

**DON'T MAKE  
ME LAUGH.  
IT'S COOL TO  
BE GLOOMY**



# THE UPS OF BEING DOWN

Optimism has cost the world a financial meltdown. It's high time we recognised the benefits of negative thinking, says confirmed pessimist Ariel Leve. And science is right behind her. Portrait by Paul Stuart

**I** imagine you are walking down the street. It is a lovely day — clear blue sky, a light breeze, sunshine. You marvel at what people refer to as “the miracle of life”. The leaves are so green! The birds are chirping! You are blissfully caught up in a state of vitamin D-induced euphoria. You think of the person you love most in the world, someone to whom you are profoundly attached. Visualising their face, you have a sense of infinite safety; you are filled with joy. Then, you picture them dead. Suddenly you are filled with dread, consumed by all the what-ifs that ➤➤➤

are contained in this thought. Thousands of them, like a shoal of sardines, racing frantically through your mind. The more you try to push this thought away, the more space it occupies, expanding uncontrollably until you are not just experiencing the loss but are fixating on the details. The funeral arrangements, the life-insurance papers, questions of their Pin and the password for their e-mail.

Forget the leaves on the trees — you have more pressing concerns. Where's the joy in being alive now? The sunshine has become oppressive; it's no longer energising; it causes melanoma. You cross over to the shady side of the street.

**A**fter a few deep breaths, you are able to control this thought, swatting it out of your head. There's no point. You'll deal with it when the time comes. You tell yourself: "Cross that bridge when you come to it." Instead, you focus on how much you have to be grateful for. You remind yourself of the reasons you have to be happy. They outweigh the reasons to be unhappy, don't they? They *do*. At least that's what you're told. You are walking along again, feeling better. Borderline upbeat. You have your health, after all. If you have that, you have everything.

But what if you lose your health? Then what do you have? Not to mention the fact that money is tight. You can't afford to have an illness. Stop. Thinking. This.

You tell yourself you don't have cancer, multiple sclerosis, glaucoma... You don't have lupus. You remember that the other day you read an article about a cancer drug that shows promise against lupus. You felt at ease after you read this, knowing that it's out there — just in case. You are feeling euphoric again, believing it will be okay. You look at your watch. You've been walking for 15 minutes. That's enough sunshine.

Now, imagine this. Maybe this walk has been productive. Imagine that, after indulging in all the what-ifs and worst-case scenarios, rather than returning home in a state of heightened anxiety, you are actually refreshed and calm. You have sweated out all negativity and prepared for

pessimist who assumes that they will fail, that it won't work out, so they won't bother.

The latter is associated with "hopeless pessimism", and with depression. In contrast, there is "defensive pessimism", which is not related to depression and may even be a protective factor. Dr Julie Norem, professor of psychology at Wellesley College, Massachusetts, addresses the phenomenon in her book *The Positive Power of Negative Thinking*.

"If you are hopeless because you don't see any way that you can do what you need or want to do, there's no motivation to try. Defensive pessimists, on the other hand, can envision plenty of ways that things can go wrong, but they also have some confidence in the possibility that they can do what needs to be done as long as they've prepared for all the bad things that are likely. The most important thing about their strategy is that they keep trying, working, moving forward, despite their anxieties and worries."

I consider myself to be in this category. I am a functional pessimist, examining all the what-ifs in any situation and fretting about every possible outcome. I assume I won't succeed, but am not so convinced of it that I'm unwilling to try new things, albeit with a negative attitude, hesitant to believe I will enjoy them — as, usually, I don't.

I have at times been what I consider to be more of a paralysed pessimist, believing failure is imminent, so why try? This has kicked in mainly when it comes to anything that requires outdoor activity, such as river rafting or camping.

There is a misperception that pessimists are at a disadvantage, a view largely supported by the optimists of the world, who seem to have the upper hand when it comes to marketing their outlook as the better way to be. Pessimists don't proselytise. They don't go about their business, focused on being happy every second, because that's not the goal. And they find it oppressive to be told constantly by other people to lighten up.

All my life I have been negative. I worry all the time, about everything. Is this in my DNA? Probably. Is it something I can change? Maybe. But the question is, why? Do I need to change

**'PESSIMISM IS PLAYING THE SURE GAME...  
IT IS THE ONLY VIEW OF LIFE  
IN WHICH YOU CAN NEVER BE DISAPPOINTED'  
(THOMAS HARDY)**

any eventuality. It would be easier not to have to do all these mental gymnastics, but if you are limber enough to handle it, what's the harm?

