CHAPTER- II

THEORETICAL ORIENTATION

OCD MODELS

Cognitive-Behavioral Model of OCD

Studies have shown that most healthy people occasionally experience intrusive thoughts (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). Unlike those with OCD, however, healthy individuals can dismiss such thoughts and do not experience them as particularly distressing. Such observations led researchers to hypothesize that it is not the experience of intrusive thoughts per se that is pathological; but rather the way in which patients interpret such thoughts that leads to the pathological anxiety, depression, and guilt that is characteristic of OCD (e.g., Freeston, Rh’eaume, & Ladouceur, 1996; Rachman, 1993, 1997; Salkovskis, 1985, 1989; Wilhelm, 2000). On the basis of this conceptualization, theorists drew from Beck’s (1976) cognitive theory to develop models delineating the mechanisms through which intrusive thoughts could lead to obsessional anxiety and ritualizing. For example, Salkovskis (1985) suggested that distorted beliefs about personal responsibility for preventing harm was the primary mechanism through which intrusive thoughts generate anxiety in OCD patients.

The Behavioral Model of OCD: The behavioral theory of OCD was based on learning theory; particularly the two-factor model of fear and avoidance presented by Mowrer (1939, 1960). This model proposed that normal intrusive thoughts, images, or impulses become associated with anxiety via classical conditioning so that when an intrusive thought occurs, anxiety increases. The person then learns, via operant conditioning, to reduce obsessional anxiety by escaping or avoiding stimuli that evoke obsessional thoughts. Thus, compulsive behavior is
performed to escape from obsessional anxiety and is negatively reinforced by the reduction in anxiety that it engenders.

In a series of experiments with dogs, Solomon and Wynne (1954) demonstrated that escape and avoidance responses to classically conditioned stimuli were highly resistant to extinction and continued long after pairing of conditioned stimuli with aversive consequences had stopped.

Rachman (1971) developed the behavioral theory that was based on Mowrer’s two factor theory:

- Obsessions are previously neutral stimuli (intrusions) which have been associated with anxiety thought a process of classical conditioning.
- Patients develop avoidance and escape responses; these responses terminate exposure to the feared stimulus. These behaviors are negatively reinforced, making them more likely to recur, through a process of operant conditioning (specifically, negative reinforcement).
- Termination of exposure prevents extinction of anxiety from occurring, thus maintaining both obsessional thinking and compulsive behaviours.

There are multiple strengths of the behavioral model.

1. It has empirical support as demonstrated in a series of now classic experiments in which exposure to obsessional stimuli resulted in increased anxiety, and performance of compulsive behavior decreased this anxiety (Rachman & Hodgson, 1980).

2. The behavioral approach is based on the assumption that learning processes involved in the maintenance of OCD are normal and that there is nothing pathological about the occurrence of unwanted intrusive thoughts per se. The
finding that 90% of people experience unwanted intrusions of a similar content (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984) supports this view.

3. An effective treatment for OCD, exposure and response prevention (ERP), is derived directly from this model and the notion that OCD patients have developed avoidance and escape habits that prevent the natural extinction of obsessional anxiety. Exposure and response prevention involves (a) exposure to stimuli that evoke obsessional distress and (b) assistance with resisting urges to avoid or escape using compulsive behaviors. This treatment is highly efficacious with an estimated 75% of treatment completers improving significantly and remaining improved at follow-up (eg, Franklin & Foa, 2002). It should, however, be noted that limitations of ERP include that many patients refuse or prematurely discontinue this treatment because of the prospect of confronting obsessional fears (Stanley & Turner, 1995).

Salkovskis’ Cognitive- Behavioral model of OCD

In 1985, Salkovskis proposed a cognitive-behavioral analysis of OCD in which appraisals of intrusive thoughts, particularly responsibility appraisals, were suggested to lead to compulsive behavior. This formulation proposes that people with obsessional problems appraise normal intrusive thoughts, images, and impulses as an indication that (a) harm to themselves or others is a particularly serious risk and (b) they may be responsible for such harm (or its prevention) (Salkovskis & McGuire, 2003).

Inflated responsibility takes two forms:
• Responsibility for errors of *commission* (excessive responsibility for having an intrusive aggressive thought they fear will lead to committing an aggressive act)

• Responsibility for errors of *omission* (responsibility for not taking every step possible to ensure the well-being of others, even those for whom they are clearly not responsible; (Salkovskis, Richards, & Forrester, 1995).

The Obsessive Compulsive Cognitions Working Group (OCCWG) has defined “inflated responsibility” as: The belief that one is especially powerful in producing and preventing personally important negative outcomes. These outcomes are perceived as essential to prevent. They may be actual, that is, having consequences in the real world, and/or at a moral level. Such beliefs may pertain to responsibility for doing something to prevent or undo harm, and responsibility for errors of omission and commission (OCCWG, 1997). Examples include “If I don’t act when I foresee danger, I am to blame for any bad consequences.” (Frost & Steketee, 2002, p. 7).

A number of interrelated consequences are proposed to arise from the interpretation of normal intrusive thoughts as indicating personal responsibility for harm, including:

1. Increased discomfort.
2. Increased attention to the intrusions and external triggers of the intrusions.
3. Increased accessibility to the original intrusion and other related ideas.
4. Behaviors such as compulsions, neutralizing, avoidance, reassurance-seeking, and thought suppression which, in this account, are attempts to reduce or escape responsibility.

Salkovskis and colleagues (Salkovskis, Shafran, Rachman, & Freeston, 1999) speculated that five particular types of learning
experiences could contribute to the development of distorted beliefs about intrusive cognitions, including:

1. An early developed and broad sense of responsibility that is deliberately or implicitly encouraged or promoted during childhood (being the eldest of many children).

2. Rigid and extreme codes of conduct and duty (the religious belief “sin by thought, sin by deed”).

3. Childhood experiences where sensitivity to ideas of responsibility develops as a result of never being confronted by it (because of highly overprotective parents).

4. An incident in which one’s actions or inaction actually contributed in a significant way to a serious misfortune (a doctor making an error on a prescription).

5. An incident in which it appeared that one’s thoughts and/or actions or inaction contributed to a serious misfortune (wishing someone was dead and finding out that they died later that day).

**Rachman’s Cognitive- Behavioral model of OCD**

Rachman (1997) proposed a cognitive theory of obsessions hypothesizing that “obsessions are caused by catastrophic misinterpretations of the significance of one’s thoughts (images, impulses)” This leads to the prediction that obsessions will persist as long as these misinterpretations continue, and they will diminish when the misinterpretations are weakened. The misinterpretations are not limited to responsibility appraisals, but can include any interpretation that the intrusive thought is personally significant, revealing, threatening, or even catastrophic.

Evidence in support of Rachman’s (1997) theory include that cognitions can cause anxiety (Clark, 1986), that patients report that their obsessions are meaningful (Freeston et al., 1993), and the presence of cognitive biases such as thought–action fusion (TAF; Shafran, Thordarson, & Rachman, 1996). Thought–action fusion is usually
considered to have two related forms. The first, Likelihood TAF, refers to the belief that having an intrusive thought increases the likelihood that a specific adverse event will occur (eg, “if I think about someone else falling ill, it makes it more likely that they will become ill”). The second component of TAF is labeled “Moral TAF” and refers to the belief that having an unacceptable intrusive thought is almost the moral equivalent of carrying out that particular act.

Rachman (1998) suggested that:
1. When a catastrophic misinterpretation of the significance of the intrusion is made, this increases the range and seriousness of potentially threatening stimuli and a wide range of stimuli may be converted from neutrality into threat. For example, sharp objects become potential weapons. Increasing the range of threats increases the opportunities for the provocation of obsessions. Internal sensations such as anxiety can also be converted into potential threat.
2. Avoidance or covert neutralization provides temporary relief from obsessional distress, yet the significance of the obsessions remains unaltered. Neutralization is viewed as attempts to “put matters right” and results in
   - relief,
   - the belief that the act of neutralizing prevented the feared event, and
   - a failure to disconfirm the significance of the intrusion. It is predicted that the significance attached to an obsession will remain unchanged (or increase) after repeated neutralization and the significance will decrease after repeated instances in which the obsession is not followed by neutralizing.
3. The very frequency of the intrusive unwanted thoughts can be catastrophically misinterpreted as evidence of their significance.
4. Attempts at thought suppression as a result of an inflated increase in the significance of an unwanted intrusive thought can paradoxically produce an increase in the frequency of the obsession.

**Purdon and Clark’s Cognitive Theory of the Importance of Thought Control**

Purdon and Clark (1999) have developed a model in which

- Faulty beliefs about the importance of controlling one’s thoughts.
- Negative misinterpretations of the consequences of failure to control unwanted intrusive thoughts are considered critical to the pathogenesis of obsessional problems. Examples of faulty beliefs include “I must control every thought that enters my mind, especially negative ones,” “losing control of thoughts is as bad as losing control over behavior,” “I would be a better person if I could control unwanted thoughts,” and “control over thoughts is an important part of self-control” (Purdon & Clark, 2002, p. 31).

It is proposed that such beliefs result in

- Heightened vigilance for the occurrence of the very intrusive thoughts to be controlled.
- Active resistance to such thoughts, for example, by attempting to suppress them.

This model of the development of obsessions is based on the work of Wegner and colleagues (Wegner, Schneider, Carter, & White, 1987) who found that deliberate suppression of a neutral (“white bears”) thought was associated with an increase in its frequency during and after thought suppression. The failure in thought control that results from the paradoxical effects of thought suppression, and for other reasons such as a decline in mood state resulting from initial failed attempts at thought control, are thought to result in escalating attempts to regain control. Such attempts can reinforce other beliefs about the thought (eg, “this thought is revealing about my true nature”) and further exacerbate low mood (Clark & Purdon, 1993; Purdon & Clark, 1999). Moreover, failed
attempts to control unwanted thoughts may evoke more catastrophic beliefs about the responsibility and personal significance concerning such thoughts.

**Neurobiological Models of OCD**

The emergence of obsessions and compulsions in the context of head injury (Ravi et al., 1996), localised lesions to the basal ganglia (Chacko et al., 2000) and autoimmune neuropsychiatric disorders (Giedd et al., 2000) suggest the potential role of an underlying neurological substrate in the development and persistence of OCD. Recurring obsessions and compulsions often have the quality of a failure to inhibit an everyday intrusive thought or repetitive behaviour pattern that most of us discard without difficulty, and these types of problems have information processing parallels (e.g. in perseveration and inhibition). Indeed, combining unique assessment/treatment and neuroimaging/genetic expertise at specific performance sites has already resulted in substantial progress in understanding the brain mechanisms that may be involved in treatment response (or lack, thereof) (Rosenberg & MacMillan, 2002).

