In Defense Of Aristotle's Laws Of Thought

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Abstract

In Defense of Aristotle's Laws of Thought addresses, from a phenomenological standpoint, numerous modern and Buddhist objections and misconceptions regarding the basic principles of Aristotelian logic.

Many people seem to be attacking Aristotle's Laws of Thought nowadays, some coming from the West and some from the East. It is important to review and refute such ideas as they arise.

This book is drawn from the author's larger work ***Logical and Spiritual Reflections***.

See also, regarding **the Laws of Thought**, the following chapters in Avi Sion's other works:

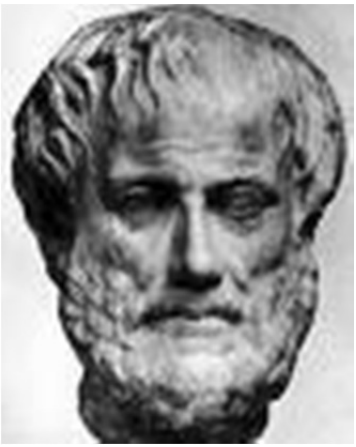
Future Logic, chapters: 2, 3, 20, 31.

Phenomenology, chapter 4.2.

Buddhist Illogic, chapters 1, 2.

Ruminations, chapters 1, 9.

A Fortiori Logic, chapter 3.1, appendix 7.3.



Aristotle (Greece, 384-322 BCE)

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1. Logicians have to introspect

The task of logicians may be described as an attempt to understand whether, how and to what extent alleged knowledge can be related to something we label ‘reality’. This effort is called ‘logic’, especially when focused on the forms of discourse. Ranging more broadly, in association with ‘phenomenology’ (the study of appearances as such), it becomes ‘epistemology’ (the theory of knowledge) and/or ‘ontology’ (the theory of being).

Logic is first a *descriptive* science, a detailed observation of how we think and acquire our knowledge (or, more cautiously put, our opinion). Secondly, logic is a *prescriptive* discipline – having carefully observed how we think, we become able to judge our thought processes more lucidly and decide which are credible and which are not. Thirdly, these

descriptive and prescriptive findings have to be collected and systematized.[1]

The first issue to be clarified is what we mean by '***thought***'. Thought is not, as some believe, a "stream of consciousness". It is, rather, a stream of *contents of* consciousness. 'Consciousness' is what relates us to objects when we cognize them. Consciousness as such is always the same, whatever it relates to. It is the 'contents' of consciousness that change over time. These are whatever appears before us of which we are aware to any degree. This includes apparently external "sensory" perceptions, the apparently internal perceptions of our "mind's eye and ear", our intuitions of self and its functions – and conceptual products of all these.

In a more psychological perspective, thought consists of nonverbal intentions and rational acts, verbal ideas and discourses, reminiscences, anticipations, fantasies, plans, calculations, judgments, decisions, explanations, accusations, justifications, and so on. These may be qualified as useful or idle; positive, negative or neutral (i.e. for or against

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[1] The term logic with a small 'l' may colloquially be applied to any sort of *discourse*, be it 'logical' or 'illogical', i.e. valid or invalid logic. When we wish to refer to the science of logic, i.e. to rigorous modes of thought, we may write Logic with a capital 'L'. However, to always use a capital becomes tedious for writers and readers, so we usually revert to use of the word logic even when we mean Logic. Context should make clear what our intent is.

something or someone, or neither way inclined); pleasant, unpleasant or without emotional charge; and so forth.

Man tends to reflect on his experience, to varying degrees. We are rarely content with passively observing experienced particulars, but usually actively seek out generalities regarding them. Why? Because thinking in terms of generalities seems cognitively more economical and efficient. Thoughts may, of course, be focused on particulars as well as on generalities.

Most thought is particular, in the sense that it is concerned with specific *individuals*. Such thoughts are about me, you, or some other person(s), or about some other individual object(s) under discussion. Some thought is, however, discourse in pursuit of principles. The latter thoughts are composed of statements applicable to all things *of a kind*, and/or statements denying such generality. They may include propositions about individuals, but only incidentally, insofar as these provide adductive basis (i.e. evidence) for principles, or illustrative examples.

All general thoughts are inductively based on, and deductively imply, some particular thoughts. Most particular thoughts involve some general thoughts (for instance, a singular syllogism needs a general premise to yield a valid conclusion), and they usually occasion some general thoughts. As well, thoughts about an individual may involve generalization and particularization, e.g. regarding that

individual's appearances or behavior patterns. Note also, the negation of a particular is a generality.

The most elementary acts of thought may be called *ratiocinations*. This refers to primary rational acts like affirming and denying, comparing and contrasting, equating and differentiating, isolating and assembling, conjoining and separating, estimating relative measures or degrees, and so forth. The more complex thoughts and thought-processes that we study in formal logic – such as predicative and other propositions; syllogism and other deductive inferences; generalization, adduction and other inductive arguments – are built up of numerous such ratiocinations. The latter might be called *cogitations*, to distinguish them.

Thoughts may be thought without or before the use of words (i.e. meaningful symbols of any sort).

Thought is quite often (more often than people are aware of) non-verbal, or more precisely put – pre-verbal. In such unspoken thought, ideas are expressed by mere intentions (which are acts of will by the Subject). Moreover, verbal thought is rarely exclusively verbal; there is usually in the background of it some visual and/or auditory projection going on (directly from memory or after manipulation by imagination), and also some related emotional and sensory phenomena, all of which are part of the overall thought.

We might call verbal thought *discourse*, because once we put a thought in words it acquires a stringy character[2]. Often, a thought is completed well before it is verbalized; it is finally put in words only to render it more publicly accessible. However, very often verbalization is necessary for successful thought; words in such cases render thought more controlled, efficient and precise. But it is also true that, if excessively indulged, words may weigh down, obscure and confuse thinking.

When discourse is aimed at the discovery of principles, it may be called *intellection* (or intellectual thought)[3]. The latter term refers ideally to reasoned philosophical and scientific inquiries; but it can also be applied to pseudo-rational discourse, like astrology or alchemy, insofar as such discourse serves the purpose of understanding life or the world through generalities for the people concerned. That is to say: intellection is not necessarily correct; a political or ethical theory is intellectual, but may be far from true.

However it is manifested, discursive thought may be rational or irrational, according as it relies on and appeals to logic or

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[2] Though, by analogy, we sometimes speak of an underlying or implicit discourse, i.e. of unstated implications of explicit discourse and other perceptible acts. The 'string' here referred to may be series of sights and sounds in one's head, a series of symbolic gestures or a series of signs on paper or some other medium.

[3] Intellection is contrasted to non-intellectual discourse, such as speaking about your lunch or your relations with your next-door neighbors. The dividing line is not always obvious, of course.

goes deliberately against it. The nature of logic[4] is of course not immediately apparent to logical thinkers, but must be discovered and studied. Nevertheless, we can reflect ex post facto on this distinction.

A thought, or a part or an aspect of a thought, that asserts anything, i.e. that makes a claim that something is to some degree true or false, or good or bad, or beautiful or ugly, may be characterized as a *judgment*. Some thoughts, or parts or aspects of thoughts, are not judgmental in this sense. All ratiocinations, and all the more so all cogitations, are judgmental in some way.

Gradually, we come to realize that the logical enterprise always involves certain fundamental judgments called the three "laws of thought" and the related "principle of induction". The term 'judgment' is always meant to suggest a 'value judgment' of sorts. But of course in that context it does not have the same meaning as in ethics or aesthetics. It relates to the values of 'truth or falsehood', not (at least, not directly) to those of 'good or bad' or of 'beautiful or ugly'. Such factual value judgments have been called 'alethic'[5].

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[4] 'Logic' being here understood in its absolute sense, rather than with reference to some individual or cultural inclinations and patterns of thought.

[5] The term 'alethic' is here used, note well, with the essential connotation of neutral fact (as against, e.g. ethical or aesthetic truths). With this distinction in mind, the foundation of logic could be characterized as an 'axiology'. The latter term (coined early in the 20th century) is used mainly with regard to ethical judgments,

The logician, then, has two tasks, both of which constitute a broad-ranging, endlessly ongoing, open-ended enterprise:

- One is essentially *observational* – to observe actual thought processes (one's own and other people's), and discern the rational acts they involve and then the forms they take[6].
- The other is more *conceptual* – to logically evaluate the cognitive efficacy of such thoughts, i.e. to determine how fit they are for knowledge of reality, by placing them within a larger context, i.e. in a coherent system of phenomenology, epistemology and ontology.

This is a very important point, which I wish to stress here: budding logicians must learn to make a major effort of *introspection*, literally 'looking inward'. Logic is not a merely analytical discipline – it is mainly synthetic, a product of observation of one's own actual thinking. Other people's thoughts, as expressed in their oral and written discourse, and as suggested by their behavior in action, are also important sources of logical information, of course.

To be an effective logician one must first, then, learn 'meditation', i.e. patient, attentive, precise, present observation of one's actual thought processes. Thereafter, of

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but can equally well be applied to study of the laws of thought in general. Another term for this study is 'metalogic'.

[6] To observe the forms thoughts take implies to abstract the 'forms' from the 'contents' of numerous thoughts. For example, 'All X are Y' is a form, while 'All living things have genes' is a content.

course, one should observe other people's ways of thinking. One benefit of this habit is to become more 'self-conscious', in the sense of able to ***reflexively*** turn one's scrutiny on one's own discourse and consider whether or not it fits in with one's own theories about discourse.

All too often, logicians (and more generally philosophers) fail to exercise critical judgment on their own ideas. They are so eager to give their opinion (and become important), and at the same time so afraid to notice their own errors (and so lose self-importance), that they compulsively avoid reflexive thought. In this way, by the way, they lose important opportunities for selflessly advancing their chosen field.

Many logicians have energetically engaged in the task of conceptualization without beforehand devoting sufficient time to the task of observation. For this reason, they have developed systems of logic that have little to do with human thought. Notably: systems that are wholly deductive, and completely ignore the largely inductive nature of human thought. Or again: symbolic systems based on a minimum of simple forms, which completely disregard the immense richness of human forms of thought. This sort of 'logical systems' I would prefer to characterize as pseudo-intellectual games or vanity showcases.

Many logicians[7] have developed their systems on the basis of very rough observations, made incidentally in the past – observations of limited scope, made relatively unconsciously. Consequently, their ideas have tended to be grossly speculative – and they have often erred, setting artificial limits to thought or drawing overly skeptical conclusions. Such logic becomes an exercise in the blind leading the blind.

A very common failure has been omitting to test their theories on themselves – i.e. not taking into consideration the question as to how those theories arose within their minds and how such perceived genesis might affect the theories' evaluation. They rush into the relatively easy task of theory construction without first collecting sufficient data and without thereafter reflexively verifying their theories.

Their inductive methods are poor. Their observations are vague and insufficient. They generalize too early and too far, and fail to particularize when they later come across new, conflicting data. They theorize without adequate checks and balances, and fail to harmonize all conflicting theses.

In view of such unprofessional behavior by many past and present logicians, it is clear that would-be logicians should learn meditation from early on, so as to acquire the required consciousness and mastery of their own thought processes. As one progresses in such meditation, and of course in

[7] I am willing to count here some major figures; some examples are mentioned elsewhere in the present volume and other works.

knowledge and understanding of logic theory, one gets to the level where one is always very aware of the thought processes involved in any discourse (one's own and other people's).

2. The primacy of the laws of thought

Aristotle's laws of thought cannot be understood with a few clichés, but require much study to be fathomed. ***The laws of thought*** can be briefly expressed as[8]:

1. ***A thing is what it is*** (the law of identity).
2. ***A thing cannot at once be and not-be*** (the law of non-contradiction).
3. ***A thing cannot neither be nor not-be*** (the law of the excluded middle).

[8] These are of course simple statements, which have to be elaborated on. Note that when I speak of a 'thing' here, I mean to include not only terms (percepts and concepts, or the objects they refer to), but also propositions (which relate percepts and/or concepts).

These three principles imply that whatever is, is something – whatever that happens to be. It is not something other than what it is. It is not nothing whatsoever. It is not just anything. If something exists, it has certain features. It cannot rightly be said to have features other than just those, or no features at all, or to both have and lack features.

A thing is what it is, whether we know what it is or not, and whether we like what it is or not. It is not our beliefs or preferences that make a thing what it is. It is what it is independently of them. Our beliefs can be in error, and often are. How do we know that? By means of later beliefs, based on better information and/or arguments.

However, a thing can have conflicting features in different parts or aspects of its being. Notably, a thing can change over time. So long as these differences are separated in respect of place, time, or other relations to other things, such as a causal relation – the contradiction is not impossible. But if we refer to the exact same thing, at the same place and time, and the same in all other respects, contradiction is logically unacceptable – it is indicative of an error of thought.

Also, we may well have no idea or no certainty what some (indeed, many or most) features of a thing are. Such problematic situations are indicative of our ignorance, and should not be taken to imply that the thing in question necessarily lacks the unknown features, or neither has nor lacks certain features, or both has and lacks them.

All these logical insights are evident in our ordinary thoughts and in scientific thinking. If we look upon our discourse clearly and honestly, we see that our conviction in every case depends upon these criteria. Occasionally, people try to make statements contrary to these criteria; but upon further analysis, they can always be convincingly shown to be erring.

These general logical principles, and certain others (notably the principle of induction, to name one), help us regulate our thinking, ensuring that it sticks as close as possible to the way things are and that we do not get cognitively lost in a complex maze of fantastical nonsense.

They do not force us to be truthful, or guarantee the success of our knowledge endeavors, but they provide us with crucial standards by which can test our progress at all times. (More will be said about these principles in this volume, in addition to what has already been said in the past.)

If the crucial epistemological and ontological roles of Aristotle's three laws of thought in human knowledge are not sought out and carefully studied, there is little hope that these little jewels of human understanding will be treasured. It takes a lifetime of reflection on logical and philosophical issues to fully realize their impact and importance.

I marvel at people who think they can show reason to be unreasonable. Leaning on hip, postmodern sophists, like Wittgenstein or Heidegger, or on more ancient ones, like Nagarjuna, they argue confidently that the foundations of rationality are either arbitrary, or involve circularity or

infinite regression. They do not realize that their intellectual forebears were in fact either ignorant of logic or intentionally illogical.

Many critics of the laws of thought simply do not understand them; no wonder then that they are critical. They have very narrow, shallow views about the laws of thought; they have not studied them in any breadth or depth. For instance, to some people, brought up under "modern" symbolic logic, the laws of thought are simply X=X, ~(X+~X) and ~(~X+~~X). Given such simplistic, superficial statements, no wonder the laws seem arbitrary and expendable to them.

The laws are not a prejudice about the world, as some critics try to suggest. The law of identity does not tell us about some particular identity, but only tells us to be aware of how and what things are or even just appear to be. The law of non-contradiction does not favor the thesis that something is X, or the thesis that it is not X; it allows for us sometimes facing dilemmas, only forbidding us to settle on the implied contradictions as final. The law of the excluded middle does not deny the possibility of uncertainty, but only enjoins us to keep searching for solutions to problems.

If nothing were known, or even knowable, as some claim, this would not constitute a good reason to dump the laws of thought – for these laws make no claims about the specific content of the world of matter, mind or spirit. They make no *a priori* demand regarding this or that thesis. They only serve to regulate our cognitive relation to the world, however it

happens to be or seem. They show us how to avoid and eliminate errors of reasoning.

These laws can for a start teach us that to claim "nothing is known or knowable" is self-contradictory, and thus illogical and untenable.

Such a claim, about the nonexistence or impossibility of knowledge as such, must be admitted to itself be an allegation of knowledge (such admission being a requirement of the law of identity). Therefore, it is unthinkable that any Subject might attain such alleged knowledge of its total ignorance (because such attainment would be against the law of non-contradiction). We could not even adopt a negative posture of denying both knowledge and knowledge of ignorance (in an attempted bypass of the law of the excluded middle), for that too is an assertion, a claim to established fact, a claim to knowledge.

All these rational insights are not open to debate.

Antagonism to the laws of thought is sure and incontrovertible proof that one is erring in one's thinking. How might such antagonism be *systematically* justified without appeal to those very laws? One couldn't claim to be generalizing or adducing it from experience, for this would appeal to the law of generalization or the principle of adduction, which are themselves based on the laws of thought. One couldn't claim to be drawing some sort of syllogistic or other deductive conclusion, for the same reason.

Such antagonism can only be based on arbitrary assertion, without any conceivable rational support.

Arguments like this in favor of the laws of thought are claimed by their opponents to be 'circular' or 'infinitely regressive' – i.e. arbitrary. But to point to the fallacy of circularity or infinite regress is to appeal to the need to ground one's beliefs in experience or reasoning – which is precisely the message of the laws of thought. Therefore, those who accuse us of circularity or infinity are doing worse than being circular or infinite: they are appealing to what they seek to oppose; they are being self-contradictory, as well as arbitrary!

It is our faculty of logical insight or rationality that teaches us to beware of arbitrary propositions, which are sometimes given an illusion of proof through circular or infinite arguments. One cannot deny this very faculty of logical insight by claiming that it can only be proven by circular or infinite arguments. This would turn it against itself, using it to justify its own denial. It would constitute another fallacy – that of "concept stealing".

The proposition "if P, then P" is not circular or infinite – it is true of all propositions. Such a proposition does not "prove" the truth of P, but merely acknowledges P as a claim that may turn out to be true or false. If one proposes "if P, then P" as a proof of P, one is then of course engaged in circularity or infinite regression; but otherwise no logical sin is involved in affirming it. On the other hand, the paradoxical proposition

"if P, then not P" does imply P to be false. To affirm P as true in such case *is* a logical sin, for P is definitely implied *false* by it.

The laws of thought are not circular or infinite – they are just consistent with themselves. It is their opponents who are engaged in fallacy – the failure to think reflexively, and realize the implications of what they are saying on what they are saying. To deny *all* claims to knowledge is to deny *that* very claim too – it is to be self-inconsistent. One logically must look back and check out whether one is self-consistent; that is not circularity, but wise reflection.

The laws of thought are not based on any particular argument, but the very basis of all reasoning processes. This is not an arbitrary starting point; it is an insight based on observation of all reasoning acts, an admission of what evidently carries conviction for us all. These laws cannot be disregarded or discarded, simply because they are so universal. That these laws do not lead to any paradox adds to their force of conviction; but that too is just an application of their universality. They encapsulate what we naturally find convincing in practice, provided we are not seeking dishonestly to pretend otherwise in theory.

The laws of thought may be viewed as specific laws of nature: they express the nature of rational thought, i.e. of logical discourse. By logic is here meant simply a mass of experiences – namely, all the 'events having the form expressed by the laws of thought'. That is, logic refers to the

concrete occurrences underlying the abstractions that we name 'laws of thought'. This is a primary given for which no further reason is necessary. It is not arbitrary, for it is the source of all conviction. To ask for a further reason is to ask for a source of conviction other than the only natural source of conviction! It is to demand the impossible, without reason and against all reason. It is stupid and unfair.