There are benefits to being a pessimist, by which I mean someone who expects the worst possible outcome — not someone who promotes failure. Pessimists tend to be worriers, and worrying is not necessarily a bad thing. There is a significant difference between the pessimistic person who worries about the worst-case scenario but is willing to give it a shot, and the

from being a pessimist, or do I need to change how I deal with it? If it is not impairing my life, or impinging on others, what's the problem? Worse than living with being a pessimistic person is living with the pressure to be positive.

Lately, though, I've begun to notice a paradigm shift. Pessimism is on the rise. People are becoming more tolerant of pessimistic outlooks, because more and more of us are recognising the consequences of being pathologically positive. You have only to look at



the hubris born of optimism over the past few years. The titans of banking and finance, CEOs and hedge-fund managers — those guys weren't pessimistic at all. They were super-confident in their predictions, channelling a belief that everything would be okay, and using it to motivate others. Now look where it got us.

Paul Ormerod, a noted economist and author of *Why Most Things Fail: Evolution, Extinction & Economics*, points out that having blind faith in an economic context can be dangerous. "To start a firm up, or to begin a new brand, one has to be irrationally optimistic. That is, you really need to believe it will succeed, no matter what. But then, once it is set up, being a pessimist is a good strategy for survival."

It's slightly paradoxical, he says, because in times of financial crisis, people need to believe that if they take a risk it will pay off. However, most of the time, these assumptions are far too optimistic. History has proved that people don't learn from past mistakes. And where will this take us in the future? "Pessimism would be

# THE BRIGHT SIDE OF THE GLOOM

Pessimism is the bedfellow of wisdom, says Bryan Appleyard

'All political lives,' said Enoch Powell, 'unless they are cut off in midstream at a happy juncture, end in failure, because that is the nature of politics and of human affairs.' Failure is the way of things, especially big things like politics and art.

'To be an artist is to fail,' said Samuel Beckett, 'as no other dare fail... failure is his world and to shrink from it desertion...'

Few truths could be more unacceptable in an age of advertising, public relations and spin, an age of brilliant, sunny optimism. But it is a truth because we die and because the human world is intractable. This makes the foolish miserable, but it gives the wise peace. Pessimism is wisdom.

These days it is hard to be wise because, through some fluke of history, we have in the West inherited 200 years of economic growth. But 200 years is not so long and all civilisations die eventually. Also, growth does not necessarily provide happiness, well-being, serenity. On the contrary, it provides the enervation of material ambition.

This fly in the ointment of growth inspires optimistic revolutionaries to change things overnight. Edmund Burke saw the problem while contemplating the French Revolution. Society, he said, was a contract between the living, the dead and the unborn. The contract must not be broken on the basis of some mad theory. This inspired the benign

pessimism of true conservatism — proceed carefully and never think you have the answer because there is no answer.

Charles Darwin inspired a more bleak pessimism. Like animals, our destinies lie beyond our control. As individuals we may be reasonable; as a species we're incapable of curbing our excesses. 'We never could save the planet!', scoffs James Lovelock, the greatest of all environmentalists.

A Burkean awareness of fallibility and a Darwinian sense of our inability to dominate

## DARWIN INSPIRED A MORE BLEAK PESSIMISM. OUR DESTINIES LIE BEYOND OUR CONTROL

nature combined with a Freudian awareness that we can't control our own minds form the foundations of the art of true pessimism. Economists still haven't learnt this art. Many think economics is a science. But economics is about the human world, and this never obeys the equations. How many economists forecast the banking crash? Roughly none. Politics and economics would be improved beyond recognition if their practitioners could learn the wisdom of benign pessimism. 'Things can only get worse,' should be the vote-winner of the future.

better, but I don't think people will change."

Dr Norem maintains that indulging negative thoughts can be helpful for managing anxiety and preparing for realistic outcomes in life. It allows you to solve problems by breaking things down, and this contributes to feeling less helpless. "Everyone is anxious about death, but why be in denial, if that's where your mind goes? For anxious people, working on planning ahead channels that anxiety into effective action. The main strain is the pressure to be positive."

