



The broken brain

There are 2 million Americans who are schizophrenic. Some live among the homeless. Some live almost normal lives. All are struggling to keep their personalities from flying apart. This is Daniel's story. He is one of the successful ones.

for all the devastation it wreaks, schizophrenia is just a word to most people. It is considerably more than that to Daniel Stone. A 34-year-old with a spindly frame and slightly hollowed eyes, he is one of 2 million Americans with the thought disorder that has been called a "cancer of the mind." After more than a decade of struggle to push the schizophrenia to the margins of his life, he can still sense it lurking there around the edges. That is Daniel's fate. He doesn't have schizophrenia so much as it has him.

As Daniel reviews his life in the sparsely furnished rooming house he occupies outside of Boston, he speaks slowly, as if it takes great effort to keep his thoughts running down the main channel, instead of branching off into tangents. His hands tremble. When he gets up, he moves somewhat gingerly, as if uncertain of his balance. "You know how life comes at you in a kind of random, unceasing flow?" he says. "Life comes *out* of me in that way."

Daniel's life had been reasonably normal until a hot summer afternoon 11 years ago. He was living with his parents, Elsie and Joseph Stone, in their cramped frame house about a mile from where he lives now; the Stones ran a sandwich shop in the basement. Despite the heat that day, Daniel was lying in bed under several layers of blankets and coats. He'd been like that for several days, not

eating or drinking, barely moving. Worried that he was getting dehydrated, Elsie brought some water for him to drink. But Daniel was determined to close out the world, his mother included, and he flung the pitcher at the window, smashing the glass and bloodying his hand as the shards showered his bed.

"I don't think he meant to," Elsie recalls, obviously still mystified by the terrible transformation in her son. "He just wanted to let out his anger, his frustration. The minute I saw, I ran out of the room, I ran into my bedroom and I—quick! quick!—called up 911 to take him right away to the hospital." It was the hospital that made the diagnosis that changed their lives—"undifferentiated schizophrenia." Elsie had to look up the definition in a medical dictionary when she got home. Even now, she has trouble pronouncing the words, as though they are from a foreign language. And so began a psychiatric odyssey for Daniel and his family that, most likely, will never end.

The Stones had certainly sensed that something was wrong early in Daniel's life, but they can't say precisely when they were fully aware of it. The usual age of onset for men is around eighteen (for women, it's a few years later), but schizophrenics often start acting "different" well

The names of Daniel Stone and his family have been changed to protect their privacy.

By JOHN SEDGWICK
Illustration by MATT MAHURIN

before that. Comparing home movies of schizophrenics and non-schizophrenics, specialists have been able to pick out the schizophrenics as early as their grade-school years, long before they were diagnosed.

Elsie was always struck by Daniel's delicacy—he seemed to come down with more illnesses than his siblings did. And there was his artistic talent. Elsie kept a lot of Daniel's artwork, and it shows a distinctive style from an early age. She remembers that he always had his own idiosyncratic view of things. In a test to see if he could enter first grade a little early, he was asked what eyes did. The expected answer was "see," but Daniel pulled at his eyebrows to make himself look almond-eyed. Similarly, for him ears were to wiggle, and a nose was to squeeze. Was he crazy then?

Or did the disease show up later, at 13, when he unaccountably burst into tears during the Hebrew reading at his bar mitzvah? That was a family calamity. Daniel had already refused to go to Hebrew school as his brothers had, so he was tutored at home. But then he couldn't get through his reading. The various explanations reveal the fundamentally enigmatic nature of the Stones' family life. Joseph took it as Daniel's stubborn refusal to do what was expected of him. Elsie believed it to be a reasonable response to the overwhelming stress of the day. And Daniel says his refusal was a sympathetic response to his mother, who had been so moved by the beauty of the moment that she began to cry.

The first clear break from normalcy came when Daniel left home for college. He couldn't settle into life at the University of Massachusetts and dropped out after a year and a half to return home and take a job washing dishes at a restaurant. That bothered his father enormously. The son of Jewish immigrants from Poland, so proud to be the first member of his family to earn a high school diploma, Joseph could not understand his son's choosing manual labor over an education. "Daniel wasn't in an office, wasn't an executive, he was a *schlub*," the father says.