If one examines the motives of critics of the laws of thought, one often finds an immature and irrational yearning for absolutes. They seek a shortcut to omniscience, a magic formula of some sort, and think the laws of thought are obstacles to this pipedream, and so they abandon these laws and seek truth by less restrictive means.

Our ordinary knowledge is very pedestrian: it progresses step by step; it advances painstakingly by trial and error; it is rarely quite sure, and certainly never total and final. This relativity of common knowledge unsettles and displeases some people. To them, such inductive efforts are worthless – knowledge that is not omniscient is not good enough; it is as bad as no knowledge at all. Thus, they reject reason. This is an unhealthy attitude, a failure of 'realism'.

Let's face it squarely: our knowledge as a whole has no finality till everything about everything is known. And how, by what sign, would we know we know everything? Ask yourself that. There is no conceivable such sign. Our knowledge is necessarily contextual; it depends on how much

we have experienced and how well we have processed the data. There is no end to it.

Even so, at any given stage of the proceedings, one body of knowledge can conceivably be considered *better* than another, given experience and reasoning so far. *To be better does not necessarily mean to be the best – but it is still better than to be worse or equal.* That is a realistic posture, and a source of sufficient security and satisfaction.

A phenomenological approach to the problem of knowledge is necessary, to avoid erroneous views. It starts with mere *appearance*, whether of seemingly material or mental phenomena (bodies and ideas), or of spiritual intuitions (of self, and its cognitions, volitions and valuations)[9]. The contents of one's consciousness are, *ab initio*, appearances; this is a neutral characterization of what we are conscious of, the raw data and starting point of knowledge. Our first cognitive task is to acknowledge these appearances, as

[9] Note well that I do not posit perception itself as the starting point of knowledge, as some do. Perception is a relational concept – it is perception of something by someone. Before we become aware of our perceptual ability, we have to exercise it – i.e. we perceive something (other than the perceiving itself). The empirical basis of our concept of perception is our common experience of sensory and mental phenomenal content. When you and I were young children, we were perceiving such phenomena – only later when we became older did we form a concept of perception. Therefore perception as such cannot be taken as a primary in the order of things.

apparent and just as they appear, coolly observing them without interference or comment before any further ado.

It is equally naïve to assume as primary given(s) matter, or mind, or spirit; what is certainly given in experience is the appearance of these things. Much logical work is required before we can, *ad terminatio*, establish with reasonable certainty the final status of these appearances as matter, mind or spirit. We may indeed to begin with assume all such appearances to be real; but in some specific cases, due to the discovery of contradictions between appearances or to insufficiencies in our theories about them, we will have to admit we were wrong, and that certain appearances are illusory.

There is an order of things in the development of knowledge that must be respected. Everything beyond appearances is 'theory' – which does not mean that it is necessarily false, only that it must be considered more critically. Theory involves the rational faculty in one way or another. What is theory needs to be sorted out, organized, kept consistent, made as complete as possible. This is where the laws of thought are essential. But these laws cannot make miracles; they can only help us (with the aid of our intelligence and imaginative faculty) formulate and select the best theory in the present context of knowledge.[10]

[10] Note well: the laws of thought cannot by themselves immediately tell you whether what you have apparently perceived is true or false – but what they can tell you is that you should notice

Human knowledge is thus essentially inductive and probabilistic, depending on the scope and quality of experience, and then on successive generalizations and particularizations, or on competing larger hypotheses requiring ongoing comparative confirmation or refutation. The laws of thought are involved at all stages of this process, regulating our judgments to minimize its chances of error.

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well what you did perceive (its configuration, the phenomenal modalities, i.e. the sights, sounds, etc., apparent times, places, and so forth). Similarly for introspective data of intuition. The question of truth and falsehood for any single item of experience can only be solved progressively, by holistic consideration of all other experiential items, as well as by logical considerations (including consistency and completeness). This is the inductive process.

3. The ontological status of the laws

Discussion of the laws of thought inevitably arrives at the question: are these ontological or epistemological laws, or both; and if both in what sequence? Furthermore, what is their own ontological status – i.e. where do they 'reside', as it were? Are they 'out there' somehow, or only 'in our minds'?

As my thought on the issue has evolved over the years[11], I am now convinced that the traditional term "laws of thought" is accurate, in that these statements are primarily *imperatives* to us humans on how to think about reality, i.e. how to ensure that we cognitively treat the givens of appearance correctly, so that our ideas remain reasonably credible possible expressions of reality and do not degenerate into delusions.

Why? Because Nature can only posit; and so 'negating' depends on Man. That is to say, the world process is always

[11] See especially my *Ruminations*, chapter 9 ("About Negation").

positive; negation involves a particular relation between a conscious being and that presentation. For negation to occur, a conscious being has to project and look for something positive and fail to find it; otherwise, all that occurs is positive.

Thus, when we state the laws of non-contradiction and of the excluded middle, formally as "X and not X cannot both be true" and "X and not X cannot both be untrue", we mean that such *claims* (i.e. 'both true' or 'both untrue') cannot reasonably be made within discourse. We mean that 'X and not-X', respectively 'not-X and not-not-X', cannot correctly be claimed as known or even as reasonably opined.

Conjunctions of (positive or negative) contradictories are thus *outside the bounds of logically acceptable discourse*. These two laws of thought together and inseparably effectively *define* what we naturally mean by negation. Note well, 'middles' between contradictories are as unthinkable as coexisting contradictories.

Note that the law of identity is also tacitly involved in such definition of negation, since before we can understand the logical act of negating, we must grasp the fact of positive presence. So, it is not just the second and third laws that define negation, but strictly speaking also the first.

Such definition is, needless to say, not arbitrary or hypothetical. Were someone to propose some other definition of negation (e.g. using the law of non-contradiction alone, or some other statement altogether), this would only produce an

equivocation – the natural definition with reference to the three laws of thought would still be necessary and intended below the surface of all discourse, however willfully suppressed.

From this it follows, *by an extrapolation* from logically legitimate thought to reality beyond thought, that these laws of thought (or, identically, of logic – 'logic' meaning 'discourse' by a thinker) are also necessarily laws of reality.

Words are symbols, and symbols can be made to do what one wills, because they are per se not in fact subject to the laws of thought. That is to say, mental gymnastics like placing the symbol X next to the symbol not-X are indeed feasible, but that does not mean that the things the symbols symbolize can equally well be conjoined.

To *label* an observed illusion or a deliberate fantasy as 'real' does not make it in fact real. We can easily *verbally imagine* a 'reality' with non-identity, contradictions and inclusions of the middle, but we cannot *actually conjure* one.

As for the status of the laws of thought themselves: being products of reason, their existence depends on that of a conscious – indeed, rational – subject. All particular acts of reasoning – such as negation, abstraction, measurement, classification, predication, generalization, etc. – depend for their existence on some such rational subject (e.g. a man).

Take away all such subjects from the universe, and only *positive particular* things or events will remain. Without an

act of negation, no mixing of or intermediate between contradictories occurs in thought; all the more so, they cannot occur outside thought. Similarly, with regard to abstraction and other acts of the reasoning subject.

Concepts like similarity, difference, uniformity, variety, continuity, change, harmony, contradiction, and principles like the laws of thought, being all outcomes of such ratiocinative acts, are similarly dependent for their existence on there being some appropriately conscious subject(s).

These concepts and principles are, we might say, inherent in the world in the way of a potential; but without the involvement of such a subject, that potential can never be actualized.

These concepts and principles depend *for their existence* on there being conscious subjects to form them – but their *truth or falsehood* is not a function of these subjects. Their occurrence is dependent, but the accuracy of their content when they occur is a different issue. It is not subjective and relative, but on the contrary objective and absolute.

It is important not to draw the wrong inference from the said existential dependence, and to think it implies some sort of relativism and subjectivism (in the most pejorative senses of those terms) as regards issues of truth and falsehood.

No: the 'reasonableness' of our basic concepts and principles is the guarantee of their truth. To suggest some other standard of judgment, or the equivalence of all standards of judgment,

is to tacitly claim such other standard(s) to be somehow ‘reasonable’. A contradiction is involved in such an attitude. Of course, you are free to propose and accept contradictions, but you will have to pay the cognitive and other consequences. As for me, I prefer to stand by and rely on what is evidently reasonable.

4. Fuzzy logic

In some cases, X and notX are considered not to be contradictory, because the term or proposition X is too *vague*. If precisely what things X refers to is unclear, or if the exact boundaries of some individual thing labeled X are uncertain, then obviously the same can be said for the negative complement 'not X' (see diagram further on). In such cases, the terms or propositions involved are simply problematic.[12]

[12] Note also that in some cases we face a range of things, or different degrees of something, and we erroneously call the extremes X and notX – whereas in fact if X is used for one extreme, then notX must refer to all other degrees; and vice versa, if notX is used for one extreme, then X must refer to all other degrees; otherwise, we would be left with some intermediate referents without name (i.e. as neither X nor notX). It also happens that X and notX are made to overlap in our thinking, so that X and notX are made to seem compatible. These are simply common errors of concept formation; they do not justify any denial of the laws of thought.

It is easy to see how such realization can lead to a general critique of the human rational act of naming, and to a philosophy of Nominalism. For, if we observe our concepts carefully, we must admit that they are always in process – they are never fully formed, never finalized. Our ordinary knowledge is predominantly *notional*, tending towards precise conception but never quite attaining it. Thus, the meaning of words (or even of wordless intentions) is in flux – it is becoming rather than being.

This is not a merely epistemological critique, but one that has ontological significance. What is being said here is that things, the objects of our consciousness (be they objective or subjective) are difficult, if not impossible, to precisely pin down and delimit. This is true of concrete individuals and of abstract classes. It is true of matter (e.g. where does the body of a man end: if I breathe air in or out, or swallow water or spit it out, at what stage does the matter entering or exiting become or cease to be part of 'my body'?), and it is true of mind and of soul (who knows where their respective limits are?).

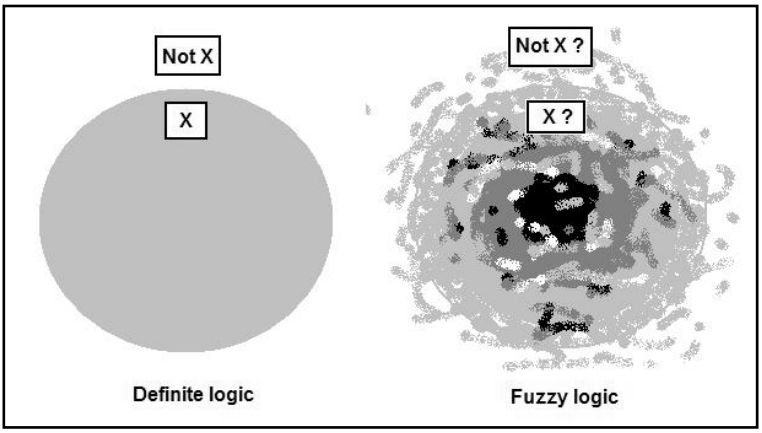
Ultimately, we realize, everything is one continuum, and the divisions we assume between things or classes are ratiocinative and intellectual interpositions. We cannot even truly *imagine* a fine line, a separation devoid of thickness, so how can we claim to *even mentally* precisely separate one thing from another? All the more so in the physical realm,

such division is impossible, given that all is composed of continuous and endless fields.

Another critical tack consists of saying that all our experience (and consequently all our conceptual knowledge) is illusory, in the way that a dream is illusory (compared to awake experience). In a dream world, X and not X *can* apparently both coexist without infringing the law of non-contradiction. Distinctions disappear; opposites fuse into each other.

But this is only superficially critical of our ordinary knowledge. For what is said to coexist here are 'the appearance of X' and 'the appearance of not X' – and not 'X' and 'not X' themselves. We have symbols, or stand-ins, or effects, instead of the objects themselves. So, this is nothing that puts the law in doubt, but rather a viewpoint that by its own terminology (reference to illusion) confirms adherence in principle to that law.

Such reflections lead us to the idea of fuzzy logic, as opposed to definite logic. The difference is illustrated in the following diagram:



Definite and indefinite terminology.

Aristotle's three laws of thought are aimed at a "definite logic" model – in this model, terms and theses are in principle *clearly* definable and knowable; or at least, this is the assumption in most cases, though in a minority of cases there might be some measure of temporary vagueness and doubt. But this ideal is in practice rarely met, and we should rather refer to a "fuzzy logic" model – wherein the assumption in most cases is that limits are chronically unclear and hard to establish with certainty, though exceptions to this rule must be acknowledged for the sake of consistency.

Ordinarily, our reason functions in a self-confident manner, from conviction to conviction, unfazed by the changes in our 'utter convictions' that in fact occur over time. In other words, we lay the stress on what we (think we) know, and minimize what we consider still unknown or the errors we

made in the past. This is the approach of definite logic, an essentially ‘deductive’ approach. The idea of a fuzzy logic is that we ought to, on the contrary, at the outset acknowledge our cognitive limitations and the ongoing flux of knowing, and opt more thoroughly for an ‘inductive’ approach.

According to this view, the logical perfection presupposed by Aristotle is largely mythical. Our concepts, propositions and arguments are, in practice, usually exploratory, tentative, approximating, open-ended with regard to referents, open to change, of uncertain pertinence and truth, and so forth. Our rational faculty works by trial and error, constantly trying out different overlays that might fit a momentarily glimpsed reality, then noticing an apparent mismatch trying out some more adjusted overlay, and so on without end.

Things are rarely quite the way we think of them, and yet our thought of them is not entirely wrong. Hence, we might well say that it is not correct to say that the referents of X fit exactly what we mean by ‘X’; and it is not correct to say that they do not all or wholly fit in. Hence, it might be said that certain things are both X and not X, and neither X nor not X – without really intending to imply any contradiction, but only in the way of a reminder to ourselves that we are functioning in shifting sands.

Such a logical posture does not really constitute a denial of the laws of thought. They continue to help us make sense of things. Their precision helps us sort out the vagueness and uncertainty we actually face in practice. They give us an

ontological and epistemological ideal we can tend to, even if we can never hope to fully and permanently match it.

In the light of the aforementioned difficulties, some logicians and philosophers are tempted to give up on all rational knowledge, and more specifically the laws of thought. However – and this is the point I am trying to make here – this would be a tragic error. The error here is to think that we humans can navigate within the sea of phenomena and intuitions without the guiding star of the laws of thought. Even if in particular cases these laws are often hard to *apply* decisively, they help us do our best to make sense of the world of appearances we face.

We have to stick with logic. It provides us with a minimum of firm ground in the midst of the shifting sands of experience and conception. Even if it is only an ideal, a theoretical norm, its importance is crucial. Without logic, we have no way to sort out changing impressions and deal with the practical challenges of our existence. Is that not the very definition of madness, insanity?

Nevertheless, sticking to logic should not be taken to signify rigid conventionality, or fearful closed-mindedness, or similar excesses of 'rationalism'. Sticking to logic does not exclude enlightened consciousness, flowing with the current of life, having faith, and similar liberating attitudes. Logic is a tool, not an end in itself. To give up a useful tool is stupid; but it is also stupid not to know when to put down the tool.

There is a stage in the life of the spirit when logical ifs and buts become irrelevant, or even disturbing, and it is wise to just be.

5. Misrepresentation of Aristotle

Aristotle's three laws of thought are often misrepresented, in the service of some doctrine or other. Often, nowadays, the motive is a desire to defend Buddhist antinomies; some decades ago, the motive might have been to defend Marxist contradictions; before that, maybe Hegelian ones. Usually, the proposed reading of Aristotle is unfair to him, a misrepresentation of his evident intentions.

During the late Middle Ages in Europe, the authority of Aristotelian philosophy was unmatched. The reason for this was that before that period many of the works of Aristotle (384-322 BCE) had been mostly lost to Christian Europe; when they were rediscovered, the superiority in many respects of the knowledge they contained was such that his influence became great[13]. But, as a result of that

[13] The rediscovery occurred mostly by way of translation into Latin (from Arabic, sometimes via Hebrew) of Greek classical texts in the libraries of Moslem Spain. These included works by Aristotle

overwhelming belief in everything Aristotelian, scientists of the Renaissance period and after often had to struggle hard to overcome what had become an academic bias.

It could be argued, paradoxically, that Aristotle's influence on the Christian European mind was one of the factors that led to the intellectual Renaissance; nevertheless, just as students must rebel from teachers to some extent to innovate and advance, an anti-Aristotelian reaction had to occur. Many historians thus regard Aristotelianism as the impetus of the Renaissance and thus of modern science.

Note moreover, Aristotle himself was no rigid ideologue; his approach was open-minded and adaptive, what we now call 'scientific'. Although many of his material opinions[14] have turned out to be false, they were quite reasonable for his period of history – and for the Middle Ages. Had he still been around in the modern era, he would no doubt have adjusted his views.

Opposition to Aristotelianism, ranged over the special sciences, more philosophical issues and logical aspects, in no particular order. With regard to his logical work, the greater emphasis Francis Bacon put on induction was indeed a

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on physics, metaphysics and ethics. Aristotle's thought was also made known to the West indirectly through commentators like Avicenna (Persia, 11th century) and Averroes (Muslim Spain, 12th century). His influence reached its peak perhaps with the writings of Thomas Aquinas (Italy, 13th century).

[14] For example, his cosmological views, which led to the Ptolemaic model that Copernicus and Galileo had to overcome.

marked improvement; whereas, attempts in the late 19th and early 20th centuries to supersede Aristotle's formal logic with more systematic deductive approaches seem (to me at least) rather pretentious. The attempts, lately, to belittle or do away with Aristotle's laws of thought fall in the same category (again, in my opinion).

In many cases, criticisms of Aristotle's thought were and are of course justified. But in many cases, too, the critics were and are just (I suspect) seeking a shortcut to academic notoriety, taking an easy ride on the ongoing wave (in some quarters) of 'Aristotle bashing'. It is very easy to be critical regarding someone who cannot answer back; I daresay, if that genius were still around, they would not dare.

A case in point (taken at random) is the following presentation, drawn from an Internet site[15]. I quote:

> *The three laws of "formal logic" which Aristotle set down in his Posterior Analytics are as follows: (1) Law of Identity: Each existence is identical with itself; (2) Law of Non-contradiction: Each existence is not different from itself; (3) Law of Excluded Middle: No existence can be both itself and different from itself.*

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[15] *History and Theory of Psychology Course*, by Paul F. Ballantyne, Ph.D. "Aristotelian and Dialectical Logic", in posted May 2003 at http://www.comnet.ca/~pballan//section1(210).htm. (I was recently pointed to this website by a Buddhist correspondent arguing against Aristotelian logic; that is how I came across it.)

Of course, nowhere in the *Posterior Analytics*, or anywhere else in Aristotle's known writings, are such inane formulations of his laws of thought to be found. Anyone who has read Aristotle knows this is not his language or terminology, nor his thought or intent. He does not speak of "existences" and is not concerned with whether or not they are "identical with" or "different from" themselves.

