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## Black Elephants and Skull Jackets

a conversation with Vinay Gupta

Before I know who he is, Vinay Gupta has started telling me about his plan to start a small African country. The drug factory is the important part, apparently – that and the Gurkha mercenaries.<sup>1</sup>

We're sitting on the bare floorboards of a townhouse in Mayfair: five stories of gilded mirrors, marble hallways, handpainted Chinese wallpaper and furniture that looks like it just came out of a skip. In one corner, a large bracket fungus is growing out of the wall, about two feet below the ceiling. It's the kind of scene that makes you think the world as we know it already ended, you just weren't paying attention.

It is January 2009. For months now, the world economy has been visibly in chaos, and even the politicians are starting to acknowledge that the consequences of this won't be confined to the financial markets. Gupta seems like a man who relishes chaos.

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<sup>1</sup> A final version of this article will be published in Dark Mountain Vol.1 (May 2010). For more information, visit [www.dark-mountain.net](http://www.dark-mountain.net)

I'm here because the artists and activists who have squatted this Mayfair palace are about to open its doors to the public. For three weeks, it will become the Temporary School of Thought, a free university where anyone can pitch up and offer classes. Gupta and I have just joined the faculty: I'm offering lectures on 'Deschooling Everything' and 'Economic Chemotherapy', but this feels pretty tame compared to his curriculum which takes in 'Infrastructure for Anarchists', 'Biometrics for Freedom', 'Avoiding Capitalism for the Next Four Billion' and 'Comparative Religion'.

For some reason, this last one sounds like a euphemism.

He's the kind of character you want to run a background check on. Anyone who shows up in a squat, wearing a black jacket with a black skull printed on the back, telling stories about his work for the Pentagon, his plans to fix global poverty and his friendly Gurkha mercenaries deserves a background check.

What makes it worse is when the stories check out. You can find the Defense Horizons paper he co-authored with the former Chief Information Officer of US Department of Defense. Then there's the Hexayurt – the refugee shelter he invented, which can be assembled from local materials, costs less than a tent and lasts for years. Evidence of this turns up in photographs from the park at the centre of the Pentagon to the playa at Burning Man.

Like a one-man Alternate Reality Game, he's conscious of the need to leave a trail of evidence. 'Otherwise, no one would ever believe me!'

The jacket, the hand-printed business cards, the over-the-top invented organisations – for a while, the cards say 'Global Apocalypse Mitigation Agency' – are partly geek humour, the residue of his early career as a software engineer. They're also a strategy for living with the kind of extreme situations Gupta spends his time thinking about.

He works on big problems: how to prevent biometrics becoming a tool for genocide; how to deal with the survivors after a nuclear terror attack on a US city; what to do if H5N1 goes pandemic at a 50% Case Fatality Rate. (His briefing paper on severe pandemic flu contains the advice: 'Do not count the dead. Count the living.')

At the Rocky Mountain Institute, he helped edit two of Amory Lovins' books: *Small is Profitable*, on decentralised energy, and *Winning the Oil Endgame*, on moving the United States to a zero-oil future. The latter was paid for by Donald Rumsfeld's office, when he was Secretary of Defense, and is credited with shaping Bush's State of the Union speech in 2006, with its pledge to end America's 'addiction' to oil.

'I wish they'd followed up that speech with action,' Gupta says,

when I mention this.

His real obsession, though, is poverty – something he attributes to his family background, half-Indian, but born and raised in Scotland.

'When I was a kid, my mother and father visited some of our family in Calcutta. I remember them telling me stories of how these relatives – middle class people, teachers – lived in a swanky area of town, but in a really lousy apartment. In the kitchen they kept a brick on top of the chapatis so that rats coming in through the open window wouldn't drag them away!'

The complex cultural awareness bundled together in that story bears unpacking: that people have drastically different experiences of life, that things he – as a child growing up in Scotland – couldn't imagine living with were normal to others. 'And that they were my relatives, people like me.'

A few weeks after the encounter in the Mayfair squat, and after a lot of long conversations over Chinese food, the Institute for Collapsonomics comes into being. Gupta and I are among its founders.

The Institute is at least half a joke, a sister organisation for the Global Apocalypse Mitigation Agency. But it is also a crossing

point for people from very different personal and professional backgrounds who, for one reason or another, have found themselves thinking seriously about what happens if and when the systems we're meant to rely on start to fail.

We convene in the back corner of Hing Loon, which does the best egg plant with garlic sauce in Chinatown, or after hours in somebody's office. We invite former hedge fund managers and Ukrainian government officials to discuss the causes and realities of economic collapse. We gatecrash thinktank seminars, with mixed results. The two of us spend three hours at a cafe in St James's Park, arguing about pandemic flu and the role of government with a guy from the Cabinet Office. One Friday afternoon we invite ourselves to the National Endowment for Science, Technology and the Arts, turning up mob-handed to what turns into the most chaotic meeting I have ever attended.

On our way back from that meeting, we alight upon a logo which embodies the spirit of collapsonomics. The Black Elephant is an unholy union of two boardroom clichés: the Elephant in the Room, the thing which everyone knows is important, but no one will talk about; and the Black Swan, the hard-to-predict event which is outside the realm of normal expectations, but has enormous impact. The Black Elephant is an event which was quite foreseeable, which was in fact an Elephant in the Room, but which,

after it happens, everyone will try to pass off as a Black Swan. We think we have spotted a few of these.

A year on, by the time we sit down to record this interview, two things have happened.

On the one hand, the sense of panic which characterised the early months of the economic crisis has subsided. Stock markets have regained most of their losses, economic statistics inform us that the recession is over – for now, at least.

Yet even as green shoots continue to be spotted, the headlines suggest another possibility. Emergency talks over a bailout for Greece to prevent a euro collapse. Sarah Palin tells Tea Party activists America is ready for a second revolution. And here in the UK, more news piles up every day about huge cuts in public spending for schools, universities, local authorities.

Reading the papers, it feels less like the crisis is over – more like it became the new normal. Did collapsonomics just go mainstream?

Then again, in the UK, our idea of a crisis is that we have hit Peak Student: the point at which economic reality and funding cuts mean less young people will go to university year-on-year, rather than more. Meanwhile, in Haiti, a country which had little left to

collapse, a disaster is playing out on an utterly different scale.

Two days after our interview, Science for Humanity announces that it is raising funds to carry out research into the deployment of the Hexayurt as a shelter solution for some of the million people made homeless by the Haitian earthquake. This would be the first large-scale application on the ground of a project on which Gupta has been working since 2002.

After a year of kicking around together, one of the things that strikes me is his ability to bridge these different worlds, the changes underway in western countries – inconveniences perceived as disasters, for the most part – and the present day extremes of life and death in the world of the very poor. This is one reason I've been keen to put some of our conversations on the record, to talk about where the kind of practical thinking he's doing connects to the cultural questions opened up by a project like Dark Mountain.

The interview takes place, naturally, in a Chinese restaurant. It is after midnight. Both of us on laptops, talking and typing, so that a transcript is produced as we go. This method seems to work. A flow of other diners come and go, their conversations our backdrop: the Estonian girl who sold books door-to-door for the same company I had done a decade ago, the stand-up comics who just finished a gig, the group of drunk guys who interrupt us to ask if we're playing Battleships.

'Something like that,' we tell them.

**DH:** Dark Mountain is about what happens when we accept that our current way of living might just not be sustainable, however many wind farms we build. So I guess I wanted to start with your prognosis for that way of living.

**VG:** Well, firstly, which 'we' are we talking about here? We as in Europeans and Americans? Or we as in people, period, globally? Because the hard part of this problem is actually thinking globally, about all of the people – and the diversity in our ways of lives and exposure to environmental and economic risks is huge.

Some cultures are right at the edge of the envelope already, and washing over the edge: island nations, the Inuit, semi-arid agriculturists in general. Other cultures are pretty bang-centre and fairly stable. Iowa isn't going to stop growing corn any time soon, but the whole of sub-Saharan Africa could be a dustbowl in 20 years.

So it's not regular and uniform, it's all of these little lifestyle niches, some of which will fare better than others against

various future scenarios.

DH: So when people think about 'collapse', they should be asking where it's going to happen, rather than whether it's going to happen?

VG: Well, in terms of sustainability, there are two questions. Sustain what? And then, can we sustain those things? Right now, more or less the whole of the debate focuses on whether we can sustain hyperconsumption - and the answer is no, of course not. Something is going to give: oil, climate, topsoil, some other factor we're not even paying attention to. You can't just burn the earth's natural resources like a gas flare on an oil rig forever.

DH: Yes, for me the thing which sums up what's screwed about the discourse of 'sustainability' is Marks & Spencer's Plan A campaign. You remember the slogan? 'Plan A: Because there is no Plan B'. And what I want to know is, well, for whom is there no Plan B? For high-end supermarkets? Or for liveable human existence? Or did we stop making that distinction?

VG: Precisely. And that's the cultural narrowing of the sustainability discourse to mean the American and European

lifestyle. There is no possible way in which that standard of living is going to be sustained. It's impossible for two reasons.

Firstly, ecological constraints. Not just climate, but land use patterns in general. We just don't have the ability to keep doing this indefinitely, and climate is just the first of a long list of things that can and eventually will go wrong.

Secondly, and this is less widely understood, even in the most optimistic scenarios globalisation is going to get us. Migration of jobs and capital around the world is making the poor richer, and the rich poorer, with a lot of noise on top of that basic pattern. Another thing that moves wealth around is natural resource scarcity: when people start paying top dollar for oil, the oil states start getting rich. Suppose we wind up with a 'global middle class' of, say, four billion people, we're going to see that same kind of auction pricing and wealth transfer for more or less all natural resources: copper, iron, nickel, even wood.

So one way or another, even with all the new high tech stuff you can think of, we're not going to be so much richer than our neighbours on the planet forever. We're all headed, on average, for a lifestyle about where Mexico is today, and

possibly a good deal worse if climate or other factors really start to bite.

If things go wrong, we could wind up anywhere.

DH: One of the questions Dark Mountain opens up is what it takes to make life 'liveable'. This is very much in play from a cultural perspective. For example, a book like 'The Road' - leaving aside its literary achievement - subtly reinforces a very common, seldom-stated cultural assumption, that life outside of a continuation of American late consumerism is unliveable.

VG: And that's where most people are already living! Not in 'The Road', but outside of the western consumerist bubble.

DH: And those are not the same thing. Part of what I find so interesting about your work is that it feels like you've arrived at this question - about how we distinguish what makes life liveable from the way you and I happen to be living right now - from a completely different perspective. I got there by reading Ivan Illich and John Berger. You got there by working with Rocky Mountain Institute and the US Department of Defence.

VG: That and the fact that I'm half-Indian. You can't underestimate the effect of that, even growing up thousands of miles away from India, there was still the curiosity about how the other half lived, combined with the sense that these people were my relatives, some of them. People like me.

So fast forward to my early 30s and I'm involved with Rocky Mountain Institute. Now, RMI is really extremely good at infrastructure. Amory is personally incredibly intelligent and sensitive to how large-scale systems work: he's a master of the complex. I, on the other hand, like simple systems. There was an event called the Sustainable Settlements Charrette in 2002 and what came out of that was a question: can we do a new kind of refugee camp?

And that was where I suddenly found a new angle on things: apply the RMI infrastructure insights, not to the big, complex western cities, but to the refugees!

This turned out to be incredibly fruitful, because refugees are a special case of the very poor. Villagers all over the world share many problems with them, problems like water and shelter. So through thinking about how to make life liveable for refugees, you arrive at practical ideas for all these people.

DH: Ideas which also apply to people in rich countries, when things go wrong?

VG: Absolutely. Like, what happens after a nuclear attack on a US city? The work on that started at a disaster response event called Strong Angel III, run by Eric Rasmussen, an ex-US Navy surgeon who's now running InSTEDD.

A couple of friends and I came as self-supporting American refugees. We swung by Home Depot, picked up about \$300 of equipment, and were self-sustaining for shelter, for water, for cooking – and we would've been for sanitation, if they'd let us use our composting toilet. People sat up and took notice, because that opened up a lot of new terrain – decentralised response to extreme crisis situations, where you have to make what you need from what you have.

DH: What strikes me here is that the situations you're talking about are situations which people – even in government or NGOs or the military – prefer not to think about, because they're too alarming or too hopeless. And in that sense, there are very strong parallels to the scenarios we're talking about with serious climate change, resource scarcity, social and economic collapse – take your pick!

The point being that a lot of the people who've been drawn to the conversations around the Dark Mountain project have reached a place where they no longer find the future offered by mainstream sustainability narratives believable. They're coming round to the likelihood that we're going to outlive our way of living – and that feels like giving up, or like once you face that, you might as well give up. We get accused a lot of defeatism – of being the guys who say 'we're fucked!' – and you're the guy whose job starts at the point where people admit they're fucked!

VG: Well, take the work on nuclear terrorism. What I found was that nobody had actually thought about cleaning up after a one-off nuclear attack in a realistic meat-and-potatoes way. They just hadn't. Worse, the people who looked at my work – senior folks in the kinds of organisations which get to think about this stuff professionally – agreed it was the best plan they had seen, but to my knowledge have not committed to building that response capability. Not because it would not work – nobody's ever suggested it wasn't feasible, efficient and necessary – but because it would.

And that means admitting you might get hit, and are prepared to deal with it. Not a popular position.

DH: Sounds a lot like being in denial.

VG: Yes, absolutely it's denial, and a lot of what I do is denial management. When Mike Bennett and I started Buttered Side Down, we consciously did everything possible to push people out of that denial – branding it as a 'historic risk management consultancy' and the scary, scary homepage, leavened with the humour of the name.

You always hit the denial and cognitive dissonance when dealing with the real world. It's all over everything in our society. TV isn't helping!

DH: So I guess the question for a lot of people is, how do you handle these possibilities? How do you admit that it could happen, without feeling like just giving up?

VG: There's an easy way, and a hard way. Only the hard way produces results.

The easy way is nihilism, which is basically escapist. 'This situation is hopeless,' you say, 'but if something else were true then it wouldn't be hopeless, and then I could re-engage.'

DH: You mean like people who say 'well, the climate situation is hopeless, so I'm not going to worry about it'?

VG: Yes, exactly. They haven't given up on the hope that somehow it's all going to work out and allow them to continue to live (and consume) in their current way. They've abandoned trying to fix the situation, but deep down they still unconsciously expect that it will somehow all be OK in the end.

People who are in that position say they've abandoned all hope, but they haven't really. It's wishful thinking. It's Goth. It's the easy way.

The hard way is mysticism. 'Look, we are all going to die.'

'The question is only when, and how.'

DH: Is that mysticism?

VG: Yep, one way or another. Anybody who thinks about these questions seriously is a mystic. Even atheism, if it's fully informed by a consideration of death, is a mystery tradition. The mystery is 'If we're all going to die, what is worth living for?' And the answer is, must be, everything.

DH: For a lot of people, 'mysticism' suggests escapism – a retreat from reality.

VG: You know, that's largely a cultural issue in the West. There's a legacy here of religion being about a mythical state, a salvation. That's not at all how it worked in pre-Christian traditions, Greek, Roman, Hindu. Those roots go back to something else, not the hope of an afterlife, but a hope for this life.

Stoicism is European Zen, more than anything else. And Diogenes looks a lot like a saddhu.

DH: So how does this help you think practically about dealing with situations in which large numbers of people are going to die – whether that's a climate disaster, or a situation like Haiti right now?

VG: Large numbers of people? 100%. Everybody is going to die. The only question is when, and how. So it's not about saving anybody. Talking about saving lives is perpetuating the illusion of living forever. I cannot save a single life. At best, my work allows people to experience more life before they face death, as we all inevitably must: a universal experience

which we all face alone; an initiation or an extinction, we cannot say with certainty.

It's this vision of the certainty of death which is at the heart of my work.

DH: How does that change the way you approach these extreme situations?

VG: There's this model I came up with called *Six Ways to Die*. It's like a mandala, a picture of life and death. In the centre is the individual self: you. At the perimeter of the circle are the six ways to die: too hot or too cold, hunger and thirst, illness and injury. What stands between you and these threats is infrastructure, the stuff that gives you shelter, supply and safety: your house, the power grid, the water purification plant, the sewer pipes, hospitals and Marks & Spencer's.

You can't draw an accurate map of what keeps people alive without having one eye squarely on death, and if you haven't faced your own mortality more or less fully, six ways to die is very hard on you. Because you will die.

To fight for people's lives effectively means understanding that you are fighting for something measured in years, in

days, in seconds and moments, not in the sense of some abstract salvation from death itself.

‘How can I add to the span of your years?’ is not the same mindset as ‘How can I save you?’ If I fail, I failed to buy you five or 10 or 15 or 50 years, made of days and moments. It’s this time to live and experience which is at stake, not your life per se.

DH: That shift in mindset – apart from anything else, that’s a substantial change in your sense of your role. I think a lot of us who have been activists, or in some way trying to ‘change the world’, are familiar with the ‘How can I save you?’ role – whether it’s ‘saving lives’ or ‘saving the planet’.

VG: It’s all going: us, now; the planet, in a few billion years.

At birth, we leapt from a building, and it takes 70 or 80 years to hit the ground on a good day. On a bad day, you miss the lower 30 or 50 floors!

DH: Now that’s dark! But you know, I see a lot of major figures in the environmental movement wrestling with this at the moment. They’ve spent years telling people, if we just try hard enough and get it together, we can save the planet – or

rather, we can save our way of living. And they’re no longer convinced, but they feel like if they admit how serious things are, everyone will just give up. And this becomes intensely morally charged.

When Paul debated George Monbiot in the Guardian last year, the key bit in George’s argument – the bit that got thrown backwards and forwards endlessly in the comments and the blog posts – was his suggestion that we were passive in the face of (or even enthusiastic about) mass death.

Here’s the bit I’m thinking of: ‘How many would survive without modern industrial civilisation? Two billion? One billion? Under your vision several billion perish.’

VG: Look, ‘modern industrial civilisation’ cannot scale to seven billion people. Two billion people in that ecosystem niche are effectively trashing the entire global ecosystem, with climate going first, followed hard on by oceans, deforestation, top soil and all the rest. Even if it stabilises, the impact as the poor billions who don’t currently use many natural resources pile on to the consumption bandwagon is going to destroy everything.

This is absolutely and completely obvious. Either the poor are going to continue living in their current conditions or worse – conditions which most industrial nations would consider an apocalypse – or they are going to ‘develop’ and follow us into the burning building.

DH: I wonder, sometimes, whether the absolute focus on climate change in the environmental movement today is partly a way of avoiding thinking about this larger question?

VG: Well, climate hits the rich and the poor. It's scary because it'll flood Venice and Bangladesh at the same time, and nobody can buy their way out of it. Most of the other ecological collapses allow the richest to buy their way to the end of the line – last tuna syndrome.

DH: How much will the last tuna to come out of the sea fetch in a Japanese fish market?

VG: That's the one.

DH: Perhaps. I see something else, though. The focus on climate change allows the implication – which I don't think many environmentalists actually believe – that if it wasn't for the pesky sensitivity of our climate system to CO<sub>2</sub>, our way of

living, our mode of development, our model of progress would be just fine. I see this in the popular discourse about climate change, from politicians and in the media, and I don't see it being challenged clearly by mainstream environmentalists.

VG: It's all very complicated, and there's a huge, huge amount of stuff going on. We can't master the complexity, we don't have the ability intellectually to master all the science. People are at the edge of their limit to cope. Picking the most pressing problem and screaming about it is an ancient human reflex. **TIGER!** Climate is our tiger.

DH: That's a good point, about people struggling to cope. It's all very well talking about how someone who comes up with disaster plans for a living handles the possibility of major, discontinuous change – of life being shorter and messier than we grew up expecting it to be – but how about the rest of us?

VG: Well, I'm not proposing a Zen revolution – not yet, anyway!

DH: It is quite a thought! But I have a strong sense of people looking for new ways of thinking, tools to adapt, ways to get their heads round the changes we're likely to live through. I

think that's why Paul and I have had such a strong response since we published the manifesto.

VG: Well, a simple humanism gets you most of the way: think about poverty first. The poor are already living without all these things we are afraid of losing. They're too poor to consume much carbon. They eat all organic produce because they can't afford fertiliser. We are afraid of becoming them, if we trash the planet with our insane greed and the standard of living that comes with it. So when you start to get clear about poverty – and I'll show you what that's like in a moment – you start to get clear about limitation.

Here's how this works, the back of an envelope version. Six and a half billion people. Half rural, half urban. Of the urban population, about two-thirds are doing OK or very well. One-third – one billion – live in utter, abject poverty. Of the rural population, you've got about a billion who are OK, a billion who are really struggling, and a billion who are regularly hungry.

With me, so far? Four billion in various states of poor, and a couple of billion of those, a third of the people on the planet,

with really serious daily personal problems like no dental care beyond having your teeth pulled with rusty pliers.

This is poverty – and it's everywhere.

And how does it work? Average income in the USA is about \$100 per day. Average income for the poorest billion is maybe \$1 per day. So at global averages, there are 100 people living on this income.

Now, think about the kind of will-to-blindness it has taken us all to build our consumer paradise while all this is going on around us. That blindness, that wilful ignorance, is what climate change threatens. But it did not start with climate, it started, as everything on earth does, with poverty.

All of these people who discovered climate recently? They'd been ignoring poverty their whole lives. The denial is cracking, and it's going to be messy, but do not assume that the environment is all that's under the rug.

DH: This is one of the things we tried to do in the manifesto, though I don't know if it was clear enough, to piece these things together: climate, resource scarcity, social and economic instability. All these unpredictable, converging

tsunamis that we're facing, all rooted in forms of denial that go generations deep.

VG: The kind of suffering we are afraid of coming from climate collapse is the ordinary condition of half of the human race.

DH: Yes. And here's the question we've been moving backwards and forwards across: once you admit that, what do you do next?

VG: Well, let's talk about what we really need. Back to *Six Ways to Die*: shelter, supply and security. Take water: there's a simple technology, a clay water filter called the Potters for Peace Filtron. It's a few dollars a unit, can be made anywhere in the world, and it takes out all the bugs. There are lots of similar little innovations for other basic needs. Taken together they can make the villages healthy and good places to live.

That's what you need. Everything else is what you want.

DH: Now, this reminds me of Illich. One of the recurring themes in his work is the massive, unexamined extension of our definition of 'need' that has gone on in modern societies: our failure to distinguish between the kind of ground-level needs

that you're talking about and the systems and institutions we happen to be dependent on right now.

There's another point from Illich, from one of his essays, 'Energy and Equity' - which feels incredibly relevant today, even though it was written nearly 40 years ago. Here's the passage I'm thinking of: 'A universal social straitjacket will be the inevitable outcome of ecological restraints on total energy use imposed by industrial minded planners bent on keeping industrial production at some hypothetical maximum.' In other words, if we frame the question of sustainability as - how do we achieve the most energy-intensive society we can, within ecological limits - the result is the end of democracy. There is no political choice left about our way of living. Whereas, if we include the range of positions below those limits, we have many possible ways of living.

VG: You're talking about hard optimisation, technocratic maximisation of utility. That's very hard to think through, as you say, without totalitarian control.

DH: Yes, although today it comes disguised as pragmatism. If you read something like *Heat*, for example - to pick on George Monbiot, again - it's not immediately obvious that you're

dealing with 'maximisation' of anything. For the purposes of his argument, reducing our emissions to reasonable levels is an almost-impossible task, therefore the least impossible option is the closest we have to a realistic one.

So there, we're still talking about achieving maximum possible consumption - what Illich warned was a social straitjacket - but because of the context, in which we're also talking about such a massive reduction of consumption, it's easy to miss the assumption that we should consume as much as we can.

VG: The problem is that we live without restraint in a limited world.

DH: Also, it's important to acknowledge the extent to which that problem is cultural. It's not simply an evolutionary drive that leads us to unlimited consumption, so that every human who ever lived would be doing the same were they in our shoes. You can find examples of times and places where people have lived very differently - and not necessarily because of local ecological constraints or lack of technology, but because they were not acting on the assumption that the source of meaning or satisfaction in life is the maximisation of

consumption.

VG: In general, old cultures get to be old cultures by wisely negotiating with whatever their limits are. In some places it's land use, not wrecking your soil, in other areas it's population. But old cultures get to be old cultures by not doing this or anything like it.

OK, so here's what it boils down to: are we going to get to be an old culture?

DH: And again, which 'we' are we talking about? Is it really about whether Europe or America becomes an old culture? The ecological problems aren't limited by one culture or another: all over the world, we see the same patterns of hyperconsumption emerging in their own local versions. It's a global issue, not just one for us in the West.

VG: Absolutely - and there's a historical context to this. American and European exceptionalism has existed in one form or another since the early days of Colonialism. It's hundreds of years of gunboat diplomacy and technological breakouts, as the rest of the world struggled to understand what was happening, and cope with the invaders. And the last cards in

that game are going to be played in this present generation.

In the future, we're all Mexicans. That's the standard of living towards which globalisation is driving us. Every country will have its rich and its poor, and some will generally do better than others, but the overwhelming military and technological superiority, which was the foundation of the economic hegemony of America and Europe, is largely at an end.

Europeans and Americans are soon going to live in the same world as everybody else: the world in which you do not have everything you want, and sometimes you do not have enough. That is coming because the plenty we took for granted was based on the absurd political power imbalances that gunpowder and mechanised war bought us, when only we controlled them. As military force runs out as an option, and industrial production becomes available to everybody, America and Europe lose the economic advantages which came with being in control of the majority of resources of the globe.

In the future, all of us on Planet Earth are going to be dealing with the fact that there are seven billion of us. In the future, you do not get a jacuzzi. Not unless you are very, very lucky

and are one of the rich, or unless your jacuzzi runs on abundant resources, not scarce ones.

If you live in a hot country, you can use the sun. In a country with abundant biomass, you can burn wood. In a cold country with geothermal springs, you can use the ground. But you are not going to burn natural gas for fun in 50 years time in any scenario I can imagine from here, and that's the end of a brief, short, foolish age.

We can still live well, but it must be wisely and appropriately, as if we were going to live a thousand years, but knowing we will not.

DH: You know, that sounds pretty upbeat, from a man wearing a skull jacket! What's left, though, is the question of how we get there from here?

VG: That's exactly what we don't know. It's where the history of the 21<sup>st</sup> century is going to be made, in the same way that wrestling with the nuclear bomb was the defining dilemma of the 20<sup>th</sup> century.

We don't have a canned solution for this one, it's a whole culture, and a whole world, engaging with a problem we've

never seen before. It's a pass/fail grade on evolution.

It's not a problem which can be project managed.

DH: What's striking is, when you talk about this, you sound hopeful.

VG: The hope starts at the point when you give up. I'm going to die one day, so are you, and the most we can expect from this life is to enjoy the ride. As long as the grass still grows, and the young are optimistic, life will be wonderful.