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# Cognitive Behavioral Analysis System of Psychotherapy (CBASP): A Disorder-Oriented, Theory-Driven Psychotherapy Method from the “Third Generation” of Behavior Therapy Models, Designed for the Treatment of Chronic Depression

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## 1. Introduction

Major depressive disorder (MDD) is a common disorder which is usually associated with severe and persistent symptoms. The global prevalence of MDD is 1.6% in men and 2.5% in women (Ayuso-Mateos et al., 2000). The lifetime prevalence in the general US population is 16.2% (Kessler et al., 2003). Individuals between 18-29 years have the highest cumulative lifetime prevalence in comparison to all other age-groups. The rate of MDD diagnosis is particularly high in younger females (Wittchen et al., 1992; Kessler et al., 1994; WHO, 2004; Satyanarayana et al., 2009). MDD is the 4<sup>th</sup> leading cause for “years of healthy life loss” in high- and middle-income countries. The WHO predicts that by 2020 MDD will move upwards to be the 2<sup>nd</sup> cause (WHO, 2004). The impact of MDD on quality of life is equivalent to that of severe physical illness, such as cancer, diabetes mellitus and chronic obstructive pulmonary disease (Sintonen, 2001; Saarni et al., 2006). In addition, 9-23.0% of individuals with one or more chronic medical conditions suffer of co-morbid depression. Consistently across countries and different demographic characteristics, respondents with depression co-morbid with one or more chronic physical conditions have the worst health scores of all disease states (Moussavi et al., 2007; Trivedi et al., 2009; Satyanarayana et al., 2009). Suicide and chronicity are significant further threats of MDD. Patients with more severe recurrent and/or chronic MDD die up to 15% by suicide (APA, 2000; Wahlbeck and Mäkinen, 2008; Satyanarayana et al., 2009). In one of three cases MDD leads into a chronic course, particularly when antecedent dysthymia is present (Keller et al., 1982; McCullough et al., 1996; Costa and Silver, 1998). A recent Canadian community health survey with inclusion of 36984 individuals aged 15 years and older reports the life-time prevalence of chronic MDD to be 2.7%, representing 26.8% of all individuals affected by MDD (Satyanarayana et al., 2009). The prevalence of dysthymia with or without superimposed major depressive episodes is estimated to be approximately 3%, the lifetime prevalence 6% (American Psychiatric Association, 2000).

### **1.1 Diagnostic issues of chronic MDD**

Chronic depression is defined as unipolar depressive disorder lasting two or more years with less than a two-month period during which the individual reports no symptoms. The rating for chronicity is contingent upon the density of symptoms at the time of assessment, every day in MDD and more days than not in dysthymia. Manic, mixed or hypomanic episodes are listed as exclusion criteria. Coincidences of symptoms with other psychiatric disorders frequently occur (American Psychiatric Association, 2000). In the DSM-IV mood disorders field trial seven chronic course descriptions were reliable differentiable (Klein, 1992; Keller et al., 1995; McCullough et al., 1996). The most common condition is represented by patients with early onset dysthymia that suffer the additional burden of either a more severe and pervasive major depressive episode or recurrent major depressive episodes with or without interepisode recovery (double depression), accounting for up to 75% of the total numbers of affected individuals (Klein et al., 1996). Double depression represents the simultaneous occurrence of two unipolar depressions with distinctive symptom severity and course patterns as well as different age of onset profiles. The antecedent dysthymia is in its origin conceptualized as a “cluster” of intrapersonal and interactional symptoms (Shapiro 1975, Lewinsohn et al., 1978). Dysthymia usually begins with an insidious early onset before the age of 21 (Klein et al., 1996). Affected patients are unlikely to remit over time compared to pure MDD (McCullough, 1988, 1994). The course of the disorder is more frequent than not associated with a repetitious history of self-reported interpersonal disappointments or childhood trauma (Klein et al., 1996). In the context of Keller’s and colleagues specificity research it was shown that the probability of both the dysthymia and the major depressive episode remitting following single treatment with either pharmacotherapy or psychotherapy is less than 40% (Keller, 1982, 1984, 1990, 1995; McCullough, 1996). Later studies demonstrated that the combination of psychotherapy and medication was proven to be more effective than medication alone (Keller et al., 1999). However, there are two major reasons that promote chronicity and early relapses of major depressive episodes that lie on the dysthymia side: (1) the interactional components of unmodified dysthymia with the ongoing environment’s negative response predisposes the dysthymic patient to stuck in a repetitious state of learned helplessness, a condition that strongly prevents full remission with the consequence of higher relapse rates compared to pure MDD (Keller et al., 1982, 1984, 1988, 1990; McCullough et al., 1991, 1996); (2) the life-long chronic course of untreated double depression places the individual at increased risk for poor general health and associated medical conditions like sleep disorders, anaemia, type-2 diabetes mellitus, hypothyroidism and substance abuse related disorders to name a few (McCullough et al., 1996; Moussavi et al., 2007; Trivedi et al., 2009). In late onset chronic unipolar depression the coincidence of dysthymia is the exception.

### **1.2 The Sequenced Treatment Alternatives to Relieve Depression study**

The Sequenced Treatment Alternatives to Relieve Depression NIHM funded study (STAR\*D) was designed to determine which pharmacological treatments and augmentation strategies including cognitive therapy augmentation are most effective following non-remission or intolerance to an initial SSRI or to any of a series of subsequent randomised treatments (Rush et al., 2005). STAR\*D` represents the most important current “real world” treatment study ever done on MDD (Rush et al., 2005). Its population consisted of 4041 outpatients aged 18-75 years which were treated in 41 primary and specialty care settings

over a 37-month period. Outpatients with non-psychotic MDD with- and without antecedent dysthymia, and with other co-morbid mental and general medical conditions were included. The evaluable MDD population consisted of 2876 patients (72%) with a mean onset age of 25.3 years. The number of MD-episodes was 6, the length of the current MD-episode was 24.6 month, the length of illness was 15.5 years, and the number of concurrent medical conditions was 3.3. Cognitive therapy was available as either a switch from or augmentation of citalopram in the second step of treatment. Based on the first (n=3671), second (n=1439), third (n=390) and fourth (n=123) treatment steps, the corresponding remission rates were 36.8%, 30.6%, 13.7% and 13.0%, respectively, with an overall cumulative remission rate of 67%. In step-2 remission rates between cognitive therapy and medication in either the switch or augmentation strategies did not differ, although participants in cognitive therapy augmentation had a longer time to remission of 55 days compared to those in medication augmentation with 40 days. Treatment resistance was associated with more concurrent axis I or III co-morbid conditions, socioeconomic disadvantage, chronicity and melancholic or anxious features. With regard to longer-term outcomes a substantial number of patients relapsed. The cumulative proportion of participants without relapse during the naturalistic 12 month follow-up was highest in step 1 remitted patients compared to step 2 remitted patients. In comparison, those patients who were only partially remitted in step-1 and did not enter step-2 treatment had a 50% decreased survival rate compared to patients that remitted at step 1. In general, those patients who required more treatment steps had higher relapse rates during the naturalistic follow-up phase (Rush et. al 2006a, 2006b). The implications of STAR\* D are that at present there is a substantial lack of knowledge how to choose among and sequence the different available treatment strategies, how to deliver or implement these treatments, and how to identify which treatments will most benefit particular patients. It is also unknown, whether different strategies or tactics have better outcomes based on different treatment settings (Rush et al., 2009). Future treatment expectations suggest combined outcome criteria that target on complete syndromal remission and complete restoration of social functioning (Nelson et al., 2008). While the increase of the range of medications, biophysical interventions, comprehensive depression-targeted psychotherapies and somatic treatment is encouraging, effective treatment to achieve complete remission and, ultimately, long-term, successful outcomes of social functioning is an unsolved problem and remains an outstanding need in psychiatry, particularly in chronic MDD with antecedent dysthymia (McCullough et al., 1996; Kessler et al., 2003; Schoepf et al., 2007; Nelson et al., 2008).

### **1.3 Cognitive Behavioral Analysis System of Psychotherapy (CBASP)**

In 2006, the Cognitive Behavioral Analysis System of Psychotherapy (CBASP) was officially introduced in Germany for the specific psychotherapeutic treatment of chronically depressed patients. CBASP is developed by James P McCullough Jr (USA) as a specific outpatient protocol that integrates interpersonal and cognitive-emotional strategies. McCullough started his clinical carrier as a "first-wave" operant behavior therapist in the early 70<sup>th</sup> of the last decade. His work is deeply influenced by Skinner's tradition of radical behaviorism. CBASP addresses directly the specific intrapersonal and interpersonal symptoms of MDD with antecedent dysthymia (double depression). From a perspective of behavior therapy, behavior theory approaches from original and revised models of behavior therapy are incorporated with a strong disengage from the pure cognitive content focus of cognitive therapy. In addition, CBASP uses elements of "third wave" of cognitive behavior therapy methods that

deal with models of self-regulation with respect to motivational and cognitive factors in meta-cognitive processing (Teasdale, 1999) as well as concepts of modern learning theory (Bouton, 2007; McCullough et al., 2010a; McCullough, 2010c). It is important to note that CBASP requires the therapist's personal involvement (McCullough, 2006). Based on Bandura's early behavioral paradigm that psychological functioning involves a reciprocal interaction between behavior and its controlling environment (Bandura, 1969), the CBASP-therapist is viewed as the primary choreographer of behavior change. The therapist, beginning in the first session of therapy, deliberately constructs a qualitatively different interpersonal environment for the individual as well as enacts a disciplined personal involvement role that stands in contrast to the relationships the early-onset chronically depressed patient has experienced with his "Significant Others" (McCullough et al., 2010b). CBASP primarily focuses on the in-session learning process of the patient. In agreement, McCullough's model has been developed through a process of trial and error and over the course of many therapy sessions with various patients into an in-session acquisition learning model (McCullough, 2006). Two types of dependent variables are being distinguished that model the specific learning success, the therapy process and the reduction of symptoms. The first type refers to the learning success and the learning process, i.e., the patient's ability to notice the consequences of his behavior, the patient's ability to apply the "Situational Analysis" independently, the reduction of destructive interpersonal behavior and the patient's ability to confidently draw an emotional distinction between the therapist and his or her "Significant Others". The second type refers to symptom-specific treatment effects, i.e., the reduction of the quality of depression with respect to self perception and the perception of others, the reduction of psycho-social impairment, higher quality of the marital relationship and other factors (McCullough, 2006).