These statements are, admittedly, not presented as verbatim quotations; but they are not, either, declared to be mere readings or interpretations; they are made to seem like loyal paraphrases. But they are not a fair statement of what Aristotelian logic is about. It is not about tautology or the lack of it, not even in an ontological sense.

In Aristotle's *Posterior Analytics*, we find the following statements of the law of non-contradiction: "it is impossible to affirm and deny simultaneously the same predicate of the same subject", and of the law of the excluded middle: "every predicate can be either truly affirmed or truly denied of every subject".[16]

But the above author seems rather to base his formulations on common statements of the laws of thought, like "A is A", "A

[16] Both these statements are there (in Book 11) referred to as laws, and the latter is specifically called the law of the excluded middle. Translation by G. R. G. Mure. See http://graduate.gradsch.uga.edu/archive/Aristotle/Posterior_Analytics_(analytic).txt

cannot be not-A" and "Either A or not-A"[17]. Such statements, however, are not meant as comprehensive expressions, but as shorthand formulas; they are more like titles, stand-ins for fuller statements that comprise all that can be said about these laws. The simplest way to read them is as follows:

1. Something that is evidently A must be admitted to be A.
2. Something admitted to be A cannot also be claimed not to be A (i.e. no thing can be claimed both to be A and not to be A).
3. And no thing can be claimed neither to be A nor not to be A.

In this primary reading, note well, the term "A" is everywhere a predicate, as Aristotle presents it, rather than a subject, as it may seem. In all three cases, the tacit subject of the proposition is "some thing", an individual thing under consideration, i.e. any apparent object of cognition. Moreover, all three propositions are primarily logical or epistemological statements, rather than ontological ones. They tell us *how to behave* in our discourse or cognition.

In a second phase, we can give "A" the role of subject that it superficially has in the expressions "A is A" and "A cannot be not-A", and "Either A or not-A". Such perspective suggests a more ontological reading of these laws, namely

[17] Or at least the first two; for the third law he misconceives altogether. See further on.

that every existent has a particular identity, i.e. 'a nature', whatever that happen to be.

Each thing is something specific (say "A"), not just anything whatsoever ("both A and not A"), nor nothing at all ("neither A nor not A"). It includes some distinguishable aspects and excludes others: it is not infinitely elastic in appearance. It neither includes nor excludes everything. It cannot include things incompatible with it ("contradictions" of it). Its negation may replace it, but nothing in between (no "middle") can replace both it and its negation.

> Note this: the law of the excluded middle could, in analogy to the law of non-contradiction, equally well be called the law of non-neutrality. These laws respectively tell us that there is *no common ground and no neutral ground* between A and not-A. They ontologically together firmly separate A and not-A, allowing of no wishy-washy togetherness or further possibility. They do not however epistemologically exclude that we might (occasionally, though not invariably) come across contradiction or uncertainty in our thinking.

Even such interpretations ought not, in any event, be treated as the whole of the meaning of the laws of thought, but more modestly as a beginning of explication[18]. They make clear,

[18] Many more issues arise in them, such as: what do we mean by predicating "A" of something? What is the relation between a label like "A" and what it intends? At what stage may we

anyway, that these laws are not about equation or non-equation of things or symbols with themselves, as the already mentioned author's formulations misleadingly suggest.

Additionally, the wording he proposes for the law of the excluded middle "No existence can be *both* itself *and* different from itself" – is *formally* wrong. This could be construed as a statement of the law of non-contradiction, perhaps, but the law of the excluded middle would (using the same sort of language) have to be stated as "No existence can be *neither* itself *nor* different from itself".[19]

Clearly, Aristotle's concern was whether the ideas we form about the world are compatible with experiential data and with each other. That is, one might say, an interest in the intersection between appearance and belief, or seeming reality and alleged knowledge. The two components of consistency with experience and other ideas correspond roughly to the tasks of inductive and deductive logic, respectively.

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consider "A" the exclusive label of that thing? Further: so far, the laws have been expressed in terms of an individual thing; but what about their application to kinds of things? Clearly, these laws of thought are pregnant with the whole philosophical enterprise!

[19] Such a glaring formal misstatement of the law discussed tells us much about the critic's logical awareness, or lack of it! When I advised him by e-mail of this formal error, his response was at first flippant, then he made a small show of open-mindedness, but finally he made no effort to correct his statement. (N.B. I have just recently looked again at his website and found out that he now seems to his credit to have corrected this and other errors.)

Elsewhere on the same website[20], the said author apparently advocates, in lieu of his pseudo-Aristotelian laws, something called "materialist dialectics," which "holds that the basic rules of correct thinking should reflect a universe not in which the static and changeless is at the core but in which change is at the core." He goes on to propose three questionable alternative "laws", which place change at the center of things.

Thus, the above quoted debatable presentation of the laws of thought is used to convey the idea that Aristotle had a static view of existence, and to propose instead a more dynamic alternative set of laws. It is tendentious rewriting of history.[21]

In truth, Aristotle is *throughout his work very much concerned* with dynamic becoming as well as with static being. His laws of thought are precisely intended to help the intellect cope with variety and change, and remain lucid and poised in the midst of the cacophony of sense-impressions and ideas.

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[20] In http://www.comnet.ca/~pballan/logic2.htm. He there quotes statements like "What Aristotle sees as the most basic characteristic of existence is static self-identity" by J. Somerville, p. 45 in "The Nature of Reality: Dialectical Materialism", in *The Philosophy of Marxism: An Exposition.* (Minneapolis: Marxist Educational Press, 1967/1983).

[21] For an understanding of **the logic of change** in formal terms, see in my works: *Future Logic*, chapter 17, and *Volition and Allied Causal Concepts*, chapter 14. See also, *Buddhist Illogic*, chapter 6.

Consider, for instance the following statement drawn from his Metaphysics[22]:

> *For a principle which everyone must have who understands anything that is, is not a hypothesis; and that which everyone must know who knows anything, he must already have when he comes to a special study. Evidently then such a principle is the most certain of all; which principle this is, let us proceed to say. It is, that the same attribute cannot at the same time belong and not belong to the same subject and in the same respect.*

With characteristic intellectual accuracy, Aristotle expresses the law of non-contradiction by saying that nothing (i.e. no subject of a true proposition) can both be and not-be the same thing (i.e. have and not have the same predicate) *in the same respect at the same time*.

These last words are crucial to his statement, yet often ignored by dishonest critics such as the above quoted. By these words, Aristotle implied that something may well be subject to both a predicate and its negation – in different respects at the same time, or in the same respect at different times, or in different respects at different times.[23]

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[22] Book 4, Part 3. (Translated by W. D. Ross.) Posted in the Internet Classics website at http://classics.mit.edu/Aristotle/metaphysics.4.iv.html

[23] Grass can be green and yellow, but not in exactly the same places and times of its existence. Grass can mean what the cows eat or what the hippies smoke, but these two same words do

He is not ignoring that a given thing may have a variety of aspects at once, or that it may change in various ways over time. He is simply reminding us that *in a given location and time of its being*, a thing cannot contradict itself. His intent is therefore clearly not an attempt to deny the existence of variety and change, but to affirm the consistency that things *nevertheless* display at any given place and time.

Evidently, the earlier quoted attempted reformulation of the laws of thought as "Each existence is identical with itself; not different from itself; and can[not] be both itself and different from itself" is not only an inaccurate rendition of Aristotle, but an extremely superficial one[24].

Aristotle should be given the credit, respect and gratitude due him for a timeless and irreplaceable achievement.

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not refer to the same things. If such differences of perspective are impulsively or dogmatically ignored - well, that does not prove that contradictions exist. To affirm contradiction is to lack depth.

[24] Due no doubt to the influence of dimwitted modern symbolic logic, which makes every effort to reduce and limit these complex laws to their simplest possible expression, thus concealing most of their philosophical riches and depth. Why do they wish to so simplify? *In order to fit* logic into their simplistic "formal languages", designed by people (like Gottlob Frege) with hopelessly bureaucratic minds, who think that standardizing thought processes makes them more "scientific". But science is not a deductive, Cartesian enterprise; it is an inductive, evolutionary process. They claim to go above common 'intuition'; but actually, all they do is permanently impose *their own* insights, and thereby inhibit future insights in the field. Development of the science of logic depends on alertness and flexibility, rather than on institutionalization and rigidity.

6. Not on the geometrical model

Since (or insofar as) the "geometrical model" of theory justification involves arbitrary axioms, it is ultimately conventional. If the first principles ("axioms") of a body of alleged knowledge cannot apparently be justified by experience, but have to be based on mere speculation ("arbitrary"), such principles must be admitted to be without proof ("conventional"). If the axioms are unproven, then logically so are all claims based on them.

This is freely admitted in the case of geometry (where for instance Euclid's fifth postulate may be replaced by alternative assumptions), and similarly in other mathematical disciplines. Here, the apparent conventionality of certain axioms gives rise to the possibility of alternative systems, all of which might eventually be found useful in specific empirical contexts. But such a liberal attitude is impossible with regard to the science of Logic.

If we accept the geometrical model for Logic, then Wittgenstein's claim that "The propositions of logic are tautologies… [and] therefore say nothing"[25] is made to seem true. But if we follow him, and admit that logic is meaningless babbling, then we must regard his own statement as meaningless – for, surely, it is itself intended as a "proposition of logic", indeed as the highest principle of meta-logic! Granting that, it is as if he has said nothing, and we can well ignore him and move on.

Similarly, some critics have accused Aristotle of 'begging the question' in his defense[26] of the laws of non-contradiction and of the excluded middle, i.e. of arguing in a circular manner using the intended conclusion(s) as premise(s). Here again, we can more reflexively ask: does that mean that the fallaciousness of such *petitio principii* is an incontrovertible axiom of logic? If the speaker is convinced by this rational principle as an irreducible primary, why not also – or even more so – by the second and third laws of thought? Can he justify his antipathy to circularity without committing circularity?

If Logic is not solidly anchored in reality through some more rigorous process of validation, then *all* knowledge is put in doubt and thus effectively invalidated. If all knowledge is without validity, then even this very claim to invalidity is without validity. The latter insight implies that this skeptical

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25 In *Tractatus*, 6 (quoted in A Dictionary of Philosophy).

26 For instance, in Chapter IV of his *Metaphysics*, Gamma.

claim is itself invalid, like all others, note well. Therefore, since this skeptical claim is paradoxical, i.e. self-denying, the opposite claim (which is not inherently paradoxical) must be admitted as necessarily true. That is to say, we must admit that Logic has undeniable validity. Only given this minimal admission, does it become possible to admit anything else as true or false.

I have said all this before again and again, but must keep repeating it in view of the ubiquity of statements I encounter these days in debates to the effect that Aristotle's three Laws of Thought are mere conventions. To make such a statement is to imply one has some privileged knowledge of reality – and yet at the same time to explicitly suggest no such knowledge is even conceivable. Thus, any such statement is self-contradictory, and those who utter it are either fools or knaves, kidding themselves and/or others.

The said laws of thought must not be viewed as axioms of knowledge within a geometrical model. The very idea of such a model is itself an offshoot of Aristotle's logic – notably his first-figure syllogism, where a broad principle or general proposition (the major premise) is used to derive a narrower principle or particular proposition (the conclusion). It follows that such a model cannot be used to justify Logic, for in such case we would be reasoning in circles and obviously failing to anchor our truths in reality.

The only way out of this quandary is to notice and understand the inductive nature of all knowledge, including deductive

knowledge. The *ground* of all knowledge is experience, i.e. knowledge of appearances (material, mental and spiritual appearances of all sorts). Without cognition of such data, without some sort of given data whatever its ultimate status (as reality or illusion), no knowledge true or false even arises.

There is no such thing as "purely theoretical" knowledge: at best, that would consist of words without content; but upon reflection, to speak even of words would be to admit them as experienced phenomena. To attempt to refer, instead, to wordless intentions does not resolve the paradox, either – for intentions that do not intend anything are not. There has to be some *experiential* basis to any knowledge claim. Whether the knowledge so based is indeed true, or the opposite of it is true, is another issue, to be sorted out next.

Logic comes into play at this stage, when we need to discriminate between true and false *theoretical* knowledge. We are always trying to go beyond appearances – and that is where we can go wrong (which does not mean we cannot sometimes be right). If we stayed at the level of pure appearance – the phenomenological level – we would never be in error. But because we existentially need to surpass that stage, and enter the rational level of consciousness, we are occasionally evidently subject to error.

Moreover, it is very difficult for us to remain at the purely phenomenological level: we seem to be biologically programmed to ratiocinate, conceptualize and argue; so we have little choice but to confront logical issues head on. The

principles of Logic, meaning the laws of thought and the specific logical techniques derived from them, are our tools for sorting out what is true and what is false. We do not infer truth from these principles, as if they were axioms containing all truth in advance. Rather, these principles help us to discern truth from falsehood in the mass of appearances. Without some appearance to work with, logic would yield no conclusion – it would not even arise.

The validity of Logic is, thus, itself an inductive truth, not some arbitrary axiom. Logic is credible, because it describes how we actually proceed to distinguish truth from falsehood in knowledge derived from experience. No other logic than the standard logic of the three laws of thought is possible, because any attempt to fancifully propose any other logic inevitably gets judged through standard logic. The three laws of thought are always our ultimate norms of discursive conduct and judgment. They point us to an ideal of knowledge we constantly try to emulate.

This logical compulsion is not some deterministic force that controls our brain or mind. It is based on the very nature of the ratiocination that drives our derivation of abstract knowledge from concrete appearances. The primary act of ratiocination is **negation**: thinking "*not* this" next to the "this" of empirical data. That act is the beginning of all knowledge over and above experience, and in this very act is the secret of the laws of thought, i.e. the explanation as to why they are what they are and not other than they are.

For, whereas the law of identity (A is A) is an acknowledgment of experience as it presents itself, the law of non-contradiction (nothing can be both A and not A) and the law of the excluded middle (nothing can be neither A nor not A) both relate to things as they do *not* present themselves. These two laws define for us what *denial* of A means – they set the standard for our imagination of something *not* presented in experience at the time concerned. Note this well, for no one before has noticed it that clearly.

Negation is the beginning of the "bigbang" of conceptual and argumentative knowledge, the way we pass from mere experience to concepts and principles; and *the only way* to test and ensure that our rational framework remains in reasonable accord with the givens of experience is to apply the laws of thought. Negations are never directly positively experienced: they are only expressions that we have not experienced something we previously imagined possible. There is no bipolarity in concrete existence; bipolarity is a rational construct.[27]

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[27] This is made clear if we consider what we mean when we say, for example, neither the dog nor the cat is in the room we are in. The absence of the dog and the absence of the cat look no different to us; what we actually see are the positive phenomena only, i.e. the carpet, the desk, the chairs, etc. We do not see a non-dog and a non-cat, or anything else that "is absent" from this room, as if this is some other kind of "presence". (However, it does not follow that non-dog and non-cat are equivalent concepts – for the cat may be present when the dog is absent and vice versa.)

The concept or term ‘not X’ can be interpreted to mean ‘anything except X’ (whether X here intends an individual thing or a group of things). To deny the law of non-contradiction is to say that this “except” is not really meant to be exclusive – i.e. that ‘not X’ can sometimes include ‘X’ (and similarly, vice versa). Again, to deny the law of the excluded middle is to say that this “anything” is not really meant to be general – i.e. that besides ‘X’ there might yet be other things excluded from ‘not X’. Thus, to deny these laws of thought is to say: “I do not mean what I say; do not take my words seriously; I am willing to lie”.

7. A poisonous brew

Despite its name, the modern theory of knowledge called Intuitionism, developed by L.E.J. Brouwer[28], can be classed as an excessively deductive approach. It was, significantly, originally intended and designed for mathematics, and was thereafter by extrapolation applied to all knowledge[29]. Equating for all intents and purposes the logical modality of proof with that of fact, "Intuitionist logic" rejects the law of the excluded middle (and hence the inference of a positive statement from a double negation).

Arguing that nothing can be claimed to be true if it is not *proved* to be true, Intuitionism claims to accept the law of

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28 Holland, 1881-1966.

29 Such extrapolations are unfortunate: since mathematics deals with special classes of concepts (notably numerical and geometrical ones), insights concerning it cannot always be generalized to all other concepts. Inversely, comments concerning logic in general like the ones made here do not exclude the possibility of specific principles for the mathematical field. I am not a mathematician and do not here intend to discuss that subject.

non-contradiction (since we cannot both prove A and prove not-A), but denies the law of the excluded middle (since we can both fail to prove A and fail to prove not-A). Thus, whereas Aristotle originally formulated these laws with reference to facts (as nothing can be A and not-A, and nothing can be neither A nor not-A), Brouwer focused on proof alone.

Many errors are involved in this change of perspective. For a start, one can refute it on formal grounds: just as we cannot both prove A and prove not-A, we cannot both *dis*prove A (= prove not-A) and *dis*prove not-A (= prove A). The fact that we can be in ignorance of both A and not-A, i.e. uncertain as to which is true and which is false, does not change the fact that A and not-A cannot be both true or, equally, be both false. The two laws are symmetrical and cannot be taken separately.

Note that Aristotle's approach was to set ontological standards that would serve as epistemological guides, whereas Brouwer tried to place epistemology squarely before ontology. The former implicitly allowed for knowledge not at all dependent on rational processes, viz. knowledge from experience, whereas the latter considered all knowledge as dependent on reasoning, i.e. as purely mental construction.

For classical logic, proof is a conflation of empirical givens and conceptual constructs. To anchor concepts in experience involves deductive methods, but the result is always inductive. If we precisely trace the development of our

knowledge, we always find ultimate dependence on empirical givens, generalization and adduction. *There is no purely deductive truth* corresponding to the Intuitionist's notion of "proved" knowledge. The Intuitionist's idea of proof is misconceived; it is not proof.

Even an allegedly "purely deductive system" would need to rely on *our experience* of its symbols, axioms and rules. Thus, it cannot logically claim to be purely deductive (or *a priori* or analytic, in Kantian terms), i.e. wholly independent of any experience. Moreover, *our understanding* of the system's significance is crucial. A machine may perform operations we program into it, but these are meaningless without an intelligent human being to consume the results. Brouwer's assumptions are rife with ignored or hidden issues.

Note too that Brouwer effectively regards "proved" and "not proved" to be exhaustive as well as mutually exclusive. This shows that he implicitly mentally relies on the law of the excluded middle (and on double negation), even while explicitly denying it. Certainly, we have to understand him this way – otherwise, if the terms proved and *un*proved (N.B. not to confuse with *dis*proved) allow for a third possibility, his theory loses all its force. That is, something in between proved and not proved (N.B. again, not to confuse with proved not) would have to somehow be taken into consideration and given meaning!

Brouwer's denial of the law of the excluded middle is in effect nothing more than a recognition that some knowledge has to be classed as *problematic*. That was known all along, and we did not need to wait for Mr. Brouwer to realize it. The law of the excluded middle does not exclude the possibility of problemacy, i.e. that humans may sometimes not know for sure whether to class something as A or not-A. On the contrary, the law of the excluded middle is formulated on that very assumption, to tell us that when such problemacy occurs (as it often does), we should *keep looking* for a solution to the problem one way or the other.

