CHAPTER 1

Obsessive Compulsive Disorder

Karen Rusa was a 30-year-old married woman and the mother of four children. Although she had been having anxiety-related problems for a number of years, she had never sought professional help prior to this time. During the preceding three months, she had become increasingly depressed; her family physician finally suggested that she seek psychological services.

For the past several months Karen had been experiencing intrusive, repetitive thoughts that centered around her children's safety. She frequently found herself imagining that a serious accident had occurred, and she was unable to put these thoughts out of her mind. On one such occasion she imagined that her son, Alan, had broken his leg playing football at school. There was no reason to believe that an accident had occurred, but Karen brooded about the possibility until she finally called the school to see if Alan was all right. Even after receiving reassurance that he had not been hurt, she was somewhat surprised when he later arrived home unharmed.

Karen also noted that her daily routine was seriously hampered by an extensive series of counting rituals that she performed throughout each day. Specific numbers had come to have a special meaning to Karen; she found that her preoccupation with these numbers was interfering with her ability to perform everyday activities. One example was grocery shopping. Karen believed that if she selected the first item (e.g., a box of cereal) on the shelf, something terrible would happen to her oldest child. If she selected the second item, some unknown disaster would befall her second child, and so on for the four children. The children's ages were also important. The sixth item in a row, for example, was associated with her youngest child, who was 6 years old. Thus, specific items had to be avoided to ensure the safety of her children. Obviously, the rituals required continuing attention because the children's ages changed. Karen's preoccupation with numbers extended to other activities, most notably the pattern in which she smoked cigarettes and drank coffee. If she had one cigarette, she believed that she had to smoke at least four in a row or one of the children would be harmed in some way. If she drank one cup of coffee, she felt compelled to drink four.

Karen acknowledged the irrationality of these rituals but, nevertheless, maintained that she felt much more comfortable when she observed them conscientiously. When she was occasionally in too great a hurry to perform the rituals, she experienced considerable anxiety in the form of a subjective feeling of dread and apprehension. She described herself as tense, jumpy, and unable to relax during these periods. Her fears were most often confirmed because something unfortunate invariably happened to one of the children within a few days after each such "fail-

ure." The fact that minor accidents are likely to occur at a fairly high rate in any family of four children did not diminish Karen's conviction that she had been directly responsible because of her inability to observe the numerical rules.

In addition to her obsessive ideas and compulsive behaviors, Karen reported dissatisfaction with her marriage and problems in managing her children. Her husband, Tony, had been placed on complete physical disability 11 months prior to her first visit to the mental health center. Although he was only 32 years old, Tony suffered from a very serious heart condition that made even the most routine physical exertion potentially dangerous. Since leaving his job as a clerk at a plumbing supply store, he had spent most of his time at home. He enjoyed lying on the couch watching television and did so for most of his waking hours. He had convinced Karen that she should be responsible for all the household chores and family errands. Her days were spent getting the children dressed, fed, and transported to school; cleaning; washing; shopping; and fetching potato chips, dip, and beer whenever Tony needed a snack. The inequity of this situation was apparent to Karen, and extremely frustrating, yet she found herself unable to handle it effectively.

The children were also clearly out of her control. Robert, age 6, and Alan, age 8, were very active and mischievous. Neither responded well to parental discipline, which was inconsistent at best. Both experienced behavioral problems at school, and Alan was being considered for placement in a special classroom for particularly disruptive children. The girls were also difficult to handle. Denise, age 9, and Jennifer, age 11, spent much of their time at home arguing with each other. Jennifer was moderately obese. Denise teased her mercilessly about her weight. After they had quarreled for some time, Jennifer would appeal tearfully to Karen, who would attempt to intervene on her behalf. Karen was becoming increasingly distressed by her inability to handle this confusing situation, and she was getting little, if any, help from Tony. During the past several weeks, she had been spending more and more time crying and hiding alone in her bedroom.

Social History

Karen was raised in New York City by Italian immigrant parents. She was the first of four children. Her family was deeply religious, and she was raised to be a devout Roman Catholic. She attended parochial schools from the first grade through high school and was a reasonably good student. Her memories of the strict practices of the church and school authorities were vivid. The formal rituals of the church played an important role in her life, as they did for the other members of her family. Beginning at an early age, Karen was taught that she had to observe many specific guidelines that governed social behavior within the church (not eating meat on Fridays, going to confession regularly, and so forth). She was told that her strict adherence to these norms would ensure the safety of her immortal soul and, conversely, that transgressions would be severely punished.

