behavior and mental processes of these individuals, the striking similarity of the symbolic meaning of the motorcycle, their tendency to use the vehicle as both an adaptive and defensive means of dealing with emotional conflict, and the remarkable number of other characteristics common to these patients document a recognizable clinical disorder that I have designated the "motorcycle syndrome."

This paper briefly outlines this syndrome and attempts to elucidate the emotional and psychological determinants of motorcycle accidents. The syndrome comprises a cluster of symptoms, the combination of which may be specific to those motorcyclists most susceptible to injury.

The findings presented here are from an in-depth study of nine motorcyclists, all college students, most of whom were seen in intensive, analytically oriented psychotherapy from one to three years. These patients, suffering a serious ego defect stemming from a distant and difficult father-son relationship and resulting in a tenuous masculine identification, perceive the motorcycle as an essential part of their body image. Satisfying an intense need to test a shadowy masculine self-image and to strengthen a fragile ego, the motorcycle becomes a highly charged object, with significant conscious and unconscious representation.

The conscious attraction to and fear of the motorcycle parallels unconscious conflicts relating to an ambivalence toward expression of what the patient considers the masculine part of himself. The relationship of the vehicle to these unconscious conflicts compounds the driver's anxiety, increases his tension, lessens his control, and makes him more susceptible to accidents. Although the motorcycle may be used adaptively, helping the patient cope with certain types of difficulties, the primary use of the cycle is defensive and maladaptive, interfering with effective functioning.

The recognition and treatment of this syndrome may be an effective step in reducing the rapidly rising rate of motorcycle accidents and deaths in this country.

Characteristics of the Motorcycle Syndrome

The essential features of the motorcycle syndrome are the following:

1. *Unusual preoccupation with the motorcycle.* When the patient is not actually riding a motorcycle, he tends to daydream continuously of doing so. The mere sound of a distant motorcycle stimulates vivid fantasies. Repetitive dreams involving motorcycles—some pleasurable, some terrifying—occur frequently. During therapeutic sessions the patient associates freely to the pleasures, fears, and fantasies related to cycling.

2. *A history of accident-proneness extending to early childhood.* A tendency to self-injury contributes to a long history of lacerations, fractures, and concussions extending into the early years and, more recently, to the occurrence of one or more serious motorcycle accidents.

3. *Persistent fear of bodily injury.* Conscious and unconscious fears of mutilation and death haunt these patients when talking about or riding the motorcycle. They openly discuss fear of castration. As with most fantasies, this one has some basis in reality: The loss of a testicle in a cycle accident is not unknown.

4. *A distant, conflict-ridden relationship with the father and a strong identification with the mother.* The relationship with the father is characteristic. The patient sees the father as all-powerful, critical, and one with whom it is hopeless to compete. Each patient within my sample feared his father and as a young boy learned to avoid him. The fathers of these patients were in reality highly successful in their careers. Several had the unusual quality of being outstanding both as athletes and scholars, making them, of course, more formidable competitors.

As a child, the patient experienced a close relationship with his mother but a gradual alienation from her once he left home. He continues to confide in his mother but also sees her, like himself, as inadequate.

5. *Extreme passivity and inability to compete.* With the exception of motorcycle riding, little physical or intellectual activity prevails. Although endowed with obvious potential, these patients, because of an inability to risk failure, refuse to compete—academically, athletically, or socially. They study only under pressure of exams, participate only in noncompetitive athletics, and

form relationships only with those taking the initiative.

These students seldom participate in extracurricular activities. When they do engage in political activity, they adhere to the more radical, extreme, irrational, and defiant part of the group; unexpressed hostility toward the parents, especially toward the father, is displaced onto the college or other institution. More commonly, however, anger is directed inward, causing apathy, withdrawal, and depression. Passivity and refusal to meet any demands are the usual means of expressing aggression.

