Spinoza - Thought as an Attribute of Substance

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An immense role in the development of logic, and in preparing the ground for modern views on its subject matter, a role far from fully appreciated, was played by Spinoza. Like Leibniz, Spinoza rose high above the mechanistic limitations of the natural science of his time. Any tendency directly to universalise partial forms and methods of thinking only useful within the bounds of mechanistic, mathematical natural science was also foreign to him.

Insofar as logic was preserved alongside the doctrine of substance, Spinoza treated it as an applied discipline by analogy with medicine, since its concern proved not to be the invention of artificial rules but the co-ordination of human intellect with the laws of thought understood as an 'attribute' of the natural whole, only as 'modes of expression' of the universal order and connection of things. He also tried to work out logical problems on the basis of this conception.

Spinoza understood thought much more profoundly and, in essence, dialectically, which is why his figure presents special interest in the history of dialectics; he was probably the only one of the great thinkers of the pre-Marxian era who knew how to unite brilliant models of acutely dialectical thought with a consistently held materialist principle (rigorously applied throughout his system) of understanding thought and its relations to the external world lying in the space outside the human head. The influence of Spinoza's ideas on the subsequent development of dialectical thought can hardly be exaggerated. 'It is therefore worthy of note that thought must begin by placing itself at the standpoint of

Spinozism; to be a follower of Spinoza is the essential commencement of all Philosophy.'[1]

But orthodox religious scholasticism, in alliance with subjective idealist philosophy, has not ceased to flog Spinoza as a 'dead dog', treating him as a living and dangerous opponent. Elementary analysis reveals that the main principles of Spinoza's thought directly contradict the conception of 'thought' developed by modern positivism all along the line. The most modern systems of the twentieth century still clash in sharp antagonism in Spinoza; and that obliges us to analyse the theoretical foundation of his conception very carefully, and to bring out the principles in it that, in rather different forms of expression perhaps, remain the most precious principles of any scientific thinking to this day, and as such are very heatedly disputed by our contemporary opponents of dialectical thought.

Hegel once noted that Spinoza's philosophy was very simple and easy to understand. And in fact the principles of his thinking, which constitute the essential commencement of all Philosophy, i.e. the real foundation on which alone it is possible to erect the edifice of philosophy as a science, are brilliant precisely in their crystal clarity, free of all reservations and ambiguities.

It is not so easy, however, to bring these brilliant principles out because they are decked out in the solid armour of the constructions of formal logic and deductive mathematics that constitute the 'shell' of Spinoza's system, its (so to say) defensive coat of mail. In other words, the real logic of Spinoza's thinking by no means coincides with the formal logic of the movement of his 'axioms', 'theorems', 'scholia', and their proofs.

'Even with philosophers who gave their work a systematic form, e.g. Spinoza, the real inner structure of their system is quite distinct from the

[1] Hegel, "Lectures on the History of Philosophy," Volume III p 257.

form in which they consciously presented it,' Karl Marx wrote to Ferdinand Lassalle. [2]

Our job then cannot be once more to paraphrase the theoretical foundations on which Spinoza built his main work, the *Ethics*, and the conclusions that he drew from them by means of his famous 'geometric modus'. In that case it would be more proper simply to copy out the text of the *Ethics* itself once again. Our job is to help the reader to understand the 'real inner structure' of his system, which far from coincides with its formal exposition, i.e. to see the real 'cornerstone' of his reflections and to show what real conclusions were drawn from them, or could be drawn from them, that still preserve their full topicality.

That can only be done in one way, and one way only, which is to show the real problem that Spinoza's thought came up against quite independently of how he himself realised it and in what terms he expressed it for himself and for others (i.e. to set the problem out in the language of our century), and then to trace what were the real principles (once more independently of Spinoza's own formulation of them) on which he based the solution of the problem. Then it will become clear that Spinoza succeeded in finding the only formulation exact for his time of a real problem that remains the great problem of our day, only formulated in another form.

We formulated this problem in the preceding essay. Spinoza found a very simple solution to it, brilliant in its simplicity for our day as well as his: the problem is insoluble only because it has been wrongly posed. There is no need to rack one's brains over how the Lord God 'unites' 'soul' (thought) and 'body' in one complex, represented initially (and by definition) as ***different*** and even ***contrary*** principles allegedly existing

[2] Marx to Ferdinand Lassalle 31 May 1858, *MECW* vol. 40 p 316. Marx repeated this idea eleven years later in a letter to M. M. Kovalevsky: '... It is necessary ... to distinguish between that which the author in fact offers and that which he gives only in his representation. This is justifiable even for philosophical systems: thus what Spinoza considered the keystone of his system, and what in fact constitutes this keystone, are two quite different things'. This letter was known only from an oral translation by Kovalevsky.

separately from each other before the ‘act’ of this ‘uniting’ (and thus, also being able to exist after their ‘separation’; which is only another formulation of the thesis of the immortality of the soul, one of the cornerstones of Christian theology and ethics). In fact, there simply is no such situation; and therefore there is also no problem of ‘uniting’ or ‘co-ordination’.

There are not two different and originally contrary objects of investigation body and thought, but only ***one single*** object, which is the ***thinking body*** of living, real man (or other analogous being, if such exists anywhere in the Universe), only considered from two different and even opposing aspects or points of view. Living, real thinking man, the sole thinking body with which we are acquainted, does not consist of two Cartesian halves ‘thought lacking a body’ and a ‘body lacking thought’. In relation to real man both the one and the other are equally fallacious abstractions, and one cannot in the end model a real thinking man from two equally fallacious abstractions.

That is what constitutes the real ‘keystone’ of the whole system, a very simple truth that is easy, on the whole, to understand.

It is not a special ‘soul’, installed by God in the human body as in a temporary residence, that thinks, but the ***body of man*** itself. ***Thought*** is a property, a mode of existence, of the body, the same as its extension, i.e. as its spatial configuration and position among other bodies.

This simple and profoundly true idea was expressed this way by Spinoza in the language of his time: thought and extension are not two special substances as Descartes taught, but only two attributes of one and the same organ; not two special objects, capable of existing separately and quite independently of each other, but only two different and even opposite aspects under which ***one and the same*** thing appears, two different modes of existence, two forms of the manifestation of some third thing.

What is this third thing? Real infinite Nature, Spinoza answered. It is Nature that extends in space and 'thinks'. The whole difficulty of the Cartesian metaphysics arose because the specific difference of the real world from the world as only imagined or thought of was considered to be extension, a spatial, geometric determinateness. But extension as such just existed in imagination, only in thought. For ***as such*** it can generally only be thought of in the form of emptiness, i.e. purely negatively, as the complete absence of any definite geometric shape. Ascribing only spatial, geometric properties to Nature is, as Spinoza said, to think of it in an imperfect way, i.e. to deny it in advance one of its perfections. And then it is asked how the perfection removed from Nature can be restored to her again.

