Literature and happiness--no doubt we are happy when enjoying a literary work, but what is happiness? Historically, happiness has meant two quite different things.

In the older view, that is, in classical and medieval times, you were happy if nothing bad was happening to you. People are helpless before fate. If more good things than bad happen, you are happy. Darrin McMahon (2006), the historian of happiness, points out, "In virtually every Indo-European language, the modern word for happiness is cognate with luck, fortune or fate." Dutch, for example, uses the same word "geluk" for both happiness and luck. In English, "hap" or "heppe" appeared in Middle English in the thirteenth century, meaning chance, fortune, "an event that befalls one" (OED s. v.). It survives in our words "perhaps," "hapless," "haphazard," "happenstance," "haphazard," "hapless" and, our topic, "happiness." I think that Freud's idea of returning his patients to ordinary unhappiness instead of neurotic unhappiness has something in common with this older, tragic view of happiness.

But since the eighteenth century, since Locke and Jefferson and Adam Smith, we have considered happiness as a state of mind. Happiness is a state of mind and you can try to achieve happiness by your own efforts. This is the view enshrined in the American Declaration of Independence. We are all entitled as an inalienable right to the pursuit of happiness.

Both these views make brain sense, but, so far as literature is concerned, it is the second that matters. When we create or re-create literature, we are pursuing happiness. We are pursuing a certain state of mind. And how do we pursue it?

Think of a rat in a laboratory cage. This rat is supposed to spin its treadmill once, then push a lever five times which delivers a little sugar water. And the rat spins the treadmill and pushes the lever five times, and the rat gets some sugar water, and the rat spins the treadmill and pushes the lever five times, and the rat gets some sugar water, and the rat spins the treadmill and pushes—and so on. Is that a happy rat? Yes! Believe it or not, rats actually look pleased when given sweet things to taste, and they produce the rat equivalent of a disgusted look in response to bitterness (Robinson and Berridge 1993). And how do we know this is a happy rat? Because it keeps on. It spins the treadmill and pushes the lever five times and gets the sugar water and it spins the treadmill and pushes--it keeps on doing it.

In this essay, I want to show you what that laboratory rat has in common with you and me who go on reading and reading and reading. I want to consider two kinds of reading: one, someone's reading a book just for pleasure and two, people like us reading a book as literary critics.

A well-known psychologist, Mihalyi Csikszentmihalyi (1990; Czikszentmihalyi and Robinson 1990b) has written about happiness in terms of something he calls flow. Flow, he defines as a Zen-like state of total oneness with what you are doing. Flow is the kind of thing we experience when we are entranced or rapt or absorbed in a book or movie. And it feels great.

To achieve flow, to get into this state of mind, Csikszentmihalyi says, you have to be doing something that balances the difficulty of the task and your ability to perform the task. If what you are doing is too hard, you will feel strained. If it's too easy, you will feel bored. You need to hit the happy medium, a nice balance, and then you will be, as we say, in the zone, in the moment—you will feel happy.

There are a lot of ways that we set ourselves up for flow. We go to the gym and lift just the right weight or we run just the right amount. We engage in contests and races, and we risk the agony of defeat in order to experience, every once in a while, the joy of victory. I am an asportual myself, and I do crossword puzzles—I triumph over Will Shortz—or cryptics or chess problems. Or I write essays like this one, and when the writing goes well and people like the essay, I feel good. I'm happy. In short, we set up situations such that we match our skill to the difficulty of the task. We do something not too hard and not too easy. And somehow that makes us happy.

But how? And why? I think the answer lies in our brains. We need to turn from Csikszentmihalyi's psychology to neuropsychology and, I think, to one neuropsychologist in particular, Jaak Panksepp who has worked extensively on the emotions of mammals (including people). Panksepp points to a system that underlies all our other emotions (like Freud's libido); he calls it the SEEKING system (Panksepp 1998, chs. 8-9).

Basically, this is a dopamine system that responds automatically and unconditionally to information from the body like "I'm thirsty" or "I'm hungry." And the system learns about things in the environment that predict satisfactions. Basically, this is a dopamine system that responds automatically and unconditionally to information from the body like "I'm thirsty" or "I'm hungry." And the system learns about things in the environment that predict satisfactions. The system is active all the time during the day and during REM sleep. It generates search activities, foraging, investigating, sniffing.

Two words that are useful here are "wanting" and "liking," handy terms introduced by Robinson and Berridge (1993). This is a wanting system and not a liking system. Just looking, not consummating. In fact, consumption shuts down this seeking system. Panksepp (1998, p. 148) compares the pattern to eating potato chips. I want a potato chip. I get a potato chip, I eat it, I like it. Now I reach for another potato chip and so on. While I am eating the potato chip, I am not busy another seeking another. I just enjoy the one I am eating. Only afterwards do I reach for another.