The depth of her belief and the severity of its consequences can be seen in the following story, which Karen recalled during an early session. When she was 8 years old, Karen and her classmates at school were to receive their First Commun-

ion in the church. This is a particularly important and solemn occasion for Roman Catholics that signifies the child's advancement to adult status in the church community. Before the child is allowed to partake in communion, however, a complete confession must be made of *all* prior sins. Karen was told that she was to confess all her sins, regardless of their severity or the time of their occurrence, to her priest, who would prescribe an appropriate penance. She remembered her parents' and teachers' warnings that if she failed to mention any of her sins, her soul would be banished to hell for eternity. This threat was still vivid in Karen's mind many years later. Despite the terror aroused by these circumstances, Karen intentionally failed to tell the priest about one of her sins; she had stolen a small picture book from her classroom and was now afraid either to return it or to tell anyone about the crime. She lived with intense guilt about this omission for several years and could remember having occasionally terrifying nightmares that centered around imagined punishments for not providing a complete confession. In subsequent years, Karen intensified her efforts to abide by even the most minute details of church regulations, but she continued to harbor the conviction that she could never atone for this mortal sin.

Karen remembered her parents as having been very strict disciplinarians. Her mother was apparently a rather unemotional and rigid person who had insisted on the maintenance of order and cleanliness in their household. Beyond her unerring adherence to religious rules and regulations, Karen's mother kept the family on a tight schedule with regard to meals and other routine activities. When the children deviated from these guidelines, they were severely punished. Karen's most positive recollections of interaction with her mother centered around their mutual participation in prescribed church functions. She did not remember her parents ever demonstrating affection for each other in front of their children.

Karen married Tony after she graduated from high school, and she became pregnant two months later. During this pregnancy, she witnessed an unfortunate accident at her neighbor's apartment. While Karen was chatting with her friend, the woman's infant daughter crawled off the porch and was run over by another child riding a bicycle. The girl was seriously injured and remained in the hospital for several weeks. Shortly after this accident, Karen began experiencing repetitive, intrusive thoughts about injuring herself. At unpredictable but frequent intervals throughout the day, she would find herself thinking about jumping out of windows, walking in front of cars, and other similar dangerous behaviors. These thoughts were, of course, frightening to her, but she could not prevent their occurrence. When one of the thoughts did come into her mind, she attempted to get rid of it by quickly repeating a short prayer that she had learned as a child and then asking God for forgiveness for having entertained such a sinful impulse. This procedure was moderately successful as a temporary source of distraction, but it did not prevent the reappearance of a similar intrusive thought several hours later. These thoughts of self-injury occurred less frequently and seemed less troublesome after the birth of her first child, Jennifer, perhaps because Karen was soon preoccupied with all of the responsibilities of caring for the baby.

During this same time, Karen began to be disillusioned with the church. Her distress centered around a number of reforms that had been introduced by Pope

John XXIII and the ecumenical council. The Mass, for example, was no longer said in Latin, and nonclerical persons were allowed to administer various rites of the church. Similarly, church members were no longer admonished to give up meat on Fridays, and other rituals were modified or completely eliminated. Most people found these changes refreshing, but Karen was horrified. The church's rituals had come to play a central role in her life. In de-emphasizing the importance of traditional rituals, the church was depriving Karen of her principal means of controlling her own destiny. She was extremely uncomfortable with these new practices and eventually stopped going to church altogether.

When Jennifer was 9 months old, Karen once again became pregnant. She and Tony decided to move to the suburbs, where they would be able to afford a house with a yard in which the children could play. Although she was proud of their new home, Karen began to feel depressed during this period because she missed her old friends.

Karen's situation showed little change throughout the next few years. By the time she was 25 years old, she had four children. She found this responsibility overwhelming and was generally unhappy most of the time. Her relationship with Tony had essentially reached a stalemate; they were not satisfied with their marriage, but they agreed to stay together for the children. Although they did not fight with each other openly, a sense of covert tension and estrangement pervaded their relationship. Tony refused to participate in what he considered to be unnecessarily rigid and complicated household regulations, particularly those dealing with the children's behavior. Karen had established very specific guidelines for meals, bedtime, and so on but found that she was unable to enforce these rules by herself. She remained distant from Tony and resisted most of his attempts to display physical affection. Thus, overall, Karen was chronically unhappy and generally dissatisfied with her life, but she nevertheless clung to her miserable surroundings and established patterns of behavior out of fear that any change would be for the worse.