The same argumentation applies to thought. Thought as such is the same kind of fallacious abstraction as emptiness. In fact it is only a property, a predicate, an attribute of that very body which has spatial attributes. In other words one can say very little about thought as such; it is not a reality existing separately from, and independently of, bodies but only a mode of existence of Nature's bodies. Thought and space do not really exist by themselves, but only as Nature's bodies linked by chains of interaction into a measureless and limitless whole embracing both the one and the other.

By a simple turn of thought Spinoza cut the Gordian knot of the 'psychophysical problem', the mystic insolubility of which still torments the mass of theoreticians and schools of philosophy, psychology, physiology of the higher nervous system, and other related sciences that are forced one way or another to deal with the delicate theme of the relation of 'thought' to 'body', of 'spiritual' to 'material', of 'ideal' to 'real', and such like topics.

Spinoza showed that it is only impossible to solve the problem because it is absolutely wrongly posed; and that such posing of it is nothing but the fruit of imagination.

It is ***in man*** that Nature really performs, in a self-evident way, that very activity that we are accustomed to call 'thinking'. In man, in the form of man, in his person, ***Nature itself*** thinks, and not at all some special substance, source, or principle instilled into it from outside. In man, therefore, Nature thinks ***of itself***. becomes aware of ***itself***, senses ***itself***, acts on ***itself***. And the ' reasoning', 'consciousness', 'idea', 'sensation', 'will', and all the other special actions that Descartes described as ***modi of thought***, are simply different modes of revealing a property inalienable from Nature as a whole, one of its own attributes.

But if thinking is always an action performed by a natural and so by a spatially determined body, it itself, too, is an action that is also expressed spatially, which is why there is not and cannot be the ***cause and effect*** relation between thinking and bodily action for which the Cartesians were looking. They did not find it for the simple reason that no such relation exists in Nature, and cannot, simply because thinking and the body are not two different things at all, existing separately and therefore capable of interacting, but ***one and the same thing***, only expressed by two different modes or considered in two different aspects.

Between body and thought there is no relation of cause and effect, but the relation of an organ (i.e. of a spatially determinate body) to the mode of its own action. The thinking body cannot cause changes in thought, cannot act on thought, because its existence as 'thinking' is ***thought***. If a thinking body does nothing, it is no longer a thinking body but simply a body. But when it does act, it does not do so ***on*** thought, because its very activity is thought.

Thought as a spatially expressed activity therefore cannot also be secreted from the body performing it as a special 'substance' distinct from the body, in the way that bile is secreted from the liver or sweat from sweat glands. Thinking is not the ***product*** of an action but the ***action itself***, considered at the moment of its performance, just as walking, for example, is the mode of action of the legs, the 'product' of which, it transpires, is the space walked. And that is that. The product or

result of thinking may be an exclusively spatially expressed, or exclusively geometrically stated, change in some body or another, or else in its position relative to other bodies. It is absurd then to say that the one gives rise to (or 'causes') the other. Thinking does not evoke a spatially expressed change in a body but exists through it (or within it), and vice versa; any change, however fine, within that body, induced by the effect on it of other bodies, is directly expressed for it as a certain change in its mode of activity, i.e. in thinking.

The position set out here is extremely important also because it immediately excludes any possibility of treating it in a vulgar materialist, mechanistic key, i.e. of identifying thought with immaterial processes that take place ***within*** the thinking body (head, brain tissue), while nevertheless understanding that thought takes place precisely through these processes.

Spinoza was well aware that what is expressed and performed in the form of structural, spatial changes within the thinking body is not at all some kind of thinking taking place outside of and independently of them, and vice versa (shifts of thinking by no means express immanent movements of the body within which they arise). It is therefore impossible either to understand thought through examination, however exact and thorough, of the spatially geometric changes in the form of which it is expressed within the body of the brain, or, on the contrary, to understand the spatial, geometric changes in the brain tissue from the most detailed consideration of the composition of the ideas existing in the brain. It is impossible, Spinoza constantly repeated, because they are ***one and the same***, only expressed by two different means.

To try to explain the one by the other simply means to double the description of one and the same fact, not yet understood and incomprehensible. And although we have two full, quite adequate descriptions of ***one and the same event***, equivalent to one another, the event itself falls outside both descriptions, as the 'third thing', the very 'one and the same' that was not yet understood or explained. Because

the event twice described (once in the language of the 'physics of the brain' and once in the language of the 'logic of ideas') can be explained and correspondingly understood only after bringing out the ***cause*** evoking the event described but not understood.

Bishop Berkeley ascribed the cause to God. And so did Descartes, Malebranche, and Geulincx. The shallow, vulgar materialist tries to explain everything by the purely mechanical actions of external things on the sense organs and brain tissue, and takes for the cause the concrete thing, the sole object, that is affecting our bodily organisation at a given moment and causing corresponding changes in our body, which we feel within ourselves and experience as our thinking.

While rejecting the first explanation as the capitulation of philosophy before religious theological twaddle, Spinoza took a very critical attitude as well toward the superficially materialist mechanistic explanation of the cause of thought. He very well understood that it was only a 'bit' of an explanation, leaving in the dark the very difficulty that Descartes was forced to bring in God to explain.

For to explain the event we call 'thinking', to disclose its effective ***cause***, it is necessary to include it in the chain of events ***within which it arises of necessity and not fortuitously***. The 'beginnings' and the 'ends' of this chain are clearly not located within the thinking body at all, but far outside it.

To explain a separate, single, sensuously perceived fact passing momentarily before our eye, and even the whole mass of such facts, as the cause of thought means to explain precisely nothing. For this very fact exerts its effect (mechanical, say, or light) on stone as well, but no action of any kind that we describe as 'thinking' is evoked in the stone. The explanation must consequently also include those relations of cause and effect that of necessity generate our own physical organisation capable (unlike a stone) of thinking, i.e. of so refracting the external influences and so transforming them within itself that they are

experienced by the thinking body not at all only as changes arising within itself, but as external things, as the shapes of things outside the thinking body.

For the action produced on the retina of our eye by a ray of light reflected from the Moon is perceived by the thinking being not simply as a mechanical irritation within the eye but ***as the shape of the thing itself***, as the lunar disc hanging in space outside the eye, which means that the Ego, the thinking substance or creature, directly feels not the effect produced on it by the external thing but something quite different, viz. the shape or form (i.e. the spatial, geometric configuration) and position of this external body, which has been evoked within us as a result of the mechanical or light effect. In that lies both the enigma and the whole essence of thinking as the mode of activity of a thinking body in distinction to one that does not think. It will readily be understood that one body evokes a change by its action in another body; that is fully explained by the concepts of physics. It is difficult, and from the angle of purely physical concepts (and in Spinoza's time of even 'purely' mechanical, geometric concepts) even impossible, to explain just why and how the thinking body feels and perceives the effect caused by an external body within itself ***as an external body***, as its, and not as its own shape, configuration, and position in space.