His older sister, Lynn, who had always been a kind of surrogate parent for Daniel while Joseph and Elsie were busy running the sandwich shop, could tell her brother was battling against forces beyond his control. "It was so painful to watch him lose his personality, his wit and humor," she says. "He used to be the funniest guy. To see him struggle against that and hear him ask, over and over again, 'What's happening to me? What's happening to me?'—that was hard. The struggle was so enormous, but there was nothing anyone could do to help."

Lynn sat in on the meeting at the hospital when a social worker first told her parents the diagnosis. The woman could hardly have been more callous. She said that Daniel had gone so long without treatment that, as Lynn recalls, "basically it was too late for him. She told us that schizophrenia was chronic and debilitating. Daniel would get

worse and worse, and he'd be better off in the back ward of some state hospital. When she said that, I saw my father cry for the first time in my life. He sat in that meeting and tears just poured out of his eyes. I was devastated, too. But as we left the meeting my mother said, 'We're not going to do that to Daniel. We're going to take him home.'"

All the Stones could do was try to keep Daniel from hurting himself or anyone else. Embarrassment was impossible to avoid, as ordinary outings quickly degenerated into major scenes. One night, Lynn took Daniel to the movies, and as soon as the film started, he swung around in his seat to stare at the viewers behind him, as if that was as much a movie as anything on the screen. And when his mother treated him to an expensive lunch at a restaurant, he took a pitcher of water and poured it all over the food laid out so beautifully on the buffet table. "I said, 'Uh, I think we better leave,' and I paid the people and we walked out," Elsie says. "Daniel looked incredibly sad. Incredibly sad."

as schizophrenia goes, Daniel's is not an extreme case. Some schizophrenics are so completely disconnected from the world that their faces are blank screens, never lit up by a self. Others are gripped by paranoid delusions—like the idea that aliens are speaking to them in TV commercials. No matter how silly these ideas might sound or how dangerous or self-destructive they might be, they are utterly real to the people who have them. And, although a few well-publicized violent individuals like John Hinckley turn out to be schizophrenic, the vast majority of schizophrenics pose a far greater danger to themselves through suicide than they do to anyone else.

Kay R. Jamison, Ph.D., professor of psychiatry at Johns Hopkins University School of Medicine, calls schizophrenia "the hardest problem in psychiatry," as it combines a terrible ferocity of illness with a relative paucity of effective treatments. Although the public imagines schizophrenia to involve a "split personality," in the manner of *The Three Faces of Eve* and other staples of pop psychology, the term actually means "split mind" and refers to the splitting up of the thought process that lies at the heart of the disorder.

Beyond that, schizophrenia typically produces a grab bag of wide-ranging, seemingly unrelated symptoms, most of which Daniel has experienced. Classically, they have been divided into the positive (delusions, hallucinations and impulsive behavior) and the negative (lack of willpower, need for withdrawal and painful sensitivity to stimulation). But to define schizophrenia is to tame it, and despite many impressive advances, medical science has yet to do either very satisfactorily.

For a teenager receiving the diagnosis of schizophrenia, the prospects are not encouraging. One third of all schizophrenics will get better in two or three years through a combination of drugs and therapy; a third will require

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continuing help from support groups and halfway houses; and the rest will need long-term institutionalization in private hospitals, in the few state-supported hospitals that still provide it; or, for too many, out in the streets. To get a sense of the dimensions of the problem: Schizophrenia fills up to 25 percent of all long-term hospital beds in the United States, and it is responsible for a third of the country's homeless population. In an era when a vague sense of ennui sends people to the psychopharmacologist for Prozac, schizophrenia provides some useful perspective on the reality of madness.

Unique as it is, schizophrenia is technically classified as one of the two major psychoses, the other being manic-depression, or, as it is now known, bipolar disorder. The theoretical difference is that schizophrenia affects thoughts while manic-depression alters moods. But the boundaries between the two conditions are not really so distinct—in particular, the manic phase of manic-depression can look a lot like schizophrenia—and psychiatrists here and in other countries do not always draw the line of demarcation between the two in exactly the same way. Lately, geneticists have suggested that the two disorders might actually be two alleles, or separate expressions, of the same genetic defect.

