexts – and in the end, of course, in the biosphere.

With this contribution on the theory of salutogenesis I would like to take up the demand by Eugen Baer (1980) for a "theory of healing," which Th. v. Uexküll and W. Wesiack included in their "Theory of Human Medicine" (1991).

Antonovsky writes the following on the further development of the concept of salutogenesis (1997, p. 149): “If the entire richness of the salutogenetic model is to be exploited, then these questions must be looked at in all deliberateness . . . I will first put the salutogenetic question in the context of the problem that in my opinion is central to the entire scientific world: the secret of transforming chaos into order.”

Chaos theory (in connection with cybernetics) gave us the insight that, in order to understand the development of the dynamics of open systems toward order, we have to regard two aspects: (1) The attractor of the system´s development (e.g., “health”) and (2) the internal and external conditions that make up the system. To date, the natural sciences have almost always studied only the second point; the question of the attractor of a development – something Aristotle called the “causa finalis” – was long taboo in the natural sciences because of its “teleological” nature.

Physicians experience daily that a wound heals very purposefully, and that people do recover completely from both light and severe diseases. These everyday observations support the results of chaos theory that attractors do exist as well for living systems; these attractors “pull” the chaotic (appearing) dynamics of the system into a state of order and regulate it. These attractors cannot be seen or observed directly, although in physical systems they can be predicted. Albeit in more complex physical systems we are speaking of irrational/imaginary (and thus metaphysical) number spheres so that one speaks of “strange attractors.”

Much research – and not only that of Antonovsky – confirms that coherence is a superordinate attractor for our healthy self-regulation. In this regard Klaus Grawe (2004, pp. 190-191) writes: “The regulation of consistency [this is part of coherence regulation, *the author*] occurs for the most part unconsciously and permeates all physical events to such an extent that one might properly speak of a supreme or pervasive regulatory principle in psychological processes.”

From a system-theoretical viewpoint, too, the coherence of a system is the supreme attractor of that system: Only by regulating this coherence through constructive communication with its surroundings can the system exist at all.

This understanding of human life as a dynamically developing system with attractive goals on the one hand and both constructive and destructive conditions on the other forms the basis of this theory of salutogenesis. First, the model of “communicative coherence regulation” is introduced, and in the second section humans are depicted as holistic and systemic beings that resonate with their life contexts (“lifedimensions of being”).

To keep the description lucid and clear, and because of the limited time and space available, I will forego for the most part a differentiated portrayal of other systemic and dynamic approaches and present the results of decades-old studies and discussions only briefly (for more detailed descriptions, see Petzold 2000a, 2000b, 2000c, 2000d, 2010, 2011).

The Dynamic Approach to Healthy Development

A Model of Communicative Coherence Regulation

An attractor of self-regulation that is omnipresent, superordinate and pervasive is nothing other than "coherence" – in the sense of a coherent, fitting affinity. This is equally true of physical and metabolic events.

Whereas coherence is the central attractor present throughout our entire lives, there are of course other attractors – desired conditions – that reveal themselves in the form of needs, wants and goals. These "low-level" attractors get our attention for shorter periods of time – minutes, hours or maybe days – and preoccupy our everyday attention and activities (e.g., getting enough oxygen to breathe and enough blood sugar to think). Coherence lies dormant in the background, but is no less active during such times. Our organism strives to reach a state that is internally and externally agreeable, where both needs and existential significance correspond to the possibilities.

Coherence regulation begins with an awareness of a deviation in one's present state from the attractive desired state (Phase 1). This revelation of discordance implies a certain knowledge of the coherent attractor. Is the discordance we experience *meaningful*? In such an assessment of our own perceptions lies the source of the motivational component entitled "meaningfulness" in Antonovsky's model. Assessing our own perception creates an inner desire, and from the additional perception of external realities arises a desired *solution* that is connected to reality.

From this perception of a desire and a desired solution results our motivation to act (Phase 2). We communicate our respective need and satisfy that need by, say, drinking or eating something or meeting with a friend or doing our job.

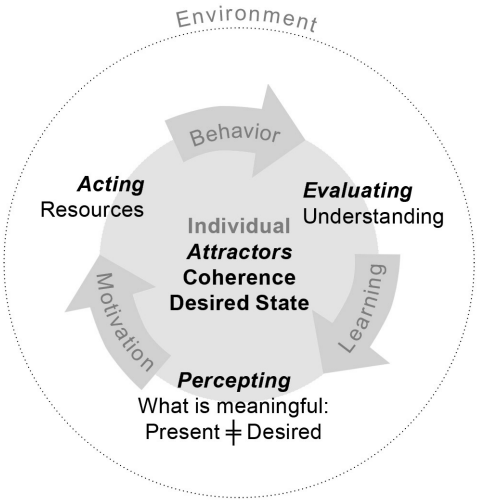


Figure 2. Salutogenesis: Healthy Development – Communicative Coherence Regulation

In the dynamics of self-regulation we find the components of the so-called "sense of coherence" (SOC) coined by Antonovsky, albeit in a slightly different definition that clearly refers to the dynamic events leading up to "being healthy."

Once we have acted, we reflect on our actions (Phase 3): Did our behavior truly bring us closer to our attractor? Did we experience more coherence, both internally and externally? Depending on how this evaluation turns out, we learn that we should repeat our behavior in a similar situation in the future – or not and try some other behavior. Reflecting on our own behavior and interacting with our environment creates *understanding* – the third component in Antonovsky's idea of SOC.

Approaching and Avoiding

Of course, life is not quite so harmonious that we are always on an approach path to our inner-most attractors. There are always dangers along the way that threaten us. In order to fend off these dangers or withdraw ourselves from their influence (or dissolve the incoherence), we have both a neuropsychological approach system and a respective avoidance system.

The approach system is connected with our inner reward system and pleasure center. Dopamine is released during an approach, causing us to go toward the planned object with a feeling of desire – even if we have yet to reach it.

The salutogenetic orientation is paired with the goals we choose to approach; the pathogenetic orientation, on the other hand, puts the goals we choose to avoid in its sights. During counseling patients often initially describe their avoidance goals. But as salutogenetic counselors we must, together with the patient, search for the goals to approach. The following table shows a number of examples of this type:

Goals to approach (often implicit)	**Goals to avoid** (warning lamps)
• Being healthy	• Being ill
• The will to live	• Resignation
• Self-determination	• Unhealthy dependence on others
• Security, courage	• Fear
• Freedom/ability to act	• Incapability to act, paralysis
• Well-being	• Pain
• Feeling of belongingness	• Isolation

The avoidance system is connected to our fear center and activates stress reactions when danger ensues. When in avoidance mode we experience stress.

