

Is Science a Humanity?

Talk by Andy Blunden at University of Witwatersrand, February 2011

Who's Looking after the big picture?

The question of "Is Science a humanity?" Raises the question of how the study of natural and human sciences came to be separated in the first place. Of how a line was drawn between human beings and nature, between science and human life. Of the question of the intellectual division of labour and the various methods which we use in order to manage the complex processes of modern life. And how do we hope to achieve some shared objectives in all this? *Who is looking after the big picture?*

At the University of Johannesburg they've got a Department of Business Management, a Department of People Management, a Department of Knowledge Management, a Department of Marketing Management, a Department of Quality Management and a Department of Supply Chain Management. ... We are teaching our young people to manage their lives with this kind of approach!

WE HAVE TWO great methods of organisation here: top down management, or central command, in which all the responsibility for running the show comes from the top down. But does the Minister for Higher Education know what's going on in those various departments of management? I doubt it. Central command is an illusion. Then on the other hand, we've got the market, Adam Smith's infamous invisible hand, steering our activity so that everyone's needs are met, without any care for a big picture. Generating efficiency and profits and bringing the world to the brink of disaster at the same time. That *laissez faire* meets the needs of anyone but a tiny minority is another illusion.

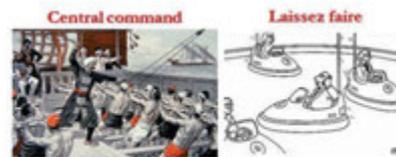
And now we are outsourcing, deregulating, privatising everything, even passing social policies and social welfare over to the market with NGOs, charities and corporations bidding for grants to deliver social services.

IN A NUTSHELL – who is looking after the big picture? No-one. Neither of these two great models for the organisation of labour have any hope of seeing, let alone managing the big picture.

Who is looking after the big picture?



Who is looking after the big picture?



No-one!



The Enlightenment: *flattened out and broke up* the human being

The Enlightenment



Kant

THE PROBLEM all began back in the Enlightenment, when in Europe science started to break free from the constraints of the Church. Under the threat of being burnt at the stake, Copernicus, Tycho Brahe, Galileo, Descartes and company insisted on the separateness of religion and science, just as in other domains the separation of Church and State was coming about. The separation of science and religion was the first great cut in the fabric of the mind.

The highest point of Enlightenment philosophy was undoubtedly late 18th / early 19th century in Germany. All the foundations of modern philosophy and modern

science were laid down in this period. And the people who did this work were all encyclopaedic minds. I am thinking of Immanuel Kant, Johann Gottfried Herder, Johann Wolfgang von Goethe, Schiller, Fichte, Schelling, the von Humboldt brothers, Hegel and so on.

Kant really laid the foundation. Kant taught philosophy to speak German it was said. And Kant remains today the founding philosopher for analytical philosophy, even for those that have never actually read his books. Immanuel Kant, had overthrown religion, superstition, privilege and narrow parochialism. But he did so under the banner of the universal rights of man and universal laws of Nature, laws which could be determined by the exercise of Pure Reason, for which every person possessed the innate capacity, alongside a separate capacity for sensuous observation, dividing the world into appearances on one side and unknowable things-in-themselves on the other.

IN THE PROCESS of disenchantment, the human subject was simultaneously *flattened out* into a uniform type and *broken up*, analysed into so many separate faculties and isolated from the world which had given birth to it. Kant gave precise, scientific expression to the analytical method, the method of dividing things up so as to look at things separately, and tracing each of them back to eternal, natural laws. But there was a rebellion against this spirit of analysis, which is known as Romantic Science. And this is what I want to talk about.

The Enlightenment

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Kant

Romantic Science and dichotomies

DOESN'T IT sound like something really fluffy and unserious: "Romantic Science." Mostly the Romantic movement is remembered as an art movement and it was that too. Its contribution to science was demeaned at the time and ultimately drowned in the floodtide of Newtonian science. But we should recall it.

ALL THE great figures of classical German philosophy were uncomfortable with Kant's dichotomies, particularly the way Kant divided the world into appearances and things-in-themselves. Each philosopher tried to find a way out of it. This problem of dichotomies dated back to the beginning of scientific philosophy in Descartes' division of the world between mind and matter, but Kant had only shifted the divide back a step and in fact multiplied the problem with philosophy now plagued with a number of dichotomies.