This unhappy, yet tolerable, equilibrium was disturbed by Tony's deteriorating health. One day, while he was working at the store, he experienced sudden chest pains and numbness in his extremities. Recognizing these symptoms as serious in nature (he had had high blood pressure for years and was therefore well-informed in this regard), Tony asked a friend to drive him to the hospital. His experience was diagnosed as a mild heart attack. Further testing revealed serious structural abnormalities in his heart. He was eventually discharged from the hospital, given a complete medical disability, and laid off from his job.

Karen became more and more depressed after Tony began staying home during the day. It was during this time that her fears about the children's safety became clearly unreasonable, and she started performing her counting rituals. Karen realized that her situation was desperate because she felt that she had lost control of her own behavior and experienced considerable anxiety whenever she attempted to resist performing the rituals. At this point, she finally decided to seek professional help.

Conceptualization and Treatment

The therapist saw the ritualistic behavior as one part of Karen's overall difficult situation. Karen's counting compulsion represented her attempt to reintroduce a sense of personal control over her own life. In this sense, the rituals were being performed instead of either the more socially acceptable religious activities that she had employed as a child or more effective social skills that she had apparently never developed. For example, she was unassertive in her relationship with Tony. Instead of standing up for her rights, she would meekly acquiesce to even his most unreasonable demands. At the same time, she would become extremely frustrated and angry with him and would look for subtle ways to "even the score." She was similarly unable to convey her appreciation to him on those (admittedly rare) occasions when he did please her. Treatment was therefore initially aimed at the development of interpersonal skills that would give Karen more control over her environment. It was hoped that as she was able to create a more satisfactory relationship with her husband and children, her increased competence would eliminate the necessity of turning to admittedly superstitious, ineffective attempts to achieve self-control.

Karen quickly recognized her deficiency in this regard but was nevertheless unable to change her behavior spontaneously. She and the therapist therefore agreed to pursue a systematic program of assertion training. The initial sessions in this sequence were devoted to a careful assessment of the situations in which Karen was unassertive. She was asked to keep a daily notebook of such situations in which she noted the people involved, the nature of their interaction, and her perception of the situation, including what she thought would happen if she did behave assertively. Having identified typical problem situations, Karen and her therapist role-played several incidents as a way of introducing Karen to more appropriate responses. They also discussed Karen's irrational fears associated with assertion. These thoughts centered on her implicit belief that everyone should love her, and that if she stood up for her own rights people would reject her. These irrational self-statements were inhibiting the expression of assertive behaviors. After Karen became proficient with such exercises in the therapy sessions, she was asked to start practicing her new skills in real-life situations outside the clinic.

After assertion training had produced some positive results, the therapist began teaching Karen more effective child-management skills. These were based primarily on procedures associated with instrumental learning (also known as operant conditioning). She was taught, for example, to ignore her daughters when they were quarreling and to reinforce them positively for playing together appropriately. Her efforts were initially channeled toward behaviors that could be changed easily. The most difficult problems, such as getting the children to stop fighting at mealtimes, were left until Karen had mastered some of the general principles of child management.

In addition to these skill-training programs, the therapist also discussed Karen's concerns about religion. It was clear that the church was still important to her and that she experienced considerable guilt and anxiety over her failure to attend services regularly. The fact that her children were not involved in church activities was also troubling to Karen. She worried that if any harm came to one of them, God

would not protect them. For these reasons, Karen was encouraged to visit several priests at churches in her area in an effort to find one who was more conservative and thus more compatible with her own views. Although most of the local priests had moved toward contemporary practices in their own churches, they did refer her to an older priest at a church somewhat farther from her neighborhood, who still adhered to several of the traditional rituals she had learned as a child. She made an appointment to visit this priest and was both pleased and relieved after their initial meeting. He was able to discuss with her some of the changes that had been made in the church. In some cases, he was able to explain the rationale behind a particular change in a way that was acceptable to her. This process was, no doubt, facilitated by the fact that he shared many of her concerns about abandoning traditional practices. Karen felt much more comfortable with this priest than she did with the liberal pastor who was in charge of the church in her immediate neighborhood. Within weeks she was once again attending church regularly with her four children.

The combination of assertion training, parent education, and a renewed interest in church activities did lead to an important improvement in Karen's mood. After three months of treatment, she reported an increased sense of self-confidence and an improvement in her family life. There was also some reduction in her anxiety level. She continued to observe her number rituals, but they were somewhat less frequent, and, when she did fail to perform the counting routines, she was not as distraught as she had been at the beginning of treatment.

