

Insanity: WisCon 29, May 27-30, 2005

Flight into Fantasy

I first read *I Never Promised You A Rose Garden* when I was an undergraduate. It's an account, written by Joanne Greenberg, using the pseudonym Hannah Green, of her treatment as a teenager for mental illness, at Chestnut Lodge Hospital in Maryland, under the pioneering care of Frieda Fromm-Reichmann and Harry Stack Sullivan. These two doctors didn't care for the crude medical treatments available at the time—electro-shock therapy, sedatives. They treated patients diagnosed as schizophrenic, and others who resisted classification, mainly through psychoanalysis. I didn't know any of that background. I had only a hazy idea of what psychoanalysis might be. To me *I Never Promised You A Rose Garden* was a novel. I read as if it was a fairytale.

A sixteen year old girl called Deborah—maybe cracking under the strain of her successful, immigrant, Jewish, father's expectations, and her mother's desperate need to see her fit in—starts to behave in obviously disturbed ways (a determined suicide attempt makes the final break with normality) and is committed to a mental hospital. To her parents this is a cause of shame and grief, and they're terrified for Deborah when they see the bars on the windows. To Deborah it's a huge relief. At last she can relax, stop spending all her energies on trying to pass. She can engage with what's wrong with her, she can try to get well.

Many of my friends thought Sylvia Plath's *The Bell Jar* was wonderful. But although I prized some of the quotes (In Japan they understand things of the spirit. They disembowel themselves when things go wrong), I wasn't smitten. My form of teenage angst led me to prefer Deborah's fighting attitude. I was attracted to the way she was a loner, stoical about it, and didn't look to other people, namely men, for her self respect. I think I'd have thrilled to her long struggle, and the strange, courageous people she meets inside, even if that had been the whole story. But it wasn't. Part of 'Deborah's' illness is her flight into a fantasy world, the secret kingdom of Yr, populated by divinities and torturers: Anterrabae, the falling god, scattering his flames in the darkness, Lactamaeon, moaning in a dog-howl; the Collect, sometimes comforting, sometimes a menacing Greek chorus...

I knew about taking flight into fantasy. I had my own, very vivid, imaginary continuum (which I'm not going to tell you about). It wasn't the same as Deborah's: I never 'appeared' there; my characters didn't speak to me, talk about me, judge me or make demands. They didn't know I existed. But I knew about the seductive allure of that escape, and how it becomes an intense experience, much more interesting than daily life. And since I love the kind of fairytale where the happy ending costs something, I loved the way Joanne Greenberg treated 'Deborah's' dismissal of her company of shadows. When she has to give them up, so that she can "hang with the world, full weight," it's a tragedy.

(One reason why I'm very glad I'm counted sane is that I don't have to make that awful sacrifice. I remember going along to my Confirmation, when I was a young teenager—the ceremony where Catholics are initiated as adults—secretly half-terrified that it might actually *work*. The Bishop would give me the symbolic slap on the cheek, I would suddenly be grown up and my access to fantasy would vanish. (I had the same worry about getting my first period). As a fully fledged professional, with a licence to practice, I still generally gloss over the strangeness of what I do, for fear that someone will try to take it away, for my own good. I willingly collude with the people who seem to think making up stories is a job of work, a handicraft with commercial potential. So far, I've got away with it. Sometimes I suspect we're all pretending, that really we all live in dreams)

Leave me alone with a shotgun or a gas oven as long as you like, I'm not interested. Leave me alone with my imagination, and I will take flight. Not because I need to escape, I've had a pretty nice life. Not because I *must*: my pleasure has never become a terrifying compulsion; because I can. (Well, okay, first I found I could, then I got shall we say benignly addicted?)

But *why* is that?

This is a question with different angles. There's the theories of insanity version. Are people who create and maintain vivid fantasy worlds dicing with psychosis? Is my desire to write fiction the sign of a wounded mind, maybe the feminine equivalent of the extremely masculine mind, the plight we

call Asperger's? Do I make up worlds only because (for organic, brain-structure reasons) I find it hard to deal with this one? The idea that 'creatives,' like 'geniuses' are all mentally ill has been around for a long time, and it now has some neurological support—

(But if I find this world difficult, does that make me crazy? Discuss.)