A mood study conducted by Norem was published in 2004 in the *Journal of Research in Personality*. She induced a bad mood in optimistic people and a good mood in pessimistic people. In the study, participants were assigned to listen either music that put them in a good mood (a zippy Mozart piece), or music that put them in a bad mood (a Russian dirge). Defensive pessimists who listened to the happy piece were cheered up, compared to defensive pessimists who listened to the dirge, but the happier defensive pessimists actually

performed more poorly when they went on to work on maths problems than the sad defensive pessimists. Norem also looked at the influence on performance of naturally occurring moods, and found that when the defensive pessimists were in more negative moods, they scored higher on the tests. It showed that each group does best in a situation that best fits their strategy, and the research, she says, proved that "Trying to cheer up can actually hurt you".

Yet the cult of positive thinking, especially in America, is a billion-dollar industry. Positive thinking will help you to find love, wealth, health... if you think it, it will come. When Rhonda Byrne's book *The Secret* came out in 2006, the backlash hit when the question was posed: if you can control your own destiny by thinking persistent positive thoughts, what does it mean when you get sick? Were you failing to think positively enough? Do we have that much control over our destiny?

"The pressure to be positive," Norem says, "is often a strain. And if people present themselves

as negative, it's weak. But if a negative outlook works for you, the only thing that impairs performance is the perception that it's wrong."

There is also, she says, a cultural bias. "In western cultures, we think that if people present themselves in a positive way, we believe them. But, in the Far East, they will perceive this as overconfidence and think you're disingenuous."

A frequent complaint I've heard is that it's difficult to be around negative people, but the converse is also true. Whenever someone has told me "It will work out", my response has been "How do you know?" They don't, but they want me to believe what they're saying because, frankly, it's easier for them.

While I have often taken into consideration complaints that I am too negative, I have never considered how others' negativity impacts on me until this question is posed by Dr Leah Kelly, a neuroscientist at the Rockefeller University in New York, who studies how changes in the brain can lead to changes in behaviour. She asks me: "What's your reaction to someone more negative than you?"

There is a long silence. I don't think I've been around anyone more negative than me. Or, if I have, I haven't noticed. I know what I *don't* do: I don't try to cheer people up. But, then, perhaps the reason for this is because negative people are often self-deprecating and this is amusing. So perhaps the reason I don't feel demoralised when I'm around them is because they're funny.

Kelly suggests my pessimism might be a self-protective mechanism — a form of self-awareness that gives people a sense of control and is not necessarily an affliction. This makes sense. When I know that disappointment is imminent, it helps if I prepare for it so I'm not let down. And this, according to Kelly, is not all my fault. "People probably don't choose to be pessimistic; it's more likely part of their chemical make-up.

"The general thinking these days is that most conditions and syndromes are a combination of genetics and environment. Pessimism, like other personality traits, is probably a result of a heady cocktail of your genetic template and your life experience. It is generally accepted that there is a huge genetic component to anxiety and depression — both of which are associated with pessimism — with roughly 40-50% of the risk for depression being genetic, although the specific genes that underlie this risk have not yet been identified. But just having the genes is not usually enough, you most likely need some traumatic event to flip the depression switch.

"As for the non-genetic risk, who knows? Suggestions include early childhood trauma, emotional stress, physical illness, and even viral infections could be involved."

Kelly explains that if your mother gives you a "triple whammy — panicky genes, a panicky womb (there is research about levels of

stress hormones in the womb and anxiety), and a panicky upbringing — the brain is going to wire itself to think the worst. Especially if the brain cells are parched of happy chemicals.”

Scientists, says Kelly, tend to view as learning, the way the brain changes in the response to the environment. So when people don't choose to be pessimistic, with the right (or perhaps wrong) triggers, they “learn” to be. If enough disabling things happen to you in your childhood, your pessimistic outlook might be a manifestation of learnt helplessness: even when things are okay, they seem doomed.

**R**esearchers have been able to identify the specific brain areas involved in optimism. A 2007 study published in *Nature* showed that two specific regions, the amygdala and the rostral anterior cingulate cortex, are strongly activated when imagining positive future events. Activity in these areas was reduced in the more pessimistic subjects. In other words, the study showed that optimism is related to the same neural mechanisms as malfunction in depressed people.

Tali Sharot, a research fellow at University College London, co-authored the paper and explains that normal, healthy individuals have an optimistic bias — meaning that they overestimate the likelihood of positive events, and underestimate the likelihood of negative events. Mildly depressed individuals are less likely either to over- or to underestimate, and therefore have a more accurate view. Severely depressed individuals are more likely to overestimate the negative events and underestimate the positive.