The most striking findings over the past decade in adult and pediatric neuropsychiatry have been the repeated identification of abnormal information processing in cortico-striatal-thalamo-cortical circuitry (Rosenberg & MacMillan, 2002).

The basal ganglia may represent the primary site of pathology in OCD (Rauch, Whalen, Dougherty, & Jenike, 1998). Disturbance in the basal ganglia’s filtering and suppressing of cortical input is believed to be involved in the emergence of OCD symptoms (Insel, 1992). Bilateral reduction in basal ganglia volume has been observed in OCD patients compared to controls (Luxenberg et al., 1988; Robinson et al., 1995; Rosenberg et al., 1997), although contradictory reports exist (Aylward et al., 1996; Jenike et al., 1996; Stein et al., 1993).
Neurobiological models have consistently implicated the prefrontal cortex in the pathogenesis of OCD (Baxter, 1994; Baxter et al., 1992; Insel, 1992). Szeszko et al. (1999) reported bilateral reductions in orbital frontal volume in OCD patients compared to controls. Alterations in anterior cingulate-basal ganglia-thalamocortical circuitry may also play a particularly critical role in compulsive behaviors (Alexander & Crutcher, 1990; Cummings, 1993). A developmentally mediated anatomic neural network dysplasia involving reduced basal ganglia volume and increased anterior cingulate volume may disrupt ongoing purposeful behavior in OCD (Rosenberg & Keshavan, 1998). Increased anterior cingulate volume associated with reduced basal ganglia volume has been reported in two independent samples of treatment-naïve pediatric OCD patients compared to controls (Rosenberg & Keshavan, 1998; Szeszko et al., 2004).

Using cortical parcellation methodology based on the sulcal anatomy, abnormalities in anterior cingulate volume were specific to the gray matter with no alterations between OCD patients and controls observed in white matter (Szeszko et al., 2004). Increased anterior cingulate gray matter in OCD patients is consistent with functional neuro imaging studies in OCD patients demonstrating increased anterior cingulated glucose metabolism and activation associated with OCD symptom severity and treatment response (Baxter et al., 1996). Consistent with animal studies demonstrating the involvement of the anterior cingulate cortex in reward expectancy (Shidara & Richmond, 2002).

The aforementioned findings may have important treatment implications. Pathological correlations among the ventral prefrontal cortex, basal ganglia, and the thalamus have been observed in OCD patients before treatment, but neither in healthy controls nor in OCD patients after effective treatment (Baxter et al., 1996; Brody et al., 1998; Rauch et al., 2002; Saxena et al., 1999; Saxena, Brody, Schwartz, &
Such investigation targets the fundamental question of whether or not specific patterns of pretreatment brain activity can indicate which treatment (eg, CBT or SRI) will be most effective for patients with OCD. The aforementioned literature suggests, for example, that decreased orbital frontal-hemispheric metabolic rates and increased activity in cingulate cortex predicted better response of OCD patients to SRI, while increased orbital frontal-hemispheric metabolic ratios pretreatment predicted enhanced response to CBT.

The thalamus is the final subcortical input to the frontal cortex, and when released from the inhibitory tonic influence of the striatum, it stimulates cortical output, thereby playing a key role in conscious information integration and perception (Baxter et al., 1996; Jones, 1997). The thalamus, particularly the dorsomedial nucleus of the thalamus, has been implicated in the pathogenesis of OCD. Lesions of interest can result in neuropsychological and neurobehavioral disturbances comparable to those observed in patients with OCD (Alexander, Crutcher, & DeLong, 1990; Cummings, 1993). Vascular and degenerative disorders of the thalamus often are indistinguishable from classically described “frontal lobe” syndromes (Cummings, 1993). Compulsive behaviors in animals can be provoked by alteration in thalamic function (Bergmann, Chaimovitz, Pasternak, & Ramu, 1974; Sasaki, Miyakawa, Sudo, & Yoshizaki, 1997). Thalamic stimulation has also been found to cause compulsive behaviors in human beings (Portenoy et al., 1986). Conversely, partial neurosurgery of the thalamus (e.g., partial thalamotomy) has been reported to decrease OCD symptoms in treatment refractory patients with OCD.

Using volumetric MRI, Gilbert et al. (2000) reported significantly increased thalamic volume in treatment-naive pediatric patients with OCD compared to controls, which decreased significantly after monotherapy with the SRI paroxetine, to levels not significantly different
from healthy controls. This “normalization” in thalamic volume was positively correlated with reduction in OCD symptom severity. Medial temporolimbic structures (eg, the amygdala and hippocampus) may play an important role in the neurobiology of OCD. Cybernetic models (Pitman, 1987) have proposed that the hippocampus plays an important role in compulsive behavior. The hippocampus maintains strong connections with basal ganglia regions that have been implicated in the pathophysiology of OCD (Robinson et al., 1995).

Consistent evidence for the efficacy of SRIs in the treatment of OCD has resulted in their being the most widely used form of therapy for members of all age groups with this disorder (Cartwright & Hollander, 1998; Rosenberg, 2002). Findings that SRIs are more effective compared to non serotonergic medication for OCD led to the “serotonin hypothesis of OCD.”

The neuronal marker, N-acetyl-aspartate (NAA) is the second most abundant amino acid in the central nervous system (Birken & Oldendorf, 1989) and can be measured by MRI using a technique called proton magnetic resonance spectroscopy (1H MRS). N-acetyl-aspartate is localized to mature neurons and not found in CSF, blood, or mature glial cells. Reduction in NAA can reflect neuronal dysfunction, decreased neuronal viability or neuronal loss (Tsai & Coyle, 1995). Reduced NAA levels, suggesting reduced neuronal viability, have been observed in OCD patients compared to controls in the caudate nucleus (Bartha et al., 1998), anterior cingulate cortex (Ebert et al., 1997), and in the medial (but not lateral) thalamus (Fitzgerald, Moore, Paulson, Stewart, & Rosenberg, 2000).

Rosenberg et al. (2000) conducted an in vivo 1H MRS study in treatment-naïve pediatric OCD patients before and after mono drug therapy with the SRI paroxetine compared to age and sex-matched healthy pediatric controls. Caudate glutamatergic (Glx) concentrations were significantly elevated in psychotropic-naïve OCD patients...
compared to controls. In contrast, no significant differences in occipital cortex Glx were observed in OCD patients as compared to controls. After 12 weeks of SRI treatment, caudate, but not occipital, Glx decreased to levels not significantly different from controls and the reduction in caudate Glx was associated with a decrease in OCD symptom severity. In pediatric OCD, reductions in caudate Glx following SRI treatment have been shown to persist after medication discontinuation if symptoms remain in remission (Bolton, Moore, MacMillan, Stewart, & Rosenberg, 2001). In contrast, no significant changes in caudate Glx were observed in psychotropic-naïve pediatric patients with OCD before and after 12 weeks of CBT (Benazon, Moore, & Rosenberg, in press). Therefore, reduced caudate Glx may be specific to SRI treatment rather than the result of a more generalized treatment response or spontaneous resolution of OCD symptoms.

NEUROPSYCHOLOGICAL MODELS

Rapoport et al. (1992) contend that the presentation of childhood OCD is generally similar to adult-onset, but that compulsions may occur without obsessions, or at least that compulsions may emerge first developmentally. As Bolton (1996) suggests, this is challenging for psychological models of OCD that view compulsions as functioning to reduce anxiety associated with obsessional thoughts. In this way the natural history of childhood-onset OCD challenges the traditional formulation of: **obsessional increased performance of reduced thought → anxiety → compulsion → anxiety**

If compulsions do emerge first developmentally, it may be that the obsessional thoughts act as secondary sense-making phenomena as the developing child tries to understand why he/she feels compelled to engage in such senseless behaviours (‘so maybe the reason why I am washing my hands all the time is because I must be frightened of getting contaminated’).
As Schultz et al. (1999) point out, such an alternative formulation raises the possibility that compulsions in childhood OCD are like complex tics, and that this can account for the relationship between OCD and tic disorders such as Tourette’s syndrome. Potentially, taking a developmental perspective might lead us away from viewing OCD as an anxiety disorder altogether (Montgomery, 1993;).

Visuospatial skills are required to perceive and manipulate objects in two and three dimensions (Rauch & Savage, 1997) and to put visual information together to see the ‘big picture’ (rather than focusing on individual elements in a sequence, as in linguistic processing). Such skills are associated with the Performance Scale of IQ tests, such as the WAIS-III and WISCIII-UK. From the perspective of adult neuropsychological theory, deficits in Performance Scale relative to Verbal Scale tasks are suggestive of right hemisphere dysfunction, according to models of lateralisation (Bryden, 1982).

In the case of OCD, Boone et al. (1991) report a well-designed study comparing seven patients with OCD who also had a family history of OCD in first-degree relatives, 13 patients with OCD without a positive family history and 16 control subjects on a range of neuropsychological measures. Results showed that both patient groups had significantly lower performance IQs than the control group; nine of the 20 patients had a verbal IQ minus performance IQ discrepancy of 10 points or greater.

Christensen et al. (1992) began from the premise that previous neuropsychological studies had suffered multiple methodological flaws, including failure to match for IQ, making multiple statistical comparisons without correction, inclusion of patients with significant depression, and compiling experimental samples on the basis of individual obsessive and compulsive symptoms, rather than using diagnostic criteria. In their study, 18 patients and controls were matched
for age, education and gender, and multivariate analyses were used to test individual hypotheses.

Their aim was to explore processing domains potentially compromised in OCD from a location–function model, including: verbal abilities (left hemisphere); visuospatial abilities (right hemisphere); recent verbal memory (left mesial temporal); recent non-verbal memory (right mesial temporal); and executive functioning (prefrontal). The investigators used the Block Design and Object Assembly subtasks from the WAIS to assess visuospatial abilities, and no significant main effect of group for this factor was identified in their multivariate analyses.