Antonovsky drew a line from stress research and from the theory of "generalized resistance resources" to the question of salutogenesis, or generally speaking to the development of health. Resilience research came on a parallel path to a similar conclusion: Especially those people prove to be resilient who, despite strong, long-lasting stress, find a way to formulate approach goals and turn on the approach mode and enjoy life (Teflon-coated tumbler).

For Example: Stress and Coherence Regulation

Approach and avoidance systems should work well together and not hinder each other. Their respective basic characteristics are genetically programmed, yet largely determined by the relationships they participate in (Grawe 2004). Persons who have a weak approach system but a strong avoidance system easily become depressed or exhibit other stress-related illnesses: Too much stress translates into too little lust for life.

For healthcare professionals this means that they must strive to formulate positive, motivating, and attractive health goals rather than emphasizing fear-mongering health risks and the terrible consequences of disease. Only people with very strong approach systems can draw the proper conclusions from fear-inducing threats, where as other less resilient persons react to such "enlightenment" about health risks rather counterproductively. A one-sided, pathogenetically oriented medicine tends to cause depression and stress-related illnesses in such people.

The following two figures show on the basis of stress regulation how useful a model of coherence regulation can be when the results of brain research are incorporated. The first one demonstrates the healthy approach to coherence regulation, where a danger is noticed and repelled with the help of the avoidance system.

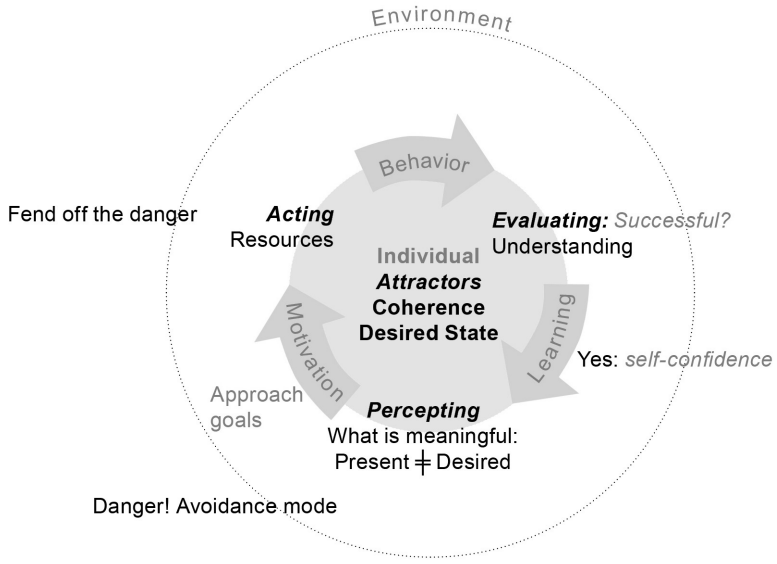


Figure 3: Dynamic Model for Dealing with Stress I

By successfully fending off an external danger we strengthen our self-confidence. For example, at the immunological level, our immune system learns to deal with certain viruses

by producing the proper antibodies. After successful repulsion one can relax again and direct one's attention to approach-related goals.

If, however, the attempt to fend off a danger fails, our perception of that menace is in fact raised, and our complete attention is directed toward that danger, which grows continually stronger: Now avoidance mode has been activated. Avoidance goals are brought more and more into focus, and our efforts to somehow repel the danger are intensified. Our organism experiences stress and feels surrounded by permanent threats.

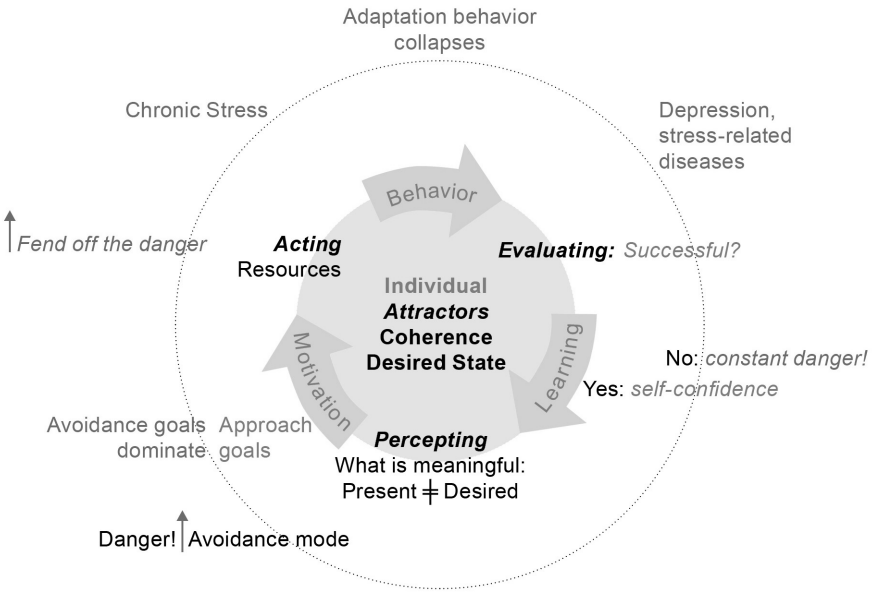


Figure 4: Dynamic Model for Dealing with Stress II

From this depiction of coherence and stress regulation we can derive several different ways of inducing prevention and intervention:

(3) First, we determine together with the clients what has happened: How dangerous is the (remaining) threat following their activities? (This is Phase 3 of self-regulation, which is why the first step in counseling is designated as (3).)

1. What needs and meaningful goals can be felt, communicated and (if possible) fulfilled – despite the threat?

2. What resources does the client need to fend off the danger (empowerment, support)?

3. What does the client want to do (alternatively: what does the client want to feel) once the danger has been banished? What attractor/approach goal is desirable?

Counseling and Coherence Regulation

Counseling and therapy means accompanying clients/patients during their coherence regulation. Self-regulation is complemented and encouraged through the entire interaction with the counselor/therapist (see Figure 5).