### 1.3.1 Efficacy of the CBASP and its most important newer applications

CBASP has demonstrated significant effects for treating refractory outpatients with chronic MDD (Keller et al., 2000; Nemeroff et al., 2003; Schramm et al. 2010a), especially in its combination with medication (Keller et al., 2000), developmental trauma (Nemeroff et al., 2003), and double depression (Schramm et al. 2010a). In contrast, in the recently published REVAMP trial (Kocsis et al., 2009) CBASP augmentation with administering of 12.5 hours of psychotherapy (over the intention-to-treat study population) in partially remitted patients with chronic MDD (who had a preference for pharmacotherapy), CBASP was found not to be more effective in reduction of acute symptoms than pharmacological augmentation or augmentation with supportive therapy. However, CBASP (with introducing the technique of "Situational Analysis" in the third session) plus pharmacotherapy was associated with significantly greater improvement in problem solving than Brief Supportive Psychotherapy plus pharmacotherapy; or medication alone (Klein et al., 2011). The implications are (1) that at present it is not clear what treatment dosage level works the best for the CBASP and (2) under which treatment circumstances CBASP is most effective (Schramm et al., 2010b). In addition, it is not clear if the US protocol that introduces the technique of "Situational Analysis" in the third session of therapy has a positive or negative impact on in-session acquisition learning and outcome-measures (Schoepf et al., 2011). A pilot study of a multidisciplinary structured three month German inpatient CBASP program shows promising findings on short- and long-term outcomes as well as on feasibility (Brakemeier et al., 2011). New applications of CBASP represent CBASP in group format in Germany, Canada, and the USA. In Canada, a manual for group CBASP in an inpatient setting that focuses on improvements in perceived functionality shows promising preliminary results (Sayegh, 2010). An ongoing study in the US explores the use of group CBASP with veterans

diagnosed with chronic depression and PTSD. The outcome criteria focus on the reduction in symptoms of avoidance and hyper-arousal present in both, as well as the reduction in depressive symptoms (Favorite, 2010). A further US research line represents the use of CBASP for treating chronically depressed alcoholics in an integrated treatment approach that focuses on simultaneous reductions of depressive symptoms and alcohol intake (Penberthy, 2010). In addition, by the research on the neural mechanisms of chronic depression and the impact of CBASP on behavioural and neural functioning (Schnell et al., 2010), more is learned about the fundamental processes of learning and memory that take place during administering CBASP intervention strategies (Walter et al., 2009; McCullough et al., 2010a).

#### **1.4 Aim of chapter**

In the first part important information is summarized about the influence of adaptation on functioning on a formal operational level (Schoepf et al., 2007), learning mechanisms (Schoepf et al., 2007; Neudeck et al., 2010), passive and active ways of stimulus recognition (Schoepf et al., 2007; Neudeck et al., 2010), aetiology and characteristics of double depression (Schoepf et al., 2007; Schoepf et al., 2008a, 2009a, 2009b; Schoepf and Penberthy, 2010), the therapist's function as a reinforcer within the therapeutic relationship (Schoepf et al., 2008b), CBASP's cutting edges of behaviour change and the principles of intervention, therapeutic goals (Schoepf and McCullough, 2009b), and the treatment strategies and their corresponding mechanisms of action subdivided into "bottom-up" and "top-down" interventions (Schoepf et al., 2007, 2008a). In the second part a multi-step psychotherapy approach is represented that integrates CBASP's intervention strategies in the therapy of chronic MDD German patients with an inpatient history of therapy-refractory major depressive episodes (Schoepf et al., 2008b).

## **2. First part**

### **2.1 The influence of childhood adaptation on functioning on a formal operational level**

Evolution is defined as a process that allows adaptation between generations. In contrast the term learning is defined as a process that allows environmental adaptation within an organism's lifetime. As organisms behave as if evolution has "prepared" them to associate certain events learning has to be viewed always within its evolutionary context (Bouton, 2007). According to Piaget's systems-theoretical biological theory, every new organized element of reaction and experience is learned on the stimulus-response level. The application of the element automatically happens in the daily living arena outside the original learning situation (functional and generalizing assimilation). The interaction of accommodation and assimilation creates a dynamic balance on the respective higher cognitive-emotional level as compared to the "specific regulatory factor underlying a biological organization", which he calls adaptation (Piaget, 1973). Successful adaptation leads to the capacity of functioning on a formal operational level with growth of self-efficacy through transitional experiences in the formative period of adolescence. In the crucial period of adolescence the roles of adulthood have to be addressed in almost every dimension of life. A formal operational adolescent is connected to its informing environment and is attached to others, is affected by and changed by the behavior consequences he receives from other interactants. In addition, he is able to recognize the consequences of his behaviors and may develop problem-solving skills, may develop foresight in planning, may develop future orientation, and may have the capacity to directly

confront fearful encounters. Childhood conditions that are likely to produce the development of formal operational thought in the period of adolescence are close relationships with competent and caring adults in the family, the capacity to develop self-regulation abilities, a positive view of self, cognitive motivation to be effective in the environment (i.e., self efficacy and self-determination), friendships, and romantic attachments with pro-social peers (Masten, 2007).

### 2.1.1 Associative learning of signalling stimuli

A child is biologically prepared to learn to associate signalling stimuli of the environment (cues or incentives) with stimuli that elicit respondent behaviours through the mechanism of classical conditioning. Figure 1 demonstrates the possible relations between signalling stimuli and behavioural tendencies in signal learning.

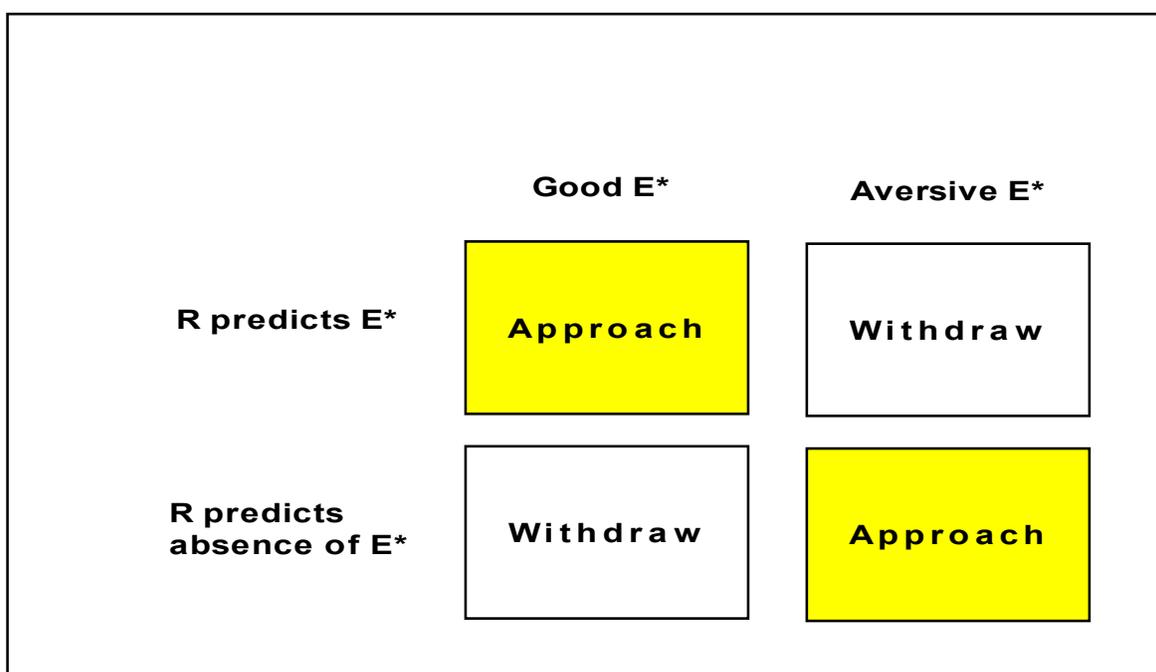


Fig. 1. Associative learning of signalling stimuli. The prediction of a “biologically” important event [E\*] causes either approaching tendencies or withdrawing tendencies. S = conditioned stimulus that predicts the presence or absence of E\*. Left upper cell: when a signal predicts a good E\* animals often begin to approach the signal (positive sign tracking). Right upper cell: when a signal predicts an aversive E\* animals tend to withdraw from the signal (negative sign tracking). Left lower cell: when a signal predicts a decrease in the probability of a good E\* animals withdraw from it. Right lower cell: when a signal predicts a decrease in the probability of an aversive E\* animals tend to approach it (modified according to Bouton, 2007; Schoepf et al., 2007).

Classical conditioning is sensitive to the timing, intensity, and to the novelty of “biological” important events. After classical conditioning has happened a former neutral stimulus elicits a conditional response (interceptive, emotional, and behavioural) that allows the child to prepare as early as possible for the upcoming event as a behavioural phenomenon (signalling stimuli in Pavlovian language). In addition, second- and higher order conditioning, stimulus independent sensory preconditioning, and generalization each provide further ways in which

stimuli that have never been directly associated with an unconditioned stimulus can elicit conditioned responses. Furthermore, the information value of a "biologically" important event is associated with the child's motivational state. The anticipation of a conditioned stimulus that predicts a "good" event causes motivation whereas the anticipation of a conditioned stimulus that predicts an aversive event causes loss of motivation or anxiety.

Associative learning of signalling stimuli may cause implicit shifts of attention in humans. Animal findings show that approaching tendencies towards "good" events and withdrawing tendencies away from "aversive" events are strongly associated with shifts of attention. This general tendency is known as positive and negative sign tracking. Sign tracking is assumed to trigger whole sets of behaviour systems and physiological reactions that may help to ensure that animals continue to make contact with "safe events" and to stay away from "dangerous events". In case that a conditioned stimulus predicts danger either species-specific defence reaction behaviour systems are elicited or more general avoidance reactions can be triggered that aren't species-specific. Species-specific defence reactions describe innate reactions like freezing and fleeing that occur when an organism encounters a predator.

### **2.1.2 Associative learning of behavioural effects**

In contrast, children learn to increase or decrease their contact with "biologically" significant events through instrumental learning. Behaviours that are controlled by their consequences represent instrumentally conditioned behaviours. Instrumental action is always guided by associative learning of signalling stimuli. Four associations are learned in instrumental action:

- associations between behaviours and their perceived effects (conscious level),
- associations between signalling-stimuli of the environment and reflexive behaviours (unconscious level),
- associations between signalling stimuli of the environment and behavioural tendencies (unconscious and conscious level),
- and associations between discriminative (contextual) stimuli and behaviours (unconscious and conscious level).