At this point, Karen's rituals were addressed directly using a behavioral treatment method known as exposure and response prevention (ERP) (Steketee, 1994). This procedure involves purposely exposing the person to stimuli that provoke intense anxiety (either in imagination or in reality) for extended periods of time while preventing the person from performing anxiety-reducing rituals. Karen was asked to smoke a single cigarette at the beginning of a therapy session. When she was finished with the cigarette, she began to feel anxious and worry about her oldest daughter. She was then instructed to resist the temptation to smoke another cigarette. Thus, the response that she typically employed to neutralize her anxiety and to control the ruminations was prevented. The therapist believed that this type of prolonged exposure to the anxiety-provoking situation would lead to a reduction in Karen's anxiety. The procedure was carried out during four consecutive two-hour sessions. Karen was encouraged to practice the same response prevention procedure on her own between sessions. When she had mastered the cigarette-smoking problem, the procedure was extended progressively to other similar situations in which she had been concerned about numbers.

Treatment was terminated after 20 sessions. Karen was no longer depressed and had not engaged in her compulsive counting rituals for four weeks. The children were better behaved at home, and Karen had plans to institute further changes in this regard. Her relationship with Tony was somewhat improved. Although he had become quite upset initially when Karen began to assert herself, he became more cooperative when he saw an improvement in her adjustment.

Discussion

Obsessive Compulsive Disorder (OCD) is included in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV-TR,* APA, 2000, pp. 462–463) under the general heading of Anxiety Disorders. It is defined by the following criteria:

A. Either obsessions or compulsions:

Obsessions as defined by (1), (2), (3), and (4):

1. Recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate, and that cause marked anxiety or distress.
2. The thoughts, impulses, or images are not simply excessive worries about real-life problems.
3. The person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action.
4. The person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind.

Compulsions as defined by (1) and (2):

1. The person feels driven to perform repetitive behaviors (e.g., handwashing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) in response to an obsession, or according to rules that must be applied rigidly.
2. The behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent, or are clearly excessive.

B. At some point during the course of the disorder, the person has recognized that the obsessions or compulsions are excessive or unreasonable.

C. The obsessions or compulsions cause marked distress, are time consuming (take more than one hour a day), or significantly interfere with the person's normal routine, occupational (or academic) functioning, or usual social activities or relationships.

The most common types of obsessions have been described by Rasmussen and Eisen (1992), who recorded the frequency of specific symptoms in a sample of over 500 patients. The numbers in parentheses indicate the percentage of patients who exhibited each type of obsession. Most of the patients (72 percent) had multiple obsessions.

Fear of contamination (50 percent): A fear of exposure to stimuli such as dirt, germs, poison, or radiation. The person's concern may include fear that other people, as well as themselves, will become ill. Fear of contamination is most often coupled with compulsive handwashing.

Pathological doubt (42 percent): An inclination to worry that something bad is going to happen because a task has not been completed correctly. People with this

symptom often develop counting rituals that may include a complex system of good numbers and bad numbers. They may repeat certain actions a particular magical number of times (as in Karen's case).

Somatic obsessions (33 percent): The irrational, persistent fear of developing a serious life-threatening illness (often indistinguishable from *hypochondriasis*, i.e., fear of having some disease despite reassurance from a physician that the disease is not present).

Need for symmetry (32 percent): An extreme need to have objects or events in a certain order or position, to do and undo certain motor actions in an exact fashion, or to have things exactly symmetric or "evened up."

Aggressive obsessions (31 percent): Recurrent, ghastly thoughts or images that the person has committed a violent or an inappropriately aggressive act.

Sexual obsessions (24 percent): Repeated, distressing thoughts about, or impulses to perform, inappropriate sexual behaviors.

In addition to provoking anxiety, sexual and aggressive obsessions are associated with exaggerated feelings of shame and guilt. People with this symptom may seek constant reassurance from friends (or therapists) that they are not really capable of performing such actions.