Insel et al. (1983) speculated that obsessional thoughts might evolve as verbal strategies to compensate for a right hemisphere deficit in visuospatial skills, and it could be argued that checking compulsions might relate to visuospatial deficits in processing visual information ('I can see that the light switch is off, but can I really trust what I'm seeing?'), contributing to Rapoport’s (1989)‘epistemological doubt’ in OCD.

Neuropsychological models based on deficits in aspects of memory functioning are potentially strong candidates to account for the phenomenology of obsessions and compulsions (doubting whether an action has been completed; being compelled to make a check). Studies in OCD have typically explored aspects of general memory, such as visual and verbal memory, or alternatively specific components such as memory-for-action and its relationship with checking. In terms of general memory, Cox et al. (1989) concluded that children with OCD show visual but not verbal memory deficits, which they concluded to be suggestive of subtle right hemisphere dysfunction.

Visual memory deficits have been reported among adults with OCD (e.g. Aronowitz et al., 1994; Boone et al., 1991; Christensen et al., 1992; Dirson et al., 1995; Hollander et al., 1990; Martinot et al., 1990; Zielinski
et al., 1991). These studies have used visual and visuospatial recall tasks such as the Rey–Osterrieth Complex Figure (ROCF), the Visual Reproduction subtest of the Wechsler Memory Scale (WMS), the Benton Visual Retention Test (BVRT) and Corsi’s Blocks Task, and visual recognition tasks such as Kimura’s Recurring Figures Test (KRFT), all tests described by Lezak (1995). Memory deficits on these tasks have been reported relative to non-clinical controls.

A number of studies have also reported verbal memory deficits among adults with OCD (e.g. Martinot et al., 1990; Zielinski et al., 1991). These studies used tasks such as the California Verbal Learning Task (CVLT) and the Rey Auditory Verbal Learning Test (RAVLT). Memory deficits were reported relative to non-clinical controls. However, other studies have failed to find verbal memory impairments among adults with OCD (e.g. Boone et al., 1991; Christensen et al., 1992; Dirson et al., 1995).

However, there are significant methodological limitations inherent in many of these studies, including the failure to control for the effects of IQ, attention and speed of information processing, medication and co-morbid anxiety and depression.

In contrast to these studies of general declarative memory functioning in OCD, other authors have begun from specific hypotheses about failure of procedural memory (remembering learned skills such as motor sequences, which cannot be directly accessed as facts). Sher and colleagues predicted that specific procedural memory deficits would be shown by individuals with checking but not other types of compulsive behaviour (e.g. washing) (Sher et al., 1983, 1984, 1989). They hypothesised that checking might reflect a deficit in memory for motor-based actions (which they termed ‘memory for action’, MFA), or alternatively a deficit in distinguishing memories of actual from imagined events (which they termed ‘reality-monitoring’, RM).
Ecker & Engelkamp (1995) reported impaired MFA, increased RM confusion, and reduced RM confidence among a group of adults with OCD and frequent checking symptoms, compared with high-checking and low checking psychiatric controls. Tallis (1995) points out, memory models also fail to account for the restricted classes of events that are doubted (such as turning a light switch off) rather than others (such as remembering what you had for breakfast). Also, neuropsychological models implicating memory in OCD have universally attempted to account for symptoms in terms of memory deficits. However, recent work by Radomsky & Rachman (1999) has shown that adults with OCD who have contamination fears demonstrate superior memory for ‘contaminated’ items compared with anxious controls. Models will need to be able to account for such areas of enhanced memory as well as deficits.

Hartson & Swerdlow (1999) showed that, compared against controls, a group of 76 adult patients with OCD (most of whom were on medication) demonstrated an increased bias towards a previously primed visual target. They proposed a model in which inhibition deficits in OCD may prevent old or irrelevant information from being discarded from consciousness Swerdlow et al. (1993) demonstrated that patients with OCD are deficient on laboratory measures that assess the ability to inhibit or gate motor responses to sensory stimuli and proposed that difficulty inhibiting irrelevant information may play a central role in OCD symptomatology.

Rosenberg et al. (1997) suggest that the symptoms of OCD might be caused by a problem in the natural inhibition of repetitive thoughts and behaviours, implicating the key behavioural functions of the orbital prefrontal–striatal system in response inhibition, initiating delayed responses and the temporal integration of behaviour. They compared 18 psychotropic medication-naive, non-depressed patients with OCD and case matched healthy comparison subjects on a range of oculomotor
tasks, and demonstrated that a significantly higher percentage of response inhibition failures was observed in the patients. In addition, severity of OCD symptoms (based on total score on the child version of the Yale–Brown Obsessive–Compulsive Scale; Riddle et al., 1992) correlated significantly with oculomotor response suppression error rate. In their oculomotor response suppression task, subjects were required to fixate on a central visual target and then look the same distance away \textit{but in the opposite direction} to a peripherally presented target. This task requires the suppression of a powerful reflexive response to look toward a novel stimulus, as well as the ability to look away from a target when no cue exists to guide the eyes towards the peripheral target. This oculomotor response suppression paradigm is fascinating in the context of OCD, as control of eye movement is dependent on the integrity of frontostriatal systems.

Using a clinical measure, the Test of Everyday Attention, Clayton et al. (1999) compared 17 adult patients with OCD, 13 adult patients with panic disorder and 14 controls. Their results suggested that people with OCD may have a reduced ability to selectively ignore unimportant external (sensory) and internal (cognitive) stimuli. The authors speculate that if obsessional thinking has its origin in normal intrusive cognitions that we all experience, then individuals with a reduced ability to automatically and unconsciously disattend selectively to their own intrusive thoughts may therefore be vulnerable to developing OCD.

\textbf{Psychoanalytic Model}

Freud (1896) proposed a revolutionary theory for the existence of obsessional thinking in which he defined obsessional ideas as ‘transformed self-reproaches which have re-emerged from repression and which always relate to some sexual act that was performed with pleasure in childhood’ (Freud, 1896, p. 169). This suggestion was formulated predominantly from his experience with patients at the turn of the
nineteenth century. Although Freud saw a number of patients whom he considered to be suffering from obsessional neurosis, much of his thinking (and writing) on OCD was based on the now famous ‘Rat Man’, a case which will be briefly outlined below. The patient, a youngish man of university education, told Freud that he had suffered from obsessions since early childhood. As a child, he had experienced an unnatural obsession about the death of his father (having believed that he had the power to control his father’s general well-being). Without apparent questioning, the patient proceeded to discuss his infantile sexuality. From an early age, he expressed the wish to see girls naked and had a desire to touch them. Accompanying this desire was the feeling that if he did not prevent such thoughts, his father might die. The patient subsequently developed certain impulses that he believed would be effective in warding off the impending evil. These ‘impulses’ are now more commonly known as compulsions that serve to reduce the anxiety associated with his obsessive thinking.

Later in this patient’s life, he came across a senior officer who conveyed a form of punishment that was extremely unnerving to him. This particularly horrendous method of torture involved the criminal being tied up and then having rats placed under a pot, which was turned upside down on the man’s buttocks. The rats, having no means of escape, slowly bore their way into the man’s buttocks (Freud, 1909). Although the patient expressed horror as he conveyed this story to Freud, Freud interpreted it as one of ‘horror at pleasure of his own of which he himself was unaware’ (p. 167). The precipitating cause of this man’s obsessional thinking was never clearly identified by Freud or by the patient himself. Freud (1909) argued that the ‘infantile preconditions of the neurosis may be overtaken by amnesia . . . though the immediate occasions of the illness are . . . retained in the memory’ (pp. 195–6).

In a second illustrative example of OCD from the dynamic perspective, Freud (1909) described the symptoms of a patient who
displayed an obsession with cleanliness. This particular individual was a government official who always presented crisp paper notes as payment. Freud remarked that that they were distinctive because they were always clean and smooth. The patient replied that he had ironed them at home for fear of contracting an illness from the bacteria on the notes. Because of Freud’s suspicion of a link between the neuroses and infantile sexuality, he enquired about the patient’s sexual life. The patient replied that he found it gratifying to masturbate a number of young women with his hands. To this Freud replied, ‘but aren’t you afraid of doing (them) some harm, fiddling about in (their) genitals with your dirty hand?’ (p. 197). The patient was horrified and remarked that it had never done any of the girls harm. On the contrary, he claimed, they had enjoyed the activity. Freud believed that this patient was able to justify his inappropriate sexual behaviour by the displacement of his self-reproach and, in line with his theory, assumed that the patient’s sexual gratification was ‘probably impelled by some powerful infantile determinants’ (p. 198).

Instead of a medical treatment regime typical of the late nineteenth century, Freud opted for psychoanalysis, an attempt to resolve past conflicts in the afflicted individual by appealing to the unconscious. However, this form of treatment did little to improve the outcome of OCD patients (Jenike et al., 1998). An important distinction was also made. Freud believed that obsessive-compulsive neurosis existed as a syndrome separate from the ‘anal-erotic’ character. The latter syndrome, according to Freud, predisposed an individual to the development of OCD. It is this distinction that (in part) led to the present-day differentiation of OCD and obsessive-compulsive personality disorder (OCPD).
MOTIVATIONAL THEORIES

Development of Motivational concepts:

- Rationalism - Humans are free to choose.
- Mechanistic view - Descartes, Hobbes, Locke and Hume suggested that some action arise from internal or external forces for which we have no control. Hobbes held that we behave as to achieve pleasure and avoid pain. This doctrine of hedonism considered these two tendencies as the underlying causes of all behaviours.
- Instincts – an innate biological cause that pre dispose the organism to act in a certain way.
- Needs and Drives - An arousal state resulting from some bodily and tissue needs. E.g. food, water or avoidance of painful stimulus. Acc. To Hull, ‘All behaviours are based in four primary drives Hunger, Thrust, Sex, and Avoidance of pain. According to this view drive provide the energy for behaviour, whereas the associative bonds that develop between drive stimuli and behaviours through the process of drive production provide the direction for behaviours.
- Hull’s Drive Theory (1943, 1952) proposes that drive arose from a range of bodily disturbances, including hunger, thrust, sex, pain, air deprivation, temperature regulation, urination pressures, sleep, activity, nest building (Hull, 1943, pp.59-60). Once it arose, drive energized behaviour (Bolles, 1975). But it did not direct it. Habit, not drive, directed behaviour. As one contemporary phrased it, ‘Drive is an energizer, not a guide’. (Hebb, 1955, p.249). To show how and drive (i.e. learning and motivation) produced behaviour .Hull(1952) developed the following formula:
Where \( E \) is the strength of behaviour, \( H \) is habit strength, \( D \) is drive and \( K \) is incentive motivation.