FICHTE tried to solve it with the idea of Activity, uniting both subject and object, Schelling tried to solve it with the Absolute in which all divisions were overcome, but it was actually the poet Goethe who solved the problem. Hegel took up Goethe's solution to turned it into a wonderful philosophical system. But I want to stop short of Hegel tonight and just talk to you about Goethe's idea, which is relatively easy to grasp. Hegel's philosophy is very difficult. You should study it, but you may have to give up a year of your life to understand Hegel, at least. Hegel was a lousy communicator, and his works read like riddles. So let's stick with the poet Johann Wolfgang von Goethe.

Romantic Science



Goethe in Italy

Dichotomies



Romantic Science

Goethe: Grasping things as a Whole

GOETHE was famous as a poet, but he was also a very good scientist. In particular he was interested in morphology, the study of the forms of living things. He invented the science actually. He was an avid student of Nature, observing the plant and animal life around him

Johann Wolfgang von Goethe
(1749-1832)



Grasping things as a Whole

wherever he went and also the geology, and his interest in human life was always closely connected to his interest in Nature.

And Goethe opposed what he called Newtonian science, with its invisible forces and mechanical laws, and was also passionately critical of the Kantian doctrine of separate faculties of Sensation and Reason and things-in-themselves, and Bacon's method of trying to force Nature to tell the truth under torture.

Johann Wolfgang von Goethe
(1749-1832)

THE ISSUE for Goethe was how to understand a complex process as a *Gestalt*. *Gestalt* is a common German word, meaning something like "figure" when you say "what a fine figure of a man," but Goethe's focus on this idea and his effort to solve the problem is what made the German word *Gestalt* into an international word, meaning an *integral whole*.



Grasping things as a Whole

HOW OFTEN do you hear people say "We have to see the whole picture" or "We have to begin from the whole." These are very well-known and commonplace ideas. Easy to say, but not so easy to do. Let's look at the various ways people try to or claim to grasp processes as a whole.

Gestalt



Grasping things as a Whole

Name

THE FIRST approach we come across is to *name* the whole, as for example, when we say "global" or "Nature." But a word is just a word. On its own it can convey nothing; the Smiths have nothing in common other than their name. If a word succeeds in any degree in conveying an image of the whole it is only because of the associations it has accumulated over the years, and never manages to do more than name a general idea, and does not reflect any real understanding of the process, as a whole. Appealing to Nature or God or "the people" is just words. Usually a cover in fact, for whoever is the representative of Nature or God or the People.

Name



Grasping things as a Whole

Common Attribute

Name

Common Attributes



Grasping things as a Whole

THE MOST common way of conceiving of a complex whole, and in fact the only way known to analytical philosophy, is to define the whole phenomenon according to a common attribute of all the elements of the whole. What is South Africa? All those people who are citizens of the Republic of South Africa. What is a worker? Everyone who works for a wage. And so on. Here instead of grasping the whole we pick out some contingent attribute and focus on that instead.

Instead of knowing the thing, we just select something which can be said of one. Instead of thinking about what the country is, we focus on the criteria for citizenship, something we have in common. This never works. There are always perfectly good South Africans who aren't citizens and citizens who do not deserve the name of South Africans. There are always workers who don't get a wage and those who get a wage but have nothing to do with the working class. Instead of understanding the whole, we look elsewhere, at some accident instead.

Common Attributes

For example, counting votes



Grasping things as a Whole

THIS IDEA of representing a whole by means of inessential attributes is in fact how our electoral system works: the government is selected by counting votes in a multiple-choice survey.

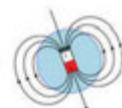
Forces

THEN, we have Isaac Newton's method of proposing a force to explain the complex phenomenon. For example, objects accelerate towards one another *because* of the force of gravity.