Compulsions represent patterns of ritualistic behavior and thinking that are usually performed in response to an obsession. Whereas obsessions lead to an *increase* in subjective anxiety, compulsions *reduce* the person's anxiety or discomfort. Compulsive behavior is designed to neutralize or to prevent discomfort or some dreaded event or situation. Most patients who seek treatment for obsessive symptoms also exhibit compulsive behaviors (Foa & Franklin, 2001; Parmet, Glass, & Glass, 2004). Compulsive patients fall into two primary groups: "cleaners" and "checkers."[1] Cleaning and washing rituals are associated with fear of contact with contaminating objects. For example, a patient who is afraid of contamination by germs or bodily secretions may spend hours each day bathing or disinfecting his or her home. This ritualistic behavior restores the patient's sense of safety. Repetitive checking, on the other hand, is more often motivated by a fear of some catastrophic event. For example, a patient who experiences obsessive thoughts about gas explosions may engage in compulsive checking of the burners on a gas stove.

Some other behaviors that take a repetitive form and are associated with either a decrease or increase in anxiety have also been considered "compulsive" in the popular media. These include problems such as gambling, drug addiction, and exhibitionism. There are, however, some important distinctions between these actions and truly compulsive behaviors. First, addictive behaviors involve a pleasure-seeking component that is absent in compulsive behaviors. Second, the anxiety that is associated with the performance of criminal activities (e.g., stealing) is appropri-

[1] Some investigators have suggested that there may be important differences between these two subgroups in terms of their etiology and response to treatment (e.g., Rachman & Hodgson, 1980). Cleaning compulsions may be more likely to develop in families in which the parents are overprotective, whereas checking rituals, which are more often associated with doubts and indecisiveness, are more often encouraged by parents who are excessively critical.

ate in light of social sanctions; obsessive compulsive patients experience anxiety that is inappropriate to the situation.

Obsessive Compulsive Disorder (OCD) should be distinguished from Obsessive Compulsive Personality Disorder (OCPD). The latter does not involve specific ritualistic behaviors; it is intended to refer to a general *personality style*. People with an obsessive compulsive personality are preoccupied with orderliness and perfectionism as well as mental and interpersonal control. They are inflexible and overly devoted to work to the point that they avoid leisure activities and ignore friendships.

The phobic disorders (i.e., specific phobia, social phobia, and agoraphobia) are similar to OCD because they involve severe anxiety and are characterized by behaviors that are designed to reduce that anxiety. Some obsessive compulsive patients also display phobic avoidance of situations associated with anxiety about dirt or contamination. There are, however, some important differences between OCD and the phobic disorders. For example, phobic patients do not show the same tendency toward superstitious or "magical" thinking that is often characteristic of obsessive compulsive patients, nor do they manifest compulsive symptoms. Also, for the phobic patient, the anxiety-inducing stimulus is unrelated to the content of any obsessions the patient may experience.

Obsessive thoughts should also be distinguished from delusional beliefs. Two criteria are important in this regard. First, patients with OCD try, often desperately, to resist their intrusive ideas, whereas delusional patients do not. Second, most OCD patients are ambivalent about their thoughts; they realize the essential absurdity of their obsessions and compulsions at the same time that they are preoccupied with them. Some OCD patients do have relatively poor insight regarding the senseless nature of their obsessions, but *DSM-IV-TR* requires for a diagnosis of OCD that, *at some point during the course of the disorder*, the person must recognize that the obsessions or compulsions are excessive or unreasonable (Eisen, Phillips, & Rasmussen, 1999; Foa & Kozak, 1995).

Depression is a common complication of OCD. Two out of every three patients with OCD have experienced at least one episode of major depression at some point during their lives. The relationship between these phenomena is unclear. Sometimes compulsive symptoms appear before the onset of depression; in other cases this relationship is reversed. The successful treatment or alleviation of depressive symptoms does not invariably lead to a reduction in the frequency of compulsive behaviors, and vice versa (Abramowitz et al., 2000).

Although OCD was previously thought to be relatively rare, results from the Epidemiologic Catchment Area (ECA) study suggest that milder forms of the disorder may affect between 2 and 3 percent of the general population at some point during their lives (Karno & Golding, 1991; Zohar et al., 1999). The disorder may be slightly more common among women than men. Prevalence rates among untreated community residents must be interpreted with caution, however. The validity of OCD diagnoses based on data collected by lay interviewers has been seriously questioned; the *false positive rate* (people who receive a diagnosis when they do not really have the disorder) may be quite high (Fireman et al., 2001; Nelson & Rice,

1997). Data from England suggest that the true prevalence of OCD in the community may be closer to 1 percent (Bebbington, 1998).