When instrumental action is controlled by the discriminative stimulus that precedes it the learning mechanism is called stimulus control. Through stimulus control the child learns to discriminate events in which behaviour is reinforced from events where behaviour is not. So called occasion setters simply involve "context cues" that are always present whenever instrumental learning occurs; occasion setters mark the spot where/when the child associates that some behaviour will deliver a reinforcer (discriminative stimulus in Skinnerian language). Reinforcement means strengthening of a specific learning mechanism. Positive reinforcement is defined as a specific situation in which behaviour is followed by a "good" event that represents a positive reinforcer. Negative reinforcement is defined as a specific situation in which behaviour is strengthened because it removes or prevents an aversive event that is a negative reinforcer. Figure two represents the possible relations between behavioural effects and "biologically" significant events in instrumental learning. Instrumental action may cause implicit shifts of reward and punishment expectations in humans that may help the individual to increase the contact with events that are expected to have "good" outcomes, and to decrease the contact with events that are expected to have "aversive/negative" outcomes.

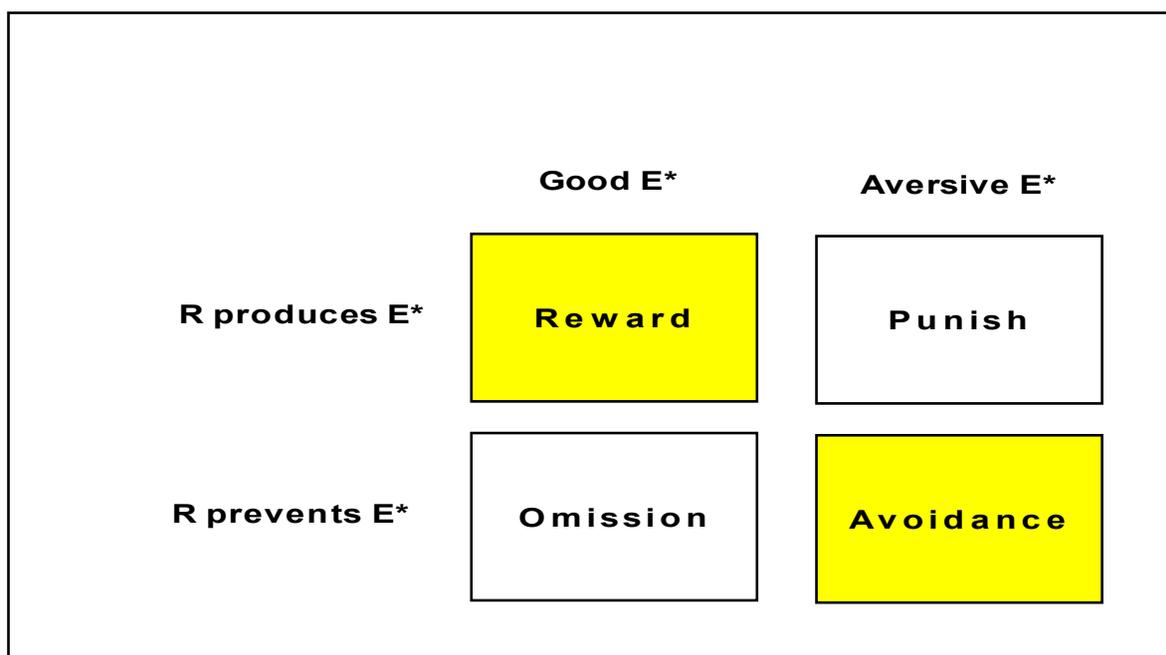


Fig. 2. The law of effect in instrumental action. The effects of behaviours [R] determine the type of learning. Left upper cell: reward learning causes an increase of a behaviour if the behaviour produces a “good” event [E\*]. Right upper cell: if behaviour is followed by an aversive E\* (punishment) the behaviour typically decreases in strength. Left lower cell: behaviour decreases in strength if it prevents a “good” E\* (omission). Right lower cell: if a specific behaviour prevents an aversive E\* avoidance or escape learning happens (modified according to Bouton, 2007; Schoepf et al., 2007).

### 2.1.3 Non-associative learning mechanisms

In contrast, sensitization and habituation represent two forms of non-associative learning since, in order for a response to occur, no association or combination of stimuli is necessary. Both mechanisms are stored as knowledge in the part of the memory system that is called implicit (non-declarative) memory. It is where behavior, skills, and priming processes are stored. Both mechanisms are triggered by a specific cognitive stimulus processing and they originate in certain plastic processes in the nervous system. Sensitization is defined as enhanced perception and increased responsiveness (response readiness) when repeatedly confronted with a certain sensory stimulus. Sensitization represents a mechanism of the central nervous system that plays an important physiological role in everyday life. As a result of the repeated presentation of a specific stimulus, an increase in response occurs. Sensitization therefore represents an induction procedure (caused by specific stimulus properties) and the resulting measurable responsiveness. If the induction procedure causes an appropriate response, its perpetual repetition leads to a specific learning process that causes hyper-responsivity. A typical increase in response is an increase of attention with respect to the stimulus cue. Through sensitization, we learn to pay special attention to important stimuli, rather than ignoring them. Sensitization is largely unspecific to the stimulus, which makes it different from habituation. The better known mechanism of habituation describes the opposite, meaning a decrease in response to a stimulus that is repeatedly presented (Neudeck et al., 2010).

### **2.1.4 Passive and active ways of stimulus recognition**

Associative learning of signalling stimuli and instrumental action are present in all learning situations because of the simple cognitive association of what-leads-to-what. The conditioned stimulus represents the "stimulus signal" that runs the situational outcome. In other words, learning on a formal-operative level of functioning is cognitively associating what signal is connected to what upcoming event and how to keep the event coming or removing. Therefore perception and behavior are closely coupled. Perception is defined as the processing of information that is acquired through one of the senses (sight, hearing, smell, taste, touch). This information about the structure of the physical world is used for the adaptive control of behavior. Two different types of processes or ways of stimulus recognition exist: bottom-up and top-down.

- In the case of "bottom-up processing," a specific property of the stimulus is detected; the specific stimulus properties are then combined into more complex forms until final stimulus recognition takes place. This explains why bottom-up processing is sometimes referred to as "passive" (perception). Anatomical correlates to bottom-up processes include the brain stem and the basal forebrain (affect-driven attention).
- By contrast, in "top-down processing," hypotheses about the stimulus as a whole are formed (expectations and prior knowledge); then specific properties are selected and tested and, finally, stimulus recognition occurs. Top-down processing is referred to as "active" (behavior). Top-down processes (given sufficient sensorial stimulation or individually developed goals) can be represented in the dorsolateral or the prefrontal regions as well as the anterior cingulate gyrus and the basal cerebral cortex (Schoepf et al., 2007; Neudeck et al., 2010).

### **2.2 Aetiological background and characteristics of double depression**

Chronic MDD with antecedent dysthymia (double depression) usually begins around 13-14 years of age. McCullough holds that the psychopathology of chronically depressed patients results, to a large degree, from bidirectional interaction between disturbed emotion and stress regulation on the one hand and developmentally inhibiting "person-environment" conditions on the other hand, i.e. in situations where the individual was subject to repetitive experiences of helplessness. The attachment disorder (with a negative attributional style and disturbed behaviours) is perpetuated through generalized avoidance learning, thus accounting for an uncoupling of the person-environment connection (Schoepf et al., 2007, 2008a). It is important to note, that the disorder is as well caused as maintained by global deficits in cognitive-emotional development that involve intrapersonal and interactional domains. The psychological organization is similar to the organization of children during their preoperational stage of development (Schoepf et al., 2008a, 2008b, 2009a). According to a reciprocal model of causation, the decreased cognitive-emotional development results of four contributing factors:

- the genetic contributor represents genetically caused dispositions and personality factors like internalizing or externalizing negative affect,
- the environmental contributor represents early experiences of loss and/or chronic neglect in combination with later adverse life events in the form of failures, hardships, and lack or loss of emotional relationships,
- the cognitive contributor and the behavioral contributor both represent the intrapersonal and interactional effects of recurrent experiences of helplessness when

interacting with the “Significant Others” during childhood (Schoepf et al., 2007, 2008a, 2008b, 2009a; Schoepf and Penberthy, 2010).

### **2.2.1 Cognitive-emotional level of organization and core pathology**

The cognitive-emotional level of organization of the early-onset chronically depressed patient is characterized by preoperational representations in connection with a preoperational thinking style and wishful thinking. This explains why, instead of thinking in an action-oriented and goal-oriented manner, there are deficits in the areas of logical thinking, concept formation, problem solving and reasoning. In addition, affectivity has a powerful impact, causing overwhelming emotions that seem uncontrollable from the patient’s subjective point of view. Patients are unable to identify what causes these alterations as their thoughts are constantly revolving around themselves. As a result, the patient does not receive information from his or her environment in an adequate way and is therefore not adequately influenced by relevant environmental incentives

The core pathology is contingent on the disturbed person-environment interaction. The chronically depressed patient experiences the world in dysfunctional ways across different situations and exhibits strikingly maladjusted social behavior. Typical dysfunctional ways of interpreting a situation include: “none will ever be able to forgive me,” “it would be best to just die,” “I’m a total failure,” “I regularly escape into my fantasy world,” “whatever I do ends up being wrong,” and “everything is always my fault.” Social interaction is replaced by interpersonal avoidance behavior in asymmetrical and inflexible ways. Patients typically show hostile-dominant and hostile-submissive personality dimensions. In addition, a chronically low self-esteem value is found as well as feelings of hopelessness that generalize over all interpersonal situations. There are also problems with memory and recalling, poor abilities to observe accurately, diminished self-perception and insufficient processing of new experiences. Due to the weight that McCullough’s multidimensional approach puts on the disturbed person-environment-relationship and the resulting deficient ability to act, the patient’s core pathology, i.e., the maladjusted way of experiencing the world and the maladjustment with respect to social interaction, becomes the major focus of therapy. McCullough states “I have developed the CBASP to penetrate and change closed perceptual systems of early-onset chronically depressed patients that are closely related to the developmental influence of recurrent experiences of helplessness” (McCullough, 2006; McCullough, 2008; Schoepf et al., 2009a).