Name

Common Attributes

Forces



Grasping things as a Whole

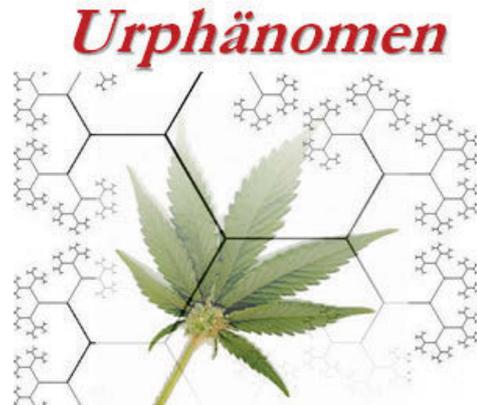
Or, people migrate to the city because of the attractive force of city life. You start with a sensuously given phenomenon of which you have at least a little understanding, and then you replace this with some force or vibration or energy, which is invisible – a cause known only by the effect which is what the force is supposed to explain. So, in themselves, forces explain nothing, it just shifts the problem to understanding the invisible force.

Now I don't want to say that these various methods are entirely worthless. On the contrary. In general, naming and forces and shared attributes are stages in the description of a phenomenon. But they are just stages and they do not give us understanding or any conception of the process as a whole.

It is also an important way of understanding something if you can identify it as part of a larger process, for example, by identifying an animal by its belonging to a certain *species* of creature, or by identifying some artefact by its place in some system of *practice*. But this still depends on understanding the greater whole.

Urphänomen

SO HOW does Goethe do it? How does he suggest we grasp the *Gestalt*? What Goethe said was that we have to find the smallest unit of a complex phenomenon which has all the essential properties of the whole. He called this the *Urphänomen*, that is, the archetypal phenomenon. The simplest particular thing which counts as a member of the whole universal process. He came to this idea during his trip through Italy. He travelled the length of Italy, the mountains and the lowlands from North to South, observing all the plant life, looking for the simplest unit of plant life, which lacked any of the particular attributes of any plant, but which had what was essential to all plant life, and from which a whole plant can be generated.



Now it has to be said, Goethe did not quite succeed in his quest. Microscopes were still not powerful enough to give him empirical images of cells: cells which are themselves complete living organisms from which the entire plant can be generated. The cell *looks* nothing like a plant, but it is precisely what Goethe was looking for: the simplest individual thing which constitutes plant life, each itself a complete living organism, and out of which the entire biosphere is constructed. With the discovery of the cell, only a few years after Goethe's death, biology was put on a scientific footing for the first time.

So this is the irony which Goethe saw clearly: the whole is contained entirely in its smallest unit, and in a way in which you can see and understand it. And conversely, the whole is actually constituted as a *Gestalt* by its cell. The whole plant is not something which is what it is because it *looks like* a plant, but something which is made up of plant cells. No list of the attributes of what makes a plant is ever complete or free of exceptions. The cell constitutes the plant.

So, unlike a force, the *Urphänomen* is sensuously given, and can be understood with the senses, even viscerally. It is a sign for the whole complex, but it also shows you how it works. It is a principle, but unlike one of Newton's laws, it is also a real, sensuously given particular thing. Unlike the invisible force or law of analytical science, the *Urphänomen* is given to the senses. You can see how it works. Unlike the common attribute, the *Urphänomen* is not arbitrary but gets to the essence of the whole process.

Identifying the *Urphänomen* of a complex process only comes as the outcome of a long drawn out process of patient observation. It is not something that you can fire off from the hip. It takes careful thought and understanding. But when you get it, then you can unlock the whole process. You've got what it is which constitutes the *Gestalt*.

Have I explained this idea?

Have I explained that OK?

Collaboration

Collaboration is the basic human relationship.

SO THE PROBLEM before us is how can we understand human society? How is it possible to live in a way that makes sense for us? How we should live? That's a problem worth tackling, isn't it? If we want to understand human society then Goethe tells us to figure out what is the smallest unit of human society.

The first thing I'll tell you is that the smallest unit of society is not, as analytical philosophy tells us, the individual person. An individual dropped into the jungle on their own will never grow up to be a human being or exhibit any of the phenomena of human life. As a matter of fact, even if you dropped a million infants into the jungle, together, you would not get anything resembling human social life.