Such was the enigma, in general, that Leibniz and Fichte came up against later; but Spinoza had already found a fully rational, though only general, theoretical solution. He clearly understood that the problem could only be fully and finally solved by quite concrete investigation (including anatomical and physiological) of the material mechanism by which the thinking body (brain) managed to do the trick, truly mystically incomprehensible (from the angle of purely geometric concepts). But that it did the trick – that it saw the ***thing*** and not the changes in the particles of the retina and brain that this body caused by its light effect within the brain was an undoubted fact; and a fact calling for

fundamental explanation and in a general way outlining paths for more concrete study in the future.

What can the philosopher say here categorically, who remains a philosopher and does not become a physiologist, or an anatomist, or a physicist? Or rather, what can he say, without plunging into a game of the imagination, without trying to construct hypothetical mechanisms in the fancy by which the trick mentioned 'might', in general, be performed? What can he say while remaining on the ground of firmly established facts known before and independently of any concrete, physiological investigation of the inner mechanisms of the thinking body, and not capable either of being refuted or made doubtful by any further probing within the eye and the skull?

In the given, partial, though very characteristic case, there is another, more general problem, namely that of the relation of philosophy as a special science to the concrete research of the natural sciences. Spinoza's position on this point cannot in principle be explained if we start from the positivist idea that philosophy has made all its outstanding achievements (and makes them) only by purely empirical 'generalisation of the progress of its contemporary natural sciences'. Because natural science did not find the answers to the problem before us either in the seventeenth century, in Spinoza's time, or even in our day, three hundred years later. Furthermore, the natural science of his day did not even suspect the existence of such a problem; and when it did, knew it only in a theological formulation. As for the 'soul' or 'spirit', and in general everything connected one way or another with 'spiritual', psychic life, the natural scientists of the time (even the great ones like Isaac Newton) found themselves prisoners of the prevailing (i.e. religious, theological) illusions. Spiritual life they gladly left to the Church, and humbly acknowledged its authority, interesting themselves exclusively in the mechanical characteristics of the surrounding world. And everything that was inexplicable on purely mechanical grounds was not subjected to scientific study at all but was left to the competence of religion.

If Spinoza had in fact tried to construct his philosophical system by the method that our contemporary positivism would have recommended to him, it is not difficult to imagine what he would have produced as a 'system'. He would only have brought together the purely mechanical and religious, mystical 'general ideas' that were guiding all (or almost all) naturalists in his day. Spinoza understood very clearly that religious, theological mysticism was the inevitable complement of a purely mechanistic (geometrical, mathematical) world outlook, i.e. the point of view that considers the sole 'objective' properties of the real world to be only the spatial, geometrical forms and relations of bodies. His greatness was that he did not plod along behind contemporaneous natural science, i.e. behind the one-sided, mechanistic thinking of the coryphaei of the science of the day, but subjected this way of thinking to well substantiated criticism from the angle of the specific concepts of philosophy as a special science. This feature of Spinoza's thinking was brought out clearly and explicitly by Frederick Engels: 'It is to the highest credit of the philosophy of the time that it did not let itself be led astray by the restricted state of contemporary natural knowledge, and that from Spinoza right to the great French materialists it insisted on explaining the world from the world itself and left the justification in detail to the natural science of the future.' [3]

That is why Spinoza has come down in the history of science as an equal contributor to its progress with Galileo and Newton, and not as their epigone, repeating after them the general ideas that could be drawn from their work. He investigated reality himself from the special, philosophical angle, and did not generalize the results and ready-made findings of other people's investigation, did not bring together the general ideas of the science of his day and the methods of investigation characteristic of it, or the methodology and logic of his contemporary science. He understood that that way led philosophy up a blind alley, and condemned it to the role of the wagon train bringing up in the rear of the

[3] Engels, "Dialectics of Nature," *MECW* vol. 25 p 323.

attacking army the latter's own 'general ideas and methods', including all the illusions and prejudices incorporated in them.

That is why he also developed 'general ideas and methods of thought' to which the natural science of the day had not yet risen, and armed future science with them, which recognized his greatness three centuries later through the pen of Albert Einstein, who wrote that he would have liked 'old Spinoza' as the umpire in his dispute with Niels Bohr on the fundamental problems of quantum mechanics rather than Carnap or Bertrand Russell, who were contending for the role of the 'philosopher of modern science' and spoke disdainfully of Spinoza's philosophy as an 'outmoded' point of view 'which neither science nor philosophy can nowadays accept'.[4] Spinoza's understanding of thinking as the activity of that same nature to which extension also belonged is an axiom of the true modern philosophy of our century, to which true science is turning more and more confidently and consciously in our day (despite all the attempts to discredit it) as the point of view of true materialism.

The brilliance of the solution of the problem of the relation of thinking to the world of bodies in space outside thought (i.e. outside the head of man), which Spinoza formulated in the form of the thesis that thought and extension are not two substances, but only two attributes of one and the same substance, can hardly be exaggerated. This solution immediately rejected every possible kind of interpretation and investigation of thought by the logic of spiritualist and dualist constructions, so making it possible to find a real way out both from the blind alley of the dualism of mind and body and from the specific blind alley of Hegelianism. It is not fortuitous that Spinoza's profound idea only first found true appreciation by the dialectical materialists Marx and Engels. Even Hegel found it a hard nut to crack. In fact, on the decisive point, he returned again to the position of Descartes, to the thesis that pure thought is the ***active cause*** of all the changes occurring in the 'thinking body of man', i.e. in the matter of the brain and sense organs,

[4] Bertrand Russell, "History of Western Philosophy," London 1946, p 601.

in language, in actions and their results, including in that the instruments of labour and historical events.

From Spinoza's standpoint ***thought before and outside of its spatial expression in the matter proper*** to it simply does not exist. All talk about an idea that first arises and then tries to find material suitable for its incarnation, selecting the body of man and his brain as the most suitable and malleable material, all talk of thought first arising and then 'being embodied in words', in 'terms' and 'statements', and later in actions, in deeds and their results, all such talk, therefore, from Spinoza's point of view, is simply senseless or, what is the same thing, simply the atavism of religious theological ideas about the 'incorporeal soul' as the active cause of the human body's actions. In other words, the sole alternative to Spinoza's understanding proves to be the conception that an idea can ostensibly exist first somewhere and somehow ***outside the body of the thought*** and independently of it, and can then 'express itself' in that body's actions.

What is thought then? How are we to find the true answer to this question, i.e. to give a scientific definition of this concept, and not simply to list all the actions that we habitually subsume under this term (reasoning, will, fantasy, etc.), as Descartes did? One quite clear recommendation follows from Spinoza's position, namely: if thought is ***the mode of action of the thinking body***, then, in order to define it, we are bound to investigate the mode of action of the thinking body very thoroughly, in contrast to the mode of action (mode of existence and movement) of the non-thinking body; and in no case whatsoever to investigate the structure or spatial composition of this body in an inactive state. Because the thinking body, when it is inactive, is no longer a thinking body but simply a 'body'.