The law of non-contradiction is similarly based on human shortcoming, viz. the fact that contradictions do occur occasionally in human knowledge; and its function is similarly to remind us to try and find some resolution to the apparent conflict. Note here the empirical fact that we do sometimes both seem to prove A from one angle and seem to prove not-A from another tack. In other words, if we follow Brouwer's formulation of the law of non-contradiction, that law of thought should also be denied!

The fact of the matter is that what we commonly call proof is something tentative, which may turn out to be wrong. The genius of classical logic is its ability to take even such errors of proof in stride, and lead us to a possible resolution. It is a logic of realism and adaptation, not one of rigid dogmas.

Indeed, if there is anything approaching purely deductive truth in human knowledge, it is the truth of the laws of

thought. So much so, that we can say in advance of any theory of knowledge that if it postulates or concludes that any law of thought is untrue – it is the theory that must be doubted and not these laws. Such antinomy is sure proof that the theory is mixed-up in some way (just as when a theory is in disagreement with empirical facts, it is put in doubt by those facts).

In the case of Intuitionism, the confusion involved is a misrepresentation of what constitutes "proof". Only people ignorant of logic are misled by such trickery. Why on earth would we be tempted to accept Brouwer's idea of "proof" in preference to the law of the excluded middle (which this idea denies)? Has he somehow "proved" his idea, or even just made it seem less arbitrary, more credible or more logically powerful than the idea of the law of the excluded middle? His view of proof is not even "proved" according his own standards – and it is certainly not proved (indeed it is disproved) by true logic.

Consider the implications of denials of the second and third laws of thought on a formal level. To deny the law of non-contradiction only is to wish to logically treat X and not-X as subcontraries instead of as contradictories. To deny the law of the excluded middle only is to wish to logically treat X and not-X as contraries instead of as contradictories. To deny both these laws is to say that there is no such thing as negation. All the while, the proponent of such ideas unselfconsciously affirms some things and denies others.

Reflect and ask yourself. If X and not-X cannot be contradictories, why should they be contraries or subcontraries? On what conceivable basis could we say that incompatibility (as that between X and not-X) is possible, but exhaustiveness is not; or vice versa? And if nothing can be incompatible and nothing can be exhaustive – what might negation refer to? It is clear that all such proposed antinomial discourse is absurd, devoid of any sort of coherence or intelligence. It is just a manipulation of symbols emptied of meaning.

The deeper root of Intuitionist logic is of course *a failure to understand the nature of negation*. What does 'not' mean, really? How do we get to know negative terms, and what do they tell us? How does negation fit in the laws of thought? I will not go far into this very important field here, having already dealt with it in detail in the past[30]; but the following comments need be added.

Another, related weakness of Intuitionist is *ignorance of inductive logic*. As already stated, Brouwer functioned on an essentially deductive plane; he did not sufficiently take induction into consideration when formulating his ideas. In a way, these were an attempt to get beyond deductive logic; but his analysis did not get broad enough.

This can be illustrated with reference to **double negation**. On a deductive plane, negation of negation is equivalent to

[30] In Chapter 9 of my book *Ruminations*. I strongly recommend the reader to read that crucial essay.

affirmation. This is an implication and requirement of the laws of thought. However, on an inductive plane, the matter is not so simple, because negation is always a product of generalization or adduction. That is to say, 'not' always means: 'so far, not'; i.e. it is always relative to the current context of knowledge.

What distinguishes deductive from inductive logic is that in the former the premises are taken for granted when drawing the conclusion, whereas in the latter the uncertainty of the premises and therefore of the conclusion are kept in mind. Thus, deductively: 'not not X' means exactly the same as, and is interchangeable with, 'X'; but inductively: the premise 'not not X' tends towards an 'X' conclusion, but does not guarantee it.

Since 'not X' really means 'we have looked for X but not found it so far', it always (with certain notable exceptions) remains somewhat uncertain. On the other hand, a positive, namely 'X' here, can be certain insofar as it can be directly perceived or intuited (and in this context, the experience 'not found' must be considered as a positive, to ensure theoretical consistency).

If 'not X' is always uncertain to some degree, it follows that 'not not X' is *even more* uncertain and cannot be equated in status to the certainty inherent in 'X' (if the latter is experienced, and not merely a conceptual product). Double negation involves two generalizations or adductions, and is therefore essentially an abstraction and not a pure experience.

Moreover, the expression 'not (not X)' inductively means 'we have looked for the negation of X and not found it'. But since 'not X' already means 'we have looked for X and not found it', we may reasonably ask the question: is the path of 'not not X' the way to find 'X' in experience? Obviously not! If we seek for X, we would directly look for it– and not indirectly look for it through the negation of its negation.

Note, too, that having found 'X' in experience we would consider 'not not X' to follow with deductive force, even though the reverse relation is (as already mentioned) much weaker.

Thus, the problem of double negation posed by Brouwer is a very artificial one, that has little or nothing to do with actual cognitive practice. Not only are the laws of thought nowhere put in doubt by this problem – if we are careful to distinguish induction from deduction – but it is not a problem that would actually arise in the normal course of thought. It is a modern sophistical teaser.

8. The game of one-upmanship

People who think the law of non-contradiction and/or the law of the excluded middle is/are expendable have simply not sufficiently observed and analyzed the formation of knowledge within themselves. They think it is just a matter of playing with words, and they are free to assert that some things might be "both A and not A" and/or "neither A nor not A". But they do not pay attention to how that judgment arises and is itself judged.

They view "A is A", etc.[31], as verbal statements like any other, and think they can negate such statements like all others, saying "A is not A", etc. But in fact, negation is not possible as a rational act without acceptance of *the significance of negation inherent in the second and third laws of thought*, in comparison to the first law of thought. To say

[31] Incidentally, I notice people on the Internet nowadays labeling the three laws of thought (LOT): LOI, LNC and LEM, for brevity's sake. Sure, why not?

"not" at all meaningfully, I must first accept that "A cannot be not A" and that "there's no third alternative to A and not A".[32]

To try to introduce some other (less demanding) definition of negation is impossible, for true negation would still have to be thought of (in a hidden manner or using other words). Inventing a "many-valued logic" or a "fuzzy logic" cannot to do away with standard two-valued logic – the latter still remains operative, even if without words, on a subconscious level. We have no way to think conceptually without affirmation and denial; we can only pretend to do so.

Many "modern" logicians are so imprisoned by symbolic logic that they have lost contact with the intended meanings of their symbols. For this reason, the symbols 'X' and 'not X' seem equivalent to them, like 'X' and 'Y'. But for classical logicians, a term and its negation have a special relationship.

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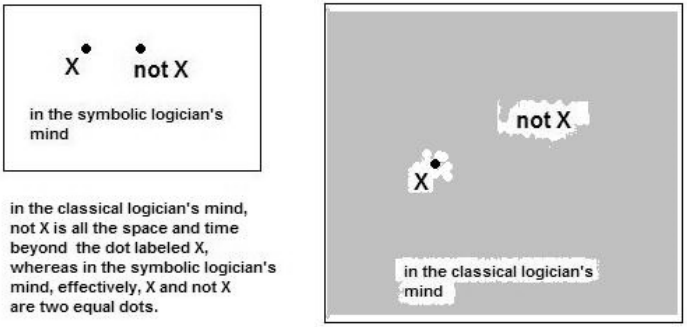
[32] Some logicians accept the law of non-contradiction as unavoidable, but consider the law of the excluded middle as expendable: this modern notion is quite foolish. *Both* laws are needed and appealed to in both deductive logic and in inductive logic. They do not only serve for validation (e.g. of syllogisms or of factorial inductions), but they generate questions and research (e.g. what does this imply? or what causative relation can be induced from that?). Moreover, they are mirror images of each other, meant to complement each other so as to exhaust all possibilities, and they ultimately imply each other, and both imply and are implied by the law of identity.

The negation of X refers to *all but* X, i.e. everything that is or might be in the whole universe other than X.[33]



Visualizations of negation.

The diagram above illustrates how differently these people effectively visualize negation:

Obviously, if a person mentally regards 'X' and 'not X' as commensurate, he will not understand why they cannot both

[33] Note that difference does not imply incompatibility. Two things, say X and Y, may be different, yet compatible – or even imply each other. We are well able to distinguish two things (or characteristics of some thing(s)), even if they always occur in tandem and are never found elsewhere. Their invariable co-incidence does not prevent their having some empirical or intellectual difference that allows and incites us to name them differently, and say that X is not the same thing as Y. In such case, X as such will exclude Y, and not X as such will include Y, even though we can say that X implies Y, and not X implies not Y.

be affirmed or both be denied at once; the second and third laws of thought will seem to him prejudicial and conventional. To return to a rational viewpoint, that person has to become conscious of the radical intent of the act of negation; it leaves no space for mixtures or for additional concoctions.

Bipolar logic is not a mere "convention", for the simple reason that making a convention presupposes we have a choice of two or more alternatives, whereas bipolarity is the only way rational thought can at all proceed. We do not arbitrarily agree bipolarity, because it is inherent in the very asking of the question. To claim something to be conventional is already to acknowledge the conflict between it and the negation of it, and the lack of anything intelligible in between the two.

The motive behind the attempts of some thinkers to deny the laws of thought (i.e. the laws of proper affirmation and denial) is simply an ego ambition to "beat the system", or more specifically (in the case of Western philosophers) to surpass Aristotle (the one who first made these laws explicit objects of study). "You say X? I will 'up the ante' and say Not X (etc.) – and thus show I am the greatest!"

This is not mere perversity – but a sort of natural denial instinct gone mad. For, funnily enough, to deny some suggestion (including the suggestion there are three laws of thought) is in the very nature of conceptual knowing, a protective mechanism to make sure all alternative

interpretations of fact are taken into consideration. This is precisely the faculty of negation – the very one which gives rise to the need for the laws of thought! The problem here is that it is being turned on itself – it is being over-applied, applied in an absurd way.

This can go on and on ad infinitum. Suppose I say "A" (meaning "A but not notA"), you answer "not A" (meaning "notA but not A")[34]; I reply "both A and notA", you oppose "neither A nor notA"; what have we said or achieved? Perhaps I will now say: "all of these four alternatives"; and you will reply: "none of these four alternatives". Then I trump you, asserting: "both these last two alternatives" and you answer: "neither of them". And so forth. Whither and what for?

A more complex version of the same game of one-upmanship can be played with reference to the laws of thought:

1. A is A (affirming the law of identity).
2. A is not A (denying the law of identity).
3. Both (1) and (2). A is A, and A is not A. (disregarding the law of non-contradiction).

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[34] Note that if we start admitting the logical possibility of "A and notA" (or of "not A and not notA"), then we can no longer mention "A" (or "notA") alone, for then it is not clear whether we mean "A with notA" or "A without notA" (etc.). This just goes to show that normally, when we think "A" we mean "*as against* notA" – we do not consider contradictory terms as compatible.

4. Neither (1) nor (2). A is not A, and A is not not A (disregarding the law of the excluded middle).
5. Both (3) and (4).
6. Neither (3) nor (4).
7. Both (5) and (6).
8. Neither (5) nor (6).
9. And so on and so forth.

Thus for the first law of thought; and similarly for the other two. We do not merely have a choice of four alternatives (the first four in the above list), a so-called 'tetralemma', but an infinite choice of denials of denials of denials… *How would we even evaluate the meaning of all these alternatives without using the laws of thought? They would all be meaningless, because every proposed interpretation would be in turn deniable.*

Thus, the attempt to propose a radically "alternative logic", instead of the standard (Aristotelian) logic, is really *the end of all intelligible logic*, the dissolution of all rationality. It is not a meaningful option but a useless manipulation of meaningless symbols. None of it makes any sense; it is just piling up words to give an optical illusion of depth. People who engage in such moronic games should clearly not be granted the status of "logicians".

9. In Buddhist discourse

Opposition by some Western logicians to (one or more of) the laws of thought is mostly naïve symbolic games, without any profound epistemological or ontological reflection; of quite another caliber is the opposition to these laws found in some Buddhist literature[35]. But we can, with a bit of effort of reflection, explain away the apparent antinomies in their discourse.

When Buddhist philosophers make statements of the form "not X and not notX", they should not (or not always) be viewed as engaging in antinomy, or in rejection of the laws of thought. Rather, such statements are abridged expressions intending: "don't look for X and don't look for not X", or "don't think X and don't think not X", or "don't say X and

[35] I am of course over-generalizing a bit here, for emphasis. There are of course more savvy Western logicians and less savvy Oriental (including Buddhist) logicians. A case of the latter I have treated in some detail in past works is Nagarjuna.

don't say not X", or "don't attach to X and don't attach to not X", or the like.[36]

When thus clarified, statements superficially of the form "neither X nor not X" (or similarly, in some cases, "both X and not X") are seen to be quite in accord with logic. For the laws of thought do not deny that you cannot *look for* 'X' and for 'not X', or for that matter for 'both X and not X', or even 'neither X nor not X'. Similarly, with regard to *thinking* this or that, or to *claiming* this or that, or to *attaching* to this or that, etc.

The laws of logic would only say that you cannot at once 'look for X' and '*not* look for X', and so forth. It does not say you cannot at once 'look for X' and 'look for *not* X', and so forth. The latter situation merely asserts that the issue of X or not X ought to be left *problematic*. An unsolved problem is not an antinomy. The most we can say is that whereas Buddhism might be deemed to enjoin us to accept such uncertainty as final, Western logic would recommend pressing on to find a solution of sorts.

Thus, in some cases, the apparent contradictions and inclusions of middle terms in Buddhist philosophy (and similarly in some other texts) are merely verbal. They are due to *inaccuracy in verbal expression*, omitting significant

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[36] For example, the following is a recommendation to avoid making claims of truth or falsehood: "Neither affirm nor deny… and you are as good as a enlightened already." *Sutra of Supreme Wisdom*, v. 30 – in Jean Eracle (my translation from French).

implicit aspects of what is really meant. The reason for such verbal brevity is that the focus of such statements is *heuristic*, rather than *existential*. They are merely meant as "skillful means" (to the end of Realization), not as factual descriptions. That is to say, they are statements telling the subject *how to* proceed (cognitively, volitionally or in valuation), rather than telling him/her how things *are*.

To give an actual example from Buddhist literature, I quote the following passage from the *Wake-up Sermon* attributed to Bodhidharma:

> "*Mortals keep creating the mind, claiming it exists. And arhats keep negating the mind, claiming it doesn't exist. But bodhisattvas and buddhas neither create nor negate the mind. This is what's meant by the mind that neither exists nor doesn't exist… called the Middle Way.*"[37]

When we face an unresolved contradiction or an unsolved problem of any sort, we are from the point of view of knowledge in front of a void. This 'emptiness' can be looked upon with anxiety, as a precipice, as a deficiency of means to deal with the challenges of life. Or it may be viewed as something pregnant with meaning, a welcome opportunity to

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[37] P. 53. This passage is particularly clear in its explanation of "neither exists nor does not" as more precisely "is neither created nor negated". Whereas the former is logically contradictory, the latter is in fact not so. What is advocated here is, simply put, non-interference.

dive fearlessly into infinity. The former attitude gives rise to Western science, the latter to Zen meditation.

Or again, consider the following quotation from Huang Po's teaching:

> *"If only you will avoid concepts of existence and non-existence in regard to absolutely everything, you will then perceive the Dharma."* (P. 43.)

Here again, the meaning is clear. The Zen master is not here denying existence or non-existence or both; he is just telling us not to engage in judgments like 'this exists' or 'this does not exist' that are inherent to all conceptualization. He refers to such judgments as "dualism", because they require a decision between two alternatives. Clearly, Huang Po's statement is not a formally contradictory ontological proposition, but a *prima facie* coherent epistemological injunction not to be concerned with judging whether what one experiences is real or unreal.

Admittedly, some Buddhists[38] do take such a statement as implying that existence does not exist, or that it both exists and does not exists, or neither exists nor does not exist. But

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[38] In truth, Huang Po is among them, since elsewhere he piously states: "*from first to last not even the smallest grain of anything perceptible has ever existed or ever will exist*" (p. 127). This is a denial of all appearance, even as such. Of course, such a position is untenable, for the existence of mere appearance is logically undeniable – else, what is he discussing? Before one can at all deny anything, one must be able to affirm something. Also, the act of denial is itself an existent.

as far as commonsense logic is concerned, existence does exist – i.e. whatever is, is (Aristotle's law of identity). Any clear denial of this fundamental truth would just be self-contradictory – it would deliberately ignore the fact and implications of its own utterance (i.e. that a statement has been made, alleging a truth, by someone to someone, etc.)

More precisely, in the present context, we must acknowledge that ***whatever but appears, certainly exists*** – whether it is eventually judged to be real or illusory. On this basis, we can reasonably interpret Huang Po (at least in the citation above) as simply saying "do not ask whether some particular (or general) thing exists or not, or whether it is real or not, because such questioning diverts your attention from a much more important insight into the nature of being".

It should be added that, even though I above admit that Huang Po's position is prima facie coherent, it is not so coherent upon further scrutiny. He cannot strictly speaking utter a statement without using concepts and he cannot be understood by us without use of our conceptual faculty. All discourse is conceptual, even anti-conceptual discourse. That is, in the very act of preaching abstinence from concepts, *he is in fact not practicing what he preaches*.

This shows that even persons presumed to be enlightened need concepts to communicate, and also that such conceptuality does not apparently (judging by the claims of those who practice it) affect their being enlightened. So concepts cannot be intrinsically harmful to enlightenment,

and the claim that they must be eschewed is internally inconsistent! This is not a game of words (as some might argue) – it is a logical insight that cannot be waved off. One can only at best argue against excessive conceptualization.

In any event, it must be understood that Buddhist anti-conceptual philosophy is aimed at psychological development: it is primarily a "way" or "path". Its focus is how to react to ordinary experiences, so as to get to see the ultimate reality beyond them. It refers to the object (X or not X), not independently (as in most Western logic), but as an object *of the Subject* (i.e. sought out, thought of, claimed, or attached to by the subject-agent). The latter 'subjectivity' (i.e. dependence on the subject-agent) is very often left implicit, simply because it is so pervasive. Notwithstanding, there are contexts in which the intent is more 'objective' than that[39].

It should also be noticed that many of the contradictions or paradoxes that Buddhist philosophers produce in their discourse are due to their tendency to make apparently general statements that in the last analysis turn out to be less than all-inclusive. Even while believing that there is more to the world as a whole than what is commonly evident, they formulate their ideas about the phenomenal world as *unqualified universal propositions*. There are many examples of this tendency.

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[39] For a start, to claim a means as skillful is a kind of factual description.

"All is unreal", says the *Dhammapada* (v. 279). Calling all unreal or illusory is of course possible *in imagination, i.e. verbally* – by taking the predicate 'unreal' or 'illusory' from its original legitimate subjects of application and applying it to 'all' subjects. Implicit in this manipulation is *an analogy* – i.e. a statement that just as within the realm of appearance some items are found not real and labeled illusory, so we can project a larger realm in which the whole current realm of appearance would seem unreal.