The correlation between pessimism and depression, says Sharot, falls into two categories. “Most people with depression are pessimistic, either mildly or severely. They have a hard time imagining future events in general. Healthy, optimistic individuals can imagine the future in detail.”

What seems to be going on is that people recall past events to make predications about the future. Most people imagine positive future outcomes, whereas less optimistic people assess the outcomes less positively. The fact that the same two areas of the brain are consistently activated across different people suggests that these areas are needed when we imagine positive scenarios. If these areas are not working properly, positive thinking will be impaired. There are clear differences in brain activity between optimistic and pessimistic people, but, as Kelly points out: “We still don't know if the depression causes the differences, or the differences cause the depression.”

A British woman living in New York, she admits: “Most of my friends here are in therapy. It is almost a requirement to live in this city. I think perfectly functioning people are



constantly questioning themselves, desperate for some recognisable personality defect, which can then be treated. As a Brit and a neuroscientist, I find it hard to take seriously but strangely endearing. That's not to say that some Brits couldn't benefit from a little therapy, but mostly we just put it down to being a bit eccentric or difficult.”

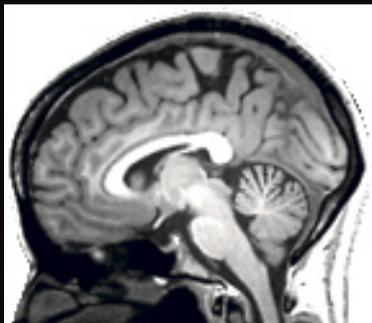
Overall, there seems to be no precise template for what exactly constitutes pessimism, anxiety or depression, so treatment is still a mystery. The general conclusion is, nobody knows anything for sure. No wonder I'm anxious!

Twelve years ago, I was prescribed the antidepressant drug Wellbutrin (also known as bupropion and Zyban). This is a dopamine and norepinephrine reuptake inhibitor, which works on a different part of the brain from that worked on by an SSRI (selective serotonin reuptake inhibitor). SSRIs such as Prozac and Zoloft increase the levels of serotonin and are the most widely prescribed antidepressants, but the psychopharmacologist who was treating me felt that these drugs might sedate me. Wellbutrin has been found to be effective with

adult attention-deficit hyperactivity disorder (ADHD) and people who have mood and panic disorders. Dopamine, norepinephrine and serotonin are all neurotransmitters — naturally occurring chemicals that amplify and regulate the transmission of nerve impulses and signals from cell to cell. When more dopamine and norepinephrine are secreted, balancing out and restoring levels, mood is elevated.

I was having problems with low energy, feeling unhappy, unfocused and disorganised. I have a history of chronic, low-level depression, and there had been a steady deterioration. Events in my childhood had flipped the depression switch, but it was on a dimmer.

I was functioning, but barely. How much of this was circumstantial and how much of it was my brain chemistry is hard to say. But over time, on the medication, I experienced a marked improvement. I was able to sustain a job and to manage reasonably well the stresses of life. My symptoms, though still there, retreated into the background. I still suffered from depression, and my bleak outlook didn't waver, but I was able to achieve things and to move forward. Nine



## INSIDE THE MIND OF A PESSIMIST

A person's brain chemistry determines whether they will have a positive or negative outlook. Ariel Leve (below) had her brain scanned as part of a study that revealed her to be a moderate hypochondriac, which contributes to her pessimistic state of mind. The study is yet to reveal how this can be treated



months ago, I stopped taking the drug. I can't really tell if there's a difference.

One area where my pessimistic attitude is particularly disabling is that of my health. Any symptom, or perceived symptom, is cause for abject panic. Sure, it could be a freckle — but what if it's not?

People who assume the worst tend to worry about everything. If you are a "half empty" person who sees things in the worst possible light, simple things become potentially catastrophic, whether they are related to your personal life, your job, your finances or your health, so it is not uncommon for chronic worriers to be hypochondriacs.

Unlike other personality and anxiety disorders, such as depression or obsessive-compulsive disorder (OCD), which are recognised as legitimate, hypochondria still has a stigma attached to it that implies it's more of a character defect than a serious concern. Hypochondriacs are often dismissed as neurotic and attention-seeking; they are the objects of scorn or a source of the sort of comic relief provided in Woody Allen movies.