### **2.2.2 The influence of recurrent experiences of helplessness in childhood and adolescence**

In general, recurrent (daily) experiences of helplessness have catastrophically psychological ramifications, particularly during childhood development. Seligman’s theory of learned helplessness claims in its origin that noncontingent environmental reinforcement responses to a person’s behavior reduces the incentive motivation to control the outcome of an event, interferes with further event related outcome learning, and if the outcome is traumatically processed, produces fear as long as the subject is uncertain of the uncontrollability of the outcome, and then produces the state of helplessness and hopelessness (Seligman, 1975; Abramson et al., 1978).

### 2.2.2.1 Intrapersonal destructiveness of the learned helplessness effect

Table one represents the intrapersonal characteristics of the learned helplessness effect in a severely disturbed female patient with double depression prior to treatment.

The intrapersonal destructiveness of the learned helplessness effect is cognitive-emotional stunting when the child’s world becomes so aversive or uncontrollable that mastery of interactional problems is experienced as impossible. The pre-causal and pre-logical child cannot solve the destructive onslaught of its environment and is thrust into an “emotional survival” mode of living. Three negative cognitive effects are implicit within the conceptualisation of learned helplessness:

<p><b>The destructiveness of the leaned helplessness effect is characterised by</b></p> <ul style="list-style-type: none"> <li>➤ a severely decreased cognitive-learning ability,</li> <li>➤ a significantly decreased motivation to cope problems,</li> <li>➤ emotional deregulations,</li> <li>➤ survival behaviour.</li> </ul>
<p><b>The reward system is biased towards the expectation of punishment</b></p> <ul style="list-style-type: none"> <li>➤ <b>First expectation:</b> “less punishment/rejection results from the environment if I react as submissively as I can”</li> <li>➤ <b>Second expectation:</b> “punishment results from the environment if I react in any other different way than submissive”</li> <li>➤ <b>Instrumentally learned rule:</b> “I have to behave totally passively and submissively with the consequence of being shoved around. If I react actively - independently of the way I express my needs (independent of my stimulus value) - I will experience strong responses of punishment and rejection”</li> </ul>
<p><b>The attentional system is biased towards unexpected events</b></p> <ul style="list-style-type: none"> <li>➤ The release of social fear is elicited by fast detection of any verbal- or nonverbal stimulus that predicts uncontrollability or unpredictability</li> </ul>

Table 1. Double depression of the adult is usually associated with a refractory cognitive-emotional dilemma. What is observed at the beginning of treatment is an interpersonally avoidant patient with predomination of detached, distant and submissive behaviour. Instrumental avoidance of interpersonal encounter that holds the avoidance of the classical conditioned fear in abeyance is the predominant strategy. As a consequence the environment can not inform the patient (McCullough, 2007).

- generalized retrospective negative causal attributions of failure and success,
- generalized negative outcome expectancies,
- negative cognized goals.

The intrapersonal effects become aware to the child at the point when the child is able to conclude that it doesn’t matter what it does with a resulting independent of response expectation. From this time on the child is a prison holder of an ongoing “emotional survival” mode that is strongly coupled with a poor cognitive regulation of motivation. As a consequence the child is (in more cases than not) not able to develop a formal-operative mode of cognitive-emotional functioning in later developmental phases, cognitive-

emotional development is derailed. Uniformity, helplessness and hopelessness become the order of the day. In addition, the ability to recover after situational exposure is reduced and adverse life events are interpreted in pessimistic ways that produce, exacerbate, and prolong acute depressive symptoms (McCullough, 2007).

### **2.2.2.2 Interactional destructiveness of the learned helplessness effect**

Chronically depressed patients create depressing environments (Bandura, 1986). According to McCullough, the cognitive variable in double depression is the mental ability of the adult patient when he was a young child to learn to associate the emotions of fear and terror that accompanied maltreatment with behaviour that subsequently avoided the exacerbation of the negative emotions. From a communication perspective, associative learning of signalling stimuli and instrumentally learned rules mediate verbal and nonverbal responses (messages) that are regularly exchanged between two interactants. A "survival mode" with decreased cognitive regulation of motivation is associated with a severe disturbance of the dynamic person-environment interaction that maintains the learned helplessness effect. Social interaction is experienced as subjectively dissatisfying and is therefore avoided. Necessary adaptation in the period of adolescence and the adversities of later life cannot be dealt with in adequate ways. In addition, the negative social evaluations and reactions the growing-up adolescence elicits from others provide social validation for a negative outlook on life. Three negative interactional effects are implicit within the conceptualization of learned helplessness.

- Severely disturbed stimulus recognition: the established independent of response expectation results in the child's unawareness of the interactional relatedness to the environment in which it lives. The child becomes oblivious of its stimulus value and does not see why it elicits negative responses on others (McCullough, 1988).
- Loss of social reinforcement: according to a biologically pre-determined person-environment devil circulation the child has not available a sufficient quantity of reinforcing social events in the appropriate motivational state, that are able to accelerate the development of its cognitive-emotional organization. Instead, associative learning processes of stressful encounters with the "Significant Other's" and persistent deviant interpersonal behavior is dominating about adaptive action-outcome learning.
- Deviant behaviours in social encounters: emotional deregulations lead to general interpersonal withdrawal, interpersonal detachment, interpersonal submission and interpersonal passivity. However, in persistent deviant interpersonal behaviour there is a lack of flexibility to use a broader range of interpersonal responses and behaviours which different interpersonal situations warrant. In its extreme form a severely maltreated child (that suffers of impaired development across diverse domains of biological and psychological functioning) has only a narrow range of one or two responses. The child's abnormal behaviour, then, consists of the rigid, constricted, and extreme behaviours that are often performed reflexively, whether they are appropriate to a situational encounter or not. As a consequence, non-corresponding reflexive responses without regard to their consequences often arouse stress and provide the child with an enduring vulnerability factor, placing it at great risk for future environmental maladaptation and psychopathology. The ongoing environment's negative response predisposes the child to stick in a repetitious state of learned helplessness.

### **2.3 The learned helplessness effect in chronic MDD without antecedent dysthymia**

The late-onset form of chronic MDD usually begins during the mid-20s and is associated with a first episode of MDD without antecedent dysthymia. The affected individuals report more often than not conditions without child maltreatment. They hold prison of a persisting "out-of-control" mood state that finally undercuts all of their previous assumptions of controllability. The affected individual therefore is a "hold prisoner" of a later learned helplessness state and "falls back" into a pre-operational mode of cognitive, emotional and behavioural functioning (McCullough, 2008).

### **2.4 The intentional use of the therapist's function as a reinforcer within the therapeutic relationship**

Integrating the concepts of various methods of first and second generation behavior therapists the CBASP is conceptualized in its origin as a single, integrative, and theory-driven third wave behavior therapy model that relies on modern learning theory to guide technique administration (McCullough, 2010c).

With respect to the therapist's basic attitude, it is important that the CBASP therapist is highly aware of the fact that he or she merely helps to give birth to the functional learning processes and insights the patient experiences. In this sense, the therapist has to succeed in letting the patient "think and feel" during the process of becoming aware of proactive interpersonal and health-related behavior in the presence of the therapist. In order to effectively use the interventions of CBASP therapy, the therapist has to be trained and prepared to bring his or her own function as a reinforcer into the therapeutic relationship, and this has to be done in a personal, disciplined and responsible way. During the interaction between the patient and the therapist, the therapist's behavior should, on the one hand, guide and reinforce the patient's gain in knowledge yet, on the other hand, he or she should not interfere with the intrapersonal reinforcement of the patient's stress-induced behavioral patterns. The influence on the patient should not be such that he, due to positive interpersonal reinforcement, tries to present a maximum amount of successful behavior to the therapist, nor should the patient, as a result of positive (add a punisher) or negative (subtract a reinforcer) interactional punishment, avoid the therapist's negative reactions when mentioning dysfunctional behavior (Schoepf et al., 2008b).

#### **2.4.1 The transference hypothesis**

One specific transference hypothesis in one of four transference areas that identifies the specific "hot spot" situations should be constructed as early as possible. The transference hypothesis is deduced using the "Significant Other History" (SOH) technique in CBASP (McCullough, 2006, 2008, 2010b; Neudeck et al., 2010). After reconstruction of the course of the depression (in the introductory session of therapy) the patient is asked to name his or her 3-6 "Significant Other's" in the following session and to work through the following three prompts for each "Significant Other" together with the therapist: (1) "What was it like growing up with or being around this person?" (2) Then, "how did he or her causally influence the course of your life in a way that is still present now?" (3) Then, "what is the emotional stamp you take from this relationship that informs who you are today?" In the original US-protocol the time instruction for the SOH-technique was one therapy session (second session). The time instruction was taken back by McCullough in the planning phase of German CBASP-studies (McCullough et al, 2008). According to the modified protocol the emotional reconstruction process in an antecedent-consequent format usually takes two to four sessions of therapy

(Schoepf and McCullough 2009a, Schoepf et al., 2010). The SOH technique is more often than not hurtful for the early-onset patient. The patient has to be informed that negative feelings like fear, pain and sadness may be evoked and that the therapist is blind for “hot spot” situations at this time of therapy (McCullough, 2008; Schoepf and McCullough, 2009a). It is important to note, that a two-step focussing strategy is applied (prompts one and two) before the therapist helps in step three the patient to construct the stamp. The duration of the SOH exercise usually takes at least thirty minutes with respect to one “Significant Other”. After the emotional reconstruction process is finished the therapist reviews in the absence of the patient the leading interpersonal theme in which the patient interacted with his “Significant Other’s”. The interpersonal-emotional theme reflects the early learning history of the patient and is derived from these “stamps” or causal theory conclusions (McCullough et al., 2010b). McCullough (2000, 2006, 2010b) assumes four transference areas of interaction in chronically depressed patients that, from the perspective of developmental psychology, play an important role in the patient’s relationship with significant others. His theoretical considerations concerning the transference hypothesis refer to the concept of “tacit knowledge” (Polanyi, 1966) and the idea of “reasoning based on implicit causal theories” (Nisbett and Wilson, 1977). In accordance with these assumptions, learning processes and instrumentally learned interpersonal rules that were developed during “toxic experienced” developmental conditions may have caused implicit shifts of attention and expectation. These shifts may have helped the growing-up child as “emotional surviving strategies” to decrease the contact with interpersonal events in the specific “hot spot area” that are expected to have negative outcomes. Automatic conditioned patterns of interpersonal behavior are elicited and executed regularly in “hot spot” situations. This rigidly ruled behaviour usually does not correspond to the present situation, arouses stress and provides the patient with a social disadvantage. Specifically, McCullough (2000) describes working with the construct of transference as an exercise in “focused attention.” The transference hypothesis differs from Freud’s concept of transference since it can be actively acted out in session with the therapist and then processed within the “Interpersonal Discrimination Exercise” (IDE). From a learning theory perspective the transference hypothesis includes the interpersonal content that most likely reflects the patient’s expectancy of the therapist’s reactions toward the individual (McCullough et al., 2010b). The four transference areas of interpersonal dysfunction in that “hot spots” occur are:

1. in-session moments of intimacy (either felt by the patient or the therapist) that evoke in the patient (Pavlovian) fear of being physically or emotionally abused (intimacy area),
2. in-session events in which the patient discloses emotional needs toward the therapist that evoke in the patient (Pavlovian) fear of being ridiculed or censored (disclosure of need area),
3. in-session events during which the patient makes mistakes towards the therapist (e.g., not doing his or her homework or being unable to solve problems presented during therapy sessions) that evoke in the patient (Pavlovian) fear of severe physical or emotional punishment (mistake and failure area),
4. in-session events in which the patient expresses negative affects towards the therapist that evoke in the patient (Pavlovian) fear of punishment (expression of negative affect area).