(3) Counseling usually begins by taking a look at the client´s anamnesis that led him or her to seek help in the first place. The first step in counseling (denoted with (3) here) also begins with Phase 3 of self-regulation. Evaluating the situation together makes the counselor part of the coherence regulation; through empathy the counselor adjusts to the patient´s wavelength – and establishes a common system that should lead to a healing atmosphere.

1. Describe the present state and establish a diagnosis (observation and examination complement the client´s subjective impressions).

2. Agree on the next steps or activities to be taken (write a prescription, carry out a treatment, make a suggestion …)

3. Take stock of the situation (at the time of therapy usually speculative: Does the planned or completed therapy/treatment feel right? How successful will the treatments probably be? The "true" evaluation is then done later).

Synergy in the Healthcare Professions

The model of systemic communicative self-regulation can also be employed to plan the synergistic cooperation of different healthcare professions. Synergy is best attained if the healthcare professionals support patients in that phase of their self-regulation, that most effects their healthy development. Each and every healthcare professional plays an important role: initially through the similar initial contact that serves to establish an evaluation of both the history and present state of the patient and leads to a better understanding of the related contexts.

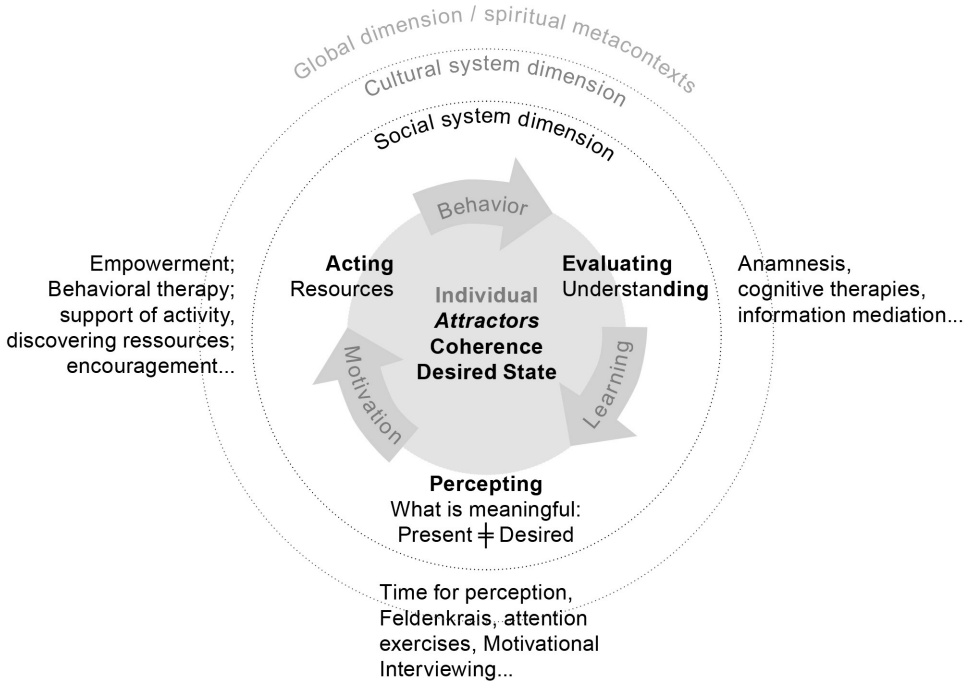


Figure 5. Stimulating salutogenetic self-regulation by various healthcare professions

Moreover, the so-called gentle methods and diagnostic means are applied which further patients´ perceptive abilities as well as interventions from intensive-care medicine that serve to regenerate the organism in emergency situations. Empowerment methods are used preventively to rehabilitate the ability to act and to enable the patient to develop and discover own resources. These approaches are valid for both therapy and for health promotion.

Summary of the Dynamic Approach

As we have seen, a salutogenetic-oriented, dynamic approach sheds new light on both healthy and unhealthy developments, and provides many new practical implications for the healthcare professions to promote the well-being of their clients.

Our understanding of the salutogenesis of human life as a dynamic cooperation between our motivating attractors and the circumstances that make their realization feasible means that asking why someone is healthy or not becomes a very different question indeed. Empathizing and scrutinizing someone's healthy self-regulation means looking for the presence of attractors as well as the available capabilities and resources of that particular person. Like every healthy development, the yearning for coherence always occurs within a context. In order to understand the present state of development we must thus also look at its context and its circumstances. One cannot search for the cause of some disease/recovery without understanding its development in a complex, multidimensional context.

Such an endeavor requires a systemic perspective that can make sense of a particular human's development in that person's specific environment. The most important thing is to understand that individual in resonance with all existing contexts. Resonance means setting in motion one's own oscillating capability – also as a response to one's environment. That results in the following:

A New Systemic Approach

The atomistic approach, which sought the cause of all things in miniscule particles – in organs, cells, genes, molecules as well as, in the end, in elementary particles – led to a fragmentation of human life, something we consider both inhumane and contradictory to the natural human striving for wholeness, healthiness and healing. Because the healthcare professions have as their primary goal the "healing" and "health" of their subjects, we need a way to focus on the holistic nature of humans that corresponds to our natural inner search and our sociocultural mandate: We need a salutogenetic orientation.

One major difference from the previous systemic theories (Bertalanffy, Bateson, Luhmann, Engel et al.) lies in our introducing the term *resonance* to describe the communication and interrelationships between systems. Children, for example, by resonating with their parents and their siblings as well as with other important persons in their life – through language and culture and perhaps even through global events - develop a feeling of solidarity with all things living. The systemic approach is necessarily a holistic one.

A whole is more than the sum of its parts. A creature interacts as a whole entity, as a system with other systems. A brain cannot feel on its own, it cannot think, philosophize or otherwise function all alone – that is reserved for the entire human being. Individual cells of our bodies can react to stimuli; yet, whether we react as a whole being is not determined by that individual cell, but by our entire self.

Our understanding of resonance as the resonating in one's own oscillation capability does justice to the individual autonomy and freedom of each living being as well as the fellowship with other living beings, and it adequately reproduces the physical understanding of all existence as oscillations.