Artefact-Mediated Action

LEV VYGOTSKY, the Soviet psychologist who worked in the Soviet Union in the aftermath of the Russian Revolution, and died in 1934, had some useful advice. What Goethe called the *Urphänomen* Vygotsky called the 'unit of analysis', and his subject matter was verbal thought, or the intellect. Taking a developmental approach to the problem of understanding the intellect, Vygotsky focussed on how a person comes to acquire one element of their own culture. So he was interested in the simplest, most elementary act of learning, the simplest unit of becoming a person. He took the unit of analysis for the study of the intellect to be a novice (or student) and someone who is experienced in the culture (a teacher), using some artefact to collaborate in some task. This was called an 'artefact-mediated action'. This is not a bad shot at a basic unit of a cultural group. Even though an 'artefact-mediated action' only involves one or two individuals, by including one artefact it potentially includes anything in a society's material culture. Also, having used artefacts to coordinate their actions with another person, people will go on to use artefacts to coordinate their self-activity.

Artefact-mediated Collaboration



The teacher would set the student a task, which the student would find too difficult to complete. The teacher then offers the student some artefact to use in completing the action and helps them to use it. Learning to use this artefact to solve some problem constituted the simplest act of learning, and Vygotsky could study the development of the intellect by studying these elementary acts of learning. But there was one thing missing in this model. Well, not so much missing as implicit. There is nothing in the artefact-mediated action which explains *why* the student wants to do the action, what is their motive? This is a problem which was taken up by Vygotsky's followers. But we can sum up the problem quite succinctly by saying that Vygotsky's unit of analysis was an action in which two people use an artefact to complete some task. We will come back to this.

The point is though, there is no use in any theory of society in which every society looks the same as any other. Such a view would be useless, so let's look a little closer. As it happens, Marx used Goethe's idea in his analysis of bourgeois society (that is, capitalism).

Commodity Relation

MARX said that the cell of bourgeois society is the *commodity relation*. That is, he claimed that the entire phenomenon of capitalist society unfolded out of the exchange of commodities. Once people start producing for exchange, the rest follows. One person produces something which meets someone else's needs and exchanges it for something they need. As a matter of fact, exchange of commodities is something that hardly ever happens in modern capitalist society. Usually people buy and sell things, rather than exchange their products, but the point is that it is all *there* in the simplest relation, even before money enters the picture.

Now, producing something for exchange is not exactly collaboration. It is and it isn't. It is a limit case of collaboration. Each person has a completely different objective in the relationship and each uses the other as a means to their own ends. Mutual instrumentalisation. So capitalism is a specific kind of society and it is based on a specific kind of relationship, a certain "economic cell form" – the market relation, which is a limiting case of collaboration. The commodity relation is a kind of relation which is egalitarian, but each party remains entirely separate from the other, and simply exchanges or doesn't exchange as they see fit. Once this relation is firmly established in a society, everything else follows with iron necessity.

Management Tree

NOW THIS is not the only kind of society. It is one specific kind of society. There have been perfectly workable societies in which the basic unit of association has *not* been exchange of commodities. But the classic counter-example to commodity exchange is the capitalist enterprise. Here everyone works under the direction of a management tree from the top down. This is a form of collaboration as well, but again it is a limiting form of collaboration, a kind of uncollaborative collaboration, so to speak. And there have been whole societies organised along these lines, like a single enterprise, where everyone works for the good of the company and under the direction of the company's representative.

But the same basic unit of society applies: two people doing something together using some artefact – be it a machine, or a text, or another person, or material or land – some artefact. But the relationships within that collaboration can be different. It is possible to collaborate uncollaboratively. Teachers assist a learner in completing a project that the learner wants to complete. Traders pursue their own projects by honestly dealing with each other as separate independent agents. Masters direct their servants within the bounds of their responsibility as masters. *But there is also a norm*, a norm of collaboration which we all know fairly well.

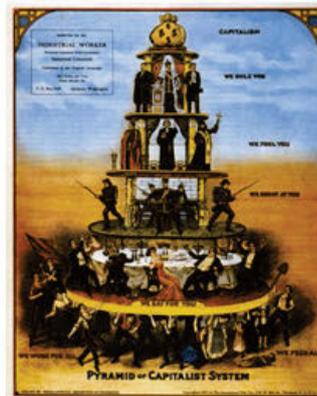
Norm of collaborations

THE NORM of collaboration is this: firstly, you share an objective, whatever else you are doing, the basis for collaboration is this *common objective*. But the objective is really implicit, immanent in the shared project, and both parties learn more and more about their shared objective as the project unfolds. Secondly, both parties participate as equals, both have an equal say. Thirdly, collaborating is not a peaceful thing. Like marriage, collaboration involves as much conflict as cooperation. You argue over what to do and how to do it. But the ethics of

Commodity Relation



The Management Tree



Norms of Collaboration



collaboration are clear enough: you treat people as equals and decide what to do together with those you are collaborating together with.