Investigation of all the material (i.e. spatially defined) mechanisms by which thought is effected within the human body, i.e. anatomical, physiological study of the brain, of course, is a most interesting scientific question; but even the fullest answers to it have no direct bearing on the

answer to the question ‘What is thought?’. Because that is another question. One does not ask how legs capable of walking are constructed, but in what walking consists. What is thinking as the action of, albeit inseparable from, the material mechanisms by which it is effected, yet not in any way identical with mechanisms themselves? In the one case the question is about the structure of an organ, in the other about the function the organ performs. The structures, of course, must be such that it can carry out the appropriate function; legs are built so that they can walk and not so that they can think. The fullest description of the ***structure of an organ***, i.e. a description of it in an ***inactive*** state, however, has no right to present itself as a description, however approximate, of the ***function*** that the organ performs, as a description of the ***real thing*** that it does.

In order to understand the mode of action of the thinking body it is necessary to consider the mode of its active, causal interaction with other bodies both ‘thinking’ and ‘non-thinking’, and not its inner structure, not the spatial geometric relations that exist between the cells of its body and between the organs located within its body.

The cardinal distinction between the mode of action of a thinking body and that of any other body, quite clearly noted by Descartes and the Cartesians, but not understood by them, is that the former actively builds (constructs) the shape (trajectory) of its own movement in space in conformity with the shape (configuration and position) ***of the other body***, coordinating the shape of its own movement (its own activity) with the shape of the other body, ***whatever it is***. The proper, specific form of the activity of a thinking body consists consequently in ***universality***, in that very property that Descartes actually noted as the chief distinction between human activity and the activity of an automaton copying its appearance, i.e. of a device structurally adapted to some one limited range of action even better than a human, but for that very reason unable to do ‘everything else’.

Thus the human hand can perform movements in the form of a circle, or a square, or any other intricate geometrical figure you fancy, so revealing that it was not designed ***structurally*** and ***anatomically*** in advance for any one of these 'actions', and ***for that very reason*** is capable of performing ***any action***. In this it differs, say, from a pair of compasses, which describe circles much more accurately than the hand but cannot draw the outlines of triangles or squares. In other words, the action of a body that 'does not think' (if only in the form of spatial movement, in the form of the simplest and most obvious case) is determined by its ***own inner construction*** by its 'nature', and is quite uncoordinated with the shape of the other bodies among which it moves. It therefore either disturbs the shapes of the other bodies or is itself broken in colliding with insuperable obstacles.

Man, however, ***the thinking body, builds his movement on the shape of any other body***. He does not wait until the insurmountable resistance of other bodies forces him to turn off from his path; the thinking body goes freely round any obstacle of the most complicated form. ***The capacity of a thinking body to mould its own action actively to the shape of any other body***, to coordinate the shape of its movement in space with the shape and distribution of all other bodies, Spinoza considered to be its distinguishing sign and the specific feature of that activity that we call 'thinking' or 'reason'.

This capacity, as such, has its own gradations and levels of 'perfection', and manifests itself to the maximum in man, in any case much more so than in any other creature known to us. But man is not divided from the lower creatures at all by that impassable boundary that Descartes drew between them by his concept of 'soul' or 'spirit'. The actions of animals, especially of the higher animals, are also subsumed, though to a limited degree, under Spinoza's definition of thinking.

This is a very important point, which presents very real interest. For Descartes the animal was only an automaton, i.e. all its actions were determined in advance by ready-made structures, internally inherent to

it, and by the distribution of the organs located within its body. These actions, therefore, could and had to be completely explained by the following scheme: external effect – movement of the inner parts of the body – external reaction. The last represents the response (action, movement) of the body evoked by the external effect, which in essence is only transformed by the working of the inner parts of the body, following the scheme rigidly programmed in its construction. There is a full analogy with the working of a self-activating mechanism (pressure on a button working of the parts inside the mechanism movement of its external parts). This explanation excluded the need for any kind of 'incorporeal soul'; everything was beautifully explained without its intervention. Such in general, and on the whole, is the theoretical scheme of a reflex that was developed two hundred years later in natural science in the work of Sechenov and Pavlov.

But this scheme is not applicable to man because in him, as Descartes himself so well understood, there is a supplementary link in the chain of events (i.e. in the chain of external effect – working of the inner bodily organs according to a ready-made scheme structurally embodied in them – external reaction) that powerfully interferes with it, forces its way into it, breaking the ready-made chain and then joining its disconnected ends together in a new way, each time in a different way, each time in accordance with new conditions and circumstances in the external action not previously foreseen by any prepared scheme and this supplementary link is 'reflection' or 'consideration'. But a 'reflection' is that activity (in no way outwardly expressed) which directs ***reconstruction of the very schemes of the transformation*** of the initial effect into response. Here ***the body itself is the object of its own activity***.

Man's 'response' mechanisms are by no means switched on just as soon as 'the appropriate button is pressed', as soon as he experiences an effect from outside. Before he responds he contemplates, i.e. he does not act immediately according to any one prepared scheme, like an automaton or an animal, but considers the scheme of the forthcoming

action critically, elucidating each time how far it corresponds to the needs of the new conditions, and actively correcting, even designing all over again, the whole set-up and scheme of the future actions in accordance with the external circumstances and the forms of things.

And since the forms of things and the circumstances of actions are in principle infinite in number, the 'soul' (i.e. 'contemplation') must be capable of an infinite number of actions. But that is impossible to provide for in advance in the form of ready-made, bodily programmed schemes. Thinking is the capacity of actively building and reconstructing schemes of external action in accordance with any new circumstances, and does not operate according to a prepared scheme as an automaton or any inanimate body does.

'For while reason is a universal instrument which can serve for all contingencies, these ['bodily'] organs have need of some special adaptation for every particular action,' Descartes wrote.[5] For that reason he was unable to conceive of the organ of thought ***bodily***, as structurally organized in space. Because, in that case, as many ready-made, structurally programmed patterns of action would have to be postulated in it as there were external bodies and combinations of external bodies and contingencies that the thinking body would generally encounter in its path, that is, in principle, an infinite number. 'From this it follows,' Descartes said, that it is morally impossible that there should be sufficient diversity in any machine to allow it to act in all the events of life in the same way as our reason causes us to act,'[6] i.e. each time taking account again of any of the infinite conditions and circumstances of the external action. (The adverb 'morally' in Descartes' statement, of course, does not mean impossible 'from the aspect of morals' or of 'moral principles', etc., *moralement* in French meaning 'mentally' or 'intellectually' in general.)

[5] Descartes, *Op. cit*., p 59.
[6] Descartes, *Op. cit*., p 59.