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<td>Facial feedback hypothesis</td>
<td>Laird (1974)</td>
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<td>Flow</td>
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<td>Goal setting</td>
<td>Locke and Latham (2002)</td>
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<td>Learned helplessness</td>
<td>Peterson, Maier, and Seligman (1993)</td>
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<td>Opponent process</td>
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<td>Positive affect</td>
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<td>Psychodynamics</td>
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<td>Reactance</td>
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<td>Self-actualization</td>
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<td>Self-determination</td>
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<td>Self-efficacy</td>
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<td>Sensation seeking</td>
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<td>Stress and coping</td>
<td>Lazarus (1991a)</td>
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**Behavioural Theories:** B.F Skinner (1938) major icon in the behavioural tradition believed that there was no need to study thought and feeling as all behaviours could be understood by evaluating rewards and punishers in the organisms’ environment.
**Classical Conditioning** is also known as Pavlovian conditioning. Classical conditioning states that biological responses to associated stimuli energize indirect behaviour. This theory was mainly based on the experiments on the salivating of dogs.

**Operant Conditioning:** Operant learning states that the primary factor is consequences. The application of reinforcers provide incentives to increase behaviours, the application of punishers provides disincentives that results in decrease in behaviours.

Exposure and response prevention is based on the classical conditioning paradigm in which avoidance is acquired through the repeated presence of the noxious stimulus and extinction of avoidance occur through repeated exposure in the absence of noxious stimulus.

**Cognitive Theories:** There are many motivational theories that focus on information processing approach to learning.

The first is Cognitive –Dissonance theory developed by Leon Festinger (1957) states that when there is a discrepancy between two beliefs, two actions, or between a belief and an action, we will act to resolve conflicts and discrepancies. The implication is that if we can create an appropriate amount of disequilibrium that lead to the person changing his or her behaviour which may lead to change in thought pattern and which may change his or her behaviour, Motivational interviewing technique rely on this principle. Miller and Rollnick (1991) gave the principle to develop discrepancies between client’s goals or values and their current behaviour, in order to create maximum dissonance between his goals and values and the specific behaviour which we wanted to change.

**Attribution Theory:**

Heider, (1958); Weiner, (1974). This theory proposes that every individual tries to explain success or failure of self and others by offering certain "attributions." These attributions are either internal or external and are either under control or not under control.
**Expectancy Theory:**

This formula state three factors of expectancy, instrumentality and valence and values are to be multiplied by each other, a low value in one will result in a low volume of motivation. So all the three must be present for motivation to occur.

Motivation = Perceived Probability of Success (Expectancy) * Connection of Success and Reward (Instrumentality) * Value of Obtaining Goal (Valance, Value)

**Psychoanalytic Theory:**

Freud (1915) summarizes drive theory with four component-source, impetus, aim and object. The source of drive was rooted in the body’s physiology e.g. lack of food. Once it reached a level of threshold level of urgency, bodily deficits became psychological drive. Drives have motivational properties because drives have an impetus (force) that possessed the aim of satisfaction, which was the removal of underlying bodily deficits. To accomplish this aim, the individual’s experienced anxiety on a psychological level, and it was this anxiety that motivated the behavioural search (aim) for an object capable of removing the bodily deficits.

Unconscious Motivation – Projective techniques, dream analysis and free association and the study of the neurotic symptoms are some of the methods to assess unconscious motivation. Slip of the tongue, Forgetting, is such behaviours that Freud considered as a vain attempt to oppose an underlying resistance caused by repression.

Erikson (1993) and Sullivan (1968) proposed interpersonal and social relationships are fundamental, Adler (1989) proposed power, while Jung (1953) proposed temperament and search for soul or personal meaningfulness.
**Humanistic Theory:**

Abraham Maslow (1954) gave a hierarchy of human needs based on two groupings, deficiency needs and growth needs. Each lower need must be met before moving to the next. According to Maslow, an individual is ready to act upon the growth needs of Self–actualization.

- Maslow’s Hierarchy of Needs
  - Physiological Needs
  - Safety Needs
  - Love and Belonging Needs
  - Self-Esteem Needs
  - Self-Actualization Needs

- People try to become the person they believe they are capable of becoming.

![Maslow’s Hierarchy of needs](image)

**Figure-1**

**Maslow’s Hierarchy of needs**

**Social Learning Theory:**

**Social** Learning theories suggest that Modeling (imitating others) and vicarious learning (watching others have consequences applied to their behaviour) are important motivators of behaviour.
• Vicarious Learning- Many patterns of behaviour are learned by watching the behaviours of others and observing its consequences for them. Theorists emphasize the role of models

• Self regulatory processes- A specific behaviour produces an external outcome but it also produces a self evaluative reactions. People set their own standards of conduct and respond to their behaviour in self satisfied or self critical ways. Thus reinforcement has two sources, external and self evaluative.

• Developing procedures whereby people can control their own behaviour by self reinforcement or self punishment e.g. in alcohol or over eating habits.

Bandura (1986, 1997) highlights the self efficacy - the belief that a particular action is possible and that the individual can accomplish it and self regulation - the establishment of goals, the development of a plan to attain those goals, the commitment to implement that plan, the actual implementation of the plan and subsequent action of reflection and modification or redirection.

**MOTIVATION FOR CHANGE**

*Motivation can be understood not as something that one has but rather as something one does. It involves recognizing a problem, searching for a way to change, and then beginning and sticking with that change strategy. There are, it turns out, many ways to help people move toward such recognition and action* (Miller, 1995).

Prochaska and DiClemente, 1984 given the following stages of change:

- **Precontemplation:** Entry point to the process of change. Person is not yet considering the possibility of change. Does not see
themselves as having a problem. *Therapeutic tasks:* Provide information and feedback to raise awareness of the problem and the possibility of change; raise doubt; increase perception of risks and problems.

- **Contemplation:** Characterized by ambivalence; both considers and rejects change. Seesaws between reasons to change and reasons to stay the same. *Therapeutic tasks:* Tip the balance in favor of change; evoke reasons to change; risks of not changing; strengthen client’s belief that change is possible.

- **Preparation:** Characterized by accepting the need to change; to do something about the problem. At this point, either enters into action or slips back into contemplation. *Therapeutic tasks:* Help the client determine the best course of action to take in seeking change. Help find a change strategy that is acceptable, accessible, appropriate and effective.

- **Action:** The person is engaging in particular actions to bring about change (e.g., treatment). The goal is to produce change in the problem areas. *Therapeutic tasks:* Help the client take steps toward change.

- **Maintenance:** Maintaining the changed behavior; avoiding the problem behavior. The challenge is to sustain the change accomplished by previous action and to prevent relapse. *Therapeutic tasks:* Help the client to identify and use strategies to prevent relapse.

- **Relapse/Recycle:** A reversion back to problem behavior. Normal, expected occurrences as a person seeks to change any long-standing pattern. *Therapeutic tasks:* Help the client to renew the process of contemplation, determination, and action without becoming stuck or demoralized because of relapse.
The clinician practices motivational interviewing with five general principles in mind:

- **Express empathy through reflective listening.**
  Empathy "is a specifiable and learnable skill for understanding another’s meaning through the use of reflective listening. It requires sharp attention to each new client statement, and the continual generation of hypotheses as to the underlying meaning”. (Miller & Rollnick 1991) An empathic style
  - Communicates respect for and acceptance of clients and their feelings
  - Encourages a nonjudgmental, collaborative relationship
  - Allows you to be a supportive and knowledgeable consultant
  - Sincerely compliments rather than denigrates
  - Listens rather than tells
  - Gently persuades, with the understanding that the decision to change is the client’s
  - Provides support throughout the recovery process

- **Develop discrepancy between clients' goals or values and their current behavior.**
  - Amplify cognitive dissonance.
  - Difference between where one is and where one wants to be.
  - Awareness of consequences is important.
  - Encourage client to present reasons for change.
  - Elicit self-motivational statements.

- **Avoid argument and direct confrontation.**
  - Arguments are counterproductive.
  - Defending breeds defensiveness.
  - Resistance is a signal to change strategies.
  - Labeling is unnecessary.
New perspectives are invited, not imposed.

Clients are valuable (best?) resource in finding solutions.

  o Adjust to client resistance rather than opposing it directly.

Momentum can be used to good advantage.

Perceptions can be shifted.

New perspectives are invited but not imposed.

The client is a valuable resource in finding solutions to problems.

  o Support self-efficacy and optimism

Belief in the possibility of change is an important motivator.

The client is responsible for choosing and carrying out personal change.

There is hope in the range of alternative approaches available.

Motivation for change and OCD

Although patients usually dislike having OCD and look forward to a life that is not ruled by obsessions and compulsions, the prospect of facing feared situations and abstaining from rituals to achieve this goal may overshadow their desire to engage in treatment. Other patients may be ambivalent or unmotivated to seek treatment for OCD, and deny that they have a serious problem. Still others may adopt a hopeless outlook, believing that no treatment can help them. Thus, role of the therapist is to bolster the patient’s motivation to begin and continue with ERP.

There are three critical components of motivation: readiness, willingness, and ability.

Willing: The importance of change

The degree of discrepancy between status and goal, between what is happening at present and what one values for the future. Discrepancy is a key concept within self-regulation theory (Brown 1998; Kanfer 1986; Miller and Brown 1991), which postulates an ongoing self-
monitoring process much like that of a thermostat. As long as present reality is found to be within desired limits, no change is indicated. When an out-of-range value is detected, however, a change process kicks in. It is when things are sufficiently discrepant from the desired or expected ideal that motivation for change begins.

A low level of perceived importance is sometimes viewed as pathology, as being “resistant” or “in denial.” A lack of sufficient discrepancy to motivate action is a normal stage in the process of change. To instigate change, is to develop discrepancy: to enhance the perceived importance of change.

**Able: Confidence for change**

Sometimes a person feels willing but not able to change. “I wish I could” captures this combination of high importance and low confidence. Given sufficient importance, if people find an avenue for change that they believe will work (general efficacy) and that they believe they can do (self-efficacy), they will often pursue it through behavior change. If a person becomes alarmed by a discrepancy but perceives no way to change, however, then something else happens. Instead of changing behavior, people reduce their discomfort by shifting their thought processes and perceptions in a way that is often called “defensive.” The classic “defense mechanisms” described by Anna Freud echo these patterns: denial (“It’s not really so bad”), rationalization (“I didn’t want it anyway”), and projection (“It’s not my problem, it’s theirs”).