Whenever a “hot spot” situation occurs within a therapy session, the transference hypothesis is made explicit through IDE work, i.e. the first way of disciplined personal involvement used in CBASP therapy (McCullough, 2006, 2008). It is important to note for the reader that according to the specific CBASP protocol the patient manual is distributed to

the patient after the emotional reconstruction process is finished (McCullough, 2006, 2008; Schoepf and McCullough 2009a). "Situational Analysis" (SA) is usually introduced during the fifth-to six session. We strongly recommend that working on the functionality teaching and the skill teaching level starts after the CBASP-therapist has worked out the specific transference hypothesis in the absence of the patient. It is our opinion, that the associated IDE technique is the major CBASP technique of "in-session acquisition learning" (Schoepf and McCullough, 2009a). IDE is most effective, if it focuses on "hot spot" events that occur during teaching "Situational Analysis".

#### **2.4.2 The stimulus character of the patient**

In addition, in order to use personalized meta-communicative interpersonal techniques (the second way of disciplined personal involvement used in CBASP therapy), it is important to validly measure the hidden emotional, cognitive, and behavioral responses the patient evokes in the therapist (in McCullough words the stimulus character of the patient), using the Kessler's Impact Message Inventory after the first session of therapy (Kiesler, 1983). The technique of "Contingent Personal Responsivity" (CPR) is used in instances where the therapist consequences the behaviour of the patient by disclosing personal responses and feelings produced in the therapist by the behaviour of the patient (McCullough, 2006, 2008; Schoepf and McCullough 2009a).

#### **2.5 CBASP's cutting edges of behavior change**

The application of CBASP requires as well diagnostic skills as supervised practical therapeutic experience. The therapist should become accustomed to the use of motivational strategies through the exactly timed induction and the resolution of cognitive dissonance, as well as the use of creating negative reinforcement situations.

The essential motif of the CBASP method is to focus the patient on what behaviour leads to what outcome (emotionally and interpersonal). In general, "Situational Analysis" (SA) focuses the patient on the consequences of his behaviour and teaches him what he does matters (empowerment), as well teaches him adaptive social skills (functionality teaching and skills teaching dimension of the CBASP). Furthermore, the procedure of SA assists the therapist in identifying and addressing the specific cognitive and behavioural problems of the individual patient that interfere with his effective social management.

In addition, personal involvement techniques are linked both to the functionality teaching- and the skills teaching dimension. A unique type of therapist intervention, called „Disciplined Personal Involvement“(DPI), advocates a non-neutral role for the psychotherapist (interpersonal dimension of the CBASP). The techniques of DPI are based on early concepts of objective counter transference and interpersonal reactions that provide the authorization of the CBASP therapist for using self-disclosures with a maximum impact: to create an interpersonal "safety place" and to transfer the experiences outside the therapy to others, to connect the patient perceptually with his environment, to modify dysfunctional behaviour contingently, and to address/heal developmental trauma arising from negative experiences with maltreating significant other's (Schoepf and McCullough, 2009). Through DPI, the deeply personal nature of the therapist-patient relationship is put into the foreground of therapeutic efficacy as both a moderator variable of in-session acquisition learning and an alternative to therapist neutrality. In comparison to other therapy models the interventions of DPI are deeper and more personal - than sensitive participation in

supportive therapy, - than turning the patient's attention to the analysis of counter transference reactions in psychodynamic orientated approaches, - than the use of meta-communication to modify action-counteraction response patterns in interpersonal therapy, - than the analyses and change of maladaptive behaviour in the awakening effect based behavioural approaches or - than the work of cognitive restructuring processes in cognitive therapy. DPI (especially IDE) basically influences the process of self-update of the patient. Table 2 represents the mayor CBASP technique of behaviour change in outpatients according to the specific protocol, the "Situational Analysis" (SA).

### **Situational Analysis (SA)**

Learning context: the patient usually brings into therapy a completed SA worksheet of either a distressing or pleasant daily living interaction that happened during the last week. The review of the worksheet is usually carried out in two consecutively phases on the flip-chart (some investigators additionally distinguish a learning and transfer phase for didactic reasons).

#### **ELICITATION PHASE**

In the first step the interactional (social) event has to be described by the patient from an observational-describing focus. The beginning and the end point have to be clearly addressed.

During the second step the patient's cognitive-emotional attribution is elicited. Relevant and accurate forms represent either self-referring (self-reflecting) emotional or cognitive interpretations, as well as describing (interactional) interpretations and action interpretations.

In the following three steps the verbal and nonverbal interactional responses, the actual outcome (AO) in behavioural terms, and the way the patient wanted to behave in the situation - his desired outcome (DO) - are elicited. In the case of a distressing event a clear discrepancy appears between the patient's AO and DO. At this point a condition of negative-reinforcement is created by the therapist. The induced cognitive dissonance is later reduced by the finding of more adaptive strategies.

The last two steps are important for the patient in order to become aware of the discrepancy between his AO and DO. The patient has first to decide if he got what he wanted by comparing his AO with his DO. Then he is gently asked to explain why he did not behave in the way he wanted to behave.

#### **REMEDIATION PHASE**

In this phase, the therapist and patient work on solutions for the patient, to behave in a way that is efficient with respect to his DO.

Shaping of functional interpretations (first step) as well as shaping of missing behavioural aspects of the DO (second step), learning summary (third step), transfer to a future situation and skill training (fourth step) amplifies both the new element of reaction and experience as the conditional relationship between positive efficacy beliefs and positive outcome expectancies.

Transfer is maximized because the target situations come out of the daily living experiences of the patient.

Table 2. Description of the elicitation and remediation phase in SA.

Table 3 represents the major DPI technique of in-session acquisition learning according to the specific protocol in outpatients, the "Interpersonal Discrimination Exercise" (IDE).

<p><b>Interpersonal Discrimination Exercise (IDE)</b></p> <p><u>Learning context:</u> the therapist directs the patient's focus of attention to the just happened "hot spot" in-session event/moment and writes the "hot spot" behavior on the flip-chart. After this the three phases of IDE are consecutively carried out.</p> <p><b>NEGATIVE PHASE</b></p> <p>The patient is gently asked to recall a typical past social interaction with one or two of his maltreating "Significant Other's" in a similar situation. In the cognitive form the patient has to describe the behavioral consequences on himself caused by the behavior of his significant other. In particular bad thoughts are evoked through tacit knowledge. In the emotional form the patient is additionally gently asked to re-experience the associated hurtful (refractory) emotions in the presence of the therapist. In particular negative feelings like fear, pain and sadness are evoked. Counter-conditioning according to the principle of reciprocal inhibition takes place by the benevolent therapist's reaction (Schoepf et al., 2007).</p> <p><b>POSITIVE PHASE</b></p> <p>After the intensity of negative thoughts and emotions is decreased the patient is gently asked to describe his perception of the therapist's reactions. Furthermore, he has to characterize the feelings that have been evoked by the current incident with the therapist. He is then asked to compare the therapist's behavior to the recalled behavior (and the corresponding emotion in the emotional form of IDE) of his significant others in a similar situation. The felt distress of the patient usually decreases at this moment of the exercise.</p> <p><b>HEALING PHASE</b></p> <p>Sensitive to the timing and the magnitude of the felt decrease of distress in the healing phase of the IDE, the patient is encouraged by the therapist to identify the contrast between the therapist's behavior and the significant other's' behavior. "Automatically" there results a felt increase of the potency of the therapist to specifically reduce interpersonal distress during the experienced "hot spot" situation and a new interpersonal reality of the therapist-patient relationship comes into being meaningful to the patient.</p>
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Table 3. Negative phase, positive phase and healing phase in IDE. The starting point is defined by the presence of an in-session "hot-spot" event/moment. In the cognitive form of IDE counter-conditioning of cognitive evoked (Pavlovian) fear is applied in the negative phase. The principle of sensitization is started in the positive phase and is increased in the healing phase (Neudeck et al., 2010). In the emotional form of IDE the principle of counter-conditioning of re-experienced (Pavlovian) fear predominates within all IDE phases. A strong feeling of "safety" within the therapy dyad results that usually elevates the probability of generalizing outside of therapy to the patient's other relationships.

The self-disclosures are carefully timed and choreographed by the CBASP-therapist to strategically counteract the patient's destructive interpersonal basic assumptions he has experienced from past negative interactions. In McCullough's words, the job of the therapist is to become "a problem for the patient". That is, patients should experience difficulties integrating the therapist's interpersonal messages of caring and concern into their negative

interpersonal expectations. The sincerity, honesty, genuineness and staying power of the therapist makes it difficult for the patient to escape these interactions by using the old learned distancing strategies like „counterattacking or withdrawing“ (Schoepf and McCullough, 2009). Thus, the CBASP-therapist should be systematically prepared to demonstrate his or her own positive or negative feelings that all have message value to the patient within a defined therapeutic situation. This has to be done in a responsible way that is both theory-driven and controlled (McCullough, 2006).