Relatively little information is available regarding conditions that set the stage for later development of OCD. Nevertheless, some interesting clues were provided in one classic study. Kringlen (1970) reported the results of a 20-year followup of 91 patients who had been hospitalized with obsessive compulsive disorder. More than 80 percent of these patients had exhibited nervous symptoms as children. They had typically been raised in strict, puritanical homes. The average age of onset for compulsive symptoms in female patients was between 10 and 20 years, although most of the women did not seek professional help until some years later. More than half of the patients showed an acute onset of symptoms following a specific stressful event. Marital problems were common among compulsive patients.

The prognosis for patients with OCD is mixed. Although the disorder can last many years, most patients do improve. One study conducted followup assessments with a group of patients 40 years after they had been treated in a hospital in Sweden (Skoog & Skoog, 1999). This was, of course, a group of severely disturbed patients because most people with OCD do not need to be treated in an inpatient setting. Nevertheless, the results suggest that many patients recover from OCD. At the time of the final followup, half of the patients had recovered from their disorder (defined as the absence of clinically relevant symptoms for at least five years). Another 30 percent showed some improvement, although they still experienced clinical symptoms. Similar data have been reported from a more recent five-year followup study with people who had been treated on an outpatient basis. These investigators found that 20 percent of their patients had recovered completely and another 50 percent showed partial remission of their OCD symptoms (Steketee et al., 1999). Both studies reported that approximately 20 percent of their OCD patients were either unchanged or had deteriorated at the time of followup.

Karen was in many ways a typical OCD patient. She had, in fact, been raised in a strict, puritanical family setting. As a child, she was generally anxious and quite concerned with order and rituals. Since midadolescence, Karen had experienced difficulty with intrusive, repetitive ideas that she found distressing. These problems would come and go without apparent reason. She was also prone to serious depression. Karen's family background is also consistent with the literature on OCD (e.g., Pauls et al., 1995). There is a relatively high incidence of psychiatric anomalies—particularly obsessional traits, anxious personalities, and mood disturbances—among the biological relatives of obsessive compulsive patients.

The similarity in behavior between many obsessive compulsive patients and their parents probably reflects the influence of both genetic and environmental variables (Hudziak et al., 2004; Wolff, Alsobrook, & Pauls, 2000). In Karen's case, her mother's rigid, moralistic behavior may have had an important influence on the development of later symptoms. Karen's mother provided a salient model for her daughter's subsequent compulsive behavior. She also reinforced early tendencies toward such response patterns.

Theoretical Perspectives and Treatment Implications

According to traditional psychoanalytic theory, compulsive symptoms are the product of the ego's unconscious attempt to fend off anxiety associated with hostile impulses. Freud (1909, 1925) argued that compulsive patients had experienced overly harsh toilet training and were therefore fixated in the anal-sadistic stage of development. Such individuals presumably suffer serious conflict over the expression of anger. Since these feelings are dangerous, or unacceptable to the ego, the anticipation of their expression is seen as anxiety provoking. This anxiety is dealt with primarily through the defense mechanism known as *reaction formation*, in which the original impulse (anger) is transformed into its antithesis (love or oversolicitude). This conceptual approach is not incompatible with Karen's situation. Her principal symptoms were compulsive rituals that were intended to protect her children from harm. But her feelings about her children were, in fact, ambivalent. It would not be unreasonable to assume that she was most often very angry with them, perhaps to the point that she might have considered doing them physical harm. Of course, this impulse would be anxiety provoking to the ego, which would convert it to its opposite form. Thus, instead of injuring the children, she would spend a good deal of her time every day performing irrational responses aimed at *protecting* them.

Most contemporary therapists agree that people with OCD have trouble expressing anger (Osborn, 1998). Some recognition was given to these considerations in the treatment that was employed. Karen's anger and frustration were identified as central features of her adjustment problems, but the therapeutic procedures went beyond the goal of insight-oriented treatment. Karen's recognition of her anger and hostility was not sufficient to effect change; specific training procedures were used to help her develop more adaptive responses.

Learning theorists would view Karen's problems in a distinctly different fashion. Within this general model, two factors would be given primary consideration. Both involve the principle of *negative reinforcement*[2] which states that the probability of a response is increased if it leads to the termination of an aversive stimulus. Consider, for example, the net effect of Karen's rituals. Their performance ensured that she would be away from her home for extended periods of time. If she went to her neighbor's house for coffee, she would be gone for at least two hours before she could consume enough cups and smoke enough cigarettes to satisfy the rituals. Grocery shopping, which she did by herself, had also turned into a long, complicated process. Given that being at home with her family was mostly an aversive experience for Karen, her rituals might be seen as an operant response that was being maintained by negative reinforcement.[3]

A behavioral clinician would be most likely to point to the anxiety reduction associated with the performance of the rituals. Whenever Karen was engaged in an activity that reminded her of numbers and, consequently, her children, she became

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[2] Negative reinforcement should be distinguished from punishment, in which the *appearance* of an aversive stimulus is made contingent on the emission of a response, so the probability of the response is therefore *reduced*.