**Ready: A matter of priorities**

“It’s not the most important thing right now.” Assuming the presence of adequate importance and confidence, this third dimension, readiness, has to do with relative priorities: “I want to, but not now.”

**What trigger change?**

Punish undesired behavior, and withdraw the pain when the unwanted behavior stops. People would be motivated to change, then, by
causing them to feel enough discomfort, shame, guilt, loss, threat, anxiety, or humiliation.

Instead, constructive behavior change seems to arise when the person connects it with something of intrinsic value, something important, something cherished. Intrinsic motivation for change arises in an accepting, empowering atmosphere that makes it safe for the person to explore the possibly painful present in relation to what is wanted and valued.

**Ambivalence: “I want to, but I don’t want to” dilemma**

Ambivalence can be a key issue that must be resolved for change to occur. One reason that brief interventions may work is precisely that they help people get unstuck from their ambivalence— they enable a person to make a decision and move on toward change. In this way, the “lack of motivation” that so often frustrates the work of health professionals, counselors, and teachers can be thought of as unresolved ambivalence.

To explore ambivalence is to work at the heart of the problem of being stuck.

In the *approach–approach* conflict, the person must choose between two similarly attractive alternatives. An *avoidance–avoidance* conflict, in contrast, involves having to choose between two evils—two (or more) possibilities, each of which involves significant fear, pain, embarrassment, or other negative consequences.

The *approach–avoidance* type conflict includes where the person is both attracted to and repelled by the same object.

*Double approach–avoidance* type, wherein a person is torn between two alternatives (lovers, lifestyles, etc.), each of which has both enticing positive and powerful negative aspects. As the person moves closer to option A, the disadvantages of A become more salient and the advantages of B seem brighter. When the person then turns and starts
moving toward B, the down sides of B become clearer and A starts looking more attractive.

Instead of focusing, then, on why a person doesn’t want to make a particular change, it is sensible to explore what the person does want. This is not to ignore the topic of change. Rather, it provides a context for change. Sometimes a behavioral course adjustment does not occur until people perceive that change is relevant to achieving or preserving something that is truly important or dear to them.

There are many possible factors that can lead to poor adherence (Foa, Steketee, Grayson, & Doppelt, 1983), including patient factors (eg, comorbidity, poor insight, and anxiety sensitivity), therapist factors (eg, lack of empathy leading to poor therapeutic alliance), and situational factors (eg, lack of time or money).

To help therapists accomplish this aim, Maltby, Tolin, and Diefenbach (2002) have developed a four session readiness intervention for fearful patients who initially decline ERP. This program consists of psycho education (to raise awareness or insight about the development & maintaining mechanisms of illness), a videotape example of an ERP session (vicarious learning to reduce catastrophic fears), motivational interviewing techniques (Express empathy, Develop discrepancy, Roll with resistance, Support self-efficacy) (Miller & Rollnick, 1991), and a phone conversation with a former ERP patient (to enhance self efficacy and hope). Preliminary data from a study on the effects of this program (N = 12) indicate that 71% of patients subsequently chose to begin ERP, whereas only 20% of patients in a wait-list condition entered ERP.

Preparing patients to accept and persist with treatment in the face of their uncertainty about it remains an informal aspect of ERP. Psycho education from an expert (the therapist), as a means to facilitate acceptance of the proposed maintaining factors for OCD, and therefore logically lead to the recommended treatment via ERP. Many clinicians
working with OCD also advocate providing patients with data supporting the efficacy of ERP, summarizing the existing treatment outcome literature (Steketee, 1993, p. 96). Although there is some research demonstrating the benefits of providing a treatment rationale (Marcia, Rubin, & Efran, 1969; McReynolds & Tori, 1972; Oliveau, Agras, Leitenberg, Moore, & Wright, 1969).

According to Petty and Cacioppo (1986) persuasion via the central route depends upon argument strength, and involves critical consideration of the validity and strength of the arguments presented. The “peripheral route” of persuasion, which is less direct, and involves decision heuristics and relevant incidental cues, such as the attractiveness of the presenter, the perceived authority of the presenter, reactions of others, or the number of arguments presented.

**Therapist role**

**Educational** functions of the therapist include ensuring that the patient has a thorough understanding of OCD, ERP, and the rationale for treatment. Typically, this involves teaching the patient a cognitive-behavioral model of the disorder. Such understanding is generally considered a critical prerequisite to successful treatment.

Exposure and response prevention is a challenging treatment, and many patients require a great deal of support and encouragement during this process. Certainly one’s family and friends can be an important source of support.

An individual who fears contracting diseases from public bathrooms may be expected to conduct exposures to touching toilets and then rubbing his/her hands over his/her body. As might be expected, many patients are initially reluctant to complete this exercise, even after completing other exercises successfully. The therapist can demonstrate the appropriateness and acceptability of such exposures by completing them with the patient.
“This is pretty disgusting and I feel very dirty, but I also know that this is unlikely to hurt me”). Therapists must walk a fine line in these cases, taking care not to provide compulsive reassurance via their **modeling**.

**Insight theories**

**The Gastalt perspective of Insight**

Gastalt Psychology challenged the mechanistic structural units of consciousness. Instead the whole was viewed as different from the sum of its parts. The objection held by psychoanalytic psychologists was different. They argue that the validity of using the contents of consciousness as the object of inquiry was compromised because such contents were inherently unstable and distorted by unconsciousness mental processors.

The main underlying principle of Gastalt theory was that the whole was greater than the some of its parts. For example Melody (the Whole) consisting of separate tones (individual elements). When the tones were played in a different key, the melody could still be recognized as a particular melody but that when the same tones were played in a different sequence the melody was no longer recognizable. Thus, it was not just some of the individual elements (tones) that were important in the perception of the whole (melody) but the relation of such elements to each other (i.e. their organization) that was important in the perception of the whole melody. Werthiemer, Kohler & Koffka developed the Gastalt principles.

The concept of insight within Gastalt perspective is very different in terms of content and specificity as compared to General Psychiatry. Essence of insight lies how the individual (or animal) grasp or understand a specific situation in a particular way. Thus it is not just
understanding of a situation or problem but it is a ‘genuine’ or ‘productive’ understanding that is based on appreciation of the functional inner relatedness of the parts of the structure of a situation (Werthiemer, 1945, 1961). Kohler applied this concept to study the intelligent behaviour of chimpanzees that whether they could find solution to certain problems that could be based on insight or on chance or trial and error learning. One task involved placing fruit within sight but just out of reach of the chimpanzee. There was a small stick in the cage with the animal but this was not long enough to reach the fruit. Outside the cage there was placed a longer stick which was out of reach of the animal but could be pulled within reach by means of the smaller stick. In turn the longer stick could then be used to reach the fruit. The sudden occurrence of perfectly clear and definite solutions, is reflecting the presence of insight in animal (Köhler, 1924/1957).

So, definition of insight in Gastealt Psychology include as a form of intelligent behaviour or thought characterized by a sudden, rapid, smooth and directed process through which a particular objective is attained.

**The meaning of insight**

The researchers define insight very specifically, as the sudden unexpected solution to a problem (e.g. Schooler et al, 1995). The suddenness specifies an abrupt emergence of the solution event, the unexpectedness refers to the surprise element of the event or change and the solution to a problem delineates the discreteness of the event, implying both the particular task accomplished and a time limited episode. Alpert, Hartmann (1931) emphasized the importance of suddenness, arguing against the concept of partial or gradual insight. So suddenness includes gestalt ‘aha’ experience. This feature contrast particularly with the general psychiatry notion of insight that take
insight as a knowledge of problems that develops gradually over unspecified length of time. Smith, 1995 distinguishes between insight as an ‘understanding’ and an insight experience as the sudden emergence of an idea into conscious awareness, the aha experience. Gruber 1995 distinguishes between insight as ‘problem solving’ which include the suddenness criterion, and an insight as ‘understanding’ which focuses on knowledge or self knowledge rather than the moment of its attainment. Gick & Lockhart 1995 specifies that suddenness and surprise relate only to the effective and to the cognitive component of insight. Problem solving itself is a fundamentally different approach to a meaning of insight as compared to the meaning in the clinically disciplines. Insight in Gestalt directed at the solution of an external problem i.e. insight is equivalent to awareness of understanding a particular set task outside of the individual. On the other hand insight in the clinical disciplines is directed at the understanding of something happening within the subject i.e. insight is equivalent to awareness and understanding of changes happening within an individual.

Stages and mechanisms underlying insight

- **A mental preparation**: where the problem or situation is first confronted and where unsuccessful attempts at solving take place.

- **Incubation**: where the problem is put aside temporarily. Underlie mechanism proposed to this stage as unconscious processing or contextual change i.e. being away from the problem situation can help remove the block (functional fixedness) to solution (Seifert et al, 1995, Smith, 1995).

- **Illumination**: When suddenly and unexpectedly the solution is found, accompanied by the subjective feeling of satisfaction or (‘Aha experience’).
• **Verification**: Where details of the problem solution are worked out and tested.

**Psychoanalytic viewpoint**

The concept of insight held a central position as an integral component of psychoanalytic psychotherapies. Search for a deep self knowledge was inherent to the method of psychoanalysis itself and essential to therapeutic change (Freud 1973a, b). Fundamental difference of Psychoanalytic viewpoint in the concept of insight from Gestalt and General psychiatry lies in the ‘depth’ of self knowledge. In psychoanalytic terms the depth refers to level of understanding that an individual can develop in relation to his or her mental processes and this self knowledge can thus relate to conscious, preconscious and / or sub conscious mental processes. So deepest level of knowledge to knowledge of unconscious mental processes as Freud stated ‘our therapy works by transforming what is unconscious into what is conscious’ (Freud, 1973, p.321).