But manic-depression is the easier illness. Far more than schizophrenics, manic-depressives remain sympathetic and intelligible to others. For this reason, manic-depression has produced a remarkable number of artists, writers, scientists and other especially creative individuals. In one recent study of British poets, for example, 38 percent were discovered to be manic-depressive, a rate 30 times that of the general population. By contrast, not one was schizophrenic. Dr. Jamison, who performed some of this research, explains that, unlike manic-depressives, schizophrenics are off in their own world, persecuted by their own private demons whom others cannot begin to imagine. "Schizophrenics do not usually display the kind of creativity that has a social reference," adds Michael Robbins, M.D., a psychoanalyst and author of *Experiences of Schizophrenia*. "It is simply bizarre."

daniel's own disorder might be thought of as the link between the two diseases. He is currently diagnosed as having the relatively unusual type of schizophrenia called "schizoaffective disorder," which combines the chaotic thinking of schizophrenia with the wild mood swings of manic-depression. The manic-depressive element seems to restrain the schizophrenia, but, paradoxically, the schizophrenia may be harder for the patient to tolerate because it is more moderate. "Daniel is aware of his thought disorder," explains his psychotherapist, Andrew Hahn, Psy.D., who provides biweekly counseling. "He knows that his thinking sometimes loses coherence, whereas many schizo-

phrenics have no perspective on it. His very awareness makes his illness a double nightmare. It's a lot easier to be in hell if you don't know you are, right? Well, Daniel's in hell and he knows it."

Ever since the diagnosis, his hell has been made more endurable by an antipsychotic medication called Navane, which curbs his delusions; the mood-stabilizer lithium; talk therapy with Dr. Hahn and his several predecessors; day programs; increasingly challenging part-time jobs; and an occasional girlfriend. Inevitably, Daniel has come to resent the puppet strings that hold him up, and he has been tormented by a desire to experience

life without the dulling effect of the pills, to go "natural." But when he has given in, the schizophrenia promptly rises up from deep within him to swallow up the good times. He falls into a black despondency, a "heartbrokenness," he calls it, that has left him doubled over, sometimes virtually unable to move for days on end. His thoughts scramble, he hears angry voices, turns paranoid and suffers delusions of the classic sort. Once, when he was bitten by a duck in a park, he thought

he had been contaminated by the ghost of Adolf Hitler.

And he turns suicidal. He has tried to kill himself three times. In 1988, he hanged himself from a tree by a river near his house. He says he was inspired by the memory of a neighbor, an apparently thriving mother of three who drowned there during his childhood. Fortunately, the tree branch from which he was hanging broke, and he was rescued and brought to the psychiatric ward for observation.

He came much closer to succeeding in 1990. He had fallen in love with a social worker named Laurie, whose attraction for him was not just a matter of her auburn hair and graceful, carefree manner, but also of the fact that, as a social worker, she knew all about Daniel's schizophrenia, and so he didn't have to face that awkward, painful decision over whether he dared to confide in her. He was so happy with the relationship that he wanted to feel his love for her without the dampening effects of his antipsychotic drugs. So, with Laurie's approval, he went off his medications.

Slowly at first, and then with frightening rapidity, the happy life he had built for himself began to disintegrate. On the way to Laurie's house one afternoon, the bus in which he was riding hit a bicyclist. No matter how forcefully Laurie tried to persuade him otherwise, he was convinced that he had caused the accident. Then one night, back at his parents' house, a voice told him to cut himself with a pair of scissors. Terrified, he wanted to run downstairs to get help, but he couldn't move. Obediently, he brought the scissors to his lip, but he fought off the impulse actually to cut the skin. He slept fitfully that night.

In the morning he decided to die. "I just felt that life for me was becoming a narrow hallway," he says. He put on a T-shirt decorated with Van Gogh's "Starry

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"but people are all over the board." Indeed, the results of the SELF/Melpomene study indicated that 45 percent of the 50 to 54 age group, those most likely to be in menopause, believed HRT is needed, while 35 percent of the others are "still pondering" the question.