### **2.5.1 Principles of intervention**

The learning CBASP therapist should acquire a thorough understanding of the theoretical foundations of CBASP that are described in the following passage. In addition to G Prouty's pretherapy model for schizophrenic patients and KG Bailey's paleopsychological assumptions (McCullough, 2006), the CBASP therapy model specifically incorporates the following nine theoretical approaches from psychology.

The approaches and the associated interventions are listed in order by publication date of their respective most influential publication, including a brief summary of the relevant therapy strategies and mechanisms of actions used in CBASP.

#### **2.5.1.1 Pavlov's theory of classical conditioning and his concept of transmarginal inhibition and the paradoxical phase**

Linked to Pavlov's assumptions (Pavlov, 1941) are the principles of modern learning theory with respect to the signal-reinforcer-relationship in relation to the implicit regulation of attentional control (Bouton, 2007).

In CBASP, associative learning of intrapersonal-interpersonal (Pavlovian) fear through the mechanism of classical conditioning represents the "stimulus input" of the hypothetical construct of double depression as a refractory mood disorder. The construct represents the theoretical basis for: (1) guiding of the patient's attention control in the context of surveying the patient's "emotional learning history" (McCullough et. al., 2010b); (2) counter conditioning (Pavlovian) fear (Schoepf et al., 2008b); and (3) the application of systemic desensitization in order to modify maladjusted and destructive interpersonal types of behavior (Schoepf et al., 2009, 2011).

#### **2.5.1.2 Mowrer's two-factor theory on the generalization and inhibition of fear**

Mowrer's theory states in its origin that classical conditioned fear learning allows warning stimuli to evoke conditioned fear that motivates avoidance behavior that provides reinforcement of the instrumental avoidance response through the reduction of fear (Mowrer, 1947).

The principle of avoidance learning is of crucial importance (1) to both the CBASP-therapist and the CBASP-supervisor, defining the course of treatment with respect to the causal direction between the stimulus that reduces fear (provided by the therapist) and the inhibition of the stimulus that was conditioned in relation to the patient's "Significant Other's"; and (2) the specific therapeutic intervention and the possibility to change, inside or outside of therapy (Schoepf et. al., 2009a).

#### **2.5.1.3 Winnicott's concept of objective counter transference**

According to Winnicott "objective" counter transference is the constricted feelings, attitudes, and reactions of a therapist induced by a patient (Winnicott, 1949).

Within CBASP, Winnicott's concept constitutes the most important basic assumption, establishing how, with the help of DPI, the patient's resistance that is caused by reactions of negative transference is dealt with and the integration of traumatic learning experiences into his or her self-image is achieved. This implies according to McCullough that the CBASP therapist (1) applies objective counter-transference as a vehicle of in-session change, (2) is able to be oneself with the patient in the therapy, (3) salubriously uses personal responsivity, (4) arranges contingencies so that the patient can learn, (5) makes moment-to-moment decisions with respect to CBASP treatment goals, (6) self-monitors the patient's moment-to-moment verbal- and nonverbal messages, and (7) is focused in supervision on his non-reflected verbal- and nonverbal messages that interfere with CBASP treatment goals.

#### **2.5.1.4 Skinner's radical behaviorist approach to operant conditioning**

Closely related to Skinner's basic assumptions (Skinner, 1953), the principles of modern learning theory applied to the behavior-reinforcer-relation with respect to the implicit regulation of situational outcome expectations are crucial to CBASP (Bouton, 2007).

During CBASP-therapy, the principle of operant conditioning and the principles of consequence-based interventions are applied in most therapy situations. This is done in order to (1) activate and modulate executive performance, (2) to systematically practice adaptive goal-directed behavior with the patient, (3) and to improve his or her ability to think and act in formal-operational ways by enhancing perceptive and interpretative performance (Schoepf et al., 2007).

#### **2.5.1.5 Piaget's systems-theoretical biological theory of cognitive-emotional development**

Piaget's theory claims in its origin that a level of formal-operative functioning is achieved through a childhood condition that is associated with competent and caring adults in the family (Piaget, 1973).

In CBASP, the basic assumptions of Piaget's developmental theory play a crucial role in explaining global developmental deficits of cognitive-emotional organization in double depression. Furthermore, Piaget's theory serves as a theoretical foundation for the systematic construction of new stimulus-response behavior patterns within the therapeutic zone, and for the automatic generalization of a new learned element outside the therapeutic space through the mechanisms of functional and generalizing assimilation (Schoepf et al., 2009a).

#### **2.5.1.6 Seligman's revised theory of learned helplessness and the role of attributional style with respect to cross-situational generalization**

Seligman's theoretical idea that organisms exposed to inescapable and unavoidable shocks learn that their actions do not control environmental outcomes (Seligman, 1975; Abramson et al., 1978) formulates the theoretical foundation for the cognitive- and behavioral contributor of the reciprocal model of causation in double depression (Schoepf et al. 2008a; Schoepf and Penberthy, 2010).

In addition, the "independent of response expectation" of the chronically depressed patient justifies (1) the necessity of continuous performed moment to moment related feedback in a personalized form, and (2) discriminatory exercises between stimulus and response as well as response and consequence, using simple situational related contrast techniques (Schoepf et al., 2009a).

### **2.5.1.7 Kiesler's model of an interpersonal theory**

In CBASP, the second important theoretical foundation of DPI form the principles of interpersonal therapy redefined by Kiesler's theory as reciprocal verbal and nonverbal behaviors communicating the encoder-to decoder evoking and decoder-to-encoder impact messages. Kiesler holds that the interaction between a person's interpersonal verbal- and nonverbal behavior and another person's reaction can be understood as a self-sustaining and self-regulatory system that, from the person's point of view, is recurrent in his or her relationships and interferes in the case of social maladjustment, generating appropriate behavior (Kiesler, 1983, 1996).

This holds specifically for the systematic application of personal meta-communicative feedback in the case of a patient's destructive behavior within the therapeutic space (McCullough, 2006; Schoepf et al., 2009).

### **2.5.1.8 Bandura's reciprocal interaction model and his revised theory of social learning**

Bandura's reciprocal interaction model of behavior holds that the type of behavior that a person exhibits partly determines his environmental contingencies, which in turn, influences his behavior (Bandura, 1969). Further elements of his revised theory of social learning are (a) that affiliation patterns, in turn, shape the direction of self-efficacy development, (b) that self-efficacy beliefs contribute to the course of cognitive-emotional development and determine choice of associates and activities, and (c) that under certain conditions, all learning processes can be acquired in a more or less conscious manner via observation and imitation, featuring temporal differentiation of the four sub-processes attention, memory, behavior and motivation (Bandura, 1986).

In CBASP, Bandura's theory forms the theoretical basis to describe a behavioral change process that appears to be interactional by nature. For example, SA represents a top down technique of stimulus recognition that enables the patient to learn in a formal-operative way, how to regulate his environmental interactional process to achieve his own goals. As the patient learns to shape his environment in a more pro-active way in the therapy he is shaped by his environment inside and outside of therapy in a new way. The learning effect to self-administer SA to identify behavioral consequences and to obtain desired interpersonal outcomes is directly associated with positive treatment effects.

### **2.5.1.9 Bouton's "synthetic approach" to instrumental behavior**

Bouton's contemporary synthesis of learning and behavior is important for the conceptualization of early-onset chronic depression as well as the use and development of further learning theory based interventions (Bouton, 2007).

## **2.6 Therapeutic goals**

McCullough has introduced the innovative theoretical concept of "perceived functionality", which he defines as follows: according to him, perceived functionality is an individual's ability to be aware of the effects that one's own behavior has on the other person while being able to draw causal connections between one's own actions and the other person's reactions. The development of the ability of perceived functionality is the ultimate therapeutic goal of CBASP-treatment (McCullough, 2006). The second therapeutic goal of central importance is teaching the patient how he or she can deal with the environment in effective ways. In order to achieve this, CBASP-therapists are systematically teaching the patient, using SA and the strategies of DPI, to change his behavior so that his desired

behavior in a situational event leads to the results he really can obtain. As a result, proactive, goal-directed social behavior and success-oriented thinking in stressful social situations become more probable. Proactive, goal-directed and socially acceptable behavior describes an individual's systematic impact on his or her social and material environment, i.e., conscious, systematic, controlled and socially acceptable. In order to be able to act in such a way, the patient has to experience fear-inhibiting interpersonal reactions within the therapist-patient-relationship, which is achieved through DPI interventions applied by the therapist. This usually leads to the integration of traumatic experiences within former relationships (Schoepf et al., 2007). Success-oriented logical thinking describes an individual's ability to generate relevant, accurate and action-oriented interpretations as well as the generation of goal-directed action reads in a given social situation. Causal reasoning is learned by the individual through confronting situations and acting in them. Thus, development runs from the external to the internal, from the application of SA obeying formal-operational methodology to thinking and experiencing. At the end of the acute therapy phase, the patient has learned to effectively interact with his or her environment and perceived functionality is acquired. Both of these goals have to be further generalized and established during maintenance phase. The therapy and the process of learning represent, at the same time, the result of the acquisition process as well as the method by which it is achieved (Wechsler, 1961; McCullough, 2006).

## **2.7 Treatment strategies subdivided into bottom-up and top-down interventions**

At the beginning of the therapy, the main focus lies on the situational and interpersonal avoidance strategies of the chronically depressed patient. In accordance to its basic assumptions, CBASP assumes that it is necessary to train the patient in actively experiencing his or her problems in life from a "person-environment" perspective before there can be any change. As long as interpersonal avoidance hasn't been overcome, there will be no emotional change of the chronic depressive mood and related modes of experience. Once it has, behavioral changes, personal empowerment and an improvement of dysfunctional regulation of emotions can occur.

Over all, due to its integration of various different methods that stem from various psychological theories, CBASP is a very complex method. For didactic reasons, its therapeutic strategies can be divided into interventions which have "bottom-up" or "top-down" effects on stimulus recognition.

On the one hand, from a bottom-up point of view, a behavioral response to a "person-environment" condition will occur more reflex-like if the psycho-physiological activation of limbic and limbic-cortical structures is strong.

On the other hand, from a top-down point of view, a modulation of the perceptual and mnemonic processing gradients that was caused by cortical networks has the effect that the interference of those parts of information that do not match the behavioral response is enhanced, thereby facilitating reflexive behavior once more.

### **2.7.1 Mechanisms of action of bottom-up strategies**

In general bottom-up therapeutic strategies primarily aim at healing the patient from painful experiences early in his or her life, with the help of the therapist using DPI. Here, the patient can experience empathy and practice goal-oriented behavior (for in-depth discussion and further examples, see Schoepf et al., 2007).