Insomnia, sometimes accompanied by fantasies of going blind, disturbs the late hours. The resultant anxiety may lead to masturbation or a sudden motorcycle ride through the night. Many spend the entire night "talking in the Bic" (a local cafeteria) or "drinking beer in front of the tube." They go to bed at dawn, wake about three in the afternoon, and then begin a routine of aimless wandering. They attend few if any classes, getting through courses with borrowed lecture notes. Sleep, drugs, television, and alcohol provide escape from a monotonous, painful reality. The alcohol and drugs, of course, increase the risk of motorcycle accidents.

6. *A defective self-image.* In their associations and dreams they reveal deep-seated, often unconscious, feelings of being ugly, unintelligent, fat, weak, feminine, and defective and frequently express a sense of having "something missing." They choose to be passive, to avoid competition, lest they fail and confirm their negative self-image. The motorcycle serves to compensate for this defective picture of themselves.

7. *Poor impulse control.* Aggressive and sexual impulses are difficult to express. Anger, especially anger toward the father, is turned inward and accounts in part for the patient's passivity, depression, and tendency to self-injury. Early memories are recounted where unsuccessful attempts to express anger resulted in loss of control, self-injury, and frustration. The self-destructive tendencies contribute to the high incidence of motorcycle accidents and fatalities in this group, the motorcycle serving as an outlet for pent-up rage the patient can express in no other way.

8. *Fear of and counterphobic involvement with aggressive girls.* These patients characteristically depend on and fear tall, broad-shouldered, sexually aggressive girls, girls who initiate relationships by expressing admiration for the motorcycle or by asking to ride it. With these girls the patients often assume the passive role.

9. *Impotence and intense homosexual concerns.* An inability to maintain erection or experience orgasm is present in varying degrees. The sexual history ranges from a few traumatically unsuccessful experiences for some to promiscuous activity for others. When sexual activity is mechanically successful the promiscuous subjects describe the experience as physically and emotionally ungratifying. They rationalize impotence away on the basis of fatigue, alcohol, and drugs. They often attempt to alleviate anxiety resulting from failure to perform sexually by riding the motorcycle.

Poor heterosexual performance raises persistent doubts of masculine competence and nagging fears of homosexuality. Although not overtly homosexual, these patients feel uneasy with both sexes and with all age groups.

Psychological Meaning of the Motorcycle

What symbolic meaning does the motorcycle have for these patients? What conscious feelings does this vehicle evoke and what relationship does the machine have to unconscious conflicts?

The motorcycle is a highly charged object with many levels of emotional appeal. At first glance the noise, the dirt, the exhaust, and the loud, angry roar of the engine suggest anal elements as the primary clue to the machine's symbolic meaning. Other aspects —the appeal of the thrusting of the rider's body into space, the intrusion of the deafening noise into other people's ears, the practice of keeping motorcycles in girl friends' garages—suggest genital or phallic elements. Clinical evidence, however, proves such approaches to be limited in scope and far too superficial. To call the motorcycle a phallic symbol or to say that it demonstrates the anal character of the driver adds little to our understanding.

Clinical material does make clear, how-

ever, that the motorcycle serves as an extension of what the patient considers his masculine self—the assertive, active, aggressive, competitive parts of his psychological makeup. That is to say, the motorcycle functions as a powerful emotional prosthesis.

The patient's lifelong avoidance of and tenuous identification with a highly competent and critical father have left him inhibited and unable to effectively exercise the assertive components of his emotional makeup. When he feels weak the motorcycle gives him a sense of strength; when passive, a "sense of doing something and getting somewhere"; when effeminate, a feeling of virility; when impotent, a sense of potency and power; when withdrawn, a sense of assertion and thrusting forward. These positive feelings, however, are never free from the haunting awareness of danger.

Physical Pleasure

Patients' comments illustrate vividly the similarity in the conscious feeling produced by the motorcycle. A 23-year-old graduate student who had suffered two serious motorcycle injuries within six months explained his recent purchase of a third cycle.