Spinoza counted the considerations that drove Descartes to adopt the concept of 'soul' to be quite reasonable. But why not suppose that the organ of thought, while remaining wholly corporeal and therefore incapable of having schemes of its present and future actions ***readymade*** and ***innate within it*** together with its bodily-organized structure, was capable of actively building them anew each time in accordance with the forms and arrangement of the 'external things'? Why not suppose that the thinking thing was designed in a special way; that not having any ready-made schemes of action within it, it acted for that very reason in accordance with whatever scheme was dictated to it at a given moment by the forms and combinations of other bodies located outside it? For that was the real role or function of the thinking thing, the only functional definition of thinking corresponding to the facts that it was impossible to deduce from structural analysis of the organ in which and by means of which it (thinking) was performed. Even more so, a functional definition of thinking as action according to the shape of any ***other*** thing also puts structural, spatial study of the thinking thing on the right track, i.e. study in particular of the body of the brain. It is necessary to elucidate and discover in the thinking thing those very structural features that enable it to perform its specific function, i.e. to act according to the scheme of its own structure but according to the scheme and location of all other things, including its own body.

In that form the materialist approach to the investigation of thought comes out clearly. Such is the truly materialist, functional definition of thought, or its definition as the active function of a natural body organized in a special way, which prompts both logic (the system of functional definitions of thought) and brain physiology (a system of concepts reflecting the material structure of the organ in and by which this function is performed) to make a really scientific investigation of the problem of thought, and which excludes any possibility of interpreting thinking and the matter of its relation to the brain by the logic of either spiritualist and dualist constructions or of vulgar mechanistic ones.

In order to understand thought as a function, i.e. as the mode of action of thinking things in the world of all other things, it is necessary to go beyond the bounds of considering what goes on inside the thinking body, and how (whether it is the human brain or the human being as a whole who possesses this brain is a matter of indifference), and to examine the real system within which this function is performed, i.e. the system of relations '***thinking body and its object***'. What we have in mind here, moreover, is not any single object or other in accordance with whose form the thinking body's activity is built in any one specific case, but ***any object*** in general, and correspondingly any possible 'meaningful act' or action in accordance with the form of its object.

Thought can therefore only be understood through investigation of its mode of action in the system thinking body – nature as a whole (with Spinoza it is 'substance', 'God'). But if we examine a system of smaller volume and scale, i.e. the relations of the thinking body with as wide a sphere of 'things' and their forms as you like, but still limited, then we shall not arrive at what thought is ***in general*** (thought in the whole fullness of its possibilities associated with its nature), but only at that limited mode of thinking that happens in a given case; and we shall therefore be taking only definitions of a ***partial case*** of thinking, only its *modus* (in Spinoza's parlance) as scientific definitions of ***thought in general***.

The whole business consists in this, that the thinking body (in accordance with its nature) is not linked at all by its structural, anatomical organization with any partial mode of action whatsoever (with any partial form of the external bodies). It is linked with them, but only currently, at the given moment, and by no means originally or forever. Its mode of action has a clearly expressed universal character, i.e. is constantly being extended, embracing ever newer and newer things and forms of things, and actively and plastically adapting itself to them.

That is why Spinoza also defined thought as an ***attribute of substance***, and not as its *modus*, not as a partial case. Thus he affirmed, in the

language of his day, that the single system, within which thought was found of necessity and not fortuitously (which it may or may not be), was not a single body or even as wide a range of bodies as you wished, but only and solely ***nature as a whole***. The individual body possessed thought only by virtue of chance or coincidence. The crossing and combination of masses of chains of cause and effect could lead in one case to the appearance of a thinking body and in another case simply to a body, a stone, a tree, etc. So that the individual body, even the human body, did not possess thought one whit of necessity. Only nature as a whole was that system which possessed all its perfections, including thought, of absolute necessity, although it did not realize this perfection in any single body and at any moment of time, or in any of its 'modi'.

In defining thought as an attribute Spinoza towered above any representative of mechanistic materialism and was at least two centuries in advance of his time in putting forward a thesis that Engels expressed in rather different words: 'The point is, however, that mechanism (and also the materialism of the eighteenth century) does not get away from abstract necessity, and hence not from chance either. That matter evolves out of itself the thinking human brain is for him [Haeckel] a pure accident, although necessarily determined, step by step, where it happens. But the truth is that it is in the nature of matter to advance to the evolution of thinking beings, hence, too, this always necessarily occurs wherever the conditions for it (not necessarily identical at all places and times) are present.' [7]

That is what distinguishes materialism, sensible and dialectical, from mechanistic materialism that knows and recognizes only one variety of 'necessity', namely that which is described in the language of mechanistically interpreted physics and mathematics. Yes, only Nature as a whole, understood as an infinite whole in space and time, ***generating*** its own partial forms from itself, possesses at any moment of time, though not at any point of space, ***all the wealth of its attributes***, i.e.

[7] Engels, "Dialectics of Nature," *MECW* vol. 25 p 490.

those properties that are reproduced in its makeup of necessity and not by a chance, miraculous coincidence that might just as well not have happened.

Hence it inevitably follows logically, as Engels said, 'that matter remains eternally the same in all its transformations, that none of its attributes can ever be lost, and therefore, also, that with the same iron necessity that it will exterminate on the earth its highest creation, the thinking mind, it must somewhere else and at another time again produce it.' [8]

That was Spinoza's standpoint, a circumstance that seemingly gave Engels grounds for replying categorically and unambiguously to Plekhanov when he asked: 'So ***in your opinion old Spinoza was right in saying that thought and extension were nothing but two attributes of one and the same substance?***' "Of course," answered Engels, "***old Spinoza was quite right***".' [9]

Spinoza's definition means the following: in man, as in any other possible thinking creature, the same matter thinks as in other cases (other modi) only 'extends' in the form of stones or any other 'unthinking body'; that thought in fact cannot be separated from world matter and counterposed to it itself as a special, incorporeal 'soul', and it (thought) is matter's own perfection. That is how Herder and Goethe, La Mettrie and Diderot, Marx and Plekhanov (all great 'Spinozists') and even the young Schelling, understood Spinoza .

Such, let us emphasize once more, is the general, methodological position that later allowed Lenin to declare that it was reasonable to assume, as the very foundation of matter, a property akin to sensation though not identical with it, the property of reflection. Thought, too, according to Lenin, is the highest form of development of this universal property or attribute, extremely vital for matter. And if we deny matter

[8] Engels, "Dialectics of Nature," *MECW* vol. 25 p 335.
[9] G V Plekhanov, "Bernstein and Materialism," *Sochineniya* vol. XI, Moscow 1923 p 22.

this most important of its attributes, we shall be thinking of matter itself 'imperfectly', as Spinoza put it, or simply, as Engels and Lenin wrote, incorrectly, one-sidedly, and mechanistically. And then, as a result, we should continually be falling into the most real Berkeleianism, into interpreting nature as a complex of our sensations, as the bricks or elements absolutely specific to the animated being from which the whole world of ideas is built (i.e. the world as and how we know it). Because Berkeleianism too is the absolutely inevitable complement making good of a one-sided, mechanistic understanding of nature. That is why Spinoza too said that substance, i.e. the universal world matter, did not possess just the single attribute of 'being extended' but also possessed many other properties and attributes as inalienable from it (inseparable from it though separable from any 'finite' body).