In truth, the condition is a combination of neurochemistry, psychology and biology. In 2006, Dr Brian Fallon, associate professor of clinical psychiatry at Columbia University Medical Center in New York, began a five-year study of the biology of what he calls "heightened illness concern" (HIC) and its treatment.

"It will be much easier for people with heightened illness concern if it is legitimised as illness with a specific profile and specific treatment," he says. "It will reduce ridicule."

Fallon's study suggests that hypochondria involves a heightening of activity in the same areas of the brain as occurs in people with obsessive-compulsive disorder. Participants in the study are given brain scans, psychological evaluations and therapy in combination with medications such as Prozac.

Most recently, there has been an immunological portion added, which involves drawing blood and looking for inflammatory biomarkers. (If, let's say, someone has a viral infection, that could reduce levels of serotonin production in the body.)

Whenever I hear there's an MRI involved, I'm excited. I volunteered to participate in this study, minus the element of cognitive-behavioural therapy (CBT), which would take six months, since I didn't have the attention span for that.

In the initial interview, I was given a diagnostic assessment to determine the degree of hypochondriasis I have. I was asked: "Did you witness a death as a child?" Yes. "Were you physically hit with something?" Yes. "Did you witness violence?" Yes. Weirdly, I hadn't considered this would create panic.

The functional MRI was relaxing. While lying in the tube I performed a variety of tasks, one of which was to negotiate a virtual reality maze.

The next part was neuro-psychiatric testing. Is there anything better than spending a day at the New York Psychiatric Institute, surrounded by neurologists, getting the brain probed?

## I THINK OF A PESSIMIST AS SOMEONE WHO IS WAITING FOR IT TO RAIN. AND I FEEL SOAKED TO THE SKIN' (LEONARD COHEN)

First came the IQ estimator, in which questions ranged from "What is blame?" to "What is a bird?"; from "What is a niche?" to "What is impertinent?"

The second test involved making decisions with cubes from photos. It had something to do with logic. I didn't finish the test in the time given, but got the hardest one right.

The third test entailed comparisons. Grapes and strawberries — how are they alike? I found unlikely connections. For instance, shirt and jacket — both are in a closet. (The common answer would be that they are both items of clothing.) Bowl and plate? Both are round. And

used to eat off. I added: "Both could be broken, and then you could cut yourself on the pieces."

There were tests on spatial reasoning, a spatial-location task, the measure of my ability to remember objects. But what I did particularly well on was the Stroop test. First I had to identify coloured dots — then read the words that are spelt, for instance, "red" but are in fact green. I was told this is a response-inhibition task — it was about the ability to resist impulse. Later it occurred to me that I did well on this test because maybe I have no impulses.

The study has 18 months to go, and ultimately it will be determined if clinically there is an overlap between OCD and hypochondriasis.

One thing we do know is that disease worry is repetitive. But the question remains as to whether a failure to process information is the result of anxiety, or the anxiety is created by the failure to process information. The biology behind it is what's being studied.

It was determined that I have a moderate level of hypochondria — with episodic obsessions. I worry about diseases that would render me helpless, rather than being convinced that I have something such as a brain tumour that the doctor has overlooked. I am fearful of disease, but when I am told by my doctor that I am healthy, I do not get angry or frustrated; I am relieved. Even though I might return a month later with some new concern, my anxiety is about looking for answers, certainty and reassurance.

Strange as this may sound, I am not a hopeless person. I consider myself realistic. Even though I am aware that my plans may go awry, I plough forward. People who have a positive outlook are headed for disappointment. People who have a negative outlook may suffer, but at least they're not under any illusions.

Pessimists have every right to be on equal footing with optimists, and now that circumstances in the world have changed, awareness has changed, too. As Dr Norem points

out: "It's not that there weren't pessimists two years ago, it's that they were laughed off. Whereas now they are taken more seriously."

Across the board in the world of economics and politics, perhaps having a more pessimistic attitude will signal a more judicious approach. There was the civil-rights movement, the feminist movement, why not the pessimist's movement? The challenge: to mobilise a group of people who fundamentally believe it won't work out ■ *The Cassandra Chronicles by Ariel Leve is published on August 3 (Portobello Books, £12.99). It is available at the BooksFirst price of £11.69, including p&p. Tel: 0870 165 8585*