**The concept of Insight**

Psychoanalytic concept of insight define insight as a knowledge of one’s unconscious or partially conscious mental processes, later, it encompasses instinctual derives, resistances and defense mechanisms, thought to underlie personality structure particularly neurotic manifestations (Fenichel, 1945). Questions were asked about the meaning and nature of insight in terms of the *content* of knowledge involved, the *way* in which the knowledge was attained and the *consequences* of such knowledge. Neubauer (1979, p.29) defines insight during psychoanalysis as; the expansion of the ego by self observation, memory recovery, cognitive participation and reconstruction in the context of affective reliving. Freud differentiated between intellectual and
emotional insight by ‘knowing but not knowing’—as the intellectual understanding of the repressed (i.e. distant, non involvement of the self with the unconscious) and emotional understanding which was attained through the direct (experiential) struggle with the repressed in the transference reaction (Hatcher, 1973). Richfield, 1954 argued that recognition of such unconscious processes on the part of the patient did not necessarily lead to a change in neurotic behaviour. He proposed that it was not the content of the knowledge that was essential to the therapeutic effect of insight but the form in which this knowledge was experienced. In contrast to the Gastalt notion of suddenness, there is much greater emphasis on conceptualization of insight as a long gradual process in which insight is gained in slow increments (Hatcher, 1973; Abrams, 1981; Mangham, 1981; Segal, 1991).

Abrams 1981 proposed empirical components to ‘insight producing activity’ those were common to both cases. These include the following:

1. Attention, initially diffuse but becoming more focused.
2. Distinct emotional tone, appropriate to the ideas.
3. Recognition of link between different components (e.g. dreams or memories).
4. Free movement within time periods, due to awareness of the meaningful relationship between past and present.
5. A sense of inner unity within the patient.
6. At moment of discovery, a recognition that something new has happened.

According to Stanley B. Messer and Nancy McWilliams (2007, p.21) all of the following are considered indications of insight:
1. Recognition of patterns or connections—The patient comes to see a link between current and past relationships, between two or more current relationships, between the transference relationship and a significant
other, or between how others have treated the patient and how he or she treats him or herself (i.e., internalizations). For example, a patient came to recognize that her passive behavior with the male therapist paralleled her behavior with her boyfriend. This passive behavior, in turn, stemmed from her response to her highly critical father, whom she feared.

2. Ability to observe one's own internal processes, personality, or psychopathology—the presence of insight is suggested when patients are able to distance themselves enough from their problems to observe them. For example, a patient may realize that she is being defensive in the midst of a session, or that he is repeating a pathological identification by being excessively compliant.

3. Revision of pathological beliefs—Insight is also working when the patient begins to question and revise pathological beliefs. For example, the patient may say, "Maybe it's not really my fault that my mother is so depressed," or "Perhaps it is possible to experience feelings without anything catastrophic happening."

4. Recognition of motivations of the self—the patient may come to a new understanding about his or her motives. This may involve a recognition of wishes being expressed, fears that are involved, or the defensive function of behavior. For example, a patient came to understand that he avoided writing because he was afraid to find out that he had no talent.

5. Recognition of motivations of others—Insight is indicated when the patient shows fresh understanding about the motives and feelings of significant others or a change in his or her perception of others. For example, a patient who continually blamed her mother for her misfortunes gradually became aware of her mother's good intentions. Beliefs about the motives of others must be accompanied by evidence or examples that support the veracity of the attributions.
According to Stanley B. Messer and Nancy McWilliams (2007, p.22) in deciding on the degree of insight, the following criteria are used:

1. **Historical significance**—Other things being equal, insight into patterns involving important figures from childhood is rated higher than insight involving only current relationships.

2. **Motivation of the self**—Other things being equal, insight into motivations of the self are rated higher than insight into motivations of others.

3. **Centrality**—Insight that relates to issues that are central to the patient’s presenting complaints is rated higher than insight related to tangential issues.

4. **Depth**—Insight may vary on how close it gets to the core of a presenting problem.

5. **Conviction**—Sometimes an insight will be stated tentatively before it is fully accepted. This would be rated lower than an insight that is fully accepted.

**Neuropsychological perspective**

Babinski (1914) coined the term ‘anosognosia’ to refer to the unawareness or denial of hemiplegia seen in patients following a stroke. This term been also used in patients with other neurological syndromes like cortical blindness, aphasia, amnesic syndromes, dementia, tardive dyskinesia and deficits seen following head injury and others (Rubens & Garrett, 1991; Reed et al., 1993; Myslobodsky, 1986).

The patient behaves as though he knew nothing about his hemiplegia, as though it had not existed, as though his paralyzed limbs were normal, and insists that he can move and walk as well as he did before.”
Concept of insight in neurological model involved more specific and fairly narrow meaning of unawareness of particular impairment. The concept is much closer to the notion of a lack of consciousness of a problem or a *loss of perception*. Patients cannot perceive his disability i.e. he is not interpreting correctly his sensations.

In neurological disorders, neuroanatomically based theories of anosognosia can be broadly divided into those that attribute this deficit to focal brain lesions, and those that attribute it to diffuse brain damage (McGlynn SM, Schachter DL.1989). Regardless of the aetiology, one thing is certain: Anosognosia in neurological disorders arises directly following injury to the brain (Amador et al 1991).

**ATTRIBUTIONS THEORIES**

Baron and Byrne (1997) define causal attribution as: The process through which we seek to identify the causes of others’ behaviour and so gain knowledge of their stable traits and dispositions (p. 50).

**Theories of attribution**

*Correspondent inference theory*

The correspondent inference theory of Jones and Davis (1965) is solely concerned with the conditions under which we make dispositional (internal) attributions of another person’s behaviour. Jones and Davis (1965) state that information is required about five factors in order to make correspondent inferences. First, the person’s behaviour must be voluntary and chosen freely; we cannot infer much about behaviour that somebody had little choice over since it is likely that most people would behave in the same way. Second, does the behaviour produce *non-common effects*? This means is there something about the consequences of the behaviour that is unexpected or a specific outcome of only that behaviour.
Third, for a dispositional inference to be made the behaviour should not be seen as socially desirable. When a person does something that is against norms or conventions you can usually be sure that it reflects something about the person. Socially desirable behaviour does not single out one person from another, since the desire to please other people often overrides how we are as individuals (Baumeister and Leary, 1995). Fourth, if somebody else’s behaviour has an impact on the person making the attribution it is said to have hedonic relevance. Hedonic relevant behaviour is intended to affect, positively or negatively, the person making the attribution: it is said to have personalism. Again, personally relevant behaviour will lead to dispositional or correspondent inferences being made.
The covariation model

The covariation model of Kelley (1967) has wider use than the correspondent inference model since it accounts for both dispositional (internal) and situational (external) attributions, as well as special circumstance attributions. It is called the covariation model since Kelley claims that three types of information are used, and how these covary determines the type of attribution made. The three types of information are consistency, distinctiveness, and consensus, and each can have a high or low value.

A circumstance attribution is made when distinctiveness is high, consistency low and consensus low.

Numerous empirical studies have lent support to the covariation model (McArthur, 1972; Cheu et al., 1988), however consensus information seems to be the least used by people when making attributions (Kruglanski, 1977). Making a causal attribution on the basis of consistency, distinctiveness and consensus information demands considerable effort or deliberative thinking on the part of the individual. Sometimes not all three types of information are available and at other times we may be simply too busy to give sufficient attention to inferring a cause. Baron and Byrne (1997) claim that situations where an unexpected event or behaviour occurs, and unwanted, negative outcomes result, are most likely to lead a person to use these three types of information. That is, everyday, common events do not evoke the use of these types of information. However, there will be occasions when consistency, distinctiveness and consensus information are not available. This is especially the case when we observe one-off or single instances of behaviour and so do not have information about how the person has behaved in the past.

Kelley (1972) stated that for single instances people rely on either a discounting or augmenting principle to make a causal inference. The discounting principle is ‘the tendency to attach less importance to one
potential cause of behaviour when other potential causes are also present’ (Baron and Byrne, 1997).

The augmenting principle is ‘the tendency to attach greater importance to a cause if the behaviour occurs in the presence of inhibiting factors (Baron and Byrne, 1997).

Kelley’s covariation model may have a limited range of application since the three types of information are not always available to the attributor.

Kelley (1972) developed the idea of causal schemas to explain how we make attributions in the absence of detailed information or for a single event.

**Causal schemata model**

A causal schema is ‘a general conception the person has about how certain kinds of causes interact to produce a specific kind of effect’ (Kelley, 1972). This means that our past experiences of causes and their effects allow us to develop abstract generalizations that can then be applied to a specific event. One such abstraction is the ‘multiple necessary causes schema’, which is when we know from previous experience that at least two causes must be present. Causal schemas are generally regarded as important because they allow attributions to be made in the absence of detailed information. They also represent underlying ideas that we have about cause-effect relationships and may reflect stereotypical views. A further advantage is that causal schemas allow an individual to make an attribution quickly and with little cognitive effort. However, these strengths are also weaknesses since a ‘snap’ judgement about the cause of someone’s behaviour may be incorrect or biased. In more extreme cases a causal schema may reflect prejudicial opinions. In the end causal schemas may reflect little more than prevailing stereotypes and attitudes that are held by society or a sub-culture at a specific time.
Weiner’s model of attributions for success and failure

In making a causal attribution for success or failure (achievement) Weiner claims that we use three dimensions to produce a range of different causes to explain achievement. These three dimensions are locus, stability and controllability. **Locus** refers to whether the achievement is more to do with the person (internal) or situation (external). **Stability** is to do with whether the internal or external factor is stable that is enduring and likely to be present in the future, or unstable. If it is unstable then it may only apply to one situation and hence not be present at other times. **Controllability** concerns the extent to which the person believes or perceives his or her performance to be under personal control.

<table>
<thead>
<tr>
<th>Task Performed</th>
<th>Judgement</th>
<th>Emotional reaction</th>
<th>Causal attribution</th>
<th>Expectation for failure</th>
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**Figure-3**

<table>
<thead>
<tr>
<th>Internal</th>
<th>External</th>
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<tbody>
<tr>
<td>Stable</td>
<td>Unstable</td>
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<tr>
<td>Stable</td>
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<thead>
<tr>
<th>Controllable</th>
<th>Typical effort</th>
<th>Special effort</th>
<th>Help or hindrance from others</th>
<th>Special help or hindrance from others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncontrollable</td>
<td>Ability</td>
<td>Mood</td>
<td>Task difficulty</td>
<td>Chance or luck</td>
</tr>
</tbody>
</table>

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Weiner (1995) has developed this model to encompass attributions of responsibility and blame. It is relatively easy to see that if we attribute the cause of behaviour underlying an incident (for example, a motor car accident) to internal, controllable and either stable or unstable causes, then we are going to hold the driver responsible for the incident and its consequences. Weiner’s model of attribution for success and failure has received widespread empirical support in many different contexts, but particularly in education and the law. Social psychologists have, however, questioned how important the dimension of controllability is in relation to that of locus and stability (Fiske and Taylor, 1991). One of the enduring strengths of the model is that it shows how attribution and emotional response may be linked.