The idea of resonance provides a proper understanding of the epigenetic events that occurred in ontogenesis as well as new insights into the phylogenesis of the biosphere and the neurophysiological processes that take place in the brain: as a resonance to communication in the broadest sense of the word (cf. Petzold 2010, 2000a, 2000b, 2000c, 2011). When we depict the individual in his or her resonance with the respective environment, then there can clearly be no such thing as a linear-causal reciprocity at work, rather at best statistically relevant probabilities of interaction. We no longer search for a single cause of change, but rather contemplate all the various contexts that may have led to a certain development.

Our mind and our soul are no longer seen as some special system (perhaps even separated from the body), but rather as an individual reaction to social, cultural and spiritual communication. Our soul is a special aspect of our entire resonance capability and our resonance within the dimensions of our existence – parallel to and complementary to the aspect of corporality on the material side of things.

Joachim Bauer (2005) said the following: "Finding resonance in others, giving others resonance and observing what that means to them is a basic biological need – at least for higher forms of life. Our brain … is neurobiologically calibrated to good social relations."

Our understanding of resonance changes our view of the so-called "system levels." The individual as a small system lives and moves (resonates) in larger context systems that can be categorized as lifedimensions (also called "system dimensions"). Depending on the individual's particular needs and resources, that person resonates with different system dimensions. For example, we resonate with the needs of our family, with the expression on our spouse's face, with the manifestations of our profession, with the legal aspects of our job, with all sorts of fundamental ethical principles. Attractive goals can emerge from all of these resonances – or disturbing and demanding circumstances, as the case may be.

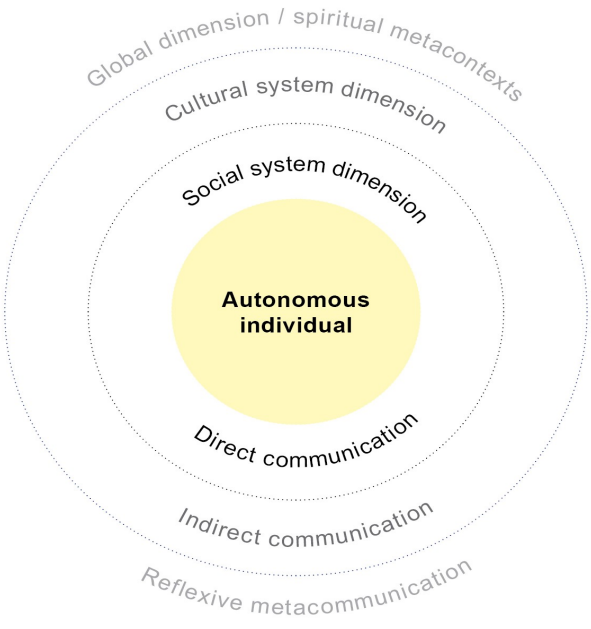
This understanding of resonance dissolves many of the contradictions that appear in conventional theories, for example, between theoretical and practical medicine, between statistical and individual medicine. The internal subjective approach and the external observation are merged in this model. Further, an evolutionary and a systemic view are

combined to form an evolutionary systemic image of humanity. This systemic model provides an anthropological framework for ordering the complex relationships present in many systems.

The Multidimensionality of Our Existence

Humans consist of organ systems, organs, cells and other, smaller entities (= systems). An individual is part of a family system (community, social system), a society/culture, the human race and the entire biosphere. Thus, we are dealing with sub- and suprasystems with respect to any one particular system in question. The coherence of a larger entity comprises all its elements, the smaller subsystems; these subsystems lie within the coherence of the superordinate systems. They resonate in turn with suprasystems – resp. the superordinate *systemdimension*.

I introduced the term *system* or *lifedimensions* (also called *dimensions of being*) into systemic thought. Dimension is used here instead of the notion of level, which implies a linear, layered understanding of system order. Dimension denotes rather a qualitative expansion and can correspondingly be used to measure the complexity of the systems, similar to the dimensions of time and space. Every larger ("higher") system dimension comprises – and thus also in a certain sense structures – all the smaller subsystems through its own coherence: The family shapes the child, the culture forms family life.



© Th. D. Petzold

Figure 6. Resonance - communication in the lifedimensions

The systemic next higher coherence is always present as an information framework. Depending on their respective abilities, the subsystems resonate with the respective larger

system dimension. Back in 1949 Ludwig v. Bertalanffy wrote the following: “Development is not so much the accomplishment of independent assets or developmental machines, but is rather controlled by the whole” (1949/1990, p. 65).

Development and Coherence Transitions

And vice versa: Every larger system is composed of many smaller systems and is thus dependent on them for its own well-being. Changes to the subsystems result in resonances, and even emergences, in the suprasystem. In the embryonic phase, the organism builds a functioning organ if enough specifically informed cells are present. A family is changed by the birth of a child. Once the value of group communication has been acknowledged and experienced by many and individual dogmatic positions have been put aside, new creative group processes and a group consciousness can arise. This is the point of transformation from “quantity to quality” – when many different subsystems are gathered under the influence of a new attractor to form a new coherence/order, which in turn rapidly transforms the superordinate system coherence as well. This the phase is also called the coherence transition.

Coherence transitions are present both when one falls ill and when one gets well again: Only when enough cells have been transformed into cancer cells does the individual become ill. Following a bed-ridden illness the convalescent learns to integrate him- or herself once again in life contexts (cf. Petzold, 2000c). Analog we can observe this phenomenon in the political arena, especially in revolutions, such as those presently taking place in the Arab countries.

In life we experience a number of large coherence transitions and many small ones. The well-known large ones are birth, puberty and death; inbetween there are many very individual developmental steps, crises, illnesses and recoveries with some major learning experiences. And there are phases in life that give everyone cause for a coherence transition: starting school, getting a job, starting a family, midlife, retirement, etc. These coherence transitions are often coupled with crises. But if we recognize them as coherence transitions, we can come to understand our fellow human beings much better and support them in their developmental needs. We then no longer need to fight the accompanying symptoms tooth and nail, which sometimes may even make the transition at hand more difficult or stifle it completely.

Communication in the Lifedimensions

A system dimension comprises systems that have similar qualities of coherence and inner communication.

Thus, the social system dimension (communities) is characterized by direct interpersonal relationships and by direct sensual communication between two or more human beings (similar to Tönnies "Gemeinschaften" and Luhmann’s sense of “interaction”[1]). This is true of

[1] That is why I call all systems consisting mainly of direct communication(“interaction” in Luhmann, 1987) “social systems.” In my definition, “social systems” have, first, a different, more limited meaning than with

families, friendships, neighborhoods and other possible or actual collectives. This is where healthcare professionals who deal directly with other humans are truly active, be it as a physician, a therapist, caretaker or counselor, inasmuch as they communicate directly, face to face and not solely through instruments, words or other means.