Then there's the evolutionary psychology version. *Why* would the human brain's function include the capacity to 'make up' worlds that don't exist? How is this adaptive? What does it tell us about the way we construct our 'normal' view of the world, the single, accepted world we believe to be 'out there'—although a very slight acquaintance with modern science will tell you that we have no way of knowing. However it is we get the feeling of red being red, or of love being love, we can *never* have an unmediated contact with 'objective' reality... Exactly how does this redundant function work? What happens—in the grey matter—when I imagine worlds that don't exist, and people them with fake characters? One of the most exciting books I've read, along this trail, was Gerald Edelman's *Bright Air, Brilliant Fire*, where I read for the first time about the magical algorithms of laying down memory, a process as elegant and amazing as the ingenious coupling and uncoupling of the double helix. Your autobiographical memories, you see, are stored in two little organs, buried deep, near the brainstem, called the hippocampi, (from a spurious idea that they look like seahorses), in much reduced form, just a few lines of code, so to speak. When some stimulus *recalls* one of these shorthand patterns, it fires up, and triggers firing in all the associated areas that were firing when the memory was laid down. A whole past brain state gets recreated, in an inverted pyramid, each level reaching out wider, until all the sensory responses are involved (though not *exactly* the same brain state, because your brain has changed, it's grown in places, withered in others, since you were eight... We cannot step twice into the same river, even in memory) Think of this: in full blown involuntary memory, when you feel as if you are there again, on that beach again, with the same sand between your toes and the same tiny shell in your little mitt, it's because inside your head (the only place where you ever perceive things, remember), you *are* there again...

Does that same process, the complex interlinked maps of firing and partially firing neurons, happen when I'm world-building? When I pick up the thread and recall, vividly, what our heroine sees when she looks around a room in a story, does that look the same as a real memory recall happening in the grey matter? Or how is it different? Do I maybe have weird neuronal architecture by now? A whole library of non-existent, extra, internally generated rooms, faces, buildings, land-

scapes? Or what? Well, maybe you can now tell that though I also write fantasy, I'm basically a science fiction writer. I want to understand how things work, concretely, logically... But forget the analysis for a moment and just imagine if our internal worlds could seep, or leak, into the external. Imagine a literary-set party, where every Islington novelist (we used to say Hampstead: substitute the current U.S. well-heeled, high-culture locale of your choice), arrives with a shadowy entourage of troubled wraiths—murder victims, wronged women, sexually inadequate anti-heroes, ruthless yet passionate politicians, self-sacrificing wives, lonely dreamers—Imagine that each one of these wraiths, male or female, whatever dress code, age or skin tone, has the same, creepily familiar cast of features. (Because of course, every character you invent is really an aspect of yourself). When you think about it like that, it does sound a bit psychotic doesn't it? Sounds uncomfortably like a visualisation of the states of mind that we call crazy.

Then imagine a gathering of genre stars. Imagine how crowded the room would be with incest victims, serial killers, repentant genocides, cold-blooded assassins, rapists, part-time predatory animals, triple-sexed parasitical adventurers, resurrected dead people, reptilian gangsters, blood-sucking evil geniuses—well, okay, also the benign geniuses—and all kinds of well-intentioned, entertaining monsters. But what kind of crowd of hangers-on would follow Stephen King around? However mild-mannered their keeper seemed, you'd give him a wide berth, wouldn't you?

Schizophrenia and Magic

I Never Promised You A Rose Garden was published in 1963. I read it ten years later in the heyday of a revolutionary approach to mental illness, when R.D.Laing was convincing everyone that socially repressed families make their adolescent children go mad, and that madness is the true sanity... (R.D Laing anecdote: If any of you are familiar with a British psychedelic band called Pink Floyd, you may remember the story of Syd Barrett, the charismatic front man and songwriter who began to fall apart very badly, just as the band started to make it, commercially. Apparently his mates took Syd to see R.D.Laing, in the hope of getting some help. He interviewed the patient, and then he told the anxious rock stars, well, there's no question Syd has been taking too much acid, and it does not agree with the lad. On the other hand, you're the ones who are destroying something free and strange and beautiful, turning it into just a way to make loads of money. You are turning the gates of heaven into a tollbooth. Are you sure *you* are not the crazy ones?)