The mechanisms of action of bottom-up therapeutic strategies are:

- reciprocal inhibition of maladjusted rule-guided behavior,
- systematic decoupling of behavioral effects and the effort to make these effects conscious,
- systematic counter-conditioning of refractory emotions in the negative phase of the emotional form of IDE,
- and counter-conditioning of fear reactions that occur during the testing of goal-oriented behavior.
- In addition, action-related interpretations and missing behavioral aspects of realistic and desired goal-oriented behavior which aren't present prior to therapy are generated through therapeutic shaping.

### 2.7.2 Mechanisms of action of top-down strategies

By contrast, top-down therapeutic strategies modulate executive performance and enhance formal-operational thinking and behavior (for in-depth discussion and further examples, see Schoepf et al., 2007).

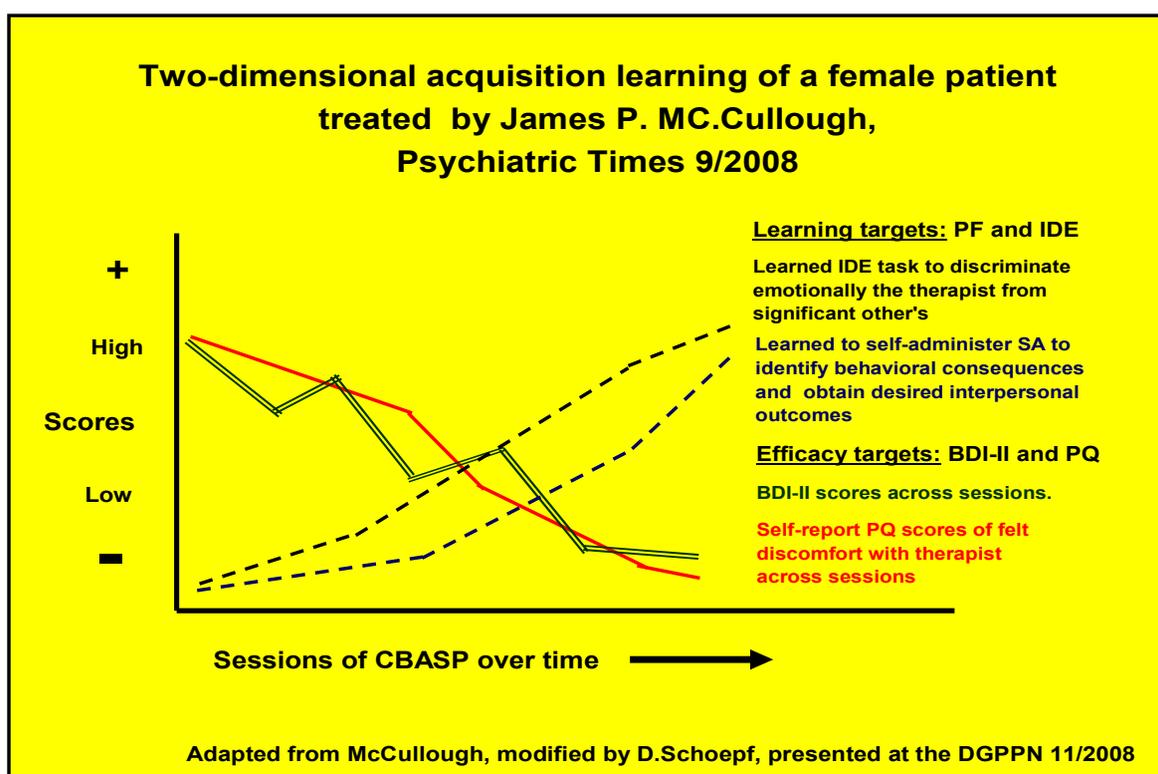


Fig. 3. Example of the learning effects and the effectiveness of “bottom-up” and “top-down” interventions over sessions of CBASP over time within the disorder-oriented and theory-driven CBASP treatment of one of McCullough’s patients. Learning targets: PF= perceived functionality. IDE = Interpersonal Discrimination Exercise. IDE represents a typical bottom-up strategy that is based on the principle of counter-conditioning intrapersonal-interpersonal emotional fear. SA=Situational Analysis. SA primarily falls into the category of top-down strategies, stressing the principles of instrumental conditioning, self-efficacy, outcome expectation, exercise of control and PF. Efficacy targets: BDI-II = Beck Depression Inventory. PQ = Personal Questionnaire. High learning scores in IDE and SA are associated with low depression scores and low scores of felt discomfort with the therapist across sessions.

The mechanisms of action of top-down therapeutic strategies are:

- reinforcing and sensitizing the perceptive and interpretative performance by means of attention-focused interventions under aspects of awareness,
- building-up the ability to control and perform with competence in a given situation, by means of contrasting past behavior with the desired goal behavior,
- and shaping mental functions to think and act according to formal operational criteria.

### 3. Second part

#### 3.1 Multi-step CBASP psychotherapy approach for pre-therapy chronically depressed inpatients

For the treatment of major depressive episodes in chronically depressed patients with antecedent dysthymia considered to be therapy refractory under inpatient conditions, a multi-step psychotherapy approach that integrates McCullough’s model, has proven to be successful during 2007-2011 in a small regular ward of the University Hospital Bonn, equipped with a specialized outpatient department. Table four represents the multi-step approach presented 2008 to CBASP-Network and both McCullough and Penberthy (Schoepf et al., 2008b). A clear distinction is drawn between an “inpatient pre-SA treatment phase” that includes two consecutive stages of treatment and care which build on each other, and an “outpatient treatment phase”. The approach targets on complete syndromal remission and complete restoration of social function in the acute treatment phase.

Acute treatment phase		
First stage of treatment	Second stage of treatment	Third stage of treatment
Level of care: inpatient	Level of care: inpatient or partial hospitalization	Level of care: mainly outpatient
<b>Suggested elements of psychotherapy</b> Mainly basic psycho-therapeutic treatment with an emphasis on supportive elements in order to relieve the patient. Additional “fundamental elements of CBASP therapy” .	<b>Suggested elements of psychotherapy</b> Mainly basic psycho-therapeutic treatment with an emphasis on problem-oriented elements for the step-by-step increase of the level of stress and the preparation for outpatient treatment. Additional “fundamental and additional elements of CBASP therapy” .	<b>Suggested elements of psychotherapy</b> CBASP treatment in accordance with the manual in order to attain perceived functionality and a change in world view through fundamental experiences of change with respect to the inter-personal problem area. Situational Analyses and Interpersonal Discrimination Exercises.
Duration: 8 - x weeks, depending on superimposed, psychiatric or somatic diseases and the influence of stressors.		Duration: 12 weeks.
<b>Pre-SA CBASP treatment phase</b>		<b>CBASP treatment phase</b>

Table 4. Psychotherapeutic stages of treatment and care in the treatment of chronically depressed patients with an inpatient history of therapy-refractory major depressive episodes.

In the first stage of treatment, fundamental elements of CBASP therapy are applied that use negative reinforcement in the case of pro-active interpersonal behaviour and simple discrimination exercises with respect to health-related behaviour.

In the second stage of treatment, additional CBASP techniques of DPI are used that feature the “deeply personal nature of the therapist patient relationship” in the development and maturation of the patient, as well as additional strategies for the enhancement of executive performance.

The third stage of treatment is considered to be the regular CBASP treatment phase. According to McCullough’s manual, situational analyses and interpersonal discrimination exercises, performed in a precise, consecutive order, are central to this phase. In order to guarantee the continuity of the development and the generalization of adaptive stimulus-response behavioural patterns, the CBASP therapist begins the treatment under inpatient conditions and continues therapy under outpatient conditions. Using various examples, the second part of the chapter also looks at the rationale, the definitions and the description of the psychotherapeutic stages of treatment and care, as well as the therapeutic elements specific to CBASP that are being used.

### **3.2 Fundamental and additional therapeutic elements of the Pre-SA CBASP treatment phase**

A pre-therapy patient according to McCullough is an outpatient who cannot learn or benefit from psychotherapy because of the way he behaves with the psychotherapist (McCullough, 2008). McCullough claims that patient learning requires the ability to be verbally controlled by the therapist; and the ability to attend and focus on one thing or stimulus situation (or one task such as SA) at a time.

In the multi-step treatment approach a patient has reached the “Pre-SA CBASP treatment phase” when he or she is able to understand simple relationships between a behavior and its effect with respect to adaptive behavior, and when the patient is able to respond to interpersonal strategies of CBASP with affects that can be clearly defined and specified.

Since, at this stage, the patient’s information processing is severely disturbed, the patient has not reached the niveau of a pre-therapy outpatient and is not yet able to conduct a SA with the therapist.

#### **3.2.1 Fundamental therapeutic elements of CBASP in the first stage of treatment and care**

During the first stage of treatment and care, the following four basic therapeutic strategies of CBASP should be applied, depending on the therapist’s competence and quality of intervention:

##### **3.2.1.1 Negative reinforcement techniques concerning proactive interpersonal patient behavior, with the goal of increasing the frequency of such behavior**

Example: The patient talks to the therapist about a certain behavior that he or she has attributed as a “failure”: the behavior in question was “not having gone for a walk”. The patient expects that his or her behavior of “mentioning the failure” to the therapist will be met with an interpersonal reaction of “some sort of punishment”. The fact that the therapist reacts with “non-punishment” leads to an absence of the negative consequences expected by the patient, and thus to stress reduction. Consequently, it becomes more probable that, in a future situation, the patient talks to the therapist about a failure he or she has experienced.

### **3.2.1.2 The therapist directs the patient's moment-to-moment attention to his or her reported health-related behavior: the patient is made aware of perceived positive effects by pointing to the contrast between before and after, in order to induce intrapersonal, positive reinforcement**

Example: The patient mentions a specific health-related behavior to the therapist, for example, the health-related behavior in question may have been that the patient "went for a walk". The patient is expecting a well-meaning, +positive reaction from the therapist (praise) while, at the same time, fearing it. The reaction usually induces a reactance reaction of the patient, e.g., an angry devaluation of the patient's own behavior. Instead of positive reinforcement through praise, the therapist asks the patient about the experience he or she has had during the behavior of "going for a walk". The patient is then asked to compare what it felt like before, during and after "going for a walk". Contrasting these inner states in such a way, the patient usually sees that he or she felt better during and after the walk than before. Thus, the health-related behavior of "going for a walk" becomes more likely for the patient the next time.

