## **Transforming Education**

Prepared for Earth is Community A celebration of the vision and path of Thomas Berry London, September 2007 Peter Reason

In Evening Thoughts Thomas Berry counsels us that

Two things are needed to guide our judgement and sustain our psychic energies for the challenges ahead: a certain alarm at what is happening at present and a fascination with the future available to us if only we respond creatively to the urgencies of the present (ET:17)

He is, of course, writing here about the wider issues of our current situation on the planet, but the same themes might guide our reflection on the current state of education, particularly in Universities which is where I have made my contribution, and of the future possibilities: a certain alarm at the present, and great excitement about what is possible. When I think about the urgencies of the present, and given the current state of Universities, the title given for this talk, Transforming Education, seems to be to be naively and wildly optimistic. When I think about the creative possibilities that we might attain, I am far more hopeful.

At the University of Bath I am involved in two main contributions which address these issues. I teach a course to final year management undergraduates which I call Thinking about Sustainability. In this course I attempt to engage the students in a range of ways of thinking about the ecological challenges facing the planet. A sister course run by my colleague Judi Marshall invites students to critically explore ways in which business organizations are acting in response to the ecological challenge. Apart from these two optional courses the management undergraduate degrees have no input on the ecological context within which business and the human economy takes place.

Our second contribution is a two-year part-time Masters Responsibility and Business Practice in which students are members of business and other organizations who are seeking to act for change. As environmental, social, and ethical issues have moved up the public agenda globally, the question of 'responsibility' in the context of business practice is now a major topic for debate and there is a movement for "corporate social responsibility". Some of this, maybe much of it, can be seen as 'greenwash' but there are also significant pressures on businesses and significant opportunities for major change. Our programme aims to encourage the development of 'tempered radicals' (Meyerson & Scully, 1995), people who choose to remain as organization members in order and use their insider position to contribute to significant change. Thus our programme is innovative in educational approach. It is draws on action research to help participants engage, intellectually, experientially and practically with challenging and contentious issues. It encourages question-posing, inquiry, experiential learning and self-reflection so that participants become explorers and pioneers in responsibility and business practice. (see course brochure

http://www.bath.ac.uk/carpp/msc/index.html)

Thomas Berry sees that Universities have a central role, along with political, religious and economic institutions, in the great work of our time because they teach "all those professions that control the human endeavor". And he sees that all four institutions are 'failing in their basic purposes... [because] they all presume a radical discontinuity between the nonhuman and human modes of being" (GW:72). He writes about the University

Our educational institutions need to see their purpose not as training personnel for exploiting the Earth but as guiding students toward an intimate relationship with the earth. (GW:x)

As now functioning, the university prepares students for their role in extending human dominion over the natural world, not for intimate presence to the natural world. Use of this power... has devastated the planet. GW:73

As one of my students wrote about how he realized that individualistic needs and wants—whether good exam results or high career prospects—were driving education

As a result, the students... fail to identify with the problems which face us as a generation in regard to the future sustainability of the earth... What we want... such as a good job, a high income, a happy family and an ipod; ...the things we adore most and want in this world are the very things we are undermining though our individual and collective behaviours...(Jonathan Holt)

Why is this so? Because we are caught in what Thomas calls "six transcendences" (ET Chapter 2) which have helped make us oblivious to the impact of our thought and action on the planet of which we are actually a part. These six transcendences are all connected, but the University primarily sustains the intellectual "disorientation of mind" which is most famously connected with Descartes and his dualistic thinking which separated mind from matter and "deensouled the world" (ET:26). It is this disorientation that allows us to wreak havoc on the planet in the name of rational civilization.

Thomas argues that the University should have the insight, freedom and critical capacity to provide guidance to other institutions and to the younger generation (GW:79). He sees the primary university as the Universe itself so that:

... the university would be the context in which the Universe reflects on itself in human intelligence and communicates itself to the human community. (GW:81)

I have to tell you that we haven't got there yet. We still, by and large, prepare our students for a world in which

The ideal is to take the greatest possible amount of natural resources, process these resources, put them through the consumer economy as quickly as possible, then on to the waste heap" (GW:76)

from whence of course they often continue to poison both humans and the more than human world.

So there is a radical discontinuity between the University as it is, a product of enlightenment thinking which splits the human from our participation in the wider whole and where man is the measure of all things; and the "creative possibilities we might attain".

The question is, how might we get from here to there? How might we recognize the current state of our educational institutions while working toward these creative possibilities? These issues present a challenge for teachers and also to our students. One of them writes

As a management student at the University of Bath it would seem strange to question the underlying objectives of the course that I have committed a number of years of my life to undertake. And yet by taking [your class] this is exactly what I have done. The response to the questions I have asked puts me in a difficult, almost untenable position due to the contradictory nature of the mainstream management course that can be argued is responsible for helping to maintain the current destructive status quo of the planet, and the emerging view of the need for a new world order where humans are a benign, and even enhancing, presence on Earth (James Langford)

I want to talk about three themes we draw on in our educational practice at Bath as we attempt both to stay relevant to current perspectives and also reach for the stars

- 1. Cultivate an attitude of inquiry in ourselves and our students
- 2. Widen the intellectual discourse
- 3. Become embodied and engage the aesthetic

1) Cultivate an attitude of inquiry. Education is too often based on what Paolo Freire called a 'banking' concept of education—the idea is to fill up the minds of the young with existing knowledge that is of value. I don't know if you are familiar with old saw, which satirized Benjamin Jowett, a renowned philosopher and Master of Balliol College, Oxford

First come I; my name is Jowett. There's no knowledge, but I know it. I am the Master of this college. What I don't know isn't knowledge.

But while there are valuable things we can communicate to our students, the current situation on the planet is one to which we don't collectively know how to respond. Undergraduate students come to our classes expecting to be told the answers to the ecological crisis. One of my brightest students told me how he had sat in class as we discussed the ecological crisis and the idea of limits to growth, fascinated and appalled by what I was offering them, and waiting for me to tell them what the solution was. He told me how amazed he was when he realized, about half way through the semester, that I was not going to do this: that I was offering no ready-made solution, but asking them all to think deeply about the issues so that they might be a contribution to a solution.

Our Masters programme is also based on the premise that we don't know how to create responsible business in a global context, that this is a problem to be addressed with curiosity, creativity and bold action. My colleague Judi Marshall describes the challenge in developing education that is question-posing, critical and values-aware:

We also wanted to encourage participants to engage reflectively with challenging, controversial, multi-dimensional and potentially disturbing issues and, consequently, to help them think and act differently. (Marshall, 2004)

Thomas Berry's work is full of this "attitude of inquiry". His own immense scholarship in cultural and religious history and his willingness to draw on the leading edge of cosmological thinking in association with Brian Swimme attest to this. When he writes

As we recover our awareness of the universe as a communion of subjects, a new interior experience awakens within the human. The barriers disappear. An enlargement of soul takes place. (ET:18)

he is writing about inquiry. When he tells us of the epic of evolution, he is telling us of a learning process in which we humans are seeking "our proper role in the great community of existence". This is inquiry. And when he writes of "moments of grace", those "privileged moments" when "great transformations of the universe occur", he is saying that humans are part of the "unbroken continuity in the creative process... of universe development". He says we need to respond with "critical reflection" as we "reinvent the human" (GW:161)

We insist on the need for critical reflection as we enter the ecological age in order to avoid a romantic attraction to the natural world that would not meet the urgencies of what we are about. (GW:161)

All this calls on us to establish education not as a process of filling minds with facts but primarily as a process of inquiry.

## 2) Widen in the intellectual discourse

The second challenge to education is to widen the intellectual discourse. One of the great difficulties in addressing issues of such magnitude—we are talking about the serious degradation or even loss of a habitat suitable for humans on planet earth—is that we don't have language to talk about it every effectively. Or maybe more accurately, there are so many different ways of talking about it that this in itself causes problems. These different discourses start from different premises, draw on different information, have different internal logics, are informed by different value systems, and reach for different end goals. In order to grasp the magnitude of the problem and make sensible choices for action we need to be able to understand these different discourses—otherwise we will keep talking past each other. We also need to be able to draw on these different discourses and find a way to integrate them

If I approach my undergraduate management students from the start by saying that we must "realize that the universe is a community of subjects, not a collection of objects" and that we have "lost the manifestation of the divine in its cosmological dimension"

no one would sign up for my class! But I can draw this strongly into my teaching if I integrate it with other perspectives.

The political theorist John Dryzek (2005) offers a helpful way of thinking about this. Environmental discourses, he argues, are on the one hand either reformist or radical, and on the other hand either prosaic or imaginative—offering us a way of seeing four different kinds of discourse.

- The prosaic and reformist sees the challenge within the current economic and social worldview and argues that what is needed is problem solving to make current policies and practices more effective and efficient. Markets and technology, properly applied, will solve the problem.
- The prosaic and radical perspective argues that there are real limits to what the planetary ecology can contain. This is the neo-Malthusian limits to growth argument, and leads to an attitude of survivalism: we must limit the damage by cutting back on economic activity.
- The reformist and imaginative perspective accepts many of the objectives of current capitalist society but argues that we need to be much more creative about how we attain them. This perspective sees that the industrial process of extraction-production-consumption-disposal is wasteful and profligate. There must be smarter ways of meeting our needs, our wants, and even our desires.
- The imaginative and radical perspective seeks to change the way we experience ourselves and the planet. This is the Deep Green perspective which argues that all life on earth has intrinsic value, not just value as a resource to humans.

I want to expand on these four and show how they interact

The Stern review of the economics of climate change, commissioned by HM Treasury, caused a bit of a stir when it was published last year. I think we can argue that this falls squarely into the prosaic reformist discourse. Stern and his team used scientific data and economic modelling to reach their conclusions, providing an impressive and thorough exploration of the economic consequences of climate change, describing it as "the greatest market failure the world has ever seen" and arguing that "the benefits of strong and early action far outweigh the economic costs of not acting". What is important and significant about Stern is precisely that he reaches his seriously challenging conclusion by arguing within the accepted economic and scientific discourses of our time.

So, my students might argue, is the Stern review sufficient? If he is able to reach these conclusions drawing on economic modelling, why do we need the other discourses at all? Well, first of all, Stern is actually in some ways more radical than he seems. One of the big controversies among economists is Stern's choice of a low discount rate for the impact of current choices on future generations: he values them much more highly than is usual in economic modelling, saying "if you don't care much about the future, you won't care much about climate change". By explicitly (and controversially) bringing value and moral judgements into the picture he vastly widens the discourse away from what we might describe as 'problem solving' and drawing into the debate the fundamental questions we are concerned with today. But nevertheless, this is problem solving within the current worldview, and in the end Stern has no way of addressing the issues of choice he raises, and in particular, his solutions are distinctly unimaginative.

Let us then turn to the prosaic-radical discourse, which is an important complement and challenge to Stern. It was first introduced in its modern manifestation in 1972 by the Club of Rome publication Limits to Growth (Meadows, Randers, & Meadows, 1972). At that time, as now, economic growth was the holy grail and the suggestion that there might be limits was seen as ridiculous. However, as ecological footprinting approaches demonstrate, if everyone in the world lived as we do in the UK we would need nearly three planets to support us. There are necessarily limits to growth on a finite planet, and it is arguably self-evident that there are too many of us doing too much and consuming too much. The modelling in Limits to Growth, which has recently been updated (Meadows, Randers, & Meadows, 2004), shows (as does Stern) that business as usual will lead to overshoot and collapse: collapse of living standards, of economic output, and of the ecology which supports us. This is not an argument for hairshirts and ashes; it is an argument for dethroning the imperative of economic growth, which Stern continues to embrace, and replacing it with broader qualitative measures of well-being of humans *and* the planet. When I bring this argument to my undergraduate students they are frankly shocked: growth of money and profit completely underlies management practice; but most of them accept the thoroughness of the Limits to growth argument as they study it in depth.

So if we turn now to the imaginative-reformist discourses we can find a whole range of exciting ways that people are reconceptualizing the processes of economic and social life. Fundamentally the arguments here are that the design of our economy is grossly inefficient, our money and tax systems absurd (Robertson, 2005), and that the products and service we produce at such great cost to our ecology often don't really do what we want. So, for example, the perspective of 'natural capitalism' builds on Fritz Schumacher's original observation (Schumacher, 1973) that humans treat the irreplaceable resources and ecosystem services of the planet as if they are income, when they are better seen as capital. A capitalism 'as if living systems mattered' would see that the limiting factor to future economic development is the availability and functionality of natural capital, in particular, life-supporting services that have no substitutes and currently have no market value. The loss of natural capital is caused by misconceived or badly designed business systems and wasteful patterns of consumption. Thus natural capitalism (Hawken, Lovins, & Lovins, 1999) seeks to remodel economic system in four ways

- By making fundamental changes in both production design and technology we can make natural resources of all kinds stretch five, ten, even 100 times further than they do today (Factor 10, ; Zero Emissions Research and Initiatives). This is the argument for 'dematerializing' our economy.
- By mimicking natural processes we can not merely to reduce waste but eliminate the very concept of waste. In closed-loop production systems, modelled on nature's designs, the waste of one process becomes the food of another. (Benyus, 2002).
- By replacing the traditional business model resting on the sale of goods with a continuous flow of services we change the nature of business so that the

interests of consumers and producers become more aligned in ways that reward them for resource productivity.

• By seeking wherever possible to actively restore ecosystems to a healthy state where they can thrive and supply the many ecosystem services on which we rely.

You can find many examples of these approaches, not just ideas, but practical experiments. These kinds of arguments truly excite my students. After the challenge of Limits to Growth, here is something, they feel, that is more positive, more appropriate for students of management, with more opportunities for exciting initiative. And they are right.

But Thomas Berry asks us to take this into a different dimension.. All these ideas are important for management students and all of us to understand, and they have enormous potential for changing our world, but they all rest on the assumption that the natural world provides 'resources' or 'capital' for the use of the human; none of them fully challenge the discontinuity between the human and more than human modes of being. The last of the four discourses is both imaginative and radical: it seeks to re-vision the relationship between the human and the more than human world. So it is important to start talking in Schools of Management about how we humans in the Western world are profoundly separated from the natural ecology within which we evolved: we rarely hear an owl call or see the stars; we don't know where our water comes from or where our waste goes; we utterly dominate the space we occupy. This is a strange and dangerous predicament for how can we attend appropriately to that from which we are radically separated?

This is Thomas Berry's great contribution to the deep ecology perspective. To restore the balance between the human and the planet, we have to see the earth again as sacred community. For Thomas, the universe itself and every being in the universe has both psychic/spiritual and physical/material dimensions, an intangible inner form as well as well as a tangible physical structure, and that these two aspects must always go together and be understood together. Thus for him (and for many others) the devastation of the earth is the consequence of this deep cultural pathology which separates these two, seeing the world as purely material. We need to move from a human-centred to an earth-centred norm of reality and value, and that is the only way we can be truly human and play our proper part in life on earth.

In my undergraduate class I argue that each one of these four discourses has something important to offer us and a trap into which we can fall. We need the kind of thorough and detailed examination of our predicament that Stern offers, cast in the language of policy and economics, and drawing on the best scientific and economic data available. We need the terrible warning that there are necessary limits to growth, that we are going beyond these, and this must inevitably lead to overshoot and collapse. In response to the relative conventionality of Stern and the potential nihilism of Limits, we desperately need the visionary perspectives of thinkers and entrepreneurs who are reinventing our ways of providing the goods we need and creating a service based economy.

But when I met Thomas I asked him, given we had all these wonderful ideas about changing our economic and industrial practices, why we needed to make the profound

changed he was advocating. He told me that the changes are going to take awesome amounts of determination, insight and endurance, and unless we experience ourselves as part of a community of subjects, we will not have the psychic energy to make the changes needed. As he says in The Great Work:

... no effective restoration of a viable mode of human presence on the planet will take place until such intimate human rapport with the Earth community and the entire functioning of the universe is re-established on an extensive scale. Until this is done the alienation will continue despite the heroic efforts being made toward a more benign mode of human activity... (GW:19)

How do my students respond to the challenge? Many can cope with the first three discourses but find the fourth really challenging. William Khuu, an undergraduate studying chemistry with management, reviewed Thomas' writing in his essay and compares it to the Limits to Growth. He says that Limits to Growth itself was 'eye opening' and the first time he began to think a bit more deeply about these issues. After a thorough and critical review he writes

While I considered Limits to be radical, Thomas Berry was even more so... I found it difficult to fully grasp... it really required deeper thinking on my part. I guess, as a student of science, the ideas within Limits resonated with me quite instantly because it is more of a scientific argument. On the other hand, the deep ecology of Tom Berry was difficult to comprehend at first because it took me out of my 'scientific' comfort zone. It required me to connect with my spiritual side and this was not something I have ever had to do before. In all honesty, I greeted Berry's perspectives with initial scepticism for it was not until I began to ponder his ideas in my mind more deeply that I began to connect with the spiritual side I did not know existed within me. This in turn led me to questioning whether or not I truly appreciated the spirituality and the beauty of our planet.... By immersing myself further in the work of Tom Berry I began to remember those precious occasions when I have marvelled at, or simply been in awe of the wonder nature of our planet—times when I have just sat silently and gazed in amazement at the beauty of a snow covered Bath landscape, or the beauty of a star filled night sky. At the time I did not realize the importance or significance in feeling these emotions, now I understood that these are valuable moments we risk losing forever.

When I reviewed the class with my students at the end of the semester, asking for their comments on my teaching, one of the looked at me very fiercely and said something like "that stuff of Thomas Berry is really difficult to grasp but you must keep it the course. It is so important to make us think about these kinds of issues".

## 3) Embodiment and aesthetics

While it is important to extend the discourse in this way, it is also important to realize the limits to this kind of intellectual thought. Gregory Bateson, who I regard as one of the greatest human minds of the C20, saw intellectual thought on its own as almost inevitably feeding narrow, human centred conscious purpose. He saw them as inhibiting the unconscious processes upon which all creativity depends. He claimed that aesthetic process tempered this and is how we recognize and re-access the sacred, the lost sense of interconnectedness and intimate interdependency (Bateson, 1972). Different language, but same sentiment as Thomas.

In his essay The Meadow Across the Creek, Thomas writes about his childhood experience of wandering down the hill, across the creek, and the magic moment of encounter with the meadow: "The field was covered with lilies rising above the thick grass", and with "the singing of the crickets and the woodland in the distance and the clouds in the clear sky" provided a magic moment which underlies all his thinking. (GW:12)

Thomas continues to show how we have "silenced too many of those wonderful voices... that spoke to us of the grand mysteries of existence" (GW:17). Yet "the universe is so bound into the aesthetic experience, into poetry, music, art and dance" into our "capacity for celebration" that we must attend to this dimension:

While the universe celebrates itself in every mode of being, the human might be identified as that being in whom the universe celebrates itself... in a special mode of conscious self-awareness (GW:19)

In the film of *The Great Story* Thomas Berry says a lot more about the importance of aesthetic experience:

If we don't have certain outer experiences we don't have certain inner experiences, or at least we don't have them in such a profound way. We need the sun, the moon, the stars, the rivers, the mountains, the trees, the flowers, the birds, the song of the birds, the fish in the sea... all of this evokes something in our inner world. It evokes a world of mystery, it evokes a world of the sacred, it gives us that sense of awe and mystery...

If we lived all alone our imagination would be as flat as the moon

He sees the experience of beauty as essential to what it is to be human:

To bear the burden and responsibility of human intelligence [the human] needed a magnificent world of beauty in order to give us the healing we would need. The greatest, deepest tragedy of losing the splendour of the outer world is that we will always have an inner demand for it. We are genetically coded to exist in a world of beauty. Your first experience is a communion experience: how *wonderful* this is!

And that wonderful poem (which I read at the naming of my grandchildren)

A child awakens to the universe: the mind of a child to a world of wonder, the imagination of a child to a world of beauty, the emotions of a child to a world of intimacy. It takes a *universe* to make a child, both in outer form and inner spirit; it takes a universe to educate a child; it takes a universe to *fulfil* a child (Reason, 2001).

How then do we bring these principles into a modern university? In my undergraduate course, I encourage students to bring pictures and poetry into their coursework—limited, but a useful first step. I also tease them that since the course has a reputation among the more hard-nosed management students as the course about talking with trees they might as well have a go themselves. I provide them with some guidelines for approaching a tree or a rock as a sacred being and suggestions for how they might commune with such a being. They giggle about this in class, but a surprising number of them try something out along these lines, usually quietly on their own. One young man approached me as I walked across the campus, saying shyly, I thought you were having us on about talking to trees, but I tried that meditation... and proceeded to tell me about his experience of presence with the tree.

When we designed our Masters programme we were adamant that students should study the planet's ecology, not just theoretically, but through experience. From the beginning we wanted, as far as is possible in the overcrowded British Isles, to offer students an opportunity for a direct experience of the wildness of the natural world.

We therefore teamed up with colleagues at Schumacher College in Devon, and particularly with resident ecologist Stephan Harding, to design a 'deep ecology' workshop, a week-long experience which explores the state of the world's natural ecology; includes lectures on deep ecology and Gaia theory; but where a lot of time is spent outside engaged in exercises designed to open an ecological awareness

We start the workshop with a night walk in the local woods, inviting participants, since they cannot see much to open their other senses—touch, hearing, smell, intuition. We walk gently, pausing to listen to the owls and ravens, the dropping of water, the wind in the trees; and to the intrusion of man-made sounds, church bells and traffic. Later, we invite students to spend an afternoon sitting by the local River Dart, simply being with what is there—and they are often amazed at the richness and complexity of life they find. We spend a day walking down the upper reaches of the Dart as the river comes off the moor, fitting ourselves into the natural world: scrambling over rocks and under branches, helping each other through bogs and over torrential streams. We experiment with deep ecology exercises: imagining how the world we sense is also sensing us (Abram, 1996; Merleau-Ponty, 1962); guiding each other in pairs on a blindfolded experience of the trees, rock, and mud; identifying with beings in the natural world and exploring through imaginative meditation how we are part of Gaia's cycles. Remember, by the way, that this is part of the curriculum of an established programme in a leading business school!

We summon the Council of All Beings, the ceremony developed by John Seed and Joanna Macy this as a means of 'rejoining the natural world' (Macy & Brown, 1998:149). Participants identify with a Being that 'calls them' to be represented in the Council, make a mask and speak as this Being in the Council, taking turns to describe the world as they experience it, and the impact humans are having on their lives.

The Council experience brings laughter and tears, deep engagement and some embarrassment. Some find the ceremonial aspects liberating, a way of 'being religious' outside of established religions; others find it awkward or offensive to their beliefs; some manage to delightfully combine the two—one brought St Francis' Canticle of the Creatures to the Council; a committed Catholic came as the Holy Ghost. While quite unpredictable, the Council is usually powerful: 'It was as if we had just woken from a dream', said one participant after we had taken our masks off at the end.

As part of the reflection process we regularly use presentational forms including creative writing visual art and drama. The following are examples of haiku written by participants.

A seed grows. Water gives it strength. The Earth moves. (Linda Farrow)

Water drop on leaf A tear rolls down for times lost And new beginnings. (Ruth Townsley)

And on falling down in the woods:

A bramble catches My ungainly fall; Thank you, I say. (Ian Nicholson)

The fourth MSc group made a tape recording to summarize their experience. This is some of what they said:

We found beauty in 'the wonder and magic of nature's complex cycles'. Through cycles of birth, death and re-use we became aware that 'everything is related in one way or another' and deep ecology provides us with an 'understanding of the intimate relationships which exist and which we have with nature as well'. Our 'connectedness to the rhythms of the natural world' is something which our urban lives allow us to forget and the experience of deep ecology places us back within our most fundamental context: 'we are nature'. One participant elaborated on this: 'I thought the core experience was to actually feel myself as part of the natural world. I don't think we normally actually feel that'. (Maughan & Reason, 2001)

This workshop is experienced as both deeply moving and challenging. Generally, it opens new perspectives on the world we live in. For a significant number of students this workshop has been a turning point in the course as a whole, providing a stillpoint or a point of reference to which the significance of their business work can always refer back.

To summarize. We are far away from the kind of University envisaged by Thomas Berry. But as always, opportunities exist within the cracks of formal systems for creative work. We have developed an approach to education which involves cultivating an attitude of inquiry; drawing on many discourses including those well outside usual Western academic worldviews; and integrating an experiential and aesthetic dimension with the intellectual and practical.

While our achievements are terribly limited in the face of the challenge of the Great Work, I nevertheless think we can be proud of what we have done. At those many moments of discouragement and despair I can be comforted and challenged by the words of the Bengali poet and philosopher Rabindranath Tagore which I stumbled upon, which is so close to the thoughts of Thomas Berry:

Great work bears Its own burden Great grief supplies Its own consolation Small tasks, small hurts, small troubles Crush the life spirit To near suffocation

(Tagore, 2001:138)

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