The core of this SEEKING system consists of pathways leading from nuclei in the substantia nigra and the closely related ventral tegmental area in the midbrain, at the top of the brain stem. These are the most ancient parts of our brains. These nuclei generate dopamine and spritz it out widely into various systems in the higher parts of the brain.

The systems we are concerned with originate in the substantia nigra and the ventral tegmental area and go on to the nucleus accumbens in the more modern forebrain. If you stimulate that pathway or, more techically, the lateral hypothalamic corridor, you get right away the most energized exploratory and search behaviors of which an animal is capable. For example, that corridor contains the nigrostriatal system that generates voluntary movement, like seeking a book.
But for reading, the two systems we want to pay attention to are the mesolimbic system and the mesocortical system. The "meso" in their names refers to the fact that they originate in the ancient midbrain (substantial nigra and ventral tegmental area). From an evolutionary point of view, then, this system must be basic to our survival. And the mesolimbic and mesocortical systems are very basic indeed.

The mesolimbic system has to do with the feelings associated with this SEEKING behavior. The mesolimbic system originates in the midbrain—it's "meso"—and more specifically in the substantia nigra. And the "limbic" in its name refers to the limbic system, where emotions originate. The mesolimbic system extends on through the nucleus accumbens and up into the limbic system. It produces that invigorated feeling, that sense of anticipation, that we have when we actively seek thrills and other rewards. This mesolimbic system maintains a feeling that something exciting and interesting and satisfying may be going to happen. Think Freud's libido.

The mesocortical system originates in the ventral tegmental area in the midbrain, passes through the nucleus accumbens and on to the motor systems of the frontal and prefrontal cortex. It is in the prefrontal cortex that we do our most advanced thinking. That is also where we plan actions at the most abstract level. The mesocortical system drives the normal cognitive function of the dorsolateral prefrontal cortex (part of the frontal lobe). For example, it helps us understand correlations in the external world in terms of causality so that we can predict what will reward us. When this system is working normally, it creates a brain state in which animals forage for what they need outside their burrows. They forage and pick things up. Then, if this type of neural activity ceases, they tend to drop the objects. Conversely, if you stimulate this system, an animal gets more and more excited, excessively excited, even crazed.

These two systems (mesocortical and mesolimbic) are much studied these days, because they are involved in drug addictions. They remind me of the old song we used to sing when I was an undergraduate:

Cigarettes and whisky and wild, wild women
They'll drive you crazy, they'll drive you insane . . .

Addictions may indeed make you crazy. Think of Freud's wishing and wish-fulfillment. Dreams and schizophrenia may simply be this dopaminergic wanting system with the frontal controls taken off.

But what do cigarettes and whisky and wild, wild women have to do with enjoying literature? How do these two systems that originate in your ancient midbrain work when we are using very advanced cognitive systems to enjoy a book or a movie or a play with our sophisticated frontal lobes? What is happening when we pick up a book to read or when the play or the movie begins? We have a SEEKING system that says, I think something good is going to happen here. I feel anticipation, interest, excitement. I want to hear the next line of the poem. I want to know what's going to happen in the next chapter of the novel or the next scene of the play. My mind is going to work, but I'm going to feel "flow."

And then it happens. We get that next line, next chapter, next scene. OK! Great! We got what we wanted. The faint puzzle is solved. The desire is satisfied—partially. And for an instant or two we are satisfied. We settle down. And then it starts up again. What's next? I anticipate. I want. And then I get it. I want, and I get, I want, and I get, and that is the rhythm that we experience as we read through the book, or as we watch the play or the movie.

That is what the experience of reading is in brain terms, a switching back and forth between systems, between wanting and liking, wanting and liking, as with the potato chip. It's no accident that these dopamine systems are the ones involved in drug addiction. Loving literature is like other kinds of addiction. Just like cigarettes and whisky and wild, wild women, a successful literary experience begins with our wanting and ends with our liking.

A book, then, is what is called a self-stimulation system. We ourselves create the stimulus that gets us to seek a satisfaction. In general, enjoying literature is just that, a self-stimulation system. When we read a book, we are like the rat in his cage. We are simply being mammals.

Now does this pattern of brain activity mean that a longing for literature is somehow inscribed in our brains. Is it genetic? Some people think so.

It has become a commonplace to insist that literature has an evolutionary value in allowing us to try out solutions to life situations. Or that literature allows us to empathize with other humans. Or that literature makes us better morally. Or wiser.

Now, if that were true, English departments would be populated by saints and sages. I've worked around English departments for more than half a century, and I can only say that has not been my experience.

People like to say that literature lets us try out life possibilities in a situation where there are no adverse consequences where nothing bad happens if what we try fails. And what possibilities are we considering? Or as Jerry Fodor (1997) puts it:

What if it turns out that, having just used the ring that I got by kidnapping a dwarf to pay off the giants who built me my new castle, I should discover that is the very ring that I need in order to continue to be immortal and rule the world? It's important to think out the options before, because a thing like that could happen to anyone and you can never have too much insurance.