Mental illness is a disease caused

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by a hateful world. Discuss.

If you're interested in the sociology of madness at all, you'll know there's been a lot of evidence, there still is, implying that simply feeling excluded, having your views denied, being *unvalued* by society, can literally drive people insane. There are many studies of the way violent black men are far more likely to be diagnosed as schizophrenic than violent white men, if they run into problems. Your assumption might be they've been mislabelled, but statistically, it seems the painful, frightening symptoms really are more likely to be there, and the tell-tales of schizophrenia really do show up on scans. One can be driven mad, and it's real madness. There's a feminist issue here. Are extraordinary women—like Sylvia Plath, like Virginia Woolf—liable to 'go mad' because their desire to become public actors puts too much stress on the female brain? (It's a point of view). Or are they driven mad by exclusion? In Western Europe, in the past, there were extraordinary women, the great female saints Theresa of Avila, Catherine of Sienna, who were major public actors in a very male oriented world. They also behaved very extravagantly: seeing visions, whipping themselves, ranting, raving. This was taken to be God's holy visitation, and the women involved were wise enough not to argue with the diagnosis (maybe they were shamen, as you heathen would say) but they were probably clinically ill, and the twisted position they held in their society surely didn't help. If you were *Einstein* and you were born female in the fifteenth century, you'd have ended up in a convent, starving yourself into hallucinations, babbling about how you'd dreamed you were flying alongside the angels, gaining knowledge of how God built the universe... I used this particular image of madness in my final work of feminist sf, the book called *Life*, published last year by the Aqueduct Press. One of the characters, Lavinia Kent, is a moral philosopher, a topflight star academic, between bouts of schizophrenic fugue. Did she fall or was she pushed? Lavinia herself has a deeply ambivalent attitude towards her 'disease.' She knows the world drove her mad, she hates her own frailty, but now she doesn't want to be 'cured.' She believes in her wounded mind. There's a passage you could read (*Life* p.81 -83), putting her point of view.

When madness was a psychological problem, the symptoms had psychological explanations. Thinking you're Napoleon, flights into fantasy worlds, were the *mind's* response to traumatic events or emotional pressure, the brain was just taken along for the ride. If the single self disintegrated into 'multiple personalities,' it was a kind of internally generated witness protection programme. The patient was going into hiding, taking on disguises to escape from an abuser. And so on. Like my fictional character the moral philosopher I'm undecided about this attitude, I can see it makes sense, but I don't

like the way it dismisses the ability to fantasise, as a feeble attempt at self-medication. Sometimes it's a *good* idea to try and fly beside the angels. I don't want to see my imagined worlds as a poor sort of first-aid, that must be removed before the wounded mind can be treated. In the stories, mine and other peoples, characters *use* a flight into fantasy. It may carry them away against their will, but they find meaning in it, they become lucid dreamers. Typically, very typically in the children's and teenage fantasy I read when I was a child, a fantasy world is a source of renewal. Implicitly it's a spirit journey: a healing dream, a message from the gods, or from yourself to yourself, teaching you how to deal with the real world; showing you the way to grow strong.

I have no ambivalence about insanity as a scientific phenomenon. It's an area that's simply got to be fascinating (as I think many sf writers have agreed, over the years). Firstly there's the imagined worlds issue: *what does this look like in my head?* What does it look like, in terms of firing and partial firings of the neurons, when a director dreams in the colours of her movie, when gamers become engrossed in GTA, or readers are absorbed in a novel? Where might this weird ability, which in its pathology we call madness, lead us? Secondly, more generally, we find out how things work by taking them apart, or if we don't know how to do that, we have to wait until we find a broken one. In the case of consciousness, until very recently the clinicians had to wait for minds to fall to pieces, one way or another, before they could even guess what was going on. Brain injury and insanity offered the only way to analyse what makes us human.