Spinoza said more than once that it was impermissible to represent ***thought as attribute*** in the image and likeness of ***human thought***; it was only the universal property of substance that was the basis of any 'finite thought', including human thought, but in no case was it identical with it. To represent thought in general in the image and likeness of existing human thought, of its modus, or 'particular case', meant simply to represent it incorrectly, in 'an incomplete way', by a 'model', so to say, of its far from most perfected image (although the most perfected known to us).

With that Spinoza also linked his profound theory of truth and error, developed in detail in the *Ethica ordine geometrico demonstrata* (*Ethics*), *Tractatus de intellectus ernendatione, Tractatus theologico-politicus*, and in numerous letters.

If the mode of action of the thinking body as a whole is determined in the form of an 'other', and not of the immanent structure of 'this' body, the problem arises, how ever are we to recognize error? The question was posed then with special sharpness because it appeared in ethics and theology as the problem of 'sin' and 'evil'. The criticism of Spinozism from the angle of theology was invariably directed at this point;

Spinoza's teaching took all the sense out of the very distinguishing of 'good and evil', 'sin and righteousness', 'truth and error'. In fact, in what then did they differ?

Spinoza's answer again was simple, like any fundamentally true answer. Error (and hence 'evil' and 'sin') was not a characteristic of ideas and actions as regards their own composition, and was not a positive attribute of them. The erring man also acted in strict accordance with a thing's form, but the question was what the thing was. If it were 'trivial', 'imperfect' in itself, i.e. fortuitous, the mode of action adapted to it would also be imperfect. And if a person transferred this mode of action to another thing, he would slip up.

Error, consequently, only began when a mode of action that was limitedly true was given universal significance, when the relative was taken for the absolute. It is understandable why Spinoza put so low a value on acting by abstract, formal analogy, formal deduction based on an abstract universal. What was fixed in the abstract 'idea' was what most often struck the eye. But it, of course, could be a quite accidental property and form of the thing; and that meant that the narrower the sphere of the natural whole with which the person was concerned, the greater was the measure of error and the smaller the measure of truth. For that very reason the ***activity*** of the thinking body was in direct proportion to the ***adequateness of its ideas***. The more passive the person, the greater was the power of the nearest, purely external circumstances over him, and the more his mode of action was determined by the chance form of things; conversely, the more actively he extended the sphere of nature determining his activity, the more adequate were his ideas. The complacent position of the philistine was therefore the greatest sin.

Man's thinking could achieve 'maximum perfection' (and then it would be identical with thought as the attribute of substance) only in one case, when his actions conformed with all the conditions that the infinite aggregate of interacting things, and of their forms and combinations, imposed on them, i.e. if they were built in accordance with the

absolutely universal necessity of the natural whole and not simply with some one of its limited forms. Real earthly man was, of course, still very, very far from that, and the attribute of thought was therefore only realized in him in a very limited and 'imperfect' (finite) form; and it would be fallacious to build oneself an idea of thinking as an attribute of substance in the image and likeness of finite human thought. On the contrary one's finite thought must be built in the image and likeness of ***thought in general***. For finite thought the philosophical, theoretical definition of thinking as an attribute of substance poses some sort of ideal model, to which man can and must endlessly approximate, though never having the power to bring himself up to it in level of 'perfection'.

That is why the idea of substance and its all-embracing necessity functioned as the principle of the constant ***perfecting*** or ***improvement of intellect***. As such it had immense significance. Every 'finite' thing was correctly understood only as a 'fading moment' in the bosom of infinite substance; and not one of its 'partial forms', however often encountered, should be given universal significance.

In order to disclose the really general, truly universal forms of things in accordance with which the 'perfected' thinking body should act, another criterion and another mode of knowledge than formal abstraction was required. The idea of substance was not formed by abstracting the attribute that belonged equally to extension and thought. The abstract and general in them was only that they ***existed***, existence in general, i.e. an absolutely empty determination in no way disclosing the nature of the one or the other. The really general (infinite, universal) relation between thought and spatial, geometric reality could only be understood, i.e. the idea of substance arrived at, through real understanding of their mode of interaction within nature. Spinoza's whole doctrine was just the disclosure of this 'infinite' relation.

Substance thus proved to be an absolutely necessary condition, without assuming which it was impossible in principle to understand the mode of the interaction between the thinking body and the world within

which it operated as a thinking body. This is a profoundly dialectical point. Only by proceeding from the idea of substance could the thinking body understand both itself and the reality with and within which it operated and about which it thought; any other way it could not understand either the one or the other and was forced to resort to the idea of an outside power, to a theologically interpreted 'God', to a miracle. But, having once understood the mode of its actions (i.e. thought), the thinking body just so comprehended substance as the absolutely necessary condition of interaction with the external world.

Spinoza called the mode of knowledge or cognition described here 'intuitive'. In creating an adequate idea of itself, i.e. of the form of its own movement along the contours of external objects, the thinking body thus also created an adequate idea of the forms and contours of the objects themselves. Because ***it was one and the same form, one and the same contour***. In this understanding of the intuitive there was nothing resembling subjective introspection. Rather the contrary. On Spinoza's lips intuitive knowledge was a synonym of rational understanding by the thinking body of the laws of its own actions within nature. In giving itself a rational account of what and how it did in fact operate, the thinking body at the same time formed a true idea of the object of its activity.

From that followed the consistent materialist conclusion that 'the true definition of any one thing neither involves nor expresses anything except the nature of the thing defined'. [10] That is why there can only be one correct definition (idea) in contrast and in opposition to the plurality and variety of the individual bodies of the same nature. These bodies are as real as the unity (identity) of their 'nature' expressed by the definition in the 'attribute of thought' and by real diversity in the 'attribute of extension' ***Variety and plurality*** are clearly understood here as ***modes of realisation*** of their own opposition i.e. of the ***identity and unity of their 'nature'***. That is a distinctly dialectical understanding of the relation

[10] Spinoza, "Ethics," in *Great Books of the Western World*, vol. 31 p 357.

between them, in contrast to the feeble eclectic formula (often fobbed off dialectics) that 'both unity and plurality', 'both identity and difference-equally really exist. Because eclectic pseudodialectics, when it comes down to solving the problem of knowledge and of 'definition' or 'determination', arrives safely at exactly the contrary (compared with Spinoza's solution), at the idea that 'the definition of a concept' is a verbally fixed form of expression in consciousness, in the idea of a real, sensuously given variety.

Talk of the objective identity, existing outside the head, of the nature of a given range of various and opposing single phenomena thus safely boils down to talk about the purely formal unity (i.e. similarity, purely external identity) of sensuously contemplated, empirically given things, of isolated facts, formally subsumed under 'concept'. And it then generally becomes impossible to consider the 'definition of the concept' as the determination of the ***nature of the defined thing***. The starting point then proves to be not the 'identity and unity' of the phenomena but in fact the 'variety and plurality' of isolated facts allegedly existing originally quite 'independently' of one another, and later only formally united, tied together as it were with string, by the 'unity of the concept' and the 'identity of the name'. So the sole result proves to be the identity in consciousness (or rather in name) of the initially heterogeneous facts, and their purely verbal 'unity'.