But as we said: not every form of collaboration is collaborative. Exchange of commodities is not collaborative: the customer is always right. And nor are capitalist firms collaborative: the manager is always right. But we all know what the norms of collaboration are, don't we? So the situation seems to be that we live in a society that is "off centre," in which *the norms of collaboration are systematically distorted*.

Collaboration is always around some project.

NOW THIS brings us back to the problem that I alluded to before, the problem of motivation. If the smallest unit of human society is two people collaborating together sharing an artefact to do something, what is it that they are trying to do? Well, let's call it a *project*. The project is what you are *both* trying to do. Collaboration can only happen around some project. And on the other hand, all projects are essentially collaborative; even the lone artist is essentially collaborating with their audience.

There is always an element of cooperation involved in any project, even if it is just the process of dividing the project up into smaller projects, where one person does one thing while the other person does something else. But if everyone is committed to the same project, there is always an element of genuine collaboration, that is, *mutual criticism*, where you argue over how to divide up the project, who is going to do what, the best way to do things, or for that matter, what you expect the project to achieve. In fact, the most fundamental conflicts are best understood as collaborative projects where conflict is more prominent than cooperation. If the different political parties have different ideas about how to run South Africa, they are engaged in a collaborative project. They argue with each other over the best way of solving the country's problems, and do so within a certain broad *set of rules*. The only time I would say that a political conflict ceases to be a collaboration is when one party actually sets out to destroy the other. Then there cannot be collaboration.

SO, THIS MEANS we can see the world as made up of so many collaborative projects ... instead of seeing the world as made up of individuals, or communities or cultures or electorates, or countries, or social groups of any kind. *The basic unit of a human society is a collaborative project*. Implicit in the idea of the project is the artefacts (such as language or tools of any kind) which are used for the project.

We are all involved in numbers of projects, and it is only in and through participation in such collaborative projects that we have anything to do with other people.

AND WHAT we have to do with other people is going to be defined by the nature of those projects. Most likely the norms of collaboration will be highly distorted in most of the projects we are engaged in. Usually, someone *owns* the project, while the other person is their servant. But in any case the world is made up of collaborative projects. And this is good, because if we see the world as a vast spaghetti bowl of collaborative projects, then we have a unit every one of which is a miniature society, each of which contains everything that is essential to the whole. The whole psychology of human existence is contained in that relation, of participating in a collaborative project. Also, the ethical foundation of society is there, in the norms of collaboration.

Conflict

NOW DON'T get me wrong. This is not just some touchy-feely call for a big love in. All wars begin with peace talks. Sometimes people just don't want to be collaborative and you have to force them to the negotiating table, so to speak. But your aim is collaboration. Usually you have end up working together anyway, and it is as well to remember this when

Collaboration is always in a Project



Conflict



you're having a fight with someone. And even when you are engaged in a collaborative process with someone, they may not recognise norms of collaboration and you may have a hell of a fight on your hands to get norms of collaboration adhered to, to stop someone from trying to treat it as a matter of customer service, when you want to be treated as a partner in the project, for example.

On the other hand, there's probably no-one in the world that you completely agree with, and if you are looking for someone who shares all your beliefs and values to cooperate with, you may be waiting a long time. So it's very powerful if you can find common projects with almost everyone out there.

Context

NOW I'LL TELL you something that educators get out of this right away. It is well-known that a person's ability to perform depends on the context. For example, the kid who is a mathematical whizz in the betting shop or at the market, turns into a dumb-arse in the classroom, and vice versa. Like the street-fighter who fails in the boxing ring and vice versa. How do you theorise context? Do you include the geographical location? the dominant culture? the family? the economic climate? The problem is that 'context' is an open ended totality. There is no boundary you can put around the situation where you can say "It's only what lies within these boundaries which is relevant to understanding this problem, which is part of this context of this situation."