The attribution approach is modeled on the idea that people operate like naïve scientists (Heider, 1958). This implies that people are seen to be systematic, rational and logical in the way causes are attributed to behaviour. Much evidence has been accumulated across social psychology which seriously questions this assumption. For example, in attitude research it has been shown that people often defend the attitude they hold when evidence tells them that they are wrong to do so. Likewise in attribution research people are often biased or make errors in causal explanation.

**Rotter’s (1966) work on locus of control.**

Rotter (1966, 1982) distinguished between internal and external locus of control. His work developed from a behaviourist tradition, whereby people with an internal locus of control believe they have personal control over rewards and punishments that they receive. By contrast, people with an external locus of control believe that things happen to them and they have little or no control over the rewards and punishments they experience. Translating this into the language of attribution, people with an external locus of control will attribute causes of events in their lives to luck, fate or the actions of powerful others. This
means that externals perceive little relationship between their own behaviour and efforts and what happens to them. This has parallels with Weiner’s (1986) dimension of controllability since, for example, in both Weiner’s and Rotter’s models attributing failure in an examination to bad luck (the wrong questions came up) is external and not in the control of the person. People who show an internal locus of control personality will see, for example, success in an examination as due to the effort they put in when revising prior to the examination. Research on locus of control has shown that those who score as internal tend to achieve better in education (Mooney et al., 1991). However, people who score very high as internals over-attribute failure to themselves (Phares, 1976) and perceive other people as being more responsible for their actions than is warranted. One consequence of this may be that internals are less sympathetic and severe in their judgments about others who do wrong. Research has shown that as people get older they tend to become more internally orientated (Lefcourt, 1982). A word of warning, however, in that you can be too far up the internal or external end of the scale. For example, Smith et al. (1983) showed that those scoring as very high internals may become what we call ‘control freaks’. Here such people have unrealistic beliefs about how much they can control their behaviour. At the other extreme, very high scores on the external side may reflect low self-esteem and high levels of anxiety in a person (Holder and Levi, 1988).

As we have seen, there are parallels between Rotter’s idea of locus of control and Weiner’s dimension of controllability. A questionnaire widely used to investigate how those suffering depression attribute the causes of events is the attribution style questionnaire (Seligman et al., 1979). A depressive attribution style is characterized by making external and uncontrollable explanations for events. This leads to feelings of helplessness with an associated perception that however hard you try you cannot change things.
COPING THEORIES

A person-based approach

The study of coping has its roots in the recognition that there are individual differences in reactions to stress that is, similar stresses may have varying effects on different people. The purpose of studying coping strategies is to understand why people differ so greatly in their responses to stress and how differing responses relate to well-being.

The theoretical orientation of a researcher or clinician directs the types of factors that he or she considers in studying influences on coping. Simply put, a clinician will focus on such person factors as personality characteristics, values, and commitments if he or she believes that the origin of coping strategies lies with the person. The astute observer will note that a strictly person-based approach implicitly assumes environmental constancy—namely, that all of the individuals in the cited example are responding to the same situation, a reprimand from the supervisor. A situation-based approach would argue that environmental demands or situational characteristics evoke differing coping strategies. This approach argues that stimulus characteristics need to be considered. For example, we do not know whether the reprimand is justified. If it is, acknowledgment is appropriate; however, if it is not, anger may be understandable.

A person-based approach assumes that person → coping. A situation-based approach assumes that situation → coping. The interactionist approach that most stress and coping researchers accept is that the person + the situation → coping. there is a fourth approach: the transactionist approach. In this instance, the person, situation, and coping mutually affect one another in a process that evolves over time. This approach requires a larger, or more contextual, view of the situation and specifies that coping behavior may change in response to its effects on the situation (Lazarus & Folkman, 1984).
Psychoanalytic Traditions

The study of coping strategies has its roots in psychoanalytic descriptions of defense mechanisms, which are directed primarily toward internal conflicts. According to Anna Freud (1966), defense mechanisms are the ways in which the ego wards off anxiety and exercises control over impulsive behaviors, affects, and instincts. Basically, anxiety arises from unconscious conflicts between the id and the superego. The ego, with its primary emphasis on reality testing and mediation between environmental and internal demands, tries to defend against this overwhelming anxiety by distorting reality or metamorphosing instinctual demands.

Defense mechanisms are manifested primarily as symptoms and are characterized by automatic, rigid reactions. Anna Freud (1966) identified several major defense mechanisms, including suppression, denial, projection, reaction formation, hysteria, obsessive–compulsive behaviors, and sublimation. Suppression and denial involve varying forms of the refusal to acknowledge an event or feelings. In this model, the type of coping behavior used has very little to do with either the actual environmental stimulus or what the individual does to solve the problem. Rather, the focus of defense mechanisms is to regulate emotions—to reduce anxiety by whatever means possible.

Thus, behaviors, feelings, and cognitions evoked by a stressful situation are determined by the individual’s personality structure, which was developed in early childhood and is thus not readily mutable.

Shapiro (1965) posited that people can become characterized by their predominant use of a particular mechanism. Shapiro focused on four major styles. The obsessive–compulsive style is characterized by rigidity, distortion of the experience of autonomy, and the loss of reality. Paranoids also suffer from a loss of reality but are primarily characterized by suspicious thinking. The hysterical style is characterized by both repression and hyper emotionality, while the
impulsive style is characterized by rapid, thoughtless action and a lack of planning. One limitation of this approach is that it focuses primarily on poor adaptation—individuals who are thought of as “neurotics.” Several psychoanalytic thinkers have attempted to circumvent this approach by suggesting adaptive hierarchies.

One problem with understanding coping efforts primarily in terms of defense mechanisms is that these mechanisms are, by definition, maladaptive in that they distort reality. However, most of us are not that maladaptive—at least most of the time. Vaillant (1977) attempted to deal with this limitation by redefining defense mechanisms in terms of adaptive styles, with the explicit assumption that some defense mechanisms can be healthy and adaptive.

Although Vaillant recognized that adaptation requires people to “alter themselves and the world around them” (1977, p. 13), he concentrated on the regulation of emotion and the preservation of ego integrity. He broke from traditional psychoanalytic theory in recognizing that the use of defense mechanisms is not inherently pathological but serves to maintain ego integrity under difficult circumstances. The higher categories, however, are considered more effective and adaptive than the lower ones. The American Psychiatric Association now describes defenses primarily in terms of Adaptive Hierarchies (Cramer, 2000).

Vaillant identified four levels of defense mechanisms: projective, immature, neurotic, and mature. The hierarchy is based primarily upon how much distortion of reality is involved in each mechanism, with the lower mechanisms involving more distortion

Haan (1977) sought to integrate the idea of adaptive processes with defense mechanisms in a largely psychodynamic framework. In contrast to Vaillant’s approach, however, Haan maintained that defense mechanisms are inherently pathological and constructed a hierarchy of
adaptation based upon the extent to which the strategies used reflect conscious or unconscious processes. She identified 10 basic, or generic, ego processes that can be expressed in three modes. The first mode, coping, is conscious, flexible, and purposive, and permits moderate expression of emotion. The second mode, defensive, is compelled, negating, and rigid and is directed toward anxiety rather than the

<table>
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<tr>
<th>Vaillant’s Hierarchy of Defensive Mechanisms</th>
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<td><strong>Level I. Projective Mechanisms</strong></td>
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<td><strong>Level II. Immature mechanisms</strong></td>
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<td><strong>Level III. Neurotic mechanisms</strong></td>
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<td><strong>Level IV. Mature mechanisms</strong></td>
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problem. The third mode, fragmentation, or ego failure, most clearly distorts “inter-subjective reality” and is automated, ritualistic, and irrational. If the situation is not very stressful, the ego will cope, which is described as being purposeful, flexible, adhering to inter-subjective reality, and permitting affective expression. But under stressful circumstances, the ego preserves integrity by greater or lesser distortion of reality. Defensive strategies are compelled, negating, rigid, and are directed toward anxiety rather than toward the problem. Fragmentation most clearly distorts inter-subjective reality. It is automated, ritualistic, and irrational, and adheres to privatistic (e.g., idiosyncratic) formulae.

Successful ego processes are not defined by their content or effects, but are defined a priori by which processes are used. However, these modes are not orthogonal; Haan admits that generally a mixture of coping and defensive strategies is used. Development consists of gaining progressive control over behavior, shifting from defensive to coping modes. She believes that people can use rational, coping modes when not under too much stress and defensive modes when the stress is too great—an extension of classical Freudian hydraulics. However, as can be noted by any casual observer, people can and do act in a rational, focused manner under situations of extreme environmental demand during combat and disasters, for example (Vaillant have argued that defensive processes are not necessarily pathological. For example, under certain limited circumstances, denial can have beneficial effects by granting a brief respite that allows an individual to gather strength (Lazarus, 1983) However, developing scales or quantitative indices of defense mechanisms may be more problematic. Both Haan (1977) and Bond, Gardiner, Christian, and Sigel (1983) have developed scales that purport to assess defense mechanisms. However, Cramer (2000) has been fairly critical of these attempts, arguing that there is a logical problem in their basic premise—if defense mechanisms are unconscious, how can people report them using a self-report inventory? It is true that,
in retrospect, some people may realize that they were denying or projecting, but my guess is that most do not. Indeed, the psychometrics on these scales tends to be relatively poor (Cramer, 2000).

Millon (1982) stated: “Personality styles characterize the more or less everyday manner in which people approach the events of their lives. It is these typical ways of coping . . . that may contribute to illness and the manner in which individuals deal with it” (p. 11). Based on earlier work by Lipowski (1970) and Leigh and Reiser (1980), Millon described eight ways in which individuals characteristically deal with health problems. Individuals who use the introversive style of coping tend to be “emotionally flat,” using a cognitive coping style called minimization. These individuals tend to ignore, deny, or rationalize their problems and are often quiet and untalkative. They can be oblivious to the implications of their illness and primarily wish to be left alone. In contrast, individuals using the cooperative style follow advice religiously, as long as they do not have to assume responsibility for themselves. They need care and reassurance and may see illness as a “relief.” People using the sociable coping style tend to be talkative, outgoing, and charming, although undependable. They are disinclined to deal with serious problems, viewing illness as a strategy to gain attention.