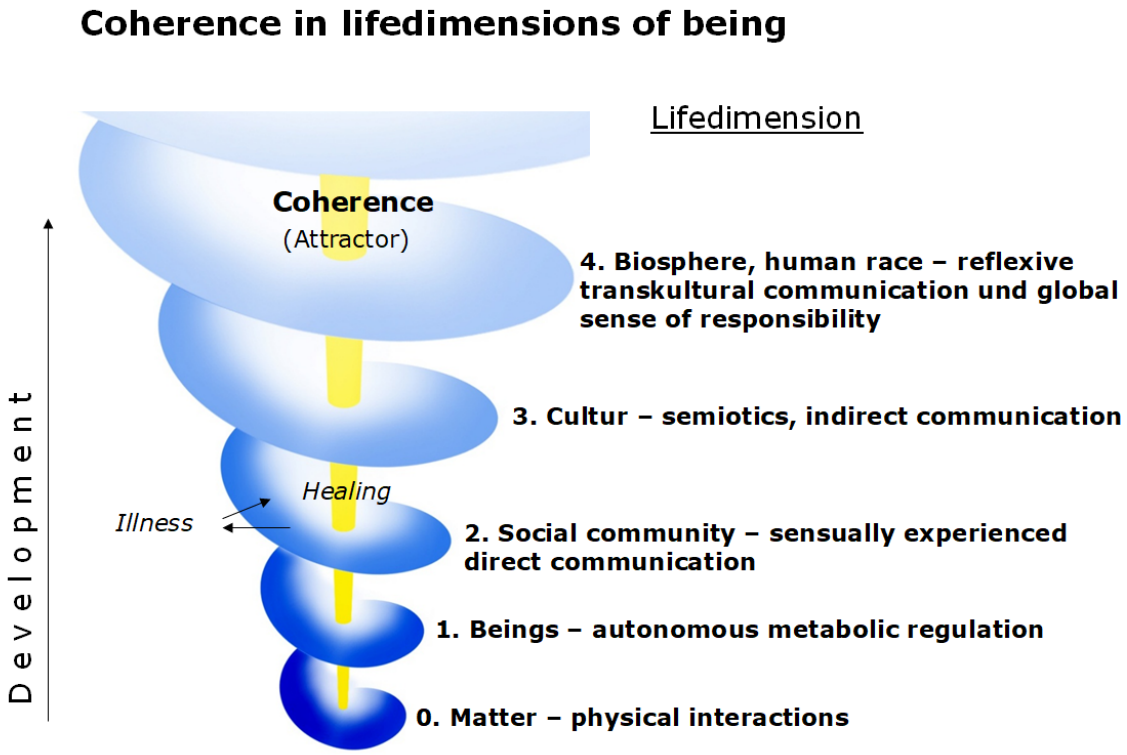


Figure 7. Coherence in lifedimensions of being - Evolution toward ever more complex coherence.

Indirect communication, on the other hand, such as semiotic (or sign) systems like language and tools, are characteristic of the cultural dimension, where we find all sorts of systems that define our culture: schools, businesses, political and cultural institutions, the economy, etc. (with analogies to Tönnies "Gesellschaft" and Luhmann's "organization"). The coherence of these systems exists for the most part explicitly, through language, morals, norms, economics, currencies, laws, contracts, instruments, drugs et al. – even though we do not know the exact originator of such means as money, medicine, books, machines (let alone of language and morals). Our relationship rather is with the mediating semiotic system, with the means. The semiotic system is what we notice, not the initiator; we interact with the tool, not its creator. Maturana (1987) speaks of a "life in the language."

Healthcare professionals have an indirect effect on their clients in two ways by means of cultural semiotics: through the various remedies they distribute (words, medicine, rituals,

---

Luhmann, who employed the term to designate all human systems (not, however, for the so-called „mental systems" and not for the „organisms," which in his opinion were excluded from the social systems). Second, it has a broader definition in that my conception of social systems include the complete individuals including their „organism" and their „mind". Evolution brought forth social systems even in the animal world and later the cultural systems among humans in very different stages. Today because there is perhaps a new cultural revolution going on leading to even more complex, conscious systems, this differentiation of the terms seems to me to be both legitimate and meaningful (cf. Petzold 2010, 2000a, 2000b).

instruments, etc.) and through the peripheral factors of the respective setting, by shaping the cultural systems where they work and live. Their influence is thus an indirect one in the cultural dimension.

The metadimension of these cultural systems is all mankind (in part analogous to Luhmann's "world society"). An important aspect of the coherence of this dimension of being lies in the humanistic, ethical principles found in all cultures and all religions. We feel a transcultural, global fellowship combined with a global consciousness of responsibility. This is modern global coherence, which goes beyond language in both quality and complexity.

Meditation may offer a way to approach this global, supralinguistic coherence. Meditation is something that unites people from the most disparate cultures around the world who can understand each other's motives. Antonovsky even defined "sense of coherence" as a "global orientation."

From this global meta-dimension we can reflect on the culture-specific effects, for example, of laws, institutions, language, cultural norms and values, etc. Healthcare professions work within this dimension when they evaluate cultural activities pertaining to healthcare from a global vantage point.

Reflexive meta-communication leads to transcultural communication in the coherence of all mankind, and to the search for interactions between culture(s) and the biosphere. The present discussion about climate change reveals how broad the interactions in a globalized world indeed are with respect to health issues. The healthcare professions face the challenge of developing the corresponding sense of responsibility.

In the various system dimensions one can discover many different temporal courses for change: The larger the dimension, the longer it takes change to occur (cf. Petzold 2010b, 2000b).

Analogies to Bateson's "Learning Levels"

In the communication paths of these three system dimensions (lifedimensions) we find analogies to the logical types proposed by Russell and the learning levels of Bateson (1985/1996, p. 367ff, 392). Every higher learning level is held by Bateson to be concerned with "learning the context" of the lower levels.

"Learning Level I" in Bateson's theory denotes the direct, interpersonal communication in the socio-emotional dimension of being. During direct communication we learn to use our senses and to understand the context of sensual stimuli as well as to shape them to our own needs (examples are learning by conditioning or reward).