With the huge baby-boom generation now advancing into middle age, and bestsellers (see "Read All About It," right) by Germaine Greer and Gail Sheehy focusing attention on it, menopause is finally beginning to get the attention it deserves. In a decade or so, there should be better information. Two long-term, multicenter national studies are currently under way under the auspices of the National Institutes of Health, the Postmenopausal Estrogen/Progestin Interventions Trial and the much larger Women's Health Initiative. They are collecting data from more than 70,000 women and should provide solid answers about short- and long-term effects of various approaches to menopause.

In the meantime, how can a woman best prepare? In one sense, there's nothing anyone can do about menopause. "Women should expect that a variety of things may happen," Lutter advises, "but many will be connected to genetics or heredity." The SELF/Melpomene study indicates that physically active women have no more actual control over menopause than other women, but they *feel* as if they are more in control and in better health. More than half said menopause has had little impact on their lifestyle; one third reported greater independence.

Even if you can't control when menopause happens, "you can control how you respond," says Dr. Cushman. You can, for example, gather data on your family's health history and make the HRT decision cognizant of any cancer or cardiac risks you may face. You can eat right and exercise regularly, so that you face the decline in estrogen with maximum bone mass and a healthy cardiovascular system. And if you smoke, you can stop.

Most women in fact do consider menopause a normal—and not overly troublesome—life passage, the SELF/Melpomene data indicate. So you should discard the common stereotypes about menopausal women and their moods, their complaints, their symptoms. Joan Ullyot, M.D., 53, a marathoner whose periods stopped without warning when she was 47, says, "I think menopause has taken a bad rap. It's simply a change in hormone patterns. Don't expect the worst. Expect the best."

Read all about it

Many of the 42 million American women who have entered menopause turn to their physicians for information. And the majority are less than satisfied with what they learn, according to a recent Gallup survey. Fortunately, a new crop of books is breaking a long silence on the subject, helping to answer questions about osteoporosis, heart disease, estrogen replacement and other related concerns of women in midlife. Indeed, the runaway success of Gail Sheehy's *The Silent Passage* (591,000 sold) and Germaine Greer's *The Change* (73,500 sold) merely stoked the interest of publishers in menopause. But perhaps the more important numbers to consider are the twenties and thirties—the ideal ages to *learn* about menopause.

Here is a sampling of the best new titles:

● *Stay Cool Through Menopause: Answers to Your Most-Asked Questions*, by Melvin Frisch, M.D. (The Body Press/Perigee). Concise answers to medical questions associated with menopause, such as: What is the difference between a hot *flash* and a hot *flush*? (A hot flash is your own experience of the sensation; a hot flush is the reddening of skin observed by others.)

● *Making the Estrogen Decision*, by Gretchen Henkel (Fawcett Columbine). A balanced look at the controversy surrounding hormone-replacement therapy, including estrogen's association with breast cancer.

● *Natural Menopause: The Complete Guide to a Woman's Most Misunderstood Passage*, by Susan Perry and Katherine O'Hanlan (Addison-Wesley). A resource with everything from philosophy to practical solutions for dealing with menopause, including chapters on eating wisely and exercising early in life.

● *Making Sense of Menopause*, by Faye Kitchener Cone (Fireside). The most up-to-date and comprehensive source on the subject. It also dispels such myths as the one that says you're more likely to have menopause problems if you had cramps and PMS in your menstruating years. You aren't.

—Liza Hamm

BRAIN

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Night" landscape, grabbed a steak knife from the kitchen drawer and went down to the park. There, he leaned back against a tree and thrust the knife into his side. As the blood oozed out and soaked his shirt, he lay back and waited. He watched some birds fly overhead, and he saw children playing in the distance. One of them came up to him, only to run off in terror. He took off his jacket, in hopes the cold would bring death on more quickly. He stayed there all that day and all that night.

The next morning, he realized with some amazement that he was still alive, so he went back to his parents' house and lay down on a couch on the front porch. But that was no good. The longer he lay there the more fearful he became that his mother would be upset if she found him. He made his way down the street to his sister's house, where he found his brother-in-law, who took him to the hospital. There, his psychiatrist gently persuaded him to go back on medication. The voices and delusions are gone now, but painful as it was, he did enjoy his day in the woods on the edge of death. "It was beautiful," he says. "It was really beautiful, the whole experience."