> Driving it is a very physical, almost sexual feeling ... you accelerate fast and there is nothing between you and nature ... the wind blowing in your face is a marvelous sensation ... it has tremendous appeal ... my new machine has a huge motor ... a big black bike ... with this under me, I feel I can do anything I want ... but I treat it with a great deal of respect because it is a powerful and dangerous piece of machinery. It's an incredibly dangerous machine because there is no such thing as a minor accident.

A bearded 22-year-old undergraduate who purchased his first bike when a freshman proffered a similar description. "Riding it is doing something, getting you somewhere. There is something new around the corner and you always have the feeling that things are about to happen. You can feel the cycle between your legs like a girl when she is next to you." Patients often describe the motorcycle as if it were alive.

> You sit as tightly on it as you can ... and all of a sudden it responds to you. It's a throaty, gutsy kind of sound. To go from 30 to 70 miles per hour sends a quiver through you ... most people treat a motorcycle as an animal ... they're almost human, you know ... it's a thrill, a joyous thing, like suddenly being free ... the noise is all you hear ... there is a strength and power in it—52 horsepower. It's masculine and makes me feel strong. I approach a girl on a cycle and I feel confident. Things open up and I am much more at ease.

While fully conscious that the motorcycle provides pleasures of full expression of masculinity, even to the physical sense of orgasm, the patient also acutely senses its potential danger. The machine both pleases and terrifies. It gives exhilarating pleasure, but pleasure always tinged with underlying anxiety. The vehicle is "an incredibly dangerous machine." Whenever the motorcycle looms into the therapeutic hour, the patient inevitably mentions, as though to remind himself, that there are grave dangers in motorcycling.

Fears of the Motorcycle

As the pleasures and thrills are described in remarkably similar terms (from patient to patient), so too are the anxieties and fears. Two basic fears prevail: the fear of bodily injury and the fear of loss of control. Associations to anxiety experienced while riding the cycle lead to earlier fears, especially to fears of physical illness or injury. Fantasies of going blind are common. Fears of castration lie close to awareness. One patient describing his motorcycle anxiety recalled that whenever he rides he fears losing his wallet and continually checks his pocket to see if it is still there. He associated to the masculine symbols of money and contraceptives he carried in the wallet.

Early difficulties with loss of control are also recalled frequently. The patient's tendency to "blow up" whenever in a threatened situation forces his withdrawal early in life from all competitive activity. Other early memories revolve around his inability to express anger, especially toward the feared father; loss of control, killing the father, or the father himself losing control and injuring the boy are frequent fantasies. Recall of specific early experiences with the father is common: One patient, discussing his motorcycle anxiety, associated to a fishing trip with his father when a small boy. He caught a fishhook in his eye and was left with persistent fears of blindness and mutilation.

The key to understanding the psychological meaning of the motorcycle to these

patients is this: Although the pleasures and fears of the motorcycle hover close to awareness or obtrude into full consciousness, the patient is *unaware* that these conscious fears are the same but fully *un*conscious fears that have all of his life inhibited expression of what he perceives as the masculine part of himself. His inability to assert himself, inability to express anger, and withdrawal from all competition into complete passivity can be traced through his associations to infantile anxieties.

Fears of the motorcycle therefore relate directly to long-term unconscious fears of loss of control and of physical injury, which in turn relate directly to an inability to express anger to what the patient perceives as an overwhelmingly competent and highly critical father. (It is interesting that the motorcycle is often purchased against the father's wishes. "Perhaps," explained one student, "he [father] forbids me to have a motorcycle because he is envious of it.") The motorcycle, while helping to express the assertive, competitive, and aggressive components of the patient's personality, also reactivates long-term unconscious fears that have long inhibited and paralyzed these components. Thus the peculiar ambivalence —i.e., the attraction to and fear of the motorcycle—that characterizes these patients.

Adaptive and Defensive Uses

The motorcycle serves both a helpful and a harmful function—i.e., it is used both adaptively and defensively. The helpful or adaptive function involves attracting attention, giving a feeling of virility, and improving, if only transiently, the patient's inner definition. The cycle helps him express the more assertive, more active part of himself, the part that, having been inhibited and paralyzed, cannot otherwise find expression. To this part the motorcycle serves as a powerful emotional prosthesis.