The language-oriented communication of "Learning Level II" is concerned with learning and shaping the context of immediate human interaction. The prerequisite for proper cultural communication is our power of imagination, which recognizes the temporal context of the spatial and qualitative contexts of the stimuli and can shape them. Cultural communication

gives us the power to change the circumstances of communal life by setting up rules and regulating our economy. Thus, we shape the contexts of direct sensual communication through culture (laws, currencies, houses, automobiles, etc.). An example may be found in the reshaping of Pavlov's experiment for "Learning Level I" by changing the context of the probands to reflect context-oriented learning, which distinguishes it from the simple conditioned reflex (= Level 0).

"Learning Level III" in Bateson's scheme means learning and shaping the context of the cultural contexts of the social contexts of the sensual information. Since the cultural context represents a human achievement, "Level III" means understanding the context of this constructed cultural reality – seeing humans as the authors of this context both in their autonomy and in their interaction with the biosphere from which and in which they developed and will continue to develop.

The context is the object of Level III and it lies beyond language – it is more complex than language because it is its author. The context consists of meaning expressed through language. This type of learning comprises the coherence of the meanings present in words, sentences and other sign systems that exist transculturally in a space beyond language. A "deep phenomenological" understanding (Murillo, 2002) occurs of the complexity of the coherence of the global or spiritual context of cultural systems. This is a reflexion of the cultural (linguistic) spaces from the perspective of a conscious experience of a larger, more complex global spiritual coherence. This makes it a very special phenomenological approach beyond "life in the language" (Maturana, 1987).

Learning Level III today may be found in the nascent global consciousness of common responsibility; in how we see the cultural effects impact and change human life and individual human lives. It occurs when humans come to see their responsibility for shaping the future by their own thoughts and actions to ensure a healthy development of the entire human race. Such approaches may also be found in thoughts on the observer problem in the modern sciences and in constructivism.

The fourth learning level of Bateson is a metareflexion that belongs to an even higher-level of spiritual consciousness (not discussed here). This consciousness refers to the coherence of dimensions that lie beyond the circles depicted.

All Systems Are Autonomous and Permeable, Yet Limited Systems

The systems are depicted with dotted circles that are separate from one another but cannot be separated from one another. Principally speaking, all observable systems are permeable but limited and thus open systems. Completely closed and isolated systems in turn are speculative: Such a closed system cannot be observed since no information can be exchanged. The term "operationally closed" is not used here because it suggests a sort of "closeness" that does not exist as such. As well, the more restrictive description of an "operational closeness" is not compatible with our understanding of systemic resonance

described above. The phenomenon described with this term fits the bill for the “autonomy” of systems better and less ambiguously.

The Relationships Between the Representatives of the Various System Dimensions

A human can assume different positions indifferent system dimensions, playing different roles in different contexts. For example, one can be a father in the family and a manager at work and a son to one’s parents. All of these roles consist of different emotions, evaluations, thoughts and behavioral patterns. It would not be fitting to act like a manager in the family or like a father toward one’s own parents.

This model can help us to understand and shape the various roles and relationships that occur in the representatives of the various system dimensions– even those within a single individual.

The dimensions are ordered according to a simple ranking: The larger one is the higher one. This explains why someone might feel “small” toward a representative of a higher cultural dimension (a civil servant, the President, a teacher, a therapist …). To understand these emotions, we do not need to serve up some pathologizing, psychoanalytic explanation of authority transference from early childhood; we need only understand it as the realization of the reality of systemic relationships. The normal feeling of systemic subordination is the same thing whether I am facing a civil servant or the President. It has little to do with their respective personality or with their particular rank (unless I myself am part of the cultural hierarchy and am comparing myself). From a systemic point of view, the normal citizen deals with representatives of the higher level cultural dimension. Of course, there is an analogous situation in the systemic feeling of a child toward his or her parents, which concerns the qualitative difference in system dimensions of an individual and the family system. But there are more differences than similarities in this comparison.

All of this is important to those who work in healthcare professions in order to better understand and shape our relationships with our patients and clients. Whether we like it or not, they generally see in us representatives of the systemically higher cultural dimension and thus tend – and not for any childhood-based reasons – to take our statements more seriously than their own opinion or the opinions of their friends and relatives. This is the source of all idolization of the “expert” – the resonance toward the rank order of the lifedimensions of being. That is why we go to a specialist with our woes and not to our grandmother. Patients hand over to us in this manner great power, and we should not misuse it, deny it or refuse it, but rather accept the responsibility and return it to the patients in a process of empowerment.

This ability to empower may be seen as a “second professionalization” – the continual development of all healthcare professions, each in their own particular way. That is our professional role; it is not something we have earned or excelled at. As human beings we stand (and remain) eye-to-eye with patients, and we should not identify with our cultural

role completely, as leaders often demand (especially civil servants etc.). Rather, we should always keep our feet on the ground and remain a *mensch*, accept our cultural role and work like the professionals we truly are.

The important thing is to recognize that the same is true for the relationships of the system dimensions among each other as for Bateson's "logical types": To ignore the rank order produces chaos.

The Ethical Implications of This Systemic Approach

Chaos ensues, for example, when politicians make political decisions based on their own personal, emotional relationships instead of on their intellectual insights and diplomatic reason in ethical resonance with the next higher dimension (e.g., the global dimension). Vice versa, damage can occur to smaller units when, for example, parents do not communicate with their children in accordance with their instincts and their feelings but rather according to some supposed cultural rules (e.g., feeding a baby every four hours, demanding social skills at an early age or not letting the child simply play), when they fail to put their personal, loving relationship to the child in the foreground and treat them like a child. Humans experience and develop simultaneously in all lifedimensions, in the physical one, in the social one and in the cultural one, and of major importance today: in the global-spiritual one.

We can discern the importance of the development of both our individuality as well as direct human relationships as irreplaceable developmental steps - for which we need time and space and acceptance: Individuals and groups, being subsystems of larger systems (e.g., a culture), can contribute to their own development and create their own cultural creativity.

I would like to show how this rule for systemic ranking order can be applied to National Socialistic ideology; this will point up the ethical implications: In Nazi thought the German people (or the Aryan race) were put above the human race as such. That bestowed upon them the right to capture any sources of raw materials they wanted and to annihilate other peoples as they thought necessary. If at the time it had been accepted as a general principle that the human race lies above any national culture, this ideology would not have had the chance to survive. The same can be said today of fundamentalist and terroristic ideologies as well as of the violent proselytization efforts on the part of large countries, churches or economies.