### **3.2.1.3 The extinction of intrusive and destructive behavioral response patterns during social interaction, with the goal of reducing the frequency of such behavior**

Example: The patient suddenly devaluates him or herself, without any apparent connection to the context of the interaction, claiming that "everything I do is wrong". The patient is expecting the therapist to respond in a (slightly confused) reassuring way, or by changing the topic of the conversation. Instead, the therapist pauses briefly, sticks to the topic (in a friendly way) and generally remains "undistracted". The behavior of sticking to the topic and not reacting to the patient's destructive, interpersonal behavior leads to a reduction of the frequency of destructive, interpersonal behavior via the mechanism of extinction. It should be noted that this is not a case of negative punishment, since the therapist does not withdraw from the patient.

### **3.2.1.4 Transformation of the formative influence of "Significant Others" from the patient's past into behavioral terminology about the "here and now", with the goal of determining and making explicit the interpersonal "hot spots" which were shaped by repetitive experiences of helplessness while living together with the "Significant Others"**

Example: The patient's mother was experienced as emotionally abusive, repeatedly violating both his personal boundaries and those of his father. Furthermore, the mother is said to have lived a very promiscuous life. For the "here and now", this means that the mother's formative influence on the patient's present life is such that the patient is unable to show affection and trust towards women.

## **3.2.2 Additional elements of CBASP therapy in the second stage of treatment and care**

The patient has acquired the niveau of a pre-therapy patient according to McCullough's definition given in 3.2. The patient has at this stage not learned what CBASP seeks to teach because of problematic interpersonal behaviors that interfere with learning. He is unable to be verbally controlled by the therapist.

Typical interfering behaviors are described by McCullough as follows:

- competitive behavior about the content of conversation,
- changing the subject and behaving like a “moving target”,
- refusing eye-contact, instead mind-reading the thoughts of the therapist,
- protesting about his own inadequacy, bringing into therapy crisis,
- highly submissive behaviors and refusing to take any initiative,
- frequently becoming angry with the therapist,
- frequently statements that he is hopeless and cannot be helped.

The CBASP-specific goals of treatment during the second treatment stage have two objectives: reducing the occurrence of strikingly maladaptive behavioral patterns and typical, inadequate social attitudes. Here, “additional elements of CBASP therapy” are given preference, with the primary goal, using the therapist’s DPI, to establish an interpersonal context which enables the patient to experience empathy and develop new stimulus-response behavioral patterns. In particular, this includes the following four techniques:

### 3.2.2.1 Counter-conditioning of interpersonal fear with the goal of modifying strikingly maladaptive interpersonal behavioral patterns and typical, inadequate social attitudes

Example: The typical maladaptive interpersonal behavior of the performance-oriented patient might be characterized by “refusal and withdrawal”. The therapist asks the patient about his or her (the therapist’s) reaction upon being told that the patient has failed to fully complete the psychological test examination.

Therapist [T]: “What did I do when you told me that you didn’t manage to sit through the full examination?”

Patient [P]: “You asked me about the experiences I had during the examination.”

T: “What else did I do?”

P: “You asked for details and seemed interested when I told you about the memory exercise.”

T: “What else can you remember?”

P: “I don’t remember anything else.”

T: “In which way did I punish you in that situation?”

P: “You didn’t punish me.”

T: “How can you tell that I didn’t punish you?”

P: “Because you didn’t condemn me for not sitting through the entire examination.”

T: “Are you trying to tell me that I didn’t punish you when you told me that you failed to sit through the examination until the end?”

P: “Yes.”

T: “Do you get the feeling of punishment now?”

P: “No.”

T: “What are you feeling instead?”

P: “I feel a lot more relaxed than before”.

Annotation: The major interpersonal problem of this patient is (Pavlovian) fear that doing a mistake towards the therapist means becoming punished, tacit knowledge to the patient. The therapist is typically pulled to “punish” the patient verbally or nonverbally. Counter-conditioning reduces the fear and helps the patient to interact with the therapist in a more authentic manner including to respond appropriately.

**3.2.2.2 Modified IDE (double counter conditioning) with the goal of teaching the patient to reliably discriminate emotionally between the therapist's behavior and the behavior of his "Significant Other's" (for patients with severe and/or refractory disorders, this presupposes that 3.2.2.1 was successful)**

Example: Subsequent to counter-conditioning (Example 3.2.2.1), the therapist conducts a modified IDE (double counter-conditioning form):

T: "I'd like to come back to the just happened situation: how did I react when you told me that you didn't manage to sit through the full examination?"

P: "You showed interest and asked me for my reasons."

T: "How did you respond when I showed interest and asked you for your reasons?"

P: "I didn't freeze up and was able to keep talking."

T: "When I asked for more details and seemed interested, how did that effect you emotionally?"

P: "I felt relaxed afterwards."

T: "What would your father have done if you had told him that you hadn't fully completed the examination?"

P: "Oh my God! He would have ranted at me, calling me a loser."

T: "What would have been the effect of your father's condemnation on you, emotionally?"

P: "I would have been very sad and would have developed feelings of guilt."

T: "What's the difference between my behavior and your father's behavior with respect to your own behavior and feelings?"

P: "My father would have called me a loser. I would have frozen up, remained silent, become sad and would have developed feelings of guilt. You didn't condemn me. I was able to talk and I felt relaxed at the end."

T: "What does this mean for our relationship?"

P: "It means that I can open up and that I won't be condemned when I fail to achieve something."

Annotation: Double counter-conditioning has the effect that the therapist usually becomes a safety signal for the patient. It is important to have in mind that the duration of both exercises (3.2.2.1 and 3.2.2.2) usually takes at least thirty minutes.

In addition, the techniques of CBASP are used to strengthen executive performance. Here, the following points seem especially important to us:

### 3.2.2.3 Practicing how to describe a situation as the basic requirement for being able to differentiate between situations that cause stress and situations that reduce stress

Example: The patient tells the therapist that he has spent a dreadful day with his mother as part of his stress test. The patient learns to identify the precise situation that caused stress, i.e., a fight over dinner, and to describe the situation using behavioral terminology in a successive “what happened next” manner, with a beginning and a clear endpoint and a story that happened in between.

### 3.2.2.4 Formulating the actual outcome (AO) of a positive experienced encounter using behavioral terminology, and the patient’s ability to name the emotional effect of his or her own behaviour (in a self reflective manner). This carefully prepares the patient for the formulation of the AO and the desired outcome (DO) in the context of SA

Example: The above-mentioned patient learns to formulate the AO of an encounter, using behavioral terminology. The situation is taken to be the fight over dinner mentioned above. The patient formulates his AO and the effects his own behaviour has had on him. The AO is: “I told my mother that there’s no point in keeping on talking, and then I felt silent”. The emotional effect the AO has had on him was: “I felt better”.

## 4. General conclusion

In this chapter, I have given an overview of my theoretical work that I have carried out with a group of colleagues whom I acknowledge at the end of the chapter. The chapter has been coordinated in both parts with James P McCullough and Kim Penberthy (2009) in its first vision, and in the end verbally with Peter Neudeck. Correspondingly, I have chosen Peter Neudeck as co-author. He is an excellent exposure therapist whom I supervise in CBASP since 2009 as I have been supervised by James P McCullough once (McCullough, 2008; Schoepf and McCullough, 2009b). Both of us strongly emphasize the aspects of modern learning theory in CBASP as CBASP therapists. Hopefully, this chapter has persuasively articulated a constructive use of the CBASP related to both chronically depressed outpatients that are able to benefit from CBASP according to the protocol of Jim McCullough (McCullough, 2000) and inpatients with a history of major depressive episodes that are therapy refractory under inpatient conditions (Schoepf et al., 2008b). It is my concern to bring into consciousness that disciplined personal involvement CBASP techniques that are both reliable and valid can only be learned through intensive and supervised training. This is the reason why, to this day, even McCullough himself conducts training for selected learning therapists, using video-supervised case studies. As CBASP-providers, CBASP-supervisors and CBASP-therapists, these therapists are responsible for the distribution and quality control of CBASP in their respective countries (Schoepf et al.

2009a). Further information is available at [www.cbasp.org](http://www.cbasp.org) and [www.cbasp-network.org](http://www.cbasp-network.org). As I was writing the chapter I found myself fueled by hope that this articulation can be of assistance to other psychiatrists and psychotherapists, as well to other mental health practitioners who are interested in working with chronically depressed patients in a constructive way to help their patients to get out of their prison of negative thoughts and outcome expectations, as well as to change their destructive interpersonal behaviors. James P McCullough would say: "Dieter, go on teaching your patients to get more what they want". This far, for a number of reasons, I have been inclined to study both the efficacy and the process variables of change of McCullough's model using qualitative methodology. If the success (that is yet not systematically evaluated or published anywhere as the studies are still running) is allowed to stand indication, work with the CBASP would appear to bode well for further applications, for example in a multistep-approach in combination with elements of cognitive processing therapy in PTSD patients and double depression.

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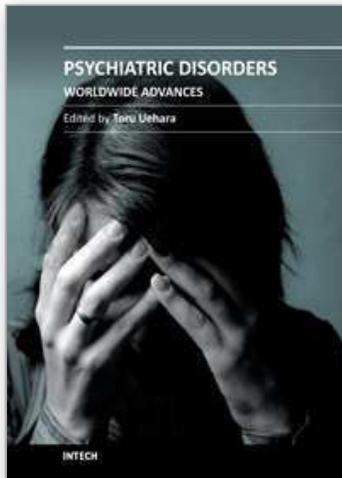
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## **Psychiatric Disorders - Worldwide Advances**

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A psychiatric disorder is defined as any complex condition that involves the impairment of cognitive, emotional, or behavioral functioning. Aside from knowing the physical organic factors, its causal pathology has remained a mystery. Regarding recent advances in psychiatry and neurosciences, psychiatric disorders have been closely associated with socio-cultural, psychological, biochemical, epigenetic or neural-networking factors. A need for diverse approaches or support strategies is present, which should serve as common knowledge, empathetic views or useful skills for specialists in the field. This book contains multifarious and powerful papers from all over the world, addressing themes such as the neurosciences, psychosocial interventions, medical factors, possible vulnerability and traumatic events. Doubtlessly, this book will be fruitful for future development and collaboration in “world psychiatry”.

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