The patients speak freely of their need for attention. Megaphones replace mufflers, the loud noise being a means of assuring attention. The powerful engine, the boots, leather jacket, and beard engender a feeling of strength and virility otherwise unattainable. "The only time I can really approach a girl is when I'm on a motorcycle. I can roar up to the curb and talk to any girl." "I like the image the motorcycle projects, and the ease it puts me at socially." "I know I should sell the bike, but if I get rid of it, I know there would be nothing but me, and I fear that's not enough." Inasmuch as the motorcycle helps these patients feel more adequate and helps them overcome their passivity, it serves an adaptive need.

The harmful, maladaptive, or defensive use of the cycle involves replacing constructive use of time with relatively unconstructive activity. Charging through the streets on a motorcycle may give one a sense of moving ahead, of doing, and of exerting oneself, but a false sense and a poor substitute for concentrated effort. Racing a motorcycle into the night may relieve the anxiety of rejection, failure, or a feeling of dissipation, but it effects little change in conditions causing the anxiety.

A loud, noisy, breathtaking ride on a cycle may relieve apprehension over exams, but it helps little in preparing for them. The cycle may simulate sexual feeling or even help the patient approach a girl, but it contributes little to forming a meaningful relationship with that girl. The cycle may help express anger, but the self-destructive tendencies of these patients make a machine that can travel 120 miles per hour less than an adaptive means of doing so.

Adding to these maladaptive aspects, the patients' conscious fears of the motorcycle, often based on a realistic awareness of its dangers, reactivate unconscious fears, intensify anxiety, and lessen their control of the vehicle. These psychological factors make the motorcycle especially dangerous to these patients and contribute to the high rate of serious accidents among them.

The syndrome does not, of course, affect everyone who enjoys riding a motorcycle. Riding a cycle can undoubtedly be fun. Furthermore, it is a fast and economical mode of transportation. But the difference between a healthy cyclist and one suffering from this syndrome is a difference in ego integrity. The latter, having a serious ego defect, perceives the motorcycle as an essential part of his body image. He cannot give it up. Without the motorcycle he experiences a sense of "having something missing," an acute awareness of inadequacy. This partic-

ular ego defect and the specific use of the motorcycle to compensate for it delineates this syndrome.

Treatment

Because of their susceptibility to injury and death, people suspected of suffering from this syndrome ought always to be given psychiatric evaluation. Severity of illness, degree of incapacitation, and risk of injury from suicide or vehicular accident will establish whether psychiatric treatment is necessary.

Psychotherapy of patients with this syndrome presents a challenge. The patient's severe passivity may pose a problem of motivation. The patient often sleeps through a therapeutic hour. However, the pain of his loneliness and purposelessness will usually deter his leaving therapy.

His depression may become severe enough to precipitate suicidal thoughts; the necessity to discourage him from using the motorcycle during these periods is evident. With the patient's homosexual concerns lying close to the surface, care must be taken to avoid homosexual panic. Because of the patient's tendency to use the motorcycle for sudden departure to other parts of the country (one of his primary defenses being avoidance), the level of anxiety during the hour must be carefully regulated. My experience indicates that optimum therapeutic progress requires a minimum of two sessions a week. An outgoing, nonthreatening male therapist may be preferable.

Five-Year Follow-Up

The syndrome gives no clue to severity of illness. The degree of illness in this sample varied considerably. Duration of treatment, consisting of two or three sessions per week, extended from six months to three years. The patients' gradual decathexis of the motorcycle and investment of emotion into other objects and activities accompanied progress in treatment. A five-year follow-up revealed that each patient went on to graduate work and, with one exception, married a girl also in graduate school. The exception dropped out of law school to undergo analysis. All the patients had some difficulty in committing themselves fully to a career.

Discussion

Space limitations permit only a cursory description of the essential features of this syndrome, an allusion to the genetic and dynamic features, and a brief sampling of clinical material on which they are based.