So what does the scientific study of insanity have to offer a science fiction writer? Well, in my case, I got very interested in the idea that the symptoms patients experience, and report on as best they can, are not metaphor invented by the patient, they are evidence of the weird reality that underpins our 'healthy' mental experience. Multiple personalities, for instance. It now seems that it's perfectly true that there is no single 'self' in there. The way the brain works, the way consciousness seems to have accreted, through evolution, implies we have various component selves, with different perspectives, competing to make their point. Imagined worlds? Well, philosophers guessed the truth millennia ago, and now that we have brain scans it's beyond dispute that the world a *healthy* person perceives is imagined. It's not real. It's an image built of patterns of electro-chemical impulses. Arguably, what's happening in insanity is not a breakdown of the vital functions, but a failure of censorship. Arguably, mad people see the world, and perceive themselves, in raw form. The more pro-

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foundly disturbed they become the closer they are to objective reality and it's a terrifying, utterly disabling experience. This is an insight that horror writers naturally find very appealing: you can find it used in H. P. Lovecraft, Aleister Crowley, Charles Williams and others. That awful, bottomless seething abyss! It's an idea I first used myself in a book called *Kairos*, published in the late '80s, about a substance, or state of affairs, or concept (there's no difference, where this stuff takes people) called the 'Kairos,' which turns the world inside out, so *everyone* gets plunged into the unbearable reality of being... (In my story this turns out to be a good thing, by the way. I think Lovecraft *et al.* are just wussies).

After *Kairos* I got interested in another angle. I started thinking about the interface between consciousness and physics, (the interface? There's no physics without consciousness, obviously. And there's no consciousness without physics. The grey matter, the material substrate of mind, is defined by the properties of time, gravity, the nature of matter, which are in turn defined by our theories of physics); and the idea of inner space having a kind of back door into outer space. Is that familiar to you? Okay, getting down to our current ontological theory of everything, 'reality' is seen as a staggeringly complex arrangement of 0s and 1s. Bits of information are the new 'atoms.' Take it that the 0s and the 1s are the same everywhere, the complex arrangement of 0s and 1s that makes up a human being would be the same anywhere. So what you do is, first you learn how to translate someone, mind and body, into the digital version of themselves (you will have seen this done, say in *Tron* or *The Matrix*). It looks painful, but I don't see why. (I think that may be Jeff Bridges and Keanu hamming it up.) The video game industry will do this, they have the financial muscle. Meanwhile, our ability to survey extra-solar planets improves. We reach the stage where we can identify not just the existence of a rocky planet in the habitable band of a system, we can read the chemical signature of its atmosphere, and establish the precise, 4-space co-ordinates of a spot on a friendly surface. Why not? It's just GPS, with a few more orders of number crunching. Then you simply send the traveller as a signal, from point A, to point B. (This is the tricky part. In the Aleutian books my scientific genius—she's not crazy, just a loner and a bit fat—does it by hijacking a particle accelerator she happens to be able to access, after hours; the one under the Swiss-French border. She divides her information-form travellers into two copies, and sends the copies zooming around so they smack into each other, go superluminal, and when they are where there is no time, they just, well, drop out of the loop at the coordinates of point B. Wherever that happens to be, relative to everything else, in the state of all states, however many light years away).

I spent about a decade playing around with this idea,

the backdoor in our heads that opens into infinite space, as one strand in a trilogy of sf novels also devoted to sexual politics, and the politics of colonialism. Then, eventually I came to write *Bold As Love*, where the science of consciousness plays a significant part. If you think that's a strange component for a fantasy grounded in '60s and '70s rock and roll, that's because you weren't there, children. The term *psychedelic* should give you a clue... I wanted to use theories of magic, (magic, or *magick*, being another big component of the hippy-dippy scene) as a stage on the way to the new science of 'neuro-physics,' when high powered research gets to the point where we can decipher the interface between matter and mind. If everything's made of information, you see, there's a level where there's no barrier between ideas and material objects, they're part of the same continuum, and you could use ideas to manipulate the material world, which is the 'sympathetic magic' that occult tradition babbles about. (Some of you may remember a Book called *Tyger Tyger*, by Alfred Bester, one of several classic sf novels that plays around with this). It's like alchemy turning into chemistry...