In contrast to psychoanalytic conceptions, the perceptual style approach to coping focuses less on how individuals deal with emotions and more on how they deal with information. The earliest typology was called repression–sensitization (Byrne, 1964). Repressers were defined as individuals who avoid or suppress information, while sensitizers were individuals who seek or augment information. This dichotomy has appeared in the literature in many different guises, including non vigilant–vigilant (Averill & Rosenn, 1972), selective inattention–selective attention (Kahneman, 1973), reducers–augmenters (Petrie, 1978), blunting–monitoring (Miller, 1980; Miller & Mangan, 1983), and
rejection–attention (Mullen & Suls, 1982). Currently, the terminology most commonly in use is approach–avoidance (Roth & Cohen, 1986).

Lazarus et al. (1974) provided three major criticisms of the repression–sensitization typology. First, measures of repression–sensitization are highly correlated with anxiety. Second, there appears to be little consistency of perceptual style across situations. Finally, general measures of repression–sensitization do not predict actual coping behavior (Cohen & Lazarus, 1973), although situation-specific measures have been shown to be useful in particular circumstances (Miller & Mangan, 1983).

Horowitz (1976) and Lazarus (1983) have argued that individuals alternate between phases of denial and intrusiveness. Pennebaker, Colder, and Sharp (1990) refer to these types of coping theories as “stage models of coping.” For example, a violent trauma may first threaten to overwhelm the ego, and denial or blunting may serve a very useful purpose in protecting the individual. However, too much denial can prevent a person from taking appropriate action. Stroebe and Schut (1999, 2001) have proposed a Dual Process Model of coping, which proposes that individuals alternate between positive and negative appraisals, approach and avoidant coping, and so on.

Perhaps people use approach strategies in situations in which they have adequate coping resources and in which they feel comfortable in dealing with problems, and perhaps they are more likely to use avoidant strategies in situations with which they feel less comfortable. Thus, rather than coping styles per se, one could refer to approach–avoidance as coping modalities that are differentially used, depending upon the interaction or transaction between the person and the situation; only a few individuals may be consistently characterized by one or the other.

There is no doubt that personality influences both the appraisal of stress as well as the use of coping strategies within stressful situations (O’Brien & DeLongis, 1997; Watson, David, & Suls, 1999). In particular,
individuals high in neuroticism (emotionality) tend to report more stressful events and hassles, and they are more likely to cope in ways that increase emotional distress, such as the use of alcohol or other drugs, denial, and so on. However, it would be a mistake to simply reduce stress and coping processes to personality traits. For example, using longitudinal data, Aldwin et al. (1989) showed that emotionality, life events, and hassles, while interrelated, nonetheless contributed independent variance to psychological distress.

In general, personality accounts for more of the variance in emotion-focused coping than in problem-focused coping (Hooker, Frazier, & Monahan, 1994; Long & Sangster, 1993). This is supported by Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986), who assessed coping over five occasions. They found that emotion-focused coping was moderately stable, whereas secondary appraisal (and presumably problem-focused coping) was much more variable.

**Situational determinant approach**

In contrast to personality theories, proponents of the situational determinant approach to coping argue that the types of strategies that individuals use to cope with problems depend on environmental demands. That is, the characteristics of different types of stresses “pull for” different types of solutions and coping processes.

There is a fair amount of evidence showing that individuals do respond in varying ways to different types of stressors (Folkman & Moskowitz, 2004; Mattlin et al., 1990). There are a number of ways in which situations can be categorized. One way is to determine whether the situation has already had harmful effects (such as a loss), has the potential for future harm (e.g., entails a threat), or has potentially positive outcomes (i.e., it can be seen as a challenge) (Brown & Harris, 1978; Lazarus, 1966; McCrae, 1984). Alternatively, a researcher can classify the stressors according to their content types, such as illness,
death, interpersonal problems, or hassles (Billings & Moos, 1984; Folkman & Lazarus, 1980; Mattlin et al., 1990). The general research strategy is to ask individuals to relate multiple problems and compare coping responses across problems. Such studies are often longitudinal. Pearlin and Schooler (1978) categorized stressors according to five major social roles: work, marital, parental, household economics, and health. They found that distinctly different coping strategies are used in different social roles.

**Cognitive approaches to coping**

Cognitive approaches to coping are based on four assumptions. First, how an individual copes with a problem is largely dependent upon his or her appraisal of the situation. Generally, appraisal is considered to be a conscious evaluation of whether a situation is benign, threatening, involves a harm or a loss, or constitutes a challenge (Lazarus & Folkman, 1984). If a situation is benign, no coping is needed. Theoretically, a situation that is threatening or challenging will evoke attempts to solve or ward off the problem (problem-focused coping), whereas a situation that involves harm or loss will be more likely to evoke palliative coping, which attempts to decrease or assuage the negative emotions evoked by a stressor. Thus, in cognitive models, adaptation is conscious—that is, individuals appraise the type of problem and its severity and decide how to cope with problems based on prior experience. Second, cognitive approaches assume that individuals are flexible in their choice of coping strategies and modify their strategies according to the demands of the particular problem. That is, they assume some degree of situational specificity; individuals are not uniformly consistent in how they approach problems but rather take into account environmental contingencies. The term “coping styles” is anathema to such theorists, because it implies that coping is consistent—a function of personality—rather than a blend of personal preferences and environmental demands. Thus, cognitive theorists believe that one must tie any reports of coping strategies to a
particular problem. The third assumption is that coping efforts include both problem and emotion-focused strategies that are directed at the problem and at the emotions, respectively. Cognitive theorists do not attempt to arrange coping efforts hierarchically. Although controlling the emotions might facilitate efforts to solve or manage a problem, it is also likely that solving or managing a problem satisfactorily is one of the best ways of managing emotions. There is now little doubt that individuals consciously seek to regulate their emotions (Stanton & Franz, 1999), which has some very interesting implications for theories of adult development. In psychodynamic theories, affect is automatically regulated by the ego via the unconscious mechanisms of defense. By contrast, in the cognitive model, the self is actively and consciously trying to manage both internal and external processes.

**Hierarchy of adaptiveness**

Cognitive theorists do not assume a hierarchy of adaptiveness. Rather, they take an empiricist approach: The task is to identify which coping strategies are used in specific situations and the conditions under which the strategies do or do not promote positive adaptation. For example, rather than assume that denial is of necessity maladaptive, Lazarus (1983) described conditions under which denial can be a useful tool for example, by allowing individuals to maintain hope in seemingly hopeless situations.

Aspinwall and Taylor (1997) distinguished among coping strategies, anticipatory coping, and proactive coping. Coping strategies are active efforts to manage a stressful problem and the attendant negative emotions, while anticipatory coping are strategies used to mitigate an event whose occurrence is nearly certain (Folkman & Lazarus, 1985). For example, if one knows that a midterm examination is eminent; studying for this exam may decrease its perceived stressfulness and promote optimal performance. In contrast, proactive coping refers to more general “efforts undertaken in advance of a potentially stressful
event to prevent it or to modify its form before it occurs” (Aspinwall & Taylor, 1997, p. 417). This includes five stages:

1. **Resource accumulation.** This might be called “saving for a rainy day.” As mentioned earlier, the definition of stress includes situations that tax or exceed an individual’s resources. Resources may include both material and social “goods” as well as temporal resources—in other words, not overscheduling oneself so that there is time to deal with unanticipated problems. Our lab has been working on developing a proactive coping scale (Kelly & Aldwin, 2001; Kelly, Shiraishi, & Aldwin, 2003). Different cultures may have varying ideas of what types of resources are most important in coping with stress.

2. **Identification of potential stressors.** This involves the ability to screen the environment as well as to be sensitive to internal cues that something might possibly go wrong. Adolescents are particularly good at blithely ignoring the potential dangers inherent in a given environment or planned action, which may be one reason why they are so accident-prone.

3. **Initial appraisal.** Once having identified a potential problem, initial appraisal processes come to the fore, in which the individual tries to understand the potential import of the situation and its likelihood of occurrence.

4. **Initial coping efforts.** Having identified a potential problem, one can take action to try to forestall it.

5. **Elicitation and use of feedback.** The stage involves determining whether the event actually developed, whether or not preliminary efforts were effective, and what was learned about the stressor.

Schwarzer and Knoll (2003) proposed a slightly different schema. They identified four types of coping—reactive, anticipatory, proactive, and preventive. Reactive coping is used in dealing with a past or present stressor, while anticipatory coping is used to deal with a pending threat
that is likely to occur in the near future. However, they distinguish between preventive and proactive coping. Preventive coping is similar to Aspinwall and Taylor’s proactive coping, but Schwarz and Knoll (2003, p. 396) added a personal growth dimension to their conception of proactive coping. “Proactive coping reflects efforts to build up resources that facilitate promotion toward challenging goals and personal growth.

*Coping becomes goal management instead of risk management.* Individuals are not reactive but proactive in the sense that they initiate a constructive path of action and create opportunities for growth.”

**Religious Coping**

Many people pray when confronted with serious problems. Sometimes individuals used prayer as a source of problem-focused coping (e.g., asked for healing or for some other type of material aid), but sometimes it was emotion-focused (as when people simply found prayer comforting). At other times, it clearly involved an element of social support. Pargament, Koenig, and Perez (2000) hypothesized that religious coping has five key functions: meaning, control, comfort/spirituality, intimacy/spirituality, and life transformation. All religions offer a framework for the understanding and interpreting of events, whether one is trying to understand God’s will or how karma or *kismet* is affecting one’s life. Further, religion can provide at least the illusion of control in the face of uncontrollable circumstances. Taking comfort in “being in God’s hands” or taking refuge in Allah or the Lord Buddha can provide a sense of relief and peace even in extremely stressful circumstances. Religion may also foster intimacy or a sense of comradery with others.

In many ways, a religious community is a ready-made social support network. Most religions provide some sort of social safety net. Mormons divide their community into wards that provide material and emotional support to distressed members of their community; It would be a mistake to think that religious coping is uniformly beneficial,
however. Pargament et al. (2000) found that there was a negative aspect to religious coping. In particular, feeling as if God had abandoned them, was punishing them, or that they were being judged by others in the congregation not only led to worse outcomes but actually seemed to hasten death among seriously ill patients (Pargament, Koenig, Tarakeshwar, & Hahn, 2001).