This explains how people assimilate that oft-repeated Buddhist statement, i.e. why it seems thinkable and potentially plausible. But it does not constitute logical justification for it. The only possible justification would be to personally experience a realm beyond that of ordinary experience. Even then, the logically consistent way to make the statement would be "all ordinary experience is unreal" (because saying just "all" would of course logically have to include the extraordinary experience).

Another frequently found example is "existence is suffering[40]." This statement is true, all too true, about the world we commonly experience, i.e. the world of material and mental phenomena. If one is observant, one discerns that we are always feeling some unpleasantness in the background

[40] This is the usual translation of the Sanskrit term is *dukkha*. This connotes not only physical and emotional pain, but more broadly mental deficiencies and disturbances, lack of full satisfaction and contentment, unhappiness, absence of perfect peace of mind.

of our existence. No earthly happiness is ever complete, if only because it is tenuous. Even sexual pleasure or orgasm – which more and more of my contemporaries seem to regard as the ultimate ecstasy and goal of existence – is a pain of sorts[41].

Buddhism has displayed extreme wisdom in emphasizing the fact of suffering, because once we realize it we are by this very simple realization already well on the way to being freed of suffering. If one were visiting hell, one would not expect to experience heaven there; likewise, it is natural in this halfway world to experience some suffering. I used to suffer a lot at the sight of people getting away with injustices or other ugly acts; but lately I just tell myself: "well, I am in samsara and this is normal behavior in samsara[42] – so long as I am here, I have to expect this kind of unpleasant experience and take it in stride!"

But the statement "existence is suffering" is wrongly formulated from the logical point of view, and for that reason it is bound to lead to paradoxes. For if we believe (as Buddhists do) that suffering can eventually be overcome (specifically, when nirvana is attained), then the truth of

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[41] If we are sufficiently attentive, we notice the pain involved in sexual feelings. Not just a pain due to frustration, but a component of physical pain in the very midst of the apparent pleasure.

[42] Or, using Jewish terminology: "I am in *galut* (exile, in Hebrew), and such unpleasantness is to be expected here". Note in passing, the close analogy between the Buddhist concept of samsara and the kabbala concept of galut.

suffering must be formulated less universally as: "*mundane* existence is suffering". The usual formulation of the first Noble Truth, "existence is suffering," is not intended to be as all-inclusive as it seems – for suffering disappears according to the third Noble Truth when we become enlightened. Therefore, to make the former consistent with the latter, it has to be rephrased more restrictively.

Another example of the tendency to artificially refuse to count the experience of enlightenment as part of the world as a whole is the idea that enlightenment takes us "beyond good and evil". This is logically incorrect – if we regard enlightenment as the *summum bonum*, the ultimate good (which we do, if we enjoin people to prefer it to all other pursuits).

The phrase "beyond good and bad" is intended to stress the practical problem that pursuing good is as much a form of attachment as avoiding evil. The pursuit of worldly good things is ultimately bad, because it just ties us to this world and subjects us to the bad in it. And indeed, even the pursuit of liberation from this world, i.e. of an otherworldly good, is problematic, in that it involves the wrong attitude, a grasping or clinging attitude that is not conducive to success. All this is true, but tends towards paradox.

To avoid confusion, we must simply rephrase our goal as "beyond *pursuit of* good and avoidance of evil". That is to say, we must admit that nirvana is 'good' in the most accurate sense of the term, while what we call 'good' in the

world of samsara (i.e. wealth position, power, sensual pleasure, etc.) is really not much better than what we call 'bad'. Alternatively, we should distinguish good in an absolute sense (the good of nirvana) and good in a relative sense (the goods within samsara). Relative goods would then to be classified as not so good from the absolute point of view.

The result of this change of perspective is that, rather than view existence as fundamentally bad (due to suffering), we may now view it as fundamentally good (since nirvana underlies all samsaric existence). Our common view and manner of existence is just an error of sorts, causing us much suffering; if we but return to correct cognition and behavior, we will experience the natural good at the core of all things. Here, the illusory good and evil of the mundane are irrelevant, and we are fully immersed in the real good.[43]

To conclude – Buddhist discourse often leads to paradox or contradiction because it insists on using terms in conventional ways and uttering generalities that apply to only part of the totality of experience (namely, the mundane part, to the exclusion of the supramundane part). To avoid the doctrinal problems such discursive practices cause, we must

[43] We could read S. Suzuki as saying much the same thing, when he says: "Because we are not good right now, we want to be better, but when we attain the transcendental mind, we go beyond things as they are and as they should be. In the emptiness of our original mind they are one, and there we find perfect composure" (p.130).

either clearly specify the terms used as having such and such conventional senses, or particularize statements that were formulated too generally (i.e. which did not explicitly take into consideration the data of enlightenment).

10. Calling what is not a spade a spade

Buddhism, no doubt since its inception, has a mix of logic and illogic in its discourse. Looking at its four main philosophical schools, Abhidharma, Prajnaparamita, Madhyamika and Yogacara, the most prone to discard the three laws of thought (i.e. Identity, Non-contradiction, Exclusion of the middle) was Madhyamika[44]. But this trend

[44] See my work *Buddhist Illogic* on this topic, as well as comments on Nagarjuna's discourse in my *Ruminations*, Part I, chapter 5. I must stress that my concern, throughout those previous and the present critiques, is not to reject Buddhism as such, but to show that it can be harmonized with reason. I consider quite unnecessary and counterproductive, the attitude of many Buddhist philosophers, who seemingly consider Realization (i.e. enlightenment, liberation, wisdom) impossible without rejection of logic. My guiding principle throughout is that they are quite compatible, and indeed that reason is an essential means (together with morality and meditation) to that desirable end.

was started in the earlier Prajnaparamita, as examples from the *Diamond Sutra*[45] show.

We do, in this sutra, find samples of valid logical argument. For example, there is a well formed a fortiori argument in Section 12[46]: "wherever this sutra or even four lines of it are preached, that place will be respected by all beings… How much more [worthy of respect] the person who can memorize and recite this sutra…!" But we do also find plain antinomies, like "the Dharma… is neither graspable nor elusive" (said even though not graspable means elusive, and not elusive means graspable).

But the *Diamond Sutra* repeatedly uses a form of argument that, as a logician, I would class as a further twist in the panoply of Buddhist illogic. This states: "**What is called X is not in fact X; therefore, it is called X**" (or sometimes: "**What is called X is truly not X; such is merely a name, which is why it is called X**").

There are over twenty samples of this argument in the said sutra. Here is one: "What the Tathagata has called the Prajnaparamita, the highest, transcendental wisdom, is not, in

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[45] Judging by its Sanskrit language, the centrality of the bodhisattva ideal and other emphases in it, this sutra is a Mahayana text. It is thought to have been composed and written in India about 350 C.E., though at least one authority suggests a date perhaps as early as 150 C.E. For comparison, Nagarjuna, the founder of Madhyamika philosophy, was active circa 150-200 C.E.; thus this Prajnaparamita text was written during about the same period, if not much later.

[46] Mu Soeng, p. 111.

fact, the Prajnaparamita and therefore it is called Prajnaparamita." Here is another: "… what are called beings are truly no beings. Such is merely a name. That is why the Tathagata has spoken of them as beings."[47]

What I am questioning or contesting here regarding this sort of discourse is only the "*therefore*" or "*which is why*" conjunction[48]. I am not denying that one might call something by an inappropriate name, or even that words can never more than approximate what one really wants to say. But to say that one is naming something X *because* it is not X – this is surely absurd and untenable.

This is not merely 'not calling a spade a spade' – it is calling something a spade even while believing it not to be a spade! This is, at least on the surface, contrary to logic. If the label is not applicable, why apply it? Moreover, why boast about this unconscionable inversion, saying "therefore"?

To say that something "is not in fact or truly X" is to imply that the word X has a sense that the thing under consideration

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[47] In Mu Soeng: pp. 145 and 151, respectively. I spotted a similar argument in another Mahayana text: "And it is because for them [the boddhisattvas] training consists in not-training that they are said to be training" (my translation from a French translation) – found in chapter 2, v. 33 of the "Sutra of the words of the Buddha on the Supreme Wisdom" (see Eracle, p. 61).

[48] Assuming the translation in this edition is correct, of course (and it seems quite respectable; see p. ix of the Preface). My point is that no logician has ever formally validated such an argument; and in fact it is formally invalid, since the conclusion effectively contradicts a premise.

does not fit into; in such case, why call that very thing 'X' against all logic? Why not just call it 'not X' (or coin for it some other, more specific name) and avoid paradox!

Discourse like "such is merely a name" is self-defeating anyway, since in fact it uses names that do convey some meaning. The sentence suggests no words have any valid reference, yet relies on the effectiveness of the words it utilizes to communicate its various intentions. It is a statement that tries to exempt itself from the criticisms it levels at *all* statements as such.

In the examples given above, the argument depends on our understanding of words like 'Prajnaparamita' (i.e. perfection of wisdom) or 'beings' – and yet at the same time tries to invalidate any such understanding. It cannot therefore be said to communicate anything intelligible.

Without doubt, we cannot adequately express ultimate reality (or God) in words. But it remains true that we can verbally express the fact of ineffability (as just done in the preceding sentence). There is no need to devalue words as such to admit that they have their limits.

Moreover, it is very doubtful that such paradoxical statements (like "name this X *because* it is not X") are psychologically expedient to attain enlightenment; they just cognitively confuse and incapacitate the rational mind. Rather than silence the inquiring mind, all they actually do is excite it with subconsciously unanswered questions. Such

nonsensical statements are products of an unfortunate fashion that developed in Buddhism at a certain epoch[49].

That sort of intellectual perversity came to seem profound, as it does to some postmodern thinkers in the West today, precisely because a logical antinomy implies nothing – and that emptiness of meaning is (wrongly) equated with the Emptiness underlying all phenomena. The gaping hole in knowledge left by antinomy gives the illusion of being pregnant with meaning, whereas in fact it is just evidence of ignorance. Note this well.

It should be added that there is indeed a sort of structural paradox in the meditative act – but the *Diamond Sutra*'s habit of 'calling not a spade a spade' is not it. The paradox involved is that if we pursue enlightenment through meditation, we cannot hope to attain it, for then our ego (grasping at this transcendental value as at a worldly object) is sustained; yet, meditation is the best way to enlightenment. So we must 'just do it' – just sit and let our native enlightenment (our 'Buddha nature') shine forth eventually.

It should also be reminded that Buddhism is originally motivated by strong realism. It is essentially a striving towards Reality. In this perspective, the Buddhist notion of "suchness" may be considered as a commitment to the Law

[49] Although not entirely absent in the earlier Abhidharma literature and the later Yogacara literature, they are not uncommon in some Prajnaparamita literature (including the *Diamond Sutra*) and rather common in Madhyamika literature.

of Identity. The enlightened man is one who perceives things, in particular and in general, *such as they really are*.

This is brought out, for instance, in the following Zen exchange. A monk asked Li-shan: "What is the reason [of Bodhidharma's coming from the West, i.e. from India to China]", to which the Zen master replied "Just because things are such as they are", and in D. T. Suzuki's commentary that this refers to "Suchness" (*Zen Doctrine of No-mind*, p. 93).

11. Buddhist causation theory

Whereas skeptics such as Hume considered that *nothing has a cause*, or at least that if anything does cause anything else we cannot know about it – Buddhist philosophy went to the opposite extreme and advocated that *everything is interconnected to everything else*, claiming that this universal truth is knowable through enlightened cognition and not merely through induction.

This philosophy of "interdependence" or "co-dependence" sounds good at first sight, because it implies that none of us is an island unto himself or herself. It is an ethical teaching against selfishness and irresponsibility. We are all part of a complex tapestry of relations, and no one can pride himself or herself on true independence from the rest of us. We should be grateful to each other and lovingly help each other. To put it very idealistically: everyone is an indispensable part of myself.

But on a strictly logical level, this view is difficult to uphold. For, if everything were causally interconnected, then we could not inductively identify causes and effects, because we could never 'remove' or 'add' any cause or effect! We would thus be deprived of one of our main scientific techniques of causal logic.

To identify causality, we need to consider what happens around a phenomenon (say, X) in both its presence and its absence. We need to experiment different situations. But the view that everything is both a cause and an effect of everything implies, for every X, both X and the negation of X to be always causally present, somehow. Universal contradiction seems to be required; that is, all contradictories coexisting and equally active at once.

We might at best say that this thesis implies that nothing has a complete and necessary causal relation to anything else, but all things are causally interrelated in the way of partial and contingent causation. Natural spontaneity and freewill are of course excluded from this thesis; it is essentially deterministic, note. But is it possible to even imagine partial-contingent causation without complete-necessary causation? I don't think so. But supposing it is arguable, there would be no logical way to prove it.

Logically, such claim can only be an arbitrary assumption. It follows that the universal mutual causality claimed by the Buddhist is only knowable, if at all, by purely intuitive means – no scientific proof of it is possible. Furthermore, such

universal intuition necessitates (implies) omniscience of all things, everywhere, at all times. And though we project that God has such cognitive power, and the Buddhists consider that a human being can acquire it through enlightenment, omniscience is not something we ordinarily encounter or know how to prove.

In a past work of mine[50], I explain how the Buddhist doctrine of co-dependence must not be taken as nugatory of the law of identity that 'facts are facts'. I want to reiterate it here, because this insight of mine hit the nail on the head with regard to the significance of co-dependence. The advocates of co-dependence explicitly argue for it by means of *diachronic* examples (sunlight causes growth of plant, plant causes feeding of animals, etc), i.e. across time; but subsequently, they tacitly intend it *synchronically*, i.e. in the present tense.

This is the hidden lie of this doctrine: the implication that somehow the present does not firmly and definitely exist, but currently 'depends' on things outside it (i.e. in past or future). In truth: once actual, the present's existence is not in need to any support by anything else; it just is and that's that. Co-dependence implies that even actual present existence is somehow tenuous. Of course, such antinomy is precisely the 'paradoxical' aspect of co-dependence that makes it so emotionally attractive to postmodern readers, and which

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50 *Buddhist Illogic*, chapter 8.

makes this doctrine quite distinct from any other causal philosophy.

Note well that I am not saying that causation requires change. We can establish causation between static existents – by referring to different instances of a class, i.e. with reference to the extensional mode of causation. The natural mode of causation, on the other hand, implies underlying changes in individuals – even when we express it verbally as a relation of static characters, we mean that the change from presence to absence or vice versa of those characters is involved.

The paradoxical aspect of the co-dependence thesis is its claiming the possibility of causation without differences across space and time, i.e. entirely in the here and now. This is a logically unthinkable and unknowable sort of causation. It should hardly be necessary to say that the present, once present, is a done thing; it can no longer be affected by the present, the past or the future. The past, once past, is gone; it is no longer changeable. The future is the only potentially changeable thing[51].

We can use these logical insights to refute the Buddhists' view of the soul's mode of existence. They consider that the soul has "no real existence" (in itself, as an essence) because

[51] And that only if we assume some indeterminism; otherwise, if the future is inevitable, it can hardly be considered as changeable. Certainly, though science fiction fans and some science theorists are wont to imagine time travel, it has not to date been shown empirically possible, and therefore cannot be taken seriously.

of its interdependence with everything else. They argue that the soul has actual past causes of generation (e.g. parents, food, etc.) and possible future causes of destruction (e.g. if the body dies, the soul disappears, say). But in truth, such retrospective and prospective causalities do not change the reality that once the soul is, and so long as it is, its actual present existence is, and it is independently of anything else.

The advocates of this idea, that the soul's existence is unreal, can be seen to profit from confusion between two terms: ontological dependence and epistemological dependence. Certainly, demonstrable past causes are indicative of what they call "dependent origination", but future causes cannot be assimilated by anticipation to the same concept. They might at best be eventually described as instances of "dependent obliteration"! Just because in our present minds the existence of the object (here, the soul) is at the center of a mass of past, present and future causes, it does not follow that all these items can be indistinguishably considered as present causes.

Nevertheless, it is possible and valuable to view the whole world as one big Ocean, and all things apparently in it as complex waves and swirls of its water, always in flux. This image is often proposed in Buddhist teachings, in seeming justification of the idea of co-dependence, as well as the idea of impermanence and others.

Just as in a large body of water, a sea, a lake, a river, all the waves, though twirling and churning, are inseparable from the whole, so the waves of matter, mind and spirit in the

universe, form a continuous whole. The various, changing many are ultimately a harmonious one. All subdivisions of the one in space or time are illusions or artificial projections by some observer. With regard to interdependence, a pressure in any locale of the whole is bound to somewhat affect all other locales.

This image reconciles the apparently conflicting views of the Greek philosophers Heraclitus and Parmenides. Heraclitean philosophy emphasizes appearance, materiality, multiplicity and change: "you cannot step into the same river twice" (or indeed, even once), for by the time you do so, both you and it have changed. In Parmenidean philosophy, the opposite is stressed: "everything is one and the same". At first sight, these views seem contradictory – one is pluralist and relativistic, and the other is monist and absolutist; but using the image of a body of water they can be made compatible and complementary.

Initially, this analogy to water seems to call for a universal underlying substance – an assumed "ether". But, as Einstein has pointed out, since the velocity of light is the same in all directions and displays no Doppler effect, there can be no ether! Thus, all is one and one is nothing! This interesting discovery of modern science seems to confirm the much older Buddhist view that the universal ocean is one of Emptiness (*Shunyata*). Judaism also has this notion of the All as originally Nothingness (*Yesh me-Ayin*).

Be that as it may, we must still consider and deal with the world as it appears – in all its details of variety, change and causality. And this task has to be fulfilled responsibly – i.e. in a credible, empirical and logical manner. Vague, colorful, idealistic pronouncements will not do, however poetic they sound.

Thus, with regard to interdependence, it must be stressed that we can formally show with reference to causative syllogism that the cause of a cause cannot necessarily be regarded as a cause in turn – so the image of a tiny stir in one part of the ocean having an effect on all others is incorrect.[52]

[52] For further discussion of these issues, see my *The Logic of Causation*, especially chapters 10 and 16.

12. A formal logic of change

I have in the past[53], following Aristotle and Darwin, proposed three forms of change for logical consideration. Namely:

a) *Alteration*, stated as "X gets to be Y", meaning that something is characterized as X and not Y at one time and as X and Y at a later time. This is intended to imply that, while remaining X for the whole time under consideration, the individual thing concerned is successively not Y then Y. This signifies a mere change of attributes (not Y to Y), without essential change (X constant).

b) *Mutation*, stated as "X becomes Y", meaning that something is characterized as X (and not Y) at one time and as Y (and not X) at a later time. This is intended to imply that the individual thing concerned does not remain

[53] See my *Future Logic*, chapter 17, and *Volition and Allied Causal Concepts*, chapter 14.