But neurophysics has a problem, roughly the same as the problem of quantum physics. Obviously, in the rather convincing world we seem to inhabit, and which my characters continue to inhabit, material objects and ideas are *not* interchangeable, and you can't influence the result of a soccer match by wishful thinking (or if you can, could we meet, later?) Where does the weirdness go? When I was trying to answer that question, I naturally reverted to schizophrenia: the state of madness where the censorship breaks down, where we try to handle reality in its raw state, and internally, emotionally generated visions and monsters are indistinguishable from 'out there' perceptions. That's when I came across Paul Thompson of UCLA, and the forest fire effect; a revelation which brought my insanity strand, so to speak, full circle, back to where it had begun, and brings my overview more or less up to date.

The URL for the relevant paper is on the handout, it tells of a clinical study, results published in 2001, in which the brains of young people (crucially, very young: this is children who have displayed the classic symptoms before adolescence) have been scanned, repeatedly, over five years. The clinicians had no idea what they were going to see, this was the first time they'd been able to look at the disease in action, instead of trying to decipher the patient's conscious and unconscious responses. It's the difference between being able to ask *how much does it hurt, can you walk?* And an X-ray that shows where the bone is broken. What they saw astonished and horrified them, and I quote—

"In studying

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the schizophrenic patients, we were stunned to see a spreading wave of tissue loss that began in a small region of the brain, the parietal cortices (see accompanying image, top row, red colors; Thompson *et al.*, 2001a). This deficit pattern, which we recently reported in the Proceedings of the National Academy of Sciences, moved across the brain like a forest fire. It destroyed more tissue as the disease progressed (red colors, bottom row), eventually engulfing the rest of the cortex after a period of 5 years. The 3D maps visualize this process. They are color-coded to show different degrees of change, revealing where gray matter is significantly reduced in disease...”

Well, science fiction novelists are callous brutes. I read this and I thought, wonderful, a bit of very convenient jargon! Just what I needed! It turns out, in my story, that there’s a rare kind of brain where the breakdown caused by the forest fire doesn’t just dissolve the censorship, it dissolves the barrier. Sometimes it only makes the brain slightly leaky, which produces ‘shamen,’ but in vanishingly rare cases you get someone who can manipulate the external world, freely as they can the ideas in their own head. Unfortunately you have to be mad, in the same mental agony as someone in schizophrenic fugue, and there’s another major obstacle, well, several obstacles, which I won’t tell you about, as they are spoilers...

But the horrible implication, in the real world, is that this is always happening to the young people going down with early onset schizophrenia; typically with a sudden collapse in their late teens. These poor kids were being dosed with Lithium, given electro-shock treatment, persecuted by hours on hours of psychotherapy, told it was all the fault of their aspirational fathers, when their brain tissue was literally coming apart, like a poor piece of knitting.

Return to Yr

Maybe the most extraordinary thing is that the talking cure can work. The brain may look soft, but it is very tough, and incredibly flexible. It’s built like DARPA-net, (which is not a coincidence). If there’s a way, the message will get through. People who lose function because an area has been burned out, through a stroke or an accident, will sometimes, or often recover, because that processing (whether its motor control over your left arm, or the ability to feel that a colour is red) just shifts over to the nearest available healthy tissue. Some of the people who have lost 25 percent of their brain mass, in crucial loci, in a fiendishly destructive pattern, can have long stretches of productive life, between the times when they go down into the snake pit. One of the things I’ve learned, through my mayfly studies of modern neuroscience, is that I really, totally *admire* the human brain. It’s the little engine that could. I now realise, in hindsight

that R.D. Laing (before neuroscience could back him) did something truly visionary, when he said, *listen*, the mad are not talking random nonsense, they are trying to explain what’s happening to them, best way they can with the equipment that’s left. The symptoms that we used to call madness, are not the *problem*, they’re like fever in response to infection, our body’s attempt to deal with what’s wrong. Multiple personalities, hallucinations, obsessions and compulsions should be looked on in the same light as a rash, bruising, inflammation. Which makes it easier to understand how the symptoms of schizophrenia can arise from so many different causes, some of them transient and curable; some of them pretty much terminal for the life of the mind.