One disturbing question raised by the phenomenon described here, however, bears mentioning. What makes the motorcycle, a relatively old-fashioned mode of transportation, suddenly so popular? And does the high casualty rate merely reflect increased usage? Perhaps both the increased popularity of the motorcycle and the high toll of injury and death result from an increasing number of people in our society afflicted with this syndrome. The conflict-ridden relationship with the father, central to both the genetic and dynamic formulation of this syndrome, may be but one facet of the increasingly fragmented family structure that characterizes our culture.

In a household obsessed with materialistic acquisition, dominated by television and other electronic gadgets, and confused as to limits and basic priorities, meaningful relationships between parents and children are exceedingly difficult to maintain. The time demands on the highly successful father, or on the many less successful fathers holding two jobs for economic gain, result in a number of homes virtually without fathers. The sense of rejection, pervasive anger, and brooding resentment fostered by such an environment characterize not only the patients described in this syndrome but a large proportion of young people today.

The question of specificity also bears brief mention. Is this cluster of symptoms specific simply to accident-prone motorcyclists? Although only further research can answer this question, clinical data now being assessed indicate that this syndrome may provide helpful clues to understanding accident-prone drivers of automobiles and small aircraft as well as motorcycles.[1]

Summary and Conclusion

The motorcycle will kill 5,000 people this year and injure close to a million. The emo-

[1] It has been reported that there is a similarity between the patients described here and a group of pilots now being studied who have a history of multiple small plane crashes(24).

tional and psychological determinants of these accidents must be understood before prevention of this carnage can be achieved.

The motorcycle syndrome, a cluster of psychiatric symptoms, may be specific to accident-prone cyclists. The syndrome includes the following: 1) unusual preoccupation with the motorcycle, 2) a history of accident-proneness extending to early childhood, 3) persistent fear of bodily injury, 4) a distant, conflict-ridden relationship with the father and a strong identification with the mother, 5) extreme passivity and inability to compete, 6) a defective self-image, 7) poor impulse control, 8) fear of and counterphobic involvement with aggressive girls, and 9) impotence and intense homosexual concerns.

Suffering a serious ego defect that stems from a distant and difficult father-son relationship and results in a tenuous masculine identification, these patients experience the motorcycle as an integral part of their body image. The vehicle serves to confirm and delineate a shadowy inner definition of masculinity and to reinforce a fragile ego. Used adaptively to provide a sense of pleasure, virility, power, and freedom, the machine's primary use is defensive: The patient substitutes a sense of "getting somewhere" for substantive effort.

The motorcycle functions as a powerful emotional prosthesis, an extension of what the patient conceives as the masculine part of himself—the active, assertive, aggressive, competitive, and independent components of his personality. The motorcycle helps express this part, long inhibited by unconscious fears of loss of control and of bodily injury. These fears relate to an early conflict-ridden relationship with the father, experienced by the patient as overwhelmingly powerful and highly critical. A peculiarly intense, unresolved ambivalence toward the father parallels an ambivalence toward expression of the patient's masculinity, which in turn is reflected in an intense ambivalence toward the motorcycle. The patient's conscious fears of the motorcycle reactivate and are intensified by the unconscious fears that have long inhibited and paralyzed the masculine components of his personality. The cycle therefore becomes highly charged emotionally with significant conscious and unconscious representations. Although the machine alleviates some forms of anxiety, it intensifies others, making it extremely dangerous.

Poor impulse control, unexpressed anger, self-destructive tendencies, a propensity to use alcohol and drugs, and, most important of all, the patient's unconscious fears that the machine reactivates increase enormously the hazards of the motorcycle. All of these factors intensify anxiety, heighten tension, and lessen driver control.

Early recognition of this syndrome by physicians, prompt psychiatric evaluation, and psychotherapy when indicated will significantly lower the rapidly increasing number of motorcycle accidents and deaths.

Evidence exists that the motorcycle syndrome may provide clues to understanding accident-prone drivers of other vehicles.

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A stereotyped but unconscious despair is concealed even under what are called the games and amusements of mankind.

—THOREAU