X or Y for the whole time under consideration, but is successively X then Y (these two being different, or incompatible, characterizations). This signifies metamorphosis or essential change (X to Y), insofar as the thing concerned is here defined by its being X or Y.

c) *Evolution*, stated as "Xs evolve to Ys", meaning that *a set* of things is characterized as Xs (and not Ys) at one time, *gives rise to another set* of things characterized as Ys (and not Xs) at a later time. Note well the intended implication here that the individuals subsumed under the classes X and Y are all different entities, although there is a significant causal relation between them. For instance, in the evolution of a living species, the earlier individuals (the Xs) are no longer present at the later stage (among the Ys), but they are their biological ancestors.

The first two forms of change can be expressed in terms of each other. "X gets to be Y (after not being Y)" can be stated as "X + notY becomes X + Y"; and conversely, "X becomes Y" can be stated as "Something gets to be notX + Y (after being X + notY)". This is pointed out to show that the differentiation between changes of attribute and essence are relative, depending on what one focuses on as the substratum of change: in the case of alteration, the substratum is specifically the label "X", whereas in the case of mutation, it is more vaguely "some thing".

While the first two forms of change are found in Aristotelian logic, the third form did not become fully formulated (in

Western philosophy[54]) till Darwin and after. Evolution is often confused with mutation, but they are clearly very different logical forms, note well. Two very different kinds of subsumption are involved.

Mutation concerns an *individual* entity, which persists from its early state (X) to its later state (Y); in the plural (i.e. some or all X become Y), this form refers to many entities but still as individuals. Evolution distinctively refers to groups, so that the individuals referred to at the beginning of the change (Xs) are *not* the same as those referred to as the end of it (Ys). Implied in the latter case is, not only a qualitative change in the same individuals, but more thoroughly a change of individuals. Nevertheless, note well, the two sets of individuals are causally related in some way, i.e. there is still a *continuity* of sorts between them; this is why we say that one set has evolved into the other.

These three forms of change seem to cover all our ordinary discourse concerning change. On the surface, that analysis of change seems unassailable; but as we shall now see, it is possible to radically criticize it.

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[54] Leaving aside some vague brief statements to similar effect in ancient Greek philosophy.

13. Buddhist critique of change

The above analysis of alteration and mutation, inspired by Aristotelian logic, has a weakness, in that it refers to "something", some underlying abiding essence or static substratum in the midst of the forms of change considered. Thus, we defined alteration by saying "*something* is characterized as X and not Y at one time and as X and Y at a later time" and mutation as "*something* is characterized as X (and not Y) at one time and as Y (and not X) at a later time".

In the case of alteration, the thing concerned retains the qualification X throughout the process of change; whereas in the case of mutation, the only implied constancy is the thing's quality of existence. This relatively constant "something" in the midst of change may at first sight seem obvious, but upon reflection it is open to criticism. It is at least an element in our analysis that has to be discussed and somewhat justified, assuming we find no reason to decidedly reject it.

Alteration is presented as a mere change of predicate, and mutation as a more radical change of definition, but in either case it is presumed that there is some one thing to which those changing predicates and definitions are being attributed, something that is unitary enough during such changes that we can continue to name it by the same label (viz. "X" in alteration or "something" in mutation).

The Buddhist critic would suggest that it is illegitimate to assume such underlying constancy without first establishing it; and that would seem something hard to do, in view of the transience of all things experienced. He would suggest that change in general fits more into the format of evolution than in those of alteration or mutation. For in the evolutionary model, the two terms of the proposition do not refer to the same individual instances, but to instances that have been in constant flux, and which are related to each other by mere causal succession rather than by uniformity in identity.

Alterations and mutations are of course in practice involved even in the course of evolutionary change (e.g. in evolution of species, the individuals of a species at any stage are themselves subject to alterations and mutations), but such underlying events remain tacit in the formal presentation of evolution, because even if such individual changes were imagined as totally absent, the definition of evolution would remain applicable provided earlier species generated later ones.

Thus, the evolutionary theoretical model could be considered universal, if we do not assume (as Aristotle did) that individuals themselves change in alteration and mutation, but rather assume (as Buddhists suggest) that we are faced with successions of individual appearances, which we may assume are causally connected. On this basis, rather than constancy of identity, an individual is named with the same name across time.

That is, my dog yesterday is not strictly-speaking the same dog as my dog today or tomorrow, but rather each momentary appearance (from his birth to his death) is caused by an earlier appearance and causes a later one, and for this reason I may repeatedly refer to all these apparently connected appearances as "my dog". Strictly, then, a term like "my dog" is always meant in the present tense, but different instances of the present across time may be identified together under certain logical conditions (viz. causal continuity) and the term is then generalized to all my dog's existence as if he were one abiding essence.

Moreover, one might venture, that which says "my dog" (i.e. me), is also in flux, and not quite the same over time. However, while it involves valid criticism, this Buddhist perspective has its own weaknesses and even faults.

Its main weakness of conception is the appeal to causal connection between successive appearances. What is here meant by causality – and on what basis is such relation between appearances to be established? That is, how do we

claim theoretical knowledge of causality as such, and how do we claim knowledge of it in a particular case? For causality (or at least, causation) is never known through single instances, but through generalizations – and to generalize we have to assume certain uniformities.

Thus, our recognition and concept of causality would seem to be logically posterior to our recognition and concept of identity, and not prior to it (as the Buddhist critique requires). There is no immediate and incontrovertible knowledge of either similarity or causality, but both are ratiocinations, i.e. logical formats or molds we (the cognizing Subject) try out tentatively on appearances, to gradually rationally organize them. These ratiocinations are inductive hypotheses, reflecting what seems to us applicable and true at a given stage in our knowledge development, but keeping an open mind for possible adaptations and corrections if (if ever) things appear differently at a later stage.

Moreover, it must be realized that this very discourse by the Buddhist critic is conceptual and verbal. The question must be asked: does the thesis proposed by the critic itself escape from the criticism used to support it? That is, if we apply the same criticism to the critic's discourse, do we not end up with the same doubt concerning it? The answer is obviously: yes.

Since the critic's discourse is itself verbal, it tacitly implies a uniformity of some sort in the midst of change, even while explicitly rejecting such uniformity as "merely verbal". To admit even a merely verbal uniformity is to admit uniformity

as such. If we could not even say of two words that they are "one" in form and content, no discourse at all would be possible. If verbal uniformity is possible, then other types of uniformity may also be postulated. Since the critic resorts to words, he must admit the logical repercussions of such action[55].

As regards the Buddhist claim that "everything is continually changing", it must not be naively accepted, even if it is presented by its proponents as the essence of wisdom. On the empirical level, at a given moment of time that our consciousness encompasses as 'the present', we experience both changing and unchanging phenomena. The latter may in turn change the next present moment or at a later time; but the comparison involves memory and the assumption of time's passing, and so is not purely experiential but partly judgmental. We may indeed experience changes in a given moment, but much of the changes we 'experience' occur over time and so are not purely empirical.

If we stand back and examine the existence of all phenomenal things across time, we may well conclude that everything we experience is subject to eventual change. But we must admit and keep in mind that *the rates of change* of different phenomena vary widely. While one thing is changing, another is apparently static. While one part of

[55] This of course is what the Indian philosopher Nagarjuna refused to admit, choosing rather to criticize others by means of logic while claiming for his views a privileged exemption from logic. Such *selective* logic cannot properly be called logic.

something changes, another is apparently static. There is not the total anarchy implied by the expression "everything changes". We may thus mentally hold onto something for some time at any given time, even if we cannot hold onto everything.[56]

This something 'held onto' can be the underlying subject of a proposition about alteration or mutation. Such propositions are thus logically justifiable.

[56] For example, I know my computer will end up in smoke one day, but meanwhile it is here and I can well use it and rely on it. I expect my life to be longer than my computer's existence, because people usually last longer than machines.

14. Different strata of knowledge

The fact of the matter is that we all experience appearances as same and/or different in various respects. This is a fundamental given of our ordinary experience, which we must admit, even while granting that it ought not be taken as necessarily true in all cases. And the latter caveat is not some sort of transcendental knowledge, but itself merely the product of common experience – viz. that sometimes, what has seemed to us as similar at first sight has later (upon review or reflection) seemed to us as different, or vice versa.

The basis of our rational ordering of experience is experience. We realize that it involves rational ordering only at a much later stage, after much philosophical reflection; but initially, we just instinctively do it and believe in it. The classification of such initial rationality as naïve is only possible *by means of* this very same faculty; there is no other, higher faculty by which we can do it. The subtlety of distinguishing between pure experience and rationally

ordered experience is *itself a product of* such rational ordering and cannot be used to justify it or criticize it.

Once this natural order of things is understood, we can begin to understand the development and validation of human knowledge. To avoid adopting superficially logical but deeply illogical theories, we must always make sure we test any suggested argument or explanation on itself. By such reflexive thinking, we save ourselves a lot of time and trouble. This leads to the realization that human knowledge is essentially inductive, rather than deductive. Deductive logic can indeed help us eliminate absurd and inappropriate constructs, but a positive theory depends mainly on gradual induction, using experience to form and develop ideas by trial and error.

The "something" underlying change (in the Aristotelian view) is seemingly justified by experience in that when we perceive the world around us or in us, at any given moment, some aspects of the whole field of experience (all sense organs included) seem to be in flux and others seem to be static. There is no reason for us to admit the flux as real, while denying the evidence of our senses with regard to the unchanging aspects. We would have to provide some very convincing reason to allow such difference of evaluation. In the absence of justification, such difference of treatment would be arbitrary prejudice. It is therefore logical to admit both perceptions as equally empirical givens *ab initio*.

We may nevertheless, *at a much later stage in the ordering* of knowledge, in the way of a theory subject to the rules of inductive logic, posit an ultimate reality that is per se static while giving rise to changing appearances – or, oppositely, posit that nothing but change exists really. However, since the latter proposition is self-contradictory (being itself apparently something static to some degree), we would be wiser to aim for the former. Nevertheless, the latter must still be given serious consideration, for it has much going for it as a description of our world of experience.

Both change and stillness are immediately apparent in our experience. They are concrete, perceptual givens in the physical and mental fields of experience. This is a phenomenological truth, whatever conceptual theories we may at a later stage construct concerning them. When I look, listen, or otherwise physically sense or mentally project – I sometimes see, hear, etc. static things, sometimes see, hear, etc. events in motion, sometimes a bit of both kinds of phenomena, and never neither (except in intuitive experience, which is non-phenomenal).

Change is not a mere conceptual construct out of experience – it is itself experienced. Likewise, stillness is not a mere conceptual construct out of experience – it is itself experienced. Thus, though stillness and change are opposites, we ought not define either of them by negation of the other. They are both independent percepts to begin with. At any moment, I may perceive some static things, some changing

things, and some partly this and partly that. The concepts we have of change and stillness are later derivatives of those percepts. It is only on a conceptual level that change and stillness are correlated as each other's opposite.

This nuance between percept and concept has to be understood to avoid misleading analyses of the static or changing, which in any way reduce the one to the other or vice versa. Such analyses are theories – to be distinguished from the experiential facts of stillness and change. Such theories are not needed to prove the existence of stillness or change – their existence is already established by direct observation at every moment. The mere appearance of stillness and change is enough to justify the concepts of stillness and change, respectively.

It suffices that stillness *seems apparent* to categorically admit it exists; and it suffices that change *seems apparent* to categorically admit it exists. Their justification is pre-conceptual, phenomenological and prior to any epistemological or ontological hypotheses. This is true, even if at a more developed stage of knowledge, we hypothesize that apparently static phenomena are really underlain by change and so essentially illusory, or alternatively that apparently changing phenomena are really underlain by stillness and so essentially illusory.

We have to admit this position; otherwise, we would not be able to explain why or how things at all *appear* as static or as changing.

Thus, though the table I am looking at during this moment is an apparently quite static phenomenon, science tells me that beneath the surface, at more and more microscopic levels, this table is really composed of molecules, made up of vibrating atoms, themselves reducible to subatomic particles in motion, etc. Even while accepting the scientific theory as correct, I must still admit that at the level of my perceptions, the table does appear static. The conceptual knowledge science gives me of the table *does not annul* (but only complements) my perceptual knowledge of it.

Similarly, though I may go on to claim that even more deeply, the changes postulated by science are themselves just some of the movements of a single, universal fabric of being – such ultimate monistic philosophy must not be construed to invalidate the observed fact of changing phenomena at the perceptual level or the conceived fact of change in scientific descriptions of what goes on beneath the surface of static or changing phenomena. Monism is a philosophy, a theoretical construct, intended to explain[57], not erase, the facts of change.

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[57] For example, monism might explain the differences between matter, mind and soul by postulating different degrees or shapes of motion. Viewing the ultimate fabric of existence as resembling a sea – matter might be represented by big waves and currents, mind perhaps by little vibrations, and soul say by rotations. By such analogy, we can roughly imagine how these three "substances" might be quite different yet essentially the same. (This example is not intended to exclude the possibility of other, better models.)

Moreover, if through meditation we eventually arrive at a direct experience of the essential unity and rest of all things, such mystical experience could not be regarded as canceling lower level experiences of change and stillness, or theories about such experiences.

Note too that all the above comments can be repeated with regard to uniformity and variety, peace and conflict, eternity and temporality, and all such basic dualities. At no level of existence or knowledge are the levels above, below or adjacent to be considered as eradicated; they all coexist. All this may seem somewhat paradoxical, but it is the only way to reconcile differences.

15. Impermanence

Man is like a breath; his days are as a passing shadow.

(Ps. 144)

The transience[58] of worldly existence is rightly emphasized by Buddhism; but it is wrongly formulated when it is stated as "everything is transient" (or some similar expression), because "everything" formally includes the statement itself, implying it to be transient too, whereas the statement is intended as a law not subject to change – so there is self-contradiction. The contradiction is avoidable if we just qualify the statement, saying: "everything *in this world* is transient", implying that beyond the domain of material and mental phenomena there is some sort of stability.

The existence of an underlying or transcendental constancy is admitted by Buddhists when they speak of the "original

58 *Anitya* in Sanskrit.

ground of being" or of our having a "Buddha nature" – but they are at the same time doctrinally committed to the idea of universal transience. The latter is a dogma many refuse to budge from, although when pushed to the wall some will admit that there are "two truths" – the truth of transience in this world and the truth of permanence in the world beyond.

That is to say, whereas the world of matter and mind (known through sensory and mental perception) is indeed impermanent, the world of the spirit (known through intuitive consciousness) is free of change.

Consider for example a car. If we scratch the paintwork or change one of its wheels, is it another car or the same car? We would conventionally continue to regard it as "one and the same" car, but add that its paintwork was scratched or its wheel had changed. But if this is true, then if we successively changed all its parts, we would be calling a completely different car "the same" car, even though not one of its parts is still present at the end of the process!

Analysis of this sort shows that there is some absurdity in our naming material – or likewise, mental – objects as if they are constant – although they never are. The question then arises: where should we draw the line? How many changes are compatible with calling the car the "same" individual, and how many force us to call it a "different" individual? Any answer we might propose would obviously be quite arbitrary!

This insight was central to the Buddha's doctrine that phenomenal objects are mere composites without an abiding

essence. There is no "ghost" of a car underlying an apparent individual car, which stays on while the components of the car change (as they inevitably and invariably do). The same is true for any part of the car: e.g. a wheel is itself a mere composite of bits of metal and rubber. There is no concrete phenomenon we can point to and call "the car" or "the wheel". The same can be said of mental objects, i.e. memories, imaginations, anticipations and dreams.

It follows that our naming of material and mental objects is a conventional act, which cannot sustain critical scrutiny. The individual object is *apparently* "the same" moment after moment, because we conceive *a similarity* between our perceptions at successive times. But such similarity is an abstract truth, made possible by our ability to compare perceptions and find some common measures between them. It is not a concrete truth – there is no phenomenal underlying unity. Thus, and in this sense, the appearance of sameness is an illusion and not a reality.

Note, however, that this argument is not entirely convincing. First, because in involves an extrapolation from an epistemological limitation (our inability to perceive an essence) to an ontological assumption (that there is no essence). This is presented as a deduction, whereas it is a mere hypothesis – and inductive logic still allows us to propose the counter-thesis that there is a unity of some sort, provided we adduce more favorable evidence and arguments in its support.

Second, we can point out that in the transition from one composition of the object to another (e.g. a car with a old wheel, then with a new wheel), there is some continuity in the way of *overlap* (i.e. some of the car parts seem unchanged). We could not change *all* the car parts *at once* and call the new construct "the same" car (i.e. the same individual car, even if the kind of car is the same); the past constituents would have to instantly disappear and be "replaced" by a new set of constituents – and even then (if we could prove this had indeed occurred) we would hesitate to call the two incarnations "the same" individual.

This is at least true for matter; that is to say, in our experience of matter we do not encounter complex things that instantly pop in or out of existence, or change into something completely different. This sort of wild behavior is, however, experienced in dreams or daydreams – and the reason why is that in the mental domain we are free to *intend* any one thing to be "identical with" any other thing. Even so, even though mental scenarios are arbitrary, it does not follow that what we thus intend is really equal.

The next question to ask would be: are there or not ***irreducible primaries***, i.e. phenomena (whether material or mental) that are not themselves composed of other phenomena? Some Buddhist philosophers (of the Abhidharma school) have insisted that there must be some initial building blocks (said in Sanskrit to have *svabhaha*,

"own-being" or "self-nature"[59]) from which all other things in the world are constructed; while others (mostly from the Mahayana school) have opted for the idea that there is no end to the subdivision of matter and mind into simpler constituents.

The former opinion may be compared to the atomism[60] of antiquity and early modern science, and the latter to more recent approaches in modern science, which keep going deeper in matter and finding no end to it.

I would like to state that contrary to common claims by its opponents so-called Aristotelian logic does not depend on belief in "essences" for its validity. The term is for a start ambiguous: does it refer to concrete particulars (i.e. irreducible primary phenomena), or to abstractions (i.e.

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[59] I find enervating the way many people keep piously repeating the expression "self-nature" as if it has some clear established meaning. It is far from clearcut, and so cannot even be used as a logical yardstick the way some Buddhists use it.

[60] 'Atom' literally means 'cannot be cut up further'; the word is here being used in a generic sense, not in the specifically material sense intended by Democritus or Dalton. The idea of atomism is that there are irreducible constituents of matter (and eventually, we could add, of mind), whose movements and combinations can be traced to explain all entities and states of the material (and analogously, the mental) world. If atoms had a beginning, they all came into being together; and if they ever have an end, they will all go together; so that, as of when and so long as the world exists, they are effectively unborn, unconditioned and indestructible. This is postulated in support of the hypothesis that atoms, though possibly of different varieties, do not change qualitatively, or increase or decrease quantitatively, but merely move around.

conceived commensurability)? If by essences we mean abstractions, it is clear that logic would be unnecessary and impossible without them. But if we mean concrete prime constituents, the laws of thought are equally applicable whether they are affirmed or denied. They do not prejudice the result of infinite subdivision, but they do clarify some potentially absurd lines of thought.

For one, the infinite subdivision view seems nihilistic if taken to an extreme, and indeed some have taken it that far, inferring that literally nothing (or "emptiness") is at the root of all being. But such an inference is not only paradoxical – it is not justified from the premises. For even if we forever keep finding smaller or simpler constituents, it does not follow that the constituents ever become non-existents. It is a fallacy, like the assumption that infinite divisibility of space ultimately implies subdivisions without extension, or that an infinity of zeros can add up to anything more than zero.