Joanne Greenberg, I am happy to tell you, is one of the ones who got away. Whether she had the forest fire version of the disease, or a milder version, she recovered from her teenage breakdown, and she never went back. She’s had a long and varied career, written several novels, including a fiction that became a landmark study on teaching the deaf, (*In This Sign*). Right now (*sometimes* Google is a wonderful thing) she’s a professor at the Colorado School of Mines ‘teaching geeks to think creatively.’ If you happen to live in Colorado, anywhere near Crested Butte, you can go along and hear her talk at the Crested Butte ‘Readers in the Rockies’ event, on 25th June 2005. From the broken mind, to expanding the minds of young people in science: I can’t think of a happier end to that story.

Neuroscience and Science Fiction

You may think I’m strangely obsessed, but if you try listing sf authors who have dabbled in insanity, mind control, altered states of consciousness, the list would be long. If you included ‘fantasy scientific’ treatments of occult tradition and folklore monsters, it would be endless. I think of Pat Cadigan’s *Mindplayers/Synners/Fools*, Elizabeth Hand’s ‘autist’ storyline, in *Winterlong*; you’ll be able to come up with countless others. And of course there’s P.K. Dick, whose biography suggests he was not just fooling with his ‘pink ray.’ He struggled with more or less severe psychotic symptoms, most of his life.

Coming up to the present day we now have to face the all too near-future possibility that our fantasies of mind control and thought police will become reality. Imagine a world where the inside of your head is not an inviolable refuge. Where those random checks at the boarding gate can include an on the spot rifling of your most secret thoughts; and instant, legally permissible correction. You reckon you’d be okay, because you are a stand-up citizen and the police would have no right to do that until after you’ve done something criminal? Time

WisCon

to start worrying about those civil liberties you don't know you've lost, children... I don't get into the police state applications myself, partly because I'm cynical about the tools (I don't believe lie detectors detect liars), and partly because, well, basically I like my imaginary worlds to be fun. Tragic maybe, but not dreary. Personally I'm more interested in the existential possibilities. I'd like to leave you thinking about a couple of them. My extrapolation about the interface between physics and neurology is pure fantasy. But the interface is really there, and digital technologies are getting closer (though the final gap may yet be uncrossable, logical) to a convergence with neuroscience. It is already possible for people to move objects, trigger muscles paralysed for years, activate voice software, *just by thinking about it*. Where is that going to go? Maybe all the way to something completely undistinguishable from magic. Maybe through the back door to the stars.

And here's another one, on a more intimate scale. The world as we perceive it is not in any measurable way 'out there.' To the neurons, external and internal stimuli are logically identical. Of course you know the difference, of course we all take the material world's reality for granted, and I'm sure we are right. But think about the realities of our very strange situation, not in the future, right now. Time. Think about time. Our sense of the passing of time *can be switched off*. You can do it by burning out the hippocampi, for instance. Or you can do it more benignly. I once watched a tape of the legendary occasion, when Christopher Mayhew, MP took mescaline, and was shown live, on TV, explaining what it felt like to the presenter of a serious topical issues programme called *Panorama*. Here's a partial account:

"Christopher Mayhew, a British MP, took 400mg of mescaline before TV cameras in 1955 and became absolutely convinced that part of us exists 'outside time': "After brooding about it for several months, I still think my first, astonishing conviction was right—that on many occasions that afternoon I existed outside time. I don't mean this metaphorically, but literally. I mean that the essential part of me (the part that thinks to itself, 'This is me') has an existence, quite conscious of itself, in a timeless order of reality outside the world as we know it. Though perfectly rational and wide awake (Dr. Osmond gave me tests throughout the experiment which showed no significant falling-off of intelligence) I was not experiencing events in the normal sequence of time."

It is entirely possible, according to what we know, that your sense of time cuts out before consciousness, when you are dying. This means that you could live, *forever, for all eternity* as far as you are aware, in the state of mind and the perception of the world that you find yourself in, at that last moment. What if that's what really happens to us? What if it has always been that way, and we sort-of know it, by blindsight, and that's where all our notions of treating the recently dead with caution, all our rumours of heaven and of eternal torment, come from...

I have some other bright ideas, but I think I'll leave you with that.

It's an interesting thought. Isn't it.

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