Given the centrality of schizophrenia to the psychiatric enterprise, the discovery of the disease came surprisingly late: It was not until the beginning of the nineteenth century that some of the essential symptoms were described. Each generation since has made its own assessment of whether the cause lay in nature or nurture. Sigmund Freud always viewed schizophrenia as a brain disorder beyond the reach of conventional psychoanalysis. But in the 1950s, schizophrenia started to be seen as the product of an emotionally destructive family environment. The psychiatrist Frieda Fromm Reichmann singled out "schizophrenogenic" mothers for blame. Now, such ideas are considered almost quaint.

These days technology has allowed scientists to "see" differences between the brain activity and physiology of schizophrenics and others. Brain scans, for example, show that

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BRAIN

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schizophrenics' brains are smaller and encased in more fluid than normal ones. In tests to track brain activity, researchers have found that schizophrenic brains do not differentiate between verbal and physical stimulation in the way that other brains do—a response that may reflect the schizophrenic's characteristic hypersensitivity to stimulation. And recent research suggests that the "voices," which are the hallmark of the disease, originate in the "speech center" of the schizophrenic's brain. This center is activated when normal people talk silently to themselves, but schizophrenics simply fail to recognize these thoughts as their own.

Other researchers have proposed that schizophrenics suffer from an excess of the neurotransmitter dopamine. And many of the antipsychotic drugs that have worked so well to curb the symptoms of the disease, including Daniel's Navane, do so by blocking the dopamine receptors. Many scientists conclude that schizophrenia is similar to Parkinson's or Alzheimer's diseases, the result of a "broken brain," to use the title of psychiatry professor Nancy C. Andreasen, M.D., Ph.D.'s book on the subject.

But if it is physiological, what causes it? Studies of identical twins have shown that no more than 40 percent of these physiological differences can be traced to genetic linkages, leaving researchers in a quandary about the source of the remaining 60 percent. Schizophrenia researcher E. Fuller Torrey, Ph.D., believes that the disease is caused by a virus that spreads through densely packed populations, which would explain why it didn't appear until industrialization and why it is found less often in the rural regions of the third world. Indeed, researchers have noted that a preponderance of schizophrenics are born in the late winter and early spring, and postulated that the flu virus, which is most likely to go around in the late fall and early winter, may have affected fetal brains in utero.

Lately, however, scientists have begun to think that family background may play a role in the development of the disease after all. In

their view, schizophrenia is the result of a delicate interplay of factors, much like heart disease. A genetic predisposition may combine with an environmental stressor—be it in the form of a virus, physical trauma or psychological stress—to trigger the onset of the disease.

It seems inescapable that the family life of schizophrenics plays some role in the disease's formation, no matter how discomfiting that may be to hear. Dr. Robbins believes, based on existing research as well as his own experience with schizophrenics in psychotherapy, that parenting style can make all the difference. To him, it's not that some parents cause schizophrenia, but rather that some parents are somehow able to prevent it. "I postulate two kinds of caretakers," he says. "One repairs the deficits of the proto-schizophrenic. The other doesn't."

Elsie and Joseph Stone sit on the porch by the couch where Daniel had lain the morning after his most recent suicide attempt. With his rabbinical beard, Joseph looks like an elderly Moses; Elsie might be Aunt Bee from *Mayberry R.F.D.* By nature, Joseph is gruff and imperious, quick to advance his own opinions and dismiss others'; Elsie is quiet and nervous, often making even the most mildly negative comments about Daniel behind her hand as if in an attempt to say them without being heard. Disagreements have been a regular feature of the Stones' 50-year marriage, and they could get quite intense. As a child, Daniel remembers running to his room and putting his hands over his ears to try to close out their arguments, but his father's angry voice would come booming through the walls. "That made me feel really terrible," Daniel recalls.

His therapist Dr. Hahn is reluctant to look too much into the past when Daniel's needs lie so much in the present. Nevertheless, he has come to see the roots of Daniel's disorder in the family disharmony. "Daniel was always the baby in the family, the child that was most enmeshed in the problematic relationship between husband and wife," he says.

That is not to say that the origins of Daniel's problems lay solely in the tensions of the household. Although Daniel himself was unaware that his

family had any history of serious mental illness, his parents and sister Lynn had all privately noted a strong resemblance between his symptoms and those of Joseph's sister Anna. A rather flamboyant personality given to wearing leopard-print dresses and costume jewelry, Anna Stone had drifted in and out of mental institutions for much of her adult life.