Also, those who claim that you can keep subdividing things, i.e. each phenomenon can be reduced to still finer phenomena ad infinitum, do not realize that this "you can" claim is fantasy and generalization. For, in truth, they do the subdivision *mentally*, and not physically; and they do it a *small number of times*, and not infinitely (which would surely take forever). Emptiness in this sense is not an experience, but at best a rational truth; and it is not even a deductive certainty, but a mere generalization. Thus, emptiness is at best an inductive truth.

To claim emptiness as a sure fact, one would have to be literally and demonstrably *omniscient*, knowing all of physics, chemistry, biology, psychology and everything else in advance of any empirical efforts. One cannot subdivide something if one does not know what to subdivide it into; for instance, to say that white light is a mix of various colors of light, one would need to have experimented with a prism.

Furthermore, emptiness cannot be claimed a one-off *experience*, because it is defined by negation as the absence of "essence" (or "self-nature"). Negation is a basic act of reason; it is not something ever directly experienced, not a positive phenomenon. Thus, to claim that what the Buddha experienced is precisely emptiness, it would be necessary to claim a positive character to emptiness; otherwise, it must be admitted his rational faculty was involved.

Another fallacy involved in this view is the idea that "relationships" are somehow more real than the things (or non-things) they are considered as relating. It is claimed that nothing exists on its own, but everything exists dependently on other things or on everything else (codependence or interdependence theory) – but the relations of causal dependence here referred to seem to be implied to have independent existence! Superficially, due to use of 'solid' words, the dependences of all things on each other seem to provide a support for their alleged emptiness – but if the same analysis is also applied to those relational suppositions, everything is left hanging up without support.

Those who adopt this view do not realize that they are using the word "things" in a way that does not subsume "dependencies" – i.e. in a way not as wide-ranging as it seems. If we examine their outlook closely, we realize that by "things" they mean the concrete objects of experience, i.e. phenomena, while by the "relations" between things they mean abstractions introduced by conception. So ultimately their thesis is that concepts are more "real" than percepts! This is the very opposite of inductive logic, for which phenomenal data precedes and justifies any rational ordering and organization.

A more credible viewpoint, which reconciles the two said theses, is to assume some sort of monism – i.e. that all things are expressions of the same one thing. We need not regard that ultimate matrix of being as literally substantial, as did the alchemists of yore when they spoke of a *prima materia*. On a material level, the idea of an 'ether' (a cosmic fluid of some sort) has been shown untenable by the constancy of the speed of light; and the idea of 'fields' that replaced it is still rather abstract and needing of ontological clarification.

As for the stuff of mind, it might be assumed some kind of rarified matter, or vice versa, but that issue yet needs to be resolved. One problem in proposing this sort of equation is that we commonly believe that "mind" (i.e. the substance of mental objects, like memories, dreams, imaginations and

anticipations) is more dependent on consciousness and its Subject than "matter" is.[61]

In any case, some sort of ultimate unity of all phenomena has to be assumed. In this monist model (as against the pluralist and nihilist hypotheses), the apparent variety and variability of the phenomenal is but an "expression" of the ultimate One[62]. The phenomenal is the surface of being, while the One is its depth. Whatever the mode of existence of that One (be it conceived as spiritual or energetic), it remains constant even as it generates variegated phenomena.

If "all is indeed One", then "all names are falsely divisive" and "all phenomena are interdependent" (or at least all depend on the same common source). Thus, monism ought to

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[61] Material objects seem more independent of their observers than do mental objects, since two or more persons may see the same material object (it is in the public domain) and when one leaves off watching it the other(s) continue to see it; whereas, a mental object is seen by only one person (it is in a private domain) and fails to exist if unseen by that person. While a material object is not apparently a product of any observer or nervous system, a mental object is considered as voluntarily produced by its observer or at least produced by the brain associated with that observer. Note however that in the case of mind, it is not accurate to say that consciousness affects its content – rather, the mental content is produced just prior to its being observed (although such production may necessitate earlier acts of deliberative consciousness). So the "subjectivity" involved is not extreme – there is a mental object somewhat apart from the Subject and his/her consciousness of it.

[62] Such monism is perhaps intended by the Buddhists in their concept of the *dharmakaya*, although if pressed they would likely insist on equating this original ground of being with *sunyata* (emptiness).

be acceptable to the Buddhist philosophers who have the views described above. It is also acceptable to their critics – since we can say that at the level of the One, names are falsely divisive and phenomena are co- or inter-dependent; but at the pluralist level of common phenomena, names are valuable and extreme dependence is misleading.[63]

Be it said in passing, the spiritual expression of belief in monism is equanimity.

[63] This is more or less the Buddhist doctrine of Two Truths, anyway.

16. Buddhist denial of the soul

The same analysis as above can be applied to humans, but only to some extent. If we identify ourselves with our bodily and mental experiences, we come to the conclusion that we are likewise composites empty of essence! Most Buddhists stop there and declare that therefore we have no self. But here they are committing an error, for it is wrong to limit our experience of humans to their material and mental manifestations[64]; we are evidently aware of more than that. Our spiritual experiences must also be taken into consideration – and in that case we must admit that we can become (by a mode of experience we may call apperception or intuition) aware of our "self" (or spirit or soul).

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[64] As previously pointed out: in *Phenomenology*, chapter V, and in *Meditations*, chapter 12, the terms "self", "consciousness" and "mind" are in Buddhism sometimes treated as equivalent, and yet sometimes used with slightly different senses. As a result of such vagueness, wrong theories are proposed and many inconsistencies remain invisible.

In truth, Buddhists agree with this viewpoint when they admit that we are potentially or ultimately all Buddhas[65] – this is effectively an admission of soul, although most would dogmatically refuse that inference. Some say pointblank that there is no soul; but others, prefer to be more cryptic, and say: "there is and is not; and there neither is nor is not"[66]. But logically, these two (or more) postures must be considered equivalent, as their intent is simply that it is wrong to claim that soul exists.

But let us insist – our bodies and minds are composites and impermanent, like cars or dreams, but we differ in that we

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[65] I give you one example (though I have come across many). S. Suzuki writes: "So it is absolutely necessary for everyone to believe in nothing. But I do not mean voidness… This is called Buddha nature, or Buddha himself" (p. 117.)

[66] To be fair, see Mu Soeng p. 125. According to that (excellent) commentator, the *anatman* doctrine was never intended as "a metaphysical statement" but as "a therapeutic device". As he tells it: "The Buddha responded to the Brahmanical formulation of a permanent entity, the self or atman, with silence, without taking a position either for or against." Logically, this would imply Buddhism to consider the issue of self to be merely *problematic*, neither affirming nor denying such a thing. However, in my own readings of Buddhist texts, I have more often than not read an assertoric *denial* of self, or a "both yes and no, and/or neither yes nor no" salad, rather than merely an avoidance of the issue of self. Another comment worth my making here: the idea of a self ought not to be identified with the Brahmanical idea of a *permanent* self; the latter is a more specific idea than the former, and denial of the latter does not logically entail denial of the former. I support the idea of an *impermanent* individual self, assigning permanence only to the universal self (i.e. the transcendent, or God). These (and many other) nuances should not be glossed over.

have a relatively abiding self. (I say "relatively abiding" to stress that the individual soul need not be considered absolutely eternal, although the common source of all spiritual substance – which many of us identify with God[67] – is necessarily absolutely eternal.)

By self (or spirit or soul), we mean *the Subject of consciousness* (i.e. the "person" experiencing, cognizing, perceiving, conceiving, knowing, etc.) and *the Agent of volition and valuation* (i.e. the "person" who wishes, wills, values, etc.). Note well this definition, which is often ignored by those who deny the self's existence.

A machine, computer or robot has no self – we (humans, and at least higher animals) evidently do: we all well know that we do. This self that we know is not our ego (a collection of aspects of our body and mind), though most of us do tend to confuse our self with our ego.

The self we know is manifest in our every act of cognition, volition or valuation, as the one engaged in that act. Although it is non-phenomenal, we are quite able to be aware of it. Although non-phenomenal, the self relates to phenomena (to those of its own body and mind, as well as to those further afield) either as their witness (i.e. through cognition), or by being affected by them or (when cognizing them) influenced by them, or by affecting them (through volition). But, though

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[67] See reasons for this in my *Meditations*, chapter 8.

thus related to phenomena to various degrees, it is not identical with them and not to be identified with them.

The Buddhist denial of self is presented as empirical: one's own bodily and mental experience is carefully examined, and nothing but passing phenomena are observed in it. But my contention is that such analysis is based on incomplete data – it does not take into account the intuitive self-awareness of the Subject and Agent. The self is willfully ignored in the way of a prejudice, rather than denied as a result of dispassionate observation. The non-self is not here a conclusion, but a premise – a dogma, an ideology.

Moreover, it must be stressed that the negation of any term (whether the term 'self' or any other) cannot logically be purely empirical. We never perceive a negative, we only search for and fail to perceive the corresponding positive, and thence *inductively* 'infer' that the thing negated is absent. This conclusion is not necessarily final – it is a hypothesis that may be later overturned if new data is encountered that belies it, or even if an alternative hypothesis is found more frequently supported by the evidence.

Thus, the non-self cannot be – as Buddhism presents it – a purely empirical product of deep meditation; according to logic, its negativity makes it necessarily a *rational* construct. It is therefore not an absolute truth of any sort – but a mere generalization from "I diligently searched, but did not so far find a self" to "no self was there to be found". It is not perceptual, but *conceptual* – it is a thesis like any other open

to doubt and debate, and requiring proof (in the inductive sense, at least). If no inconsistency is found in its counter-thesis, the idea of a self may also legitimately be upheld.

Thus, even though we may admit that the body and mind are devoid of essence(s), we can still claim that there is a soul. The soul is not meant to be the essence of the phenomena of body and mind, but a distinct non-phenomenal entity housed in, intersecting or housing[68] these phenomena in some way. Body and mind merely constitute the soul's mundane playground, i.e. a particular domain of the world over which that individual soul[69] has special powers of consciousness and volition.

This view agrees with the proponents of emptiness at least in the insight that the self is not to be confused with body and mind. Also, the fact that the soul is non-phenomenal, i.e. neither a material nor a mental entity, does not logically exclude that it too be "empty" of essence, of course. But, whereas they go on to claim that the self does not exist, we

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[68] We tend to view the soul as a small thing, something somewhere in the body or at best coextensive with it. But we should at least conceive the possibility of the opposite idea – viz. that the soul is enormous in comparison with the body, i.e. that the body is a small mark within the soul or a minor appendage to it. Our view of their relative size is, in truth, a function of the relative importance we attach to them, i.e. how frequently we focus our interest on the one or the other.

[69] Or individuated soul. I say this to stress that the individual soul may be considered as artificial subdivision of the universal soul (or God, in Judaic terms).

would insist that even if (or even though) the individual soul is empty, it evidently exists – just as body and mind evidently exist whatever we say about them.[70]

It is in any case patently absurd to say or imply, as the Buddhists do, that *a non-existent* can think that it exists and (upon enlightenment) realize that it does not exist! A non-existent cannot think or realize anything; it is not an entity or a thing – it is nothing at all, it is not. An existent, on the other hand, can well (as these existing Buddhists do) think that it does not exist and other such nonsense! There is no logic in the no-self viewpoint.

The non-self idea may be viewed as supportive of materialism (in a large sense of the term, which includes mental phenomena as within the domain of matter). That is why many people today find it appealing: eager to reject the demands and constraints of the ethics of monotheistic religion, yet wishing to retain or introduce some spirituality in their lives, they embrace soul denial.

All this is not intended to deny the crucial importance of *self-effacement* in meditation and more broadly in the course of spiritual development. I would certainly agree with Buddhist teaching that the self at some stage becomes an impediment

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[70] In my view, whatever even just but appears to exist does indeed exist (if only in the way of appearance). Is it real or illusory, though? Those characterizations are open to discussion, and depend on a great many logical factors.

to enlightenment and must be effectively forgotten to contemplate things as they are.[71]

But to my mind, the non-self thesis need not be taken literally. I think Buddhists formulated it as an *upaya*, a skillful means[72], to facilitate forgetting the self. It is easier to forget what one believes does not exist, than to forget what one believes does exist. As far as I see (at my present stage of development), though disbelief in the self has some practical advantages, there is insufficient theoretical justification for such a doctrine.

We colloquially say that our mind is "empty" when our mind-space is for a while without feelings or thoughts, as occasionally happens quite naturally. In that state of mind, we are generally less distracted, and can observe whatever presents itself to us without interfering in the presentation. Sometimes, that commonplace empty-mindedness is experienced rather as a sort of momentary detachment or even alienation from the world around us, as when our eyes become unfocused and just stare out without seeing anything.

The Buddhist sense of the word emptiness is of course much more complex than that, though not totally unrelated. When

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[71] Judaism agrees with this epistemological and ethical posture, as evidenced for instance by this statement of the Baal Shem Tov: "Before you can find God, you must lose yourself". (From *A Treasury of Jewish Quotations.*)

[72] Ultimately, Buddhism is not interested in descriptive philosophy; what concerns it is to liberate us spiritually. If an idea is effective as a means to that end, it is taught.

applied objectively, to things beyond or within the mind, it signifies that they are viewed without recourse to superimposed categories or hypotheses. Applied subjectively, the implication of the term is that the self is an illusion of consciousness, i.e. that our apperception of a cognizing soul is likewise a merely superimposed idea.

But is this Buddhist claim to be taken on faith, or do they manage to prove it incontrovertibly in any way? The mere fact that this doctrine was once proclaimed, and is claimed again by many authorities throughout the centuries, does not in itself make it a certain truth. We must be permitted to doubt it, and ask questions about it, and raise objections to it – without being accused of being heretics or morons.

17. The status of sense perceptions

I would like here to explore some more aspects of the controversy between Materialism and Mentalism[73]. Note that both views are here taken to acknowledge mental phenomena: the mentalist (or mind-only) view accepts mental phenomena to the exclusion of material ones, whereas the materialist view (as here understood[74]) accepts material phenomena without excluding mental ones from the world

[73] See also earlier comments of mine on this issue, in *Future Logic* (chapters 60-62), *Buddhist Illogic* (chapters 4 and 5), *Phenomenology* (chapters I-IV), *Ruminations* (chapter 2, Sections 16 and 17), and *Meditations* (chapter 32).

[74] I simply ignore the "matter-only" hypothesis, known as Behaviorism in modern philosophy and psychology, because that hypothesis is clearly unscientific, since it deliberately ignores all mental phenomena, treating them as non-existent (and not merely as rarified forms of matter). Mental phenomena are phenomenological givens, and cannot be just waved-off as irrelevant. That we cannot to date materially detect and measure them does not justify a materialists thesis, since this would constitute a circular argument.

(though it circumscribes their occurrence in "minds" like ours).

Is sense perception objective (and therefore valid) or subjective (and therefore invalid)? That is, is the world we perceive apparently through our sense organs material, or is it as mental as the phenomena we project in our imaginations? Most people, including most scientists and philosophers, accept things as they seem at the outset, and opt for the materialist thesis. But some philosophers, like George Berkeley in the West or the Yogacara School in the East, would argue that this 'common-sense' conclusion is rushed, and prefer the mentalist alternative.

The latter suggest that the whole notion of sense-organs is flawed, because if we suppose that there is a cognizing entity enclosed in a physical body with organs of sensation, through which information of other physical bodies beyond is obtained, the information actually cognized by the subject-entity is not the *physical objects* supposedly in contact with the sensory receptors, but *mental products* of such supposed objects at the other extremity of the process of sensation, i.e. directly opposite the one cognizing.

If, then, what we actually perceive are not physical objects but assumed mental products of them – it follows that all our actual objects of perception are all mental and none are material. That is, even our apparent body (including the sense organs it seems to contain) is effectively a mere mental phenomenon; and there is also no reason to suppose that the

material world apparently beyond them is anything but mental.

That is, concluding this line of argument, the very distinction between mental and material must be abandoned as a silly idea, and only mental objects admitted as real. Phenomena ordinarily classed as material are just as mental as imaginings (though perhaps less readily controlled). Their appearance is real enough, but their materiality is illusory. Thus, materialism is a naïve philosophy, and mentalism is the correct doctrine.

I have in the past always argued that this skeptical argument is logically *self-contradictory*, because it starts with an assumption that the body and its sense organs exist in a material sense, and ends with the conclusion that there are no such material body and sense organs. A conclusion cannot contradict the premise(s) it is drawn from – so this argument must itself be logically flawed.

But now it occurs to me that this counter-argument of mine might be unfair, and I wish to review it. It occurs to me that it is formally acceptable for a conclusion to contradict its premise(s) – this is just what (single) paradoxical propositions mean. A proposition of the form "If P, then not P" is logically quite legitimate (if not accompanied by a second proposition of the form "If not P, then P", for in such case we have an insoluble double paradox, i.e. a

contradiction). The logical conclusion of "If P, then not P" (alone[75]) is the categorical proposition "Not P".

In the case under scrutiny, the premise P is "there is a material body with sense organs" and the conclusion NotP is "there is no such thing" – and such inference is quite thinkable, quite legitimate according to the laws of thought. That is, rather than view the argument presented by the skeptics as self-defeating, we might suggest that they have shown materialism to be inherently paradoxical and thus self-contradictory, and rightly concluded mentalism to be the only internally consistent thesis of the two!

However, I have seen through this line of argument from the start, when I contended, in my *Future Logic* (chapter 62), that the solution to this conundrum was to deny the idea that what we perceive, when we seem to perceive material objects through the senses, are mental images of such material objects. I believe this is the error of conception regarding the nature of sense perception, which is logically bound to result in skepticism. John Locke made this error, and David Hume was quick to spot it (though he could not correct it).[76]

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[75] I.e. only in conjunction with "If not P, not-then P".

[76] Incidentally, in the Western philosophy of the Enlightenment (not to confuse this label with the Buddhist sense of ultimate knowledge, of course), the word "sensation" was used too vaguely. No great distinction was made between touch, smell and taste sensations, on the one hand, and visual and auditory sensations, on the other.
[Note that we linguistically tend to relate the touch, smell and taste senses. Thus, in English, 'feeling' may refer to touch-sensations

Locke was well intentioned, intent on justifying common sense; but his scenario was imperfectly conceived, and sure to lead to Berkeley's radical conclusion. However, there is a logical way out of the difficulty – and that is to conceive the sense organs as somehow allowing us to perceive the material objects *themselves*, or (more precisely) at least certain aspects of them, rather than only some mental

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(including hot and cold tastes), sensations of bodily functions (digestive, sexual, etc.), visceral sentiments (in body, of mental origin), or vaguely mental emotions; and 'sensing' may refer to physical sensations, or vague mental suspicions. Also, in French, the word '*sentir*' corresponds not only to the words 'to feel' and 'to sense', but also to 'to smell' (whence the English word 'scent').]