[3] This phenomenon would be labeled *secondary gain* by a psychoanalyst, who would give primary emphasis to the ego-defensive nature of the symptom.

anxious. She was able to neutralize this anxiety temporarily by counting the appropriate number of boxes, and so on. This ritual was therefore reinforced and maintained by the reduction of anxiety. This notion is similar to the psychoanalytic view in that the symptom is produced as a means of reducing tension. The two theories differ in that the behavioral view does not see her anxiety as being directly attributable to the unconscious urge to harm her children, nor does the behavioral view hold that the anxiety reduction is mediated by an unconsciously activated defense mechanism.

Some elements of the behavioral view were incorporated into the treatment procedure followed with Karen. In particular, by teaching her to be more assertive and to manage her children more effectively, the therapist was able to make her home life less aversive. She now experienced more pleasurable interactions with her children and her husband, and one important source of negative reinforcement for her rituals was removed. Unfortunately, this view of human behavior is fairly limited. In particular, it does not account for the importance of cognitive events. By focusing exclusively on environmental events, behaviorists may ignore important factors associated with the client's perceptions, beliefs, and attitudes. These variables also seemed to play an important role in Karen's problem.

Cognitive theories regarding the etiology of OCD emphasize the importance of excessive feelings of responsibility and guilt (Rachman, 2002; Salkovskis & Forrester, 2002). This viewpoint begins with the recognition that most normal people experience intrusive thoughts from time to time, especially when they have been exposed to stress or negative mood states. Most intrusive thoughts do not become persistent or troublesome because people do not assign special meaning to them. According to the cognitive model, obsessions may develop if people interpret their intrusive thoughts as proof that they will be responsible for harm (to themselves or others) if they do not do something immediately to correct the thought. People most likely to develop OCD may be those who (1) learned a broad sense of responsibility and high level of conscientiousness at an early age, (2) were exposed to rigid and extreme codes of conduct and duty (e.g., have learned that some thoughts are particularly dangerous or unacceptable), and (3) experienced a critical incident in which their action (or inaction) or their thoughts seemed to be connected to a harmful incident that affected them or someone else. Alarmed by the intrusive appearance of forbidden thoughts, the person may struggle to avoid them, but cognitive events are difficult to control. In fact, active attempts at thought suppression often backfire and increase the severity of the problem (Wegner, 1994). This vicious negative feedback loop magnifies feelings of helplessness and loss of control and also serves to focus attention on the content of unwanted thoughts. The person's anxiety level continues to escalate, and compulsive rituals are employed in an attempt to regain control over mental events as well as life experiences.

The relevance of this perspective to Karen's case is clear. She had experienced frequent intrusive thoughts related to her children's safety, and she did believe that a failure to act in response to these thoughts would result in harm coming to her children. As a child, Karen had been taught that certain thoughts and ideas were bad and that strict observation of the rituals of the church would guarantee her salvation and prevent harm from coming to her. These rituals became the primary

means for controlling her fate and ensuring her safety. As an adult, Karen found herself stripped of these control mechanisms. The church now maintained that salvation (or the protection of one's soul) depended more on faith than on the performance of specific overt behaviors. When Karen experienced the critical incident in which her friend's infant daughter was injured, and she began to experience intrusive thoughts about harming herself, she turned to the use of private prayers in an attempt to protect herself. In some ways, Karen's subsequent development of counting rituals represented a substitute for the formal religious practices she had learned as a child. She admitted that they were irrational and probably unnecessary, but they did reduce her immediate anxiety in much the same way that going to church had left her with a comforting feeling as a child.

Karen's treatment addressed various cognitive factors, including efforts to improve her sense of self-control. Treatment was aimed initially at reducing the level of stress, improving Karen's mood, and giving her alternative means of controlling her environment, such as assertion training and instruction in parenting skills. Considering her deeply ingrained religious beliefs, it was also judged necessary to help her reestablish contact with the church. After these procedures had achieved some modest success, it was possible to attack the counting rituals directly through the use of exposure and response prevention. A cognitive therapist would view the process of exposure and response prevention as a kind of "behavioral experiment" in which the person is given an opportunity to disconfirm her exaggerated beliefs about responsibility (i.e., "if I do not count the cereal boxes, something bad will happen to my children").