As it is, even if Joseph and Elsie's actions didn't create Daniel's problems, they have given them much of their distinct coloration. It is probably significant that Daniel has twice felt suicidal in his parents' house, and then, on the most recent occasion, couldn't bring himself to let his mother see him bloodied by a self-inflicted wound. And it was revealing, too, that Daniel should have identified the duck that attacked him with Adolf Hitler. His father had always been fascinated by Hitler; Daniel says Joseph has read every book ever written about the man. In Daniel's metaphorical imagination, his father may well have become Hitler.

For the families of schizophrenics, help is extremely difficult to come by. The liberation movements of the Sixties and the antipsychiatric fulminations of polemical psychiatrists Thomas Szasz and R. D. Laing hit a powerful pitch just as new drug therapies, chiefly Thorazine, came on the scene, allowing states to begin emptying and shutting down their mental institutions. The budget crunches that governments faced following the antitax movements of the 1970s and 1980s accelerated the process, creating drastic disruptions for the mentally ill generally, and especially for schizophrenics. Deinstitutionalization was politically correct, and it gave governments an excuse to slash money for the mentally ill out of their budgets.

But this vast depopulation of state psychiatric hospitals has served largely to substitute one ill-suited institution for another, as many of the mentally ill have relocated to nursing homes, single-room-occupancy hotels and homeless shelters. There are few support groups. There are few community treatment facilities. What remains of the state hospitals are barren, understaffed institutions where schizophrenics go when they run afoul of the law or can no longer be managed by their families.

For Daniel, institutionalization has been the worst experience of his life. Since 1988, he has been committed several times against his will, mostly at Massachusetts' Westborough State Hospital; each commitment followed a severe breakdown and the psychiatric and legal judgment that he was "a danger to himself and others." Built in 1885 during one of the few historical periods when the prevailing attitude toward mental illness was relatively benign, Westborough is located on several hundred acres of rolling farmland on the shores of Chauncy Lake. Today, it looks like a prep school in bankruptcy. Many of its once-handsome Victorian brick buildings are boarded up, and others are severely dilapidated. A few have been replaced with more efficient structures, like the hulking brick Hennessy Building, where Daniel spent six months in a locked ward on the second floor, waiting with all the other overmedicated patients until his time was up. If the experience had any positive effect, it was to get his life in order so that he would never have to go there again. "The whole time I was there was very traumatic for me," Daniel says. "I didn't get better in that hospital."

What *has* made Daniel better is a combination of insight, independence, positive role models and what he calls an appreciation of his own "singularity." Robbins argues that a lot of what passes for therapy is better thought of as just another stage of the disease, chiefly in the way that so many treatments attempt to tranquilize the individual and detach him from his experience. In Daniel's case, once the antipsychotic medication allowed him to get his thoughts under control and the lithium smoothed out his moods, he has benefited most from being treated like a normal person, with his own apartment, his own car, his own job, his own girlfriend, his own place to go. And athletics helped, too. "I was always pretty good at sports," he says, "and that boosted my self-esteem. Finally I could be known for something else besides being mentally ill."

Even as Daniel has managed to free himself from many of the symptoms of the disease, he has found it difficult to break away from the nearly exclusive company of schizo-

phrenics and enter into the mainstream population. He has been defined by his disease.

One of his best friends is 32-year-old Ed, who was able to reclaim his life thanks to Clozaril, the antipsychotic medication that has been hailed as a wonder drug because it works for schizophrenics who were previously untreatable. Ed and Daniel go out together one night a week, and on a recent evening they went bowling in the nearby town of Natick. Ed had once been thrown out of the place for arguing with the bowlers in the next lane, who, he

thought, were talking about him. With Clozaril, Ed speaks a little quickly, but otherwise his behavior is unremarkable. Out on the bowling lane, Daniel and Ed cheered each other on, slapping a triumphant high five for every good roll, as though they weren't competitors but teammates. Daniel won the first string, Ed won the second. One might have expected them to play a third, decisive string, but they unlaced their bowling shoes and headed happily for the door. For two schizophrenics, it was, at least for now, victory enough just to be playing. ☺

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