Yet, the three former sensations are far more easily misinterpreted than the latter two. E.g. it is far more difficult for us humans to identify someone based on touch, smell or taste sensations, than on visual or auditory sensations. By this I mean that touch sensations (etc.) usually tell us of a condition *of our own body caused by some other body external to it*, whereas sights and sounds are *aspects of the external object itself* that we (the Subject) somehow perceive. At least, this is the way things seem to us at first sight. We must still, of course, move from such Naïve Realism to a more Subtle Realism. In any case, each mode of sensation has its value, and they should not all be lumped together.

By the way, another vague term in this school has been "ideas". This term tends to have been used indiscriminately, sometimes applied to perceptual memories, or again to visual or auditory projections, and sometimes applied to conceptual constructs, whether or not verbal. Yet, these different mental 'entities' have very different significances in the formation of knowledge. Clearly, relatively empirical data has more weight than more abstract productions. Making distinctions between different sorts of "sensations" and "ideas" is very important if we want to accurately evaluate the constituents of knowledge.

products of them. If you reflect, you will realize that this is what we ordinarily assume we are doing when we perceive the world seemingly around us.

This is of course a hard scenario to explain, but it provides a possible justification for materialism (a self-consistent, non-naïve version), and thus an effective defense against the skeptical conclusion of mentalism. In this manner, the paradox inherent in naïve materialism is not ignored or denied, and yet the mentalist conclusion is not drawn from it, because a third thesis is proposed.

This third thesis is that sensation, rather than implying indirect perception, makes possible **direct perception** (*perhaps by producing some sort of physical structure in the brain serving as a passageway for the Subject's consciousness to get in direct contact with the object sensed*). This thesis is not, by its mere formulation, definitively proved, note well; but at least it serves to put the mentalist doctrine in doubt.

We are in this manner provided with two competing hypotheses, both of which seemingly equally account for experience; and the question of materiality versus mentality of the objects of certain perceptions is thus reopened. The issue is turned from a deductive one (favoring mentalism) to an inductive one (in which both doctrines are at least equally conceivable).

I thereafter posit further argumentation to show the reasonableness of the common sense (materialist) view. Since

the matter-mind distinction is itself based on that view, it cannot be used by mentalists to declare all objects mental rather than material. Given their view, no such distinction would arise in the first place, and we would have no understanding of the different intentions of these two words.

Moreover, I have suggested that the distinction might be phenomenologically explicable, by saying that mental phenomena are merely visual and/or auditory, but lack other phenomenal qualities. Mental phenomena correspond to those experienced through sight and hearing, whereas touch, smell and taste sensations seem to have no equivalent forms in the mind. Our memories can recognize them, but they seemingly cannot reproduce them.

In other words, we perhaps recognize materiality by virtue of touch[77], smell and taste sensations, granting that the mental domain lacks these specific phenomenal modalities. Visual and auditory phenomena are ambiguous, i.e. they might be material or mental; but (I tentatively suggest) the other modalities are distinctively material.

An explanation for this may be that the senses of touch, smell and taste are biologically more basic, while those of sight and

[77] Especially touch. Note how one sense of the term 'substantiality' is the hardness of a material object in reaction to touch. Solids are most substantial, resisting all pressure. By contrast, in view of their yielding, liquids are somewhat less substantial, and gases least of all. But all states of matter are also known to some extent through other sensations, like heat and cold, etc.

hearing occur further up the evolutionary scale. The former are more qualitative and pleasure-pain related, applicable to any sentient being, whereas the latter are more spatial and temporal, implying a more complex form of life.

It is also important to note that mentalists consider consciousness of mental objects as needing less explanation than consciousness of material objects. To them, knowledge through the senses is hard to explain, in view of the distance of the knowing subject from such objects; whereas, mental objects are more knowable because closer to us. Or if it is not an issue of distance to them, perhaps they consider that the knower is of the same substance as mental objects.

But we must realize that consciousness of mental objects is just as marvelous, mysterious and miraculous as consciousness of physical objects.

To regard mental objects as of the same stuff as the knowing self (because we colloquially lump these things together as constituents of the 'mind' or psyche) is an error. Mental objects like memories, imaginations or ideas are not themselves conscious: they are always objects, never subjects of consciousness; therefore they cannot be essentially equated to the soul that knows them.

As for distance: on what basis are physical objects regarded as further afield than mental objects? Such spatial considerations are only possible if we locate the soul in a continuum including mental and material objects. But in truth, we do not strictly believe in a continuum common to

both mental and material objects, although some mental projections (hallucinations) do sometimes seem to inhabit the same space as physical things. Furthermore, we do not know the exact 'place' of the soul: is it in the heart or in the brain or coterminous with the body or outside it – or is it in some other dimension of being altogether?

It should be added that consciousness of oneself, i.e. the intuition of self by self, is essentially no different from these two kinds of consciousness: only *the objects* differ in the three cases. That is, whether the objects are mental, material or spiritual in 'substance', consciousness is still one and the same sort of special relation. The same reflection also applies to eventual 'transcendental' consciousness, i.e. consciousness of God or of the Ultimate Ground of Being – this is still consciousness. Whatever the kind of object involved, consciousness remains marvelous, mysterious and miraculous.

Thus, asserting mentalism instead of materialism is not as significant for the theory of knowledge as might at first sight seem. The apparent gain in credibility in such change of paradigm dissolves once we pay attention to the question: but what is consciousness?

18. The status of dreams and daydreams

Do we logically need to have some absolute frame of reference to compare all others to, in order to claim that some frame of reference is relative? If that were the case, Einstein's theory on the relativity of space-time would be unthinkable. He could not claim all frameworks are relative. But he is not making such a claim by *deduction* from some privileged vantage point of his. What he is saying, rather, is that (because of the same measurement of the velocity of light in all directions) we cannot establish an absolute framework, and so we are condemned to viewing every framework we use as relative. This is an *inductive* argument, involving generalization from existing empirical knowledge.

It remains conceivable that, at some future time, scientists discover some other physical means to establish an absolute frame of reference. The same reasoning can be applied to Heisenberg's principle concerning the impossibility of

identifying precisely and simultaneously the position and momentum of an elementary particle. This too is a theoretical principle built on practical considerations. It is based on a generalization of negation from "is not found" to "cannot be found" – but it remains conceivable, however remotely, that such a rule be abrogated in the future, if we find some other way to make the measurements required.

These examples within physical science can help us to inform an issue within metaphysics. Can we logically assert as do some philosophers that "everything is illusory" (or "awake experience is only a dream" or other similar skeptical statements). At first sight, a statement like "everything is illusory" is self-contradictory, and therefore definitively false, since "everything" formally must include the statement itself, which is thereby declared illusory. However, let us try and approach the issue in less deductive terms, and view the statement as a product of induction.

We can call an experience a dream because we have some other experience to refer to, which we consider non-dreamy. Usually, we realize *after* we wake up: "Oh, I was only dreaming". Exceptionally, it happens that we become aware *during* a dream that we are dreaming, and we can even force ourselves to awaken from within the dream (I have certainly experienced this several times). In either case, we characterize our asleep experience as "dream" only because we have memory of an alternative, awake experience. The

very concept of a dream would seem to rely on such comparison.

Or does it? In comparing awake and asleep experience, we postulate that the former is more real than the latter, and thereby classify the former as "real" and the latter as "illusory". But what is the basis of such discrimination? Approaching the issue without prejudice, we might argue that (to begin with, at least) the two sets of experience are on equal footing (in terms of the reality vs. illusion distinction), i.e. that there is no reason to give precedence to the one over the other. Phenomenologically, they are of equal value, or status. We cannot tell which is more real or more illusory than the other, and therefore must conclude that both are equally unsure.

A good argument in favor of this view is the observation that most dreams seem credible enough to us while we are having them. This just goes to show *our native credulity*, how easily we tend to believe experiences. Seeing how foolishly credulous we are while asleep, we may well wonder whether our credulity while awake is just as silly, and get to think that our apparent life is perhaps a dream too.

This is perhaps the intended meaning of statements like "all is illusion" – they suggest our incapacity to find some absolute frame of reference we can label "reality". But the reply to such objection would be the following. Contrary to what some philosophers claim, we do not in fact, in practice, label some parts of experience "reality" and relegate others to

the status of "illusion" with certainty and finality. Such judgments are not absolute, but open to change using inductive reasoning.

The basic principle of induction is that every appearance is to be regarded as 'reality' *until and unless*, i.e. until if ever, conflicts between certain appearances, or between certain appearances and logical considerations, force us to relegate the appearance concerned to the status of 'illusion'.

We have no way to tell the difference between reality and illusion at first sight. We do not dish out the labels of reality or illusion from some privileged, neutral standpoint, but start with the assumption that everything we (seem to) experience is real, and only refer to some such experiences as illusory in the way of a last resort. And even then, later evidence or reasoning may make us change our minds, and decide that what seemed illusory was real and what seemed real was illusory.

The distinction between these two characterizations of appearance is thus essentially a holistic, hypothetical conclusion, rather than a point-blank premise. The more data we take into consideration in forming such judgments, the more certain they become. The initial assumption is that an appearance is real. But the initial credibility is still conditional, in that it has to be confirmed and never infirmed thenceforth.

This is obvious, because all we have to build our knowledge on are our experiences (physical, mental or non-phenomenal)

and our rational faculty (for sorting out the experiences). We have givens and a method, but we still have to work our way to certainty, through a long, largely inductive process.

At first (naïvely), appearance, existence and reality are all one and the same to us. Gradually (with increased subtlety), we distinguish appearances as existents that have been cognized, and realities as appearances that have stood the test of time with regard to consistency with other experiences and with logical issues. Illusions are appearances that have failed in some test or other.

Comparison and contrast are involved in distinguishing awake and dream experiences. Because the former seem more solid and regular than the latter, we label the former "real life" and the latter "dream". Both sets of experience have to be considered before we can make this classification, and it is such perceived characteristics *apparent within them* that lead us to this rational judgment. Thus, the way remains open for further evaluation at some future time – for example, if we encounter some third corpus of experience that seems still more real than the previous two.

This is the claim of mysticism – that there exists yet a higher reality, relative to which (when we reach it through prophesy, meditation or other means) ordinary experience seems but like a mere dream (note the language of analogy). It is in that context that it becomes perfectly legitimate to say: "all is illusion", meaning more precisely "all *that is in ordinary experience* is illusory", i.e. in comparison to all that is in

extraordinary experience. The proposition is logically self-consistent, because it is not as general in intent as it seems to be in its brief verbal formulation.

Of course, according to inductive logic, if someone had *only* the experience we call dreaming, he would have to regard that experience as reality. Likewise, someone who has never had a mystical experience is duty-bound to assume that his ordinary awake experience is reality.

It follows that only someone who has personally experienced some third, radically different, experiential content may legitimately claim that our ordinary experience is akin to a dream. Someone who thereafter repeats the same claim *without* having himself had the corresponding extraordinary experience is just expressing his (religious) faith. The epistemological status of such faith is not nil, but it is not equivalent to that involved in personal experience. It is a tentative belief, an act of hope (or fear), based indirectly on someone else's *reported* experience – but not a belief based directly on one's own experience.

Note that even without referring to any mystical experience, it is not inaccurate to say that most of our awake experience is tantamount to dreaming. For what is dreaming while asleep? A series of mental projections; the invention of fanciful scenarios. And in truth, this is just what most of us pass most of our time doing while awake: we project mental images or sounds, viewing data either directly drawn from our memory banks or indirectly derived by reshuffling such

memories. So we can rightly be said to be dreaming, even if we call it daydreaming.

In the last analysis, the only times we are *not* dreaming are those rare moments when we are actually fully absorbed in *the here and now* of direct experience!

However, according to those who claim to have had mystical experience of some transcendental reality, even this 'here and now' (made up of material and/or mental phenomena) ought to be regarded as dreaming. The latter statement is as radically metaphysical or transcendental as it can be, postulating all phenomenal experience to be dreamlike. In this view, dreams asleep are phantasms within a larger dream, and awake experience is also part of that larger dream.

People naïvely point to their apparently physical body in support of their claim to material reality, but so doing they fail to consider that when they dream while asleep they are usually represented in their dream by a mental image of a body. If this imaginary body seems credible to them while dreaming asleep, why might the apparently physical body experienced while awake not likewise wrongly seem credible?

Materiality, and its distinction from mentality, must ultimately be understood as a conceptual hypothesis, which we may philosophically adopt because it orders our world of experience (whatever its nature or status) in an intelligent and consistent manner. It is not an axiom, an ontological primary,

but an organizing principle open to doubt, which we commonly favor because of its ongoing intellectual and practical utility and success.

19. The status of conceptions

The **concept** of some thing(s), call it X, is *the sum total of all observations, beliefs, thoughts, inductively or deductively proven items of knowledge, opinions, imaginations, we (as individuals or collectively) have accumulated across time relative to* the thing(s) concerned – call these cognitive events or intentions: A, B, C, D, etc. Note well that the tag "X" refers to the objects X, intended by the concept of X, not to the mental apparatus or idea through which we know or think we know those objects.

Although we colloquially say that X "contains" A, B, C, D…, a concept is not to be thought of as a vessel containing a number of relevant mental entities, like a basket containing apples and oranges. It is best thought of as a collection of arrows pointing to various perceived phenomena, objects of intuitions, and related abstractions, which all together influence our overall idea of X. Our concept of X (an individual or kind) is our collection of beliefs about it.

The concept of X should not be thought of as equal specifically to its definition (as Kantians do), and still less to the name "X" (as Nominalists do). The name is just a physical or at least mental tag or label, allowing us to more easily focus on the concept, or more precisely on its contents (i.e. the objects intended by it). As for the definition, it is not the whole of X, but consists of some *exclusive and universal characteristic(s)* of X (say, A) among others (viz. B, C, D, etc., which may also be distinctive and always present, or not). One aspect is selected as defining, because it is helpful for complex thinking processes to do so. Definition is thus something both empirical and rational.

The definition "X is A" is therefore not a tautology, but holds information. Two propositions are involved in it: the predication that "X is A" and the claim that "A is the definition of X". The latter is an *additional* proposition; it implies the former, but not vice versa. We may know that X is A, while not yet thinking or while wrongly thinking that A is the best definition of X. Our idea of X would be equal to A if all we knew or thought about X was A; this is clearly very unlikely a scenario, though such paucity of information is theoretically conceivable. In practice, our idea of X includes much more, viz. B, C, D, etc.

We do not get the concept of man through the definition "rational animal", but through cumulative *experience* of men. The definition is only a later proposition, by means of which we try to find the essence of manhood – or at least, men. The

proposed definition is itself a product of experience and not some *a priori* or arbitrary concoction. We may for a long time have a vague concept of X, without having found an adequate definition for it. When we do find a definition, it is not necessarily final. It is a hypothesis. It could turn out to be inadequate (for instance, if some rational animals were found on other planets), in which case some further differentia or some entirely new definition of man would need to be proposed.

Note in passing that **tautology** occurs when the predicate is already wholly *explicitly* mentioned in the subject, or the consequent in the antecedent. Thus, "X is X", "XY is Y", "if X, then X", "if X + Y, then Y" are all tautologies. It does not follow that such propositions are considered by logic as necessarily *true*. Their truth depends on the actual existence of the subject or truth of the antecedent. For it is clear that the latter may be merely imaginary or hypothetical, as for example in "unicorns have one horn". Thus, tautology is not proof of truth.

Clearly, too, a definition like "man is a rational animal" is not tautologous in the strict sense. Some nevertheless consider definition as an implicit sort of tautology, by extending the concept. Those who do so do so because they think that the concept defined is identical to its definition. This I of course do not agree with, for reasons already stated. Even so, note that if tautology is not proof of truth in the case of explicit

tautologies, as just explained, the same follows all the more in the case of implicit ones.

Through definition, we try to identify the '**essences**' of things. The essence of some concrete thing(s) is rarely if ever itself something concrete, i.e. empirically evident. In most or all cases, essences are *abstractions*. We cannot produce a single mental image or Platonic Idea of man that would represent or reflect all individual men. We just point in the general direction of the notion of manhood by defining men as rational animals, but we cannot concretize it. The constituent terms 'rational' and 'animal' are themselves in turn just as or more abstract. This important insight can best be seen with reference to geometrical concepts.

In the concept of triangle, all possible physical or imagined triangles are included, those already seen and those yet to be seen, and all their apparent properties and interrelationships. If I ask you what the essence of a triangle is, you are likely to imagine and draw a particular triangle. But this is not the essence; it is *an example* – a mere instance. There is no one concrete triangle that contains all possible triangles. The essence of triangularity does not concretely exist; it is just an abstraction, a verbal or intentional contraption. That is to say, we mean by the 'essence' of a triangle, "***whatever happens to be distinctively in common to all*** triangles" – but we know we cannot mentally or physically produce such an entity.

The essence in such cases is thus just something pointed to in the foggy distance. We cannot actually produce it, but only at

best a particular triangle. We can of course define the triangle in words as "a geometrical figure composed of three lines that meet at their extremities", or the like. But such verbal definition still hides the concept of 'line', which in turn cannot be concretized except by example; it just passes the buck on. It reduces the problem (of triangular essence) to another problem (that of linear essence), but it does not really solve it. This is perhaps why many logicians and philosophers opt for Nominalism. But we should not allow it to lead us to skepticism.

Rational knowledge is built on the assumption that particulars that *seem to us to have* "something distinctively in common" *do indeed have* something distinctively in common. We extrapolate from appearance to reality, at least hypothetically – i.e. on the understanding that if ever we find some specific observation or logical reason that demands it, we will reclassify the appearance as an illusion instead. This practice is nothing other than *an application of the principle of induction* to the issue of conceptualization. It is logically impossible to argue against this principle without explicitly or implicitly relying on it, since all such argument is itself ultimately inductive. Likewise, being itself conceptual, any putative theory against our belief in abstracts is easily discredited and dismissed.

The essence of an individual is what is conceived as abiding in it through all possible changes; the essence of a kind is that which is conceived has shared by all its possible instances of

it. Moreover, in either case, the essence must be found in that thing or kind of thing, and in no other. But though we cannot usually if ever empirically point to anything that fits this definition of essence, we assume each thing or kind to have such a core, *because otherwise we could not recognize it as one and the same* thing or kind. We rely for this assumption on our faculty of insight into similarities and differences. Through such insight, we 'point towards' an essence – though we do not actually experience such essence.

Since the similar things (the individual at different times or the scattered instances of the kind) seem to point *in the same direction*, we infer by extrapolation that they are pointing *at something* in common (the apparent essence). This constitutes a reification of sorts – not into something concrete, but into something "abstract". There is thus some truth in what Buddhist philosophers say, namely that essences are "empty". However, we should not like some of them draw the negative conclusion that essences "do not really exist" from this emptiness. For we can, as already mentioned, rely on the principle of induction to justify our inference. Provided we do not confuse abstract existence with concrete existence, we commit no error thereby.

We may call such cognition of essences *conception or conceptual insight*. This implies that just as we have cognitive faculties of perception of phenomenal concretes and intuition of non-phenomenal concretes, so we have a