Hence it is not difficult to understand why Neopositivists are dissatisfied with Spinoza and attack the logical principle of his thinking. 'Spinoza's metaphysic is the best example of what may be called "logic monism" – the doctrine, namely, that the world as a whole is a single substance, none of whose parts are logically capable of existing alone. The ultimate basis for this view is the belief that every proposition has a single subject and a single predicate, which leads us to the conclusion that relations and plurality must be illusory.' [11]

[11] Russell, *Op. cit.*, pp 600-01.

The alternative to Spinoza' s view, in fact, is the affirmation that any 'part' of the world is not only 'capable' of 'existing' independently of all other parts, but must do so. As another authority of this trend postulated it, 'the world is the totality of facts not of things', by virtue of which 'the world divides into facts', and so 'any one can either be the case or not be the case, and everything else remain the same'. [12]

Thus, according to the 'metaphysic of Neopositivism', the external world must be considered some kind of immeasurable ***accumulation***, a simple ***conglomeration***, of 'atomic facts' absolutely independent of each other, the 'proper determination' of each of which is bound to be absolutely independent of the determination of any other fact. The determination (definition, description) remains 'correct' even given the condition that there are no other facts in general. In other words, 'a scientific consideration of the world' consists in a purely formal, verbal uniting of a handful of odd facts by subsuming them under one and the same term, under one and the same 'general'. The 'general', interpreted only as the 'meaning of the term or sign', always turns out to be something quite arbitrary or 'previously agreed upon', i.e. 'conventional'. The 'general' (unity and identity) - as the sole result of the 'scientific logical' treatment of the 'atomic facts', is consequently not the result at all, but a previously established, conventional ***meaning of the term***, and nothing more.

Spinoza's position, of course, had no connection with this principle of 'logical analysis' of the phenomena given in contemplation and imagination. For him the 'general', 'identical', 'united' were by no means illusions created only by our speech (language), by its subject-predicate structure (as Russell put it), but primarily the real, general nature things. And that nature must find its verbal expression in a correct definition of the concept. It is not true, moreover, that 'relations and plurality must be illusory' for Spinoza, as Russell said. That is not at all like Spinoza, and the affirmation of it is on Russell's conscience, that he

[12] Wittgenstein, "Tractatus Logico-Philosophicus," London 1955, p 31.

should have stooped so low to discredit the 'concept of substance' in the eyes of 'modern science' as 'incompatible with modern logic and with scientific method'. [13]

One thing, however, is beyond doubt here: what Russell called 'modern logic and scientific method' really is incompatible with the logic of Spinoza's thinking, with his principles of the development of scientific definitions, with his understanding of 'correct definitions'. For Spinoza 'relations and plurality' were not 'illusory' (as Russell described them) and 'identity and unity' were not illusions created solely by the 'subject-predicate structure' (as Russell himself thought). Both the one and the other were wholly real, and both existed in 'God', i.e. ***in the very nature of things***, quite irrespective of whatever the verbal structures of the so-called 'language of science' were.

But for Bertrand Russell, both the one and the other were equally illusions. 'Identity' (i.e. the principle of substance, of the general nature of things), was an illusion created by language and 'relations and plurality' were illusions created by our own sensuality. But what, in fact, is independent of our illusions? I do not know and I don't want to know; I don't want to know because I cannot, Russell answered. I know only what is the 'world' given to me in my sensations and perceptions (where it is something 'plural') and in my language (where it is something 'identical' and related). But what is there besides this 'world'? God only knows, answered Russell, word for word repeating Bishop Berkeley's thesis, though not risking to affirm categorically after him that 'God' in fact 'knew' it, because it was still not known if God himself existed.

There we have the polar contrast of the positions of Spinoza and of Berkeley and Hume (whom the Neopositivists are now trying to galvanize back to life). Berkeley and Hume also primarily attacked the whole concept of substance, trying to explain it as the product of an 'impious mind'. Because there is a really unpersuasive alternative here,

[13] Russell, *Op. cit.*, p 601.

namely two polar and mutually exclusive solutions of one and the same problem – the problem of the relation of 'the world in consciousness' (in particular in 'correct definition') to the 'world outside consciousness' (outside 'verbal definition'). For here a choice must be made: either nature, including man as part of it, must be understood through the logic of the 'concept of substance', or it must be interpreted as a complex of one's sensations.

But let us return to consideration of Spinoza's conception. Spinoza well understood all the skeptical arguments against the possibility of finding a single one correct definition of the thing that we are justified in taking as a definition of the nature of the thing itself and not of the specific state and arrangement of the organs within ourselves, in the form of which this thing is represented 'within us'. In considering different variants of the interpretation of one and the same thing, Spinoza drew the following direct conclusion: 'All these things sufficiently show that every one judges things by the constitution of his brain, or rather accepts the affections of his imagination in the place of things.'[14] In other words, we have within us, in the form of ideas, not the thing itself and its proper form, but only the inner state that the effect of the external things evoked in our body (in the corpus of the brain).

Therefore, in the ideas we directly have of the external world, two quite dissimilar things are muddled and mixed up: the form of our own body and the form of the bodies outside it. The naive person immediately and uncritically takes this hybrid for an external thing, and therefore judges things in conformity with the specific state evoked in his brain and sense organs by an external effect in no way resembling that state. Spinoza gave full consideration to the Cartesians' argument (later taken up by Bishop Berkeley), that toothache was not at all identical in geometric form to a dentist's drill and even to the geometric form of the changes the drill produced in the tooth and the brain. The brain of every person, moreover, was built and tuned differently, from

[14] Spinoza, *Op. cit.*, p 372.

which we get the skeptical conclusion of the plurality of truths and of the absence of a truth one and the same for all thinking beings. 'For everyone has heard the expressions: So many heads, so many ways of thinking; Each is wise in his own manner; Differences of brains are not less common than differences of taste;— all which maxims show that men decide upon matters according to the constitution of their brains, and imagine rather than understand things.' [15]

The point is this, to understand and correctly determine the thing itself, its proper form, and not the means by which it is represented inside ourselves, i.e. in the form of geometric changes in the body of our brain and its microstructures. But how is that to be done? Perhaps, in order to obtain the pure form of the thing, it is simply necessary to 'subtract' from the idea all its elements that introduce the arrangement (disposition) and means of action of our own body, of its sense organs and brain into the pure form of the thing:

But (1) we know as little of how our brain is constructed and what exactly it introduces into the composition of the idea of a thing as we know of the external body itself; and (2) the thing in general cannot be given to us in any other way than through the specific changes that it has evoked in our body. If we 'subtract' everything received from the thing in the course of its refraction through the prism of our body, sense organs, and brain, we get pure nothing. 'Within us' there remains nothing, no idea of any kind. So it is impossible to proceed that way.

However differently from any other thing man's body and brain are built they all have something in common with one another, and it is to the finding of this something common that the activity of reason is in fact directed, i.e. the real activity of our body that we call 'thinking'.