An extensive body of evidence indicates that behavior therapy is effective in treating compulsive disorders (Abramowitz, Brigidi, & Roche, 2001; Franklin et al., 2000). The most useful procedure seems to be in vivo (i.e., in the natural environment) exposure coupled with response prevention (ERP). Studies that have compared ERP with control treatments, such as applied relaxation, have found that patients who receive ERP (typically between 15 and 20 sessions) are more likely to experience substantial improvement. There are, of course, some patients who refuse to enter or who drop out of behavioral treatment, perhaps because it is initially anxiety provoking. But among those who do complete ERP, approximately 80 percent have been classified as improved, and most OCD patients maintain these improvements several months after the end of treatment (Stanley & Turner, 1995).

Cognitive therapy is another psychological approach to the treatment of OCD (Salkovskis, 1999). It is concerned primarily with the meanings that a person assigns to intrusive thoughts, images, and impulses. Symptoms of OCD are presumably more likely to occur if the person interprets the thoughts as an unquestionable sign that he or she is responsible for either causing or preventing harm that might come to oneself or other people. Cognitive therapy helps the person develop and use different interpretations of intrusive thoughts that do not require or motivate the person to continue to engage in compulsive rituals which are clearly ineffective and self-defeating. Treatment outcome studies report that this type of cognitive therapy can be an effective form of treatment for people with OCD (McLean et al., 2001).

Medication is also beneficial for many patients. Clomipramine (Anafranil®) has relatively specific effects in reducing OCD symptoms; its therapeutic effects

cannot be attributed solely to a reduction in comorbid depressive symptoms (Abramowitz, 1997). Sustained improvement depends on continued use of the drug. Most patients experience a return of OCD symptoms within four weeks after they stop taking medication. The newer generation of antidepressant drugs known as selective serotonin reuptake inhibitors (SSRIs), including fluoxetine (Prozac®), fluvoxamine (Luvox®), and sertraline (Zoloft®), has also been used with OCD patients. Controlled studies indicate that these drugs are also effective in the treatment of OCD (Hollander & Allen, 2001). The SSRIs are often preferred to other forms of medication because they have fewer side effects.

Several issues will need to be addressed in future studies of treatment outcome. Direct comparisons of medication and ERP have not been reported. It is not clear whether one form of treatment is, in general, more effective than the other. And, perhaps more importantly, it is not currently possible to predict whether a particular patient will respond better to ERP or to medication. In actual clinical practice, medication is often used in combination with behavioral therapy for the treatment of OCD. Two studies have reported that the combination is more beneficial than either treatment alone, but this conclusion must be considered tentative in the absence of better data (Eddy, Dutra, Bradley, & Westen, 2004).

When both psychotherapy and medication fail, one other form of treatment may be considered: neurosurgery, which refers to techniques in which neural pathways in the brain are surgically altered in an effort to change the person's behavior. Although neurosurgery was originally intended to be used with psychotic patients, clinical research indicates that it may be most effective with obsessive compulsive disorder (see Jenike, 1998; Mathew et al., 1999). One longitudinal study described 26 patients who had received neurosurgery after failing to respond to all other forms of treatment. In comparison to similar OCD patients who had not received surgery, 10 of the 26 patients were obviously improved several years after the procedure was performed. Six others showed mild improvement, six were unchanged, and four had gotten worse (Hay et al., 1993). Since the duration of illness prior to surgery was several years for all of the patients in this study, the reported rates of improvement are probably not due to placebo effects or spontaneous remission.

These results cannot be ignored, but they should also be interpreted with considerable caution. First, it is virtually impossible to conduct a double-blind[4] evaluation of neurosurgery. Second, surgical procedures have varied widely across studies, thus making general statements about neurosurgery questionable. Third, and perhaps most important, neurosurgery may produce general changes in the patient's intellectual and emotional capacities. These changes remain unpredictable and poorly understood. Thus, most investigators agree that such radical procedures should be considered only when the patient's symptoms are chronic and severely disturbing and when other treatment programs have already been unsuccessful.

[4] A double-blind procedure is used to reduce the biasing effects of the expectations of the patient and the therapist. In drug studies, patients and therapists can be kept "blind" to the patient's treatment status by assigning some patients to a placebo control group.