These are the kinds of life possibilities that we can explore through literature? I think not.

Trying out possibilities is what we do all day long when we think. And we can think about possibilities without anything bad happening as a result. We can empathize or make moral decisions just in our minds—we do this all the time. What does literature add to these adaptive activities?

We don't need to assume some complicated basis. We do literature because we enjoy it. Literature satisfies in the same way that many other things in life do—at least for most people.

So far, I have been discussing normal people, not literary critics. Normal people just pick up a book or go to the movies or the theater and they enjoy it. But literary critics and, nowadays, theorists do more. We go through an extra intellectual step. We make sense of the text. We may read it like formalist critics or like marxists or like psychoanalysts or in terms of culture or through some theorist, Lacan or Bakhtin or Lakoff. Somehow that contributes to our happiness with literature.

Notice that we perform our act of literary criticism in our own particular way, the marxist way or the psychoanalytic way or the Norm Holland way. We read and interpret—and do criticism—with a distinct personal style.

Now there is something just beginning to emerge in brain science about this notion of a personal style (Starr 2006). Style may stem from the periaqueductal gray, the PAG, a region, again in the ancient brain stem, this time in the dorsal region spanning the midbrain and the pons.

We now have some evidence that all our emotions, rage, fear, lust, disgust—that all these separate systems are somehow anchored in the PAG from where they radiate out to higher parts of the brain (Panksepp 1998). We know from ordinary experience, if nothing else, that each of us as individuals acquires a system of emotional regulation. We learn how to manage our fears, our angers, our lusts, and so on, in very personal ways And there is some evidence that this system involves pathways leading from the PAG to the frontal lobes (Schore 1994). According to this evidence, early interactions of mother and child form and shape this pathway from the PAG to the orbitalfrontal cortex. In other words, we learn at mother's knee how to begin to be the kind of person we are. We begin to acquire a personal style and with it a personal sense of humor (Holland 1982). Early childhood shapes personality, as the psychoanalysts have always said. Now, we are beginning to get from brain science some further information about how that happens.

What happens when you leave mother's knee and go off to graduate school and become a literary critic? You still have those personal preferences from your childhood, those personal ways of seeking pleasure. And you still have this basic dopaminergic pattern in your brain of seeking happiness in the form of wanting, liking, wanting, liking. What is happiness for a literary critic?

My friend and colleague Bernard Paris once said to me that we critics like those works best that we perform best with. They are what make us happy. Paris himself provides a good example. Those who know his work know that he uses the psychology of Karen Horney to analyze literary characters as though they were real people (see, for example, Paris 1974; Paris 1997). What are the texts he likes best? He likes Victorian novels, notably Joseph Conrad, but especially
George Eliot. He likes Dostoevsky. In short, he likes those novels that allow him to analyze characters and to do his very particular thing, which is to use Horneyan psychology to show that the novelists themselves didn't really understand how their characters were resolving their problems.

Let me instance a critic whose work I most admired when was in graduate school. Walter Jackson Bate affected my own thinking for a long time. Bate liked to talk about moral poignance, moral sincerity, acts of what he called the "moral imagination" (see, for example, Bate 1963; Bate 1975). Whom did Bate write about? Keats, surely the most moral of the romantic poets, but above all, Dr. Samuel Johnson, whom he regarded as a great source of moral wisdom. And for years he taught a course in the great critics, from Aristotle to Richards, showing how each elicited moral wisdom from the subjects they wrote about.

By contrast, I could point to a very different kind of critic, my late colleague Leslie Fiedler. Leslie was fond of making outrageous statements, and how did he do that? He would transform the minority into the mainstream. Leslie's great theme, the one that runs through all his work, was bringing whatever was marginal, whatever was outside, on the edges, into the mainstream. Indeed he would replace the mainstream with this thing that was marginal (see, for example, Fiedler 1960; Fiedler 1978). What are the books he liked to work with? Jewish novels. Writings about what he called "freaks." In his most famous essay, he showed that the greatest mainstream American novel, Huckleberry Finn, really embodied a homoerotic relationship between two people of different races and that this relationship—outrageous in 1950s America—was true of all the great American novels.

And what about me? For me the important thing is being able to find the unity of a text. My favorite works are those that I can treat as a problem to be solved. I find myself treating literary works as like jigsaw puzzles where the aim is to make all the parts fit together all the parts together in a rational way. I am drawn to works that are in fact obscure and difficult—Kafka, Ingmar Bergman, Last Year at Marienbad (see, for example, Holland 1958: Holland 1964). Or things that people think are simple but I can show how complicated they are and how they need my problem-solving skill: Robert Frost; Hollywood movies or soft porn (see, for example, Holland 1988: Holland 1992).

For me, literature is a puzzle, a puzzle I have been trying all my professional life to solve. And that is why you have been seeing in this paper, me being happy because I am solving the puzzle that is literature.

References