In other words an adequate idea is only the conscious state of our body ***identical in form with the thing, outside the body.*** This can be represented quite clearly. When I describe a circle with my hand on a

[15] Spinoza, *Op. cit.*, p 372.

piece of paper (in real space), my body, according to Spinoza, comes into a state fully identical with the form of the circle outside my body, into a state of real ***action*** in the form of a circle. My body (my hand) really describes a circle, and the awareness of this state (i.e. of the form of my own action in the form of the thing) is also the idea, which is, moreover, 'adequate'.

And since 'the human body needs for its preservation many other bodies by which it is, as it were, continually regenerated',[16] and since it 'can move and arrange external bodies in many ways',[17] it is in the activity of the human body in the shape of another external body that Spinoza saw the key to the solution of the whole problem. Therefore 'the human mind is adapted to the perception of many things, and its aptitude increases in proportion to the number of ways in which its body can be disposed.'[18] In other words, the more numerous and varied the means it has 'to move and arrange external bodies', the more it has 'in common' with other bodies. Thus the body, knowing how to be in a state of movement along the contours of circle, in that way knows how to be in a state in common with the state and arrangement of all circles or external bodies moving in a circle.

In possessing consciousness of my own state (actions along the shape of some contour or other), I thus also possess a quite exact awareness (adequate idea) of the shape of the external body. That, however, only happens where and when I actively determine myself, and the states of my body, i.e. its actions, in accordance with the shape of the external body, and not in conformity with the structure and arrangement of my own body and its 'parts'. The more of these actions I know how to perform, the more perfect is my thinking, and the more adequate are the ideas included in the 'mind' (as Spinoza continued to express it, using the language normal to his contemporaries), or simply in the ***conscious***

[16] *Ibid.,* p 380
[17] *Ibid*.
[18] *Ibid*.

states of my body, as he interpreted the term 'mind' on neighbouring pages.

Descartes' dualism between the world of external objects and the inner states of the human body thus disappeared right at the very start of the explanation. It is interpreted as a difference within one and the same world (the world of bodies), as a difference in their mode of existence ('action'). The 'specific structure' of the human body and brain is here, for the first time, interpreted not as a barrier separating us from the world of things, which are not at all like that body, but on the contrary as the same property of universality that enables the thinking body (in contrast to all others) to be in the very same states as things, and to possess forms in common with them.

Spinoza himself expressed it thus: 'There will exist in the human mind an adequate idea of that which is common and proper to the human body, and to any external bodies by which the human body is generally affected – of that which is equally in the part of each of these external bodies and in the whole is common and proper.

'Hence it follows that the more things the body has in common with other bodies, the more things will the mind be adapted to perceive.' [19]

Hence, also it follows that 'some ideas or notions exist which are common to all men, for ... all bodies agree in some things, which ... must be adequately, that is to say, clearly and distinctly, perceived by all.'[20] In no case can these 'common ideas' be interpreted as specific forms of the human body, and they are only taken for the forms of external bodies by mistake (as happened with the Cartesians and later with Berkeley), despite the fact that 'the human mind perceives no external body as actually existing, unless through the ideas of the affections of its body'.[21]

[19] Spinoza, *Op. cit.*, pp 386-7.
[20] *Ibid.*, p 386.
[21] *Ibid.*, p 384.

The fact is that the 'affections of one's body' are quite objective, being the actions of the body in the world of bodies, and not the results of the action of bodies on something unlike them, 'in corporeal'. Therefore, 'he who possesses a body fit for many things possesses a mind of which the greater part is external'. [22]

From all that it follows that 'the more we understand individual objects, the more we understand God,'[23] i.e. the general universal nature of things, world substance; the more individual things our activity embraces and the deeper and more comprehensively we determine our body to act along the shape of the external bodies themselves, and the more we become an active component in the endless chain of the causal relations of the natural whole, the greater is the extent to which the power of our thinking is increased, and the less there is of the 'specific constitution' of our body and brain mixed into the 'ideas' making them 'vague and inadequate' (ideas of the imagination and not of 'intellect'). The more active our body is, the more universal it is, the less it introduces 'from itself', and the more purely it discloses the real nature of things. And the more passive it is, the more the constitution and arrangement of the organs within it (brain, nervous system, sense organs, etc.) affect ideas.

Therefore the real composition of psychic activity (including the logical component of thought) is not in the least determined by the structure and arrangement of the parts of the human body and brain, but by the external conditions of universally human activity in the world of other bodies.

This functional determination gives an exact orientation to structural analysis of the brain, fixes the general goal, and gives a criterion by which we can distinguish the structures through which thinking is carried on within the brain from those that are completely unrelated to

[22] *Ibid.*, p 462.
[23] Spinoza, *Op. cit.*, pp 458.

the process of thought, but govern, say, digestion, circulation of the blood, and so on.

That is why Spinoza reacted very ironically to all contemporaneous 'morphological' hypotheses, and in particular to that of the special role of the 'pineal gland' as primarily the organ of the 'mind'. On this he said straight out: since you are philosophers, do not build speculative hypotheses about the structure of the body of the brain, but leave investigation of what goes on inside the thinking body to doctors, anatomists, and physiologists. You, as philosophers, not only can, but are bound to, work out for doctors and anatomists and physiologists the functional determination of thinking and not its structural determination, and you must do it strictly and precisely, and not resort to vague ideas about an 'incorporeal mind', 'God', and so on.

But you can find the functional determination of thought only if you do not probe into the ***thinking body*** (the brain), but carefully examine the real composition of its objective activities among the other bodies of the infinitely varied universum Within the skull you will not find anything to which a functional definition of thought could be applied, because thinking is a function of external, objective activity. And you must therefore investigate not the anatomy and physiology of the brain but the 'anatomy and physiology' of the 'body' whose active function ***in fact*** is thought, i.e. the 'inorganic body of man', the 'anatomy and physiology' of the world of his culture, the world of the 'things' that he produces and reproduces by his activity.

The sole 'body' that thinks from the necessity built into its special 'nature' (i.e. into its specific structure) is ***not the individual brain at all***, and not even the whole man with a brain, heart, and hands, and all the anatomical features peculiar to him. Of necessity, according to Spinoza, only substance possesses thought. Thinking has its necessary premise and indispensable condition ***(sine qua non) in all nature as a whole***.

But that, Marx affirmed, is not enough. According to him, only nature of necessity thinks, nature that has achieved the stage of man socially producing his own life, nature changing and knowing itself in the person of man or of some other creature like him in this respect, universally altering nature, both that outside him and his own. A body of smaller scale and less 'structural complexity' will not think. Labour is the process of changing nature by the action of social man, and is the 'subject' to which thought belongs as 'predicate'. But nature, the universal matter of nature, is also its substance. Substance, having become the subject of all its changes in man, the cause of itself (*causa sui*).

http://www.marxists.org/archive/ilyenkov/works/essays/essay2.htm