In this sense I see an ethical implication in the concept of global coherence, something Antonovsky denied for his construct of measureable SOC. The founder of system theory, Ludwig v. Bertalanffy, summarized global solidarity as follows (1949/1990, p. 58): "The whole of life on earth is highest level of organization."

We also find ethical aspects in the way one looks from a systemically superordinate position toward the respective subsystems: the ethics of acknowledgment and of respect for the autonomy of all smaller systems. For healthcare professionals this means tending to the self-autonomy of patients and clients. Politically speaking, it means respecting the autonomy of

social groups such as families as well as individuals. System theory ascribes autonomous self-regulation to all living systems, and this is worthy of respect in all dimensions if the entire system is to develop in a healthy fashion together with its subsystems. Every culture and every collective demands respect for the needs of its children and for their autonomous development.

From the above we can conclude that one cannot demand the autonomy of human beings, one has to acknowledge and respect it.

Summary and Outlook

The model of autonomous self-regulation outlined here as one of "coherence regulation in systemic resonance" is concerned with the system-immanent attractors in three successive and recurrent steps. These can emerge from a resonance with attractors (order/desired states) of both larger, higher systems (e.g., professional goals as well as other long-term, more sustainable attractors) and subsystems (short-term desired states, such as sufficient blood sugar or oxygen levels).

Communicative coherence regulation is of utmost importance not only for well-being, but also for communicative self-development and creativity. This has been proven in various experiments concerning group work (cf. Petzold 2010a, 2011).

This model of self-regulation would appear to be valid in one form or the other for all known living systems, from protozoons to families to whole cultures and the entire human race. The main attractor seems always to be a coherent affinity, a constructive coherence both within and without. The ways in which things are perceived, acted on, learned and understood, however, differ from system to system.

If we therefore focus on healthy development – salutogenesis – as a process that occurs simultaneously in several lifedimensions of being, we can encourage this healthy developmental process to take place among the various healthcare professions in several steps and in several lifedimensions; we can further it, cultivate it and perhaps even expedite it. The result: more health and more creativity.

During this path toward more health any number of coherence transitions will take place, many of them occurring between the major, well-known ones such as birth, puberty, midelife and death. But they will all appear to us in the form of crises or even of illnesses. Once we have learned to recognize them as coherence transitions, we can learn to understand such developments according to the model of multidimensional coherence regulation and to support them at the respective necessary timepoint in life.

Communication seems to be the most important method available for salutogenetically stimulating, accompanying and supporting others. Salutogenetic communication harbors the greatest resource for human and social development – the path toward greater coherence, health and creativity.

References

Antonovsky, A. (1997). *Salutogenese. Zur Entmystifizierung von Gesundheit* [Salutogenesis: Unraveling the mystery of health]. Tübingen: dgvt.

Bahrs, O., Matthiessen, P. (2008). *Gesundheitsfördernde Praxen* [Health promoting practices]. Bern: Huber.

Bateson, G. (1987/1990). *Geist und Natur* [Mind and nature]. Frankfurt am Main: Suhrkamp.

Bauer, J. (2006). *Prinzip Menschlichkeit – Warum wir von Natur aus kooperieren* [The principle of humanity – why we naturally cooperate]. Hamburg: Hoffmann und Campe.

Bertalanffy, L. (1949/1990). *Das biologische Weltbild* [The biological worldview].Vienna-Cologne: Böhlau.

Buber, M. (1994). *Das dialogische Prinzip* [The principle of dialog]. Darmstadt: Wissenschaftliche Buchgesellschaft.

Carver, C. S. (2006). Approach, avoidance, and the self-regulation of affect and action. *Motivation Emotion, 30*, 105-110.

Csikszentmihalyi, M. (2004). *Flow im Beruf* [Flow in profession]. Stuttgart: Klett-Cotta. 2.Auflg.

Dörner, K. (2004). *Das Gesundheits-Dilemma* [The health dilemma]. Berlin: Ullstein.

Egger, J.W. (2005). *Das biopsychosoziale Krankheitsmodell* [The biopsychosocial disease model]. In: *Psychologische Medizin* 16.Jhg. 2005 N 2 S.3-12. Wien: Universitätsverlag Wien.

Elliot, A. J. (Ed.).(2008). *Handbook of approach and avoidance motivation.* New York: Psychology Press.

Fuchs, T. (2010). *Das Gehirn – ein Beziehungsorgan* [The brain – a relationship organ]. Stuttgart: Kohlhammer.

Gadamer, H.G. (1993). *Über die Verborgenheit der Gesundheit* [About the hidden health]. Frankfurt am Main: Suhrkamp.

Gigerenzer, G. (2008). Bauchentscheidungen – Die Intelligenz des Unbewussten und die Macht der Intuition[Gut decisions – The intelligence of the unconscious and the power of intuition]. München: Goldmann.

Göpel, E. / GesundheitsAkademie (Hrsg.) (2010). Nachhaltige Gesundheitsförderung. Gesundheit gemeinsam gestalten [Sustained health promotion. To form health together]. Frankfurt a.M.: Mabuse-Verlag

Grawe, K. (2004). *Neuropsychotherapie* [Neuropsychotherapy]. Göttingen: Hogrefe.

Grossarth-Maticek, R. (2003). *Selbstregulation, Autonomie und Gesundheit* [Self-regulation, autonomy, and health]. Berlin-New York: de Gruyter.

Haken, H. (2003). Synergetik der Hirnfunktionen [Synergetics in brain functions]. In G. Schiepek (Ed.), *Neurobiologie der Psychotherapie*(pp. 80-103). Stuttgart: Schattauer.

Hüther, G. (2004). *Die Macht der inneren Bilder* [The power of inner images]. Göttingen: Vandenhoeck und Ruprecht.

Krause, C. (2007). Pädagogik des Willkommenheißens [The pedagogics of welcoming]. In C. Krause, N. Lehmann, F. Lorenz, & T.D. Petzold (Eds.), *Verbunden gesunden – Zugehörigkeitsgefühl und Salutogenese* (pp. 196-204). Bad Gandersheim: Verlag Gesunde Entwicklung.

Kriz, J. (1999). *Systemtheorie für Psychotherapeuten, Psychologen und Mediziner* [System theory for psychotherapists, psychologists and physicians].Vienna: UTB Facultas.

Luhmann, N. (1987). *Soziale Systeme. Grundriss einer allgemeinen Theorie* [Social systems: Outline of a general theory]. Frankfurt am Main: Suhrkamp.

Machleidt, W. (2007, April). *Migration, Kultur und seelische Gesundheit* [Migration, culture, and mental health]. E2-Vorlesung, 57. Lindauer Psychotherapiewochen.

Maslow, A.H. (1954/2008). *Motivation und Persönlichkeit* [Motivation and personality]. Reinbek: rororo.

Matthiessen, P. (2010). *Paradigmenpluralität, Salutogenese und ärztliche Praxis* [Paradigm plurality, salutogenesis and medical practice]. In: *Der Mensch*. Zeitschrift für Salutogenese Heft 41.

Maturana, H., & Varela, F. (1987). *Der Baum der Erkenntnis* [The tree of knowledge]. München: Goldmann.

Murillo, J.S. de (2002). *Durchbruch der Tiefenphänomenologie. Die Neue Vorsokratik* (= Ursprünge des Philosophierens 2) [Breakthrough of deep phenomenology. The new pre-Socratics], Stuttgart-Berlin-Köln: Kohlhammer.

Peitgen, H.O., Jürgens, H., & Saupe, D. (1994). *C.H.A.O.S. Bausteine der Ordnung* [C.H.A.O.S. The building blocks of order]. Stuttgart/Berlin/Heidelberg: Klett-Cotta/Springer-Verlag.

Petzold, T.D. (2000a). *Gesundheit ist ansteckend!*[Health is contagious]. Bad Gandersheim: Gesunde Entwicklung.

Petzold, T.D. (2000b). *Resonanzebenen – Zur Evolution der Selbstorganisation* [Levels of resonance: On the evolution of self-organization]. Bad Gandersheim: Verlag Gesunde Entwicklung.

Petzold, T.D. (2000c). *Das Maßgebliche – Information Synthese Subjekt* [The Relevant – information, synthesis, subject]. Bad Gandersheim: Verlag Gesunde Entwicklung.

Petzold, T.D. (2005). *Die ärztliche Gesprächsführung im Sinne einer salutogenen Kommunikation* [Medical interviewing in the sense of salutogenic communication]. In: *Erfahrungsheilkunde* 2005; 54, S. 230-241.

Petzold, T.D. (2007a). *Wissenschaft und Vision* [Science and vision]. In: *Der Mensch* I/2007, S. 4-14.

Petzold, T.D. (2007c). *Im Fokus der Therapie steht die Selbstregulation* [The focus of therapy is self-regulation]. In *Der Merkurstab* 1/07, 36-43.

Petzold, T.D. (2007d). *Bedürfniskommunikation* [Need communication]. *Psychotherapie Forum, 15*(3),127-133.

Petzold, T.D. (Ed.). (2010a). *Lust und Leistung … und Salutogenese* [Desire and performance … and salutogenesis]. Bad Gandersheim: Verlag Gesunde Entwicklung.

Petzold, T.D. (2010b). *Praxisbuch Salutogenese – Warum Gesundheit ansteckend ist* [Workbook salutogenesis: Why health is contagious]. München: Südwest-Verlag.

Petzold, T.D. (2011, May). Systemische und dynamische Aspekte einer Meta-Theorie für Gesundheitsberufe und Folgerungen für die Hochschulbildung [Systemic and dynamic aspects of a metatheory for health professionals and ramifications for university training]. In *Proceedings of the congress „Wie können aus Gesundheitsberufen Gesundheitsberufe werden?"* Magdeburg, Hochschulen für Gesundheit e.V.

Petzold, T.D., & Lehmann, N. (2011). *Kommunikation mit Zukunft. Salutogenese und Resonanz* [Communication with great prospects: Salutogenesis and resonance]. Bad Gandersheim: Verlag Gesunde Entwicklung.

Popp, F.A. (2006). *Biophotonen – Neue Horizonte in der Medizin* [Biophotons – new horizons in medicine]. Stuttgart: Haug-Verlag.

Popper, K.R. (1994). *Alles Leben ist Problemlösen* [All life is solving problems]. München: Piper.

Schiepek, G. (2003). *Neurobiologie der Psychotherapie* [The neurobiology of psychotherapy]. Stuttgart: Schattauer.

Schopp, J. (2010). *Eltern stärken – Die Dialogische Haltung in Seminar und Beratung* [Empowering parents: Using dialog in teaching and counselling]. Opladen: Verlag Budrich.

Schüffel, W., Brucks, U., Johnen, R. (Hrsg.) (1998). *Handbuch der Salutogenese* [Handbook of salutogenesis]. Wiesbaden: Ullstein Medical.

Schweitzer, J., Schlippe, A. (2007):. *Lehrbuch der systemischen Therapie und Beratung II* [Textbook of systemic therapy and counselling II]. Göttingen: Vandenhoeck & Ruprecht.

Schwing, R., Fryszer, A. (2010). *Systemisches Handwerk* [Systemic Tools]. Göttingen: Vandenhoeck & Ruprecht.

Spitzer, M. (2007). *Lernen* [Learning]. Berlin/Heidelberg: Springer-Verlag.

Strachman, A. (2009). Approach and avoidance orientations. In *Encyclopedia of human relationships.* Thousand Oaks: Sage.

Tönnies F (1935/1991) Gemeinschaft und Gesellschaft. Darmstadt WBG.

Uexküll, T. v., Wesiack, W. (1991). *Theorie der Humanmedizin* [The theory of human medicine]. München: Urban & Schwarzenberg. 2. Auflg.

Uexküll, T. v. et al (1996). *Psychosomatische Medizin* [Psychosomatic medicine]. München: Urban & Schwarzenberg. 5. Auflg.

Watzlawick, P., Beavin, J.H., Jackson, D.D. (1969/1990). Menschliche Kommunikation [Human communication]. Bern: Verlag Hans Huber.

Wydler, H., Kolip, P., Abel, T. (Hrsg.) (2002): *Salutogenese und Kohärenzgefühl* [Salutogenesis and the sense of coherence]. Weinheim und München: Juventa.