Well we would say that *the context is the project*, it is what is motivating the collaborative activity. So for example, a youngster might know how to use their intelligence to solve problems that arose in the marketplace, but see no point in solving the paper-based maths problems set for them by the teacher. They are just *not engaged* in that project. But as most teachers know, if the same mathematical problem which confounds the child in the classroom arises in the course of a project to which the child is dedicated, then magically it makes sense. The lesson is this: if you want someone to help you, it may not be enough to offer them a reward. If you can recruit them to your project, then they may see the point.

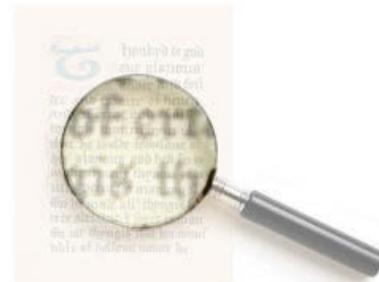
There is a general rule here: if you want to collaborate with someone, you first have to know what project you could share with that other person, what is it which you want to achieve which they *also* want to achieve, even if you completely disagree with *how* to do it. Again, this is going to be a more productive approach than doing a trade. I mean, doing a trade is better than nothing, and it may create the basis for going on to collaborate properly, normatively. But there is a lot to be said for taking the trouble to find out what someone, who may be quite alien to your way of thinking, might collaborate with you in. In this very fragmented world we absolutely have to find ways of stitching the social fabric back together again. Social movements are great creators of social fabric, but even quite small scale collaborative projects contribute, because they *are* the social fabric.

The Objective is Immanent in the Project

JUST ONE POINT. It may appear that what I am suggesting here as a foundation for the human sciences is very subjective. How can we take someone's intentions as something objective? Isn't someone's aim entirely subjective? Like in the phrase "the road to hell is paved with good intentions." Isn't this a serious fault with my proposal, taking people's intentions as component parts of the objective fabric of society?

I am anticipating this line of criticism but it rests on a misunderstanding. For a start, the idea of understanding society *without* taking what people are trying to achieve as an integral part of the fabric of society would surely be bankrupt. People's intentions may be inward and intangible and inaccessible to objective study, but they are also obviously an important part of what makes society tick. The point is that it is not people's inner

Context



The Objective is Immanent in the Project



subjective intentions as such which we are concerned with, but *projects*. When people *lend their support* to a project they are adopting the aim of the project as their own. A project is an *objective* manifestation of intention. Or rather, subjective intentions are the internalisation of projects which are quite objective.

But also, when engaging in a project, someone, or even everyone, may be quite mistaken about the outcome of a project. You set out to build socialism, and you end up creating a Stalinist state. Things don't turn out necessarily just as you intended, as you thought they would. But projects always have an aim, an objective, a vision of their ideal outcome. What happens in the course of the project's realisation is that the outcome actualises itself, and everyone involved gets a clearer and clearer image of where it is going. And they may change what they do accordingly, and might redefine their objectives or the rules they agree to in the project. Also, the way projects develop is subject to objective scientific study.

The objective, like the final outcome, is *immanent* in the project. OK? That's because collaborative projects are *learning* processes. And the only way you are going to learn something from an experience is if you collaborate in it. If someone produces something and sells it to you, you get the benefit but you don't learn anything from it. It is only to the extent that you participate as a collaborator in a project that you can learn from its perverse or happy outcome.

SO I AM suggesting that we visualise the world not as a mosaic, but as a *cloth*, woven from millions of projects, large and small. This has the great advantage that is equally meaningful whether you are talking about a child learning arithmetic or sharing a sweet with her sister, or a vast social movement or a vast enterprise. It is also important because it gives you *norms* which are intuitively impelling and give you a secular and rational ethical compass across all situations. Even an institution, such as a public service department, or any other institution, is also a project. But if you were to rethink it as a project, you are probably going to have a few changes to suggest. Likewise, the practice of out-sourcing and marketising functions within an organisation, which destroys the possibility of collaborative projects collaborating with each other. Collaboration is subsumed under the market!

The key to grasping the whole



Collaborative project: the key to grasping the whole

SO NOW after this long way around I want to return to the earlier question, that is, how can we understand the whole, and how can we work together, and in a way which isn't stuck in the same train tracks, but which gives us some chance of keeping our eye on the whole picture. Let us accept that giving someone or a group of people the job of looking after the whole while the rest of us get on with making a buck never was going to work and has up till now brought the world to the brink of disaster. But neither of the obvious alternatives will do either. Adam Smith's invisible hand will *not* manage a good outcome for everyone if everyone just pursues their own ends. On the contrary, the world needs regulation more and more, something which would have been no surprise to Adam Smith. Managing the world by means of an organising principle in which people collaborate with a mixture of command and exchange of commodities, is the short track to chaos.

Collaborative Project: The key to grasping the whole



But in a time of widespread ignorance and mutual distrust, in fact, at any time short of the socialist utopia, when people have different ideas about the world, different values and one can see little sign of the cooperative society on the horizon. At a time when resources are rapidly being exhausted with a few people in a few countries gobbling up resources like there was no tomorrow (and maybe there won't be), when a whole number of factors are contributing to the destruction of the conditions for human life on Earth, and getting worse every year, and governments are doing absolutely nothing

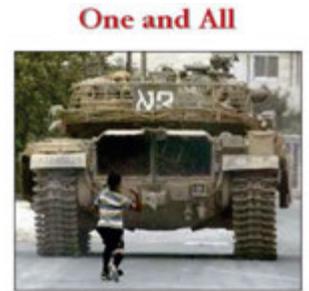
about it. At time when in most countries sociability and civility is in rapid decline while, as Marx put it: “All fixed, fast frozen relations, with their train of ancient and venerable prejudices and opinions, are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air, all that is holy is profaned ...” – In such a time we have to find a new way, neither Adam Smith’s invisible hand nor the hand of some Great Helmsman can guide us.

One and All

I WANT TO suggest that everyone of us needs to think about the whole, and that doesn’t mean that each one of us has to solve the global economic, social and environmental crises ourselves, I think what is needed is that every one of us has to conceive of what we are doing in terms of a project. Even our little project is a thread in the fabric of society. It is the projects we are participating in which connect us to the whole. I think we do have a responsibility to dedicate ourselves to a sustainable project which is consistent with other people’s lives as well. That’s basic. No-one can disagree with that. But by consciously organising our own activity and our interaction and collaboration with others on the basis of participating in a project, we can in this way organise our own work on a holistic basis.

THE PROJECT is the *Gestalt* and a whole mass of such projects can hang together if each one of them is carried through as a sustainable, collaborative project, and collaborative projects collaborate with one another.

THIS DOES NOT require that you try to force everyone else to take any particular course of action – except that is, to the extent that they want to collaborate with you. In that case, you need to discuss with them what you are going to do together.



One and All



Collaborative Projects collaborating with collaborative projects are very strong

Even our little project is a thread in the fabric of society ... which connect us to the whole.

their own activity in the same terms.

If social scientists, and educators and psychologists and political scientists and anyone, in fact, involved in the human sciences, can make sense of their subject matter in terms of collaborative projects, then anyone can understand

What we do, we decide

ALSO, religious and other differences put barriers between us as moral actors, but the ethical maxim: “What we do, we decide” is pretty much universal. The Golden Rule – “Do unto others as you would have others do unto you” suffers from the defect that it ignores the fact that others do not necessarily want to be done unto as you would. And you wouldn’t necessarily want to do unto them as they would have you do unto them. The Golden Rule is a good maxim. It does express a basic idea of universality and fraternity. Every religion and tradition in the world has a version of the Golden Rule on its books. But it has its problems in a world where, like it or not, thousands of very different ways of life are sharing a very finite globe and a very unstable and brutal world financial system. Doing unto *others* according to *your own* beliefs is not enough. So “collaborative projects” actually gives us the only possible ethic for today’s world. “What we do, we decide”!

So, is science a humanity? Natural science is a project with very definite norms of collaboration and its subject matter actually is *human activity* – measuring, making, mixing, growing, and so on – all those forms of activity in which we take the natural world to be something existing independently of our activity. But Natural Science, beyond a certain point, must see itself as a science of human activity, and therefore must be a *humanity* if it is to understand its own limits, the limits of taking nature as existing independently of human activity. So the methods of the humanities must be introduced into natural science, and *not* the other way around. The methods of natural science cause only mayhem when introduced into the humanities.

So let’s start with repairing this first cut in the fabric of human life: there can be no dichotomy between the *practice of science* and the *science of practice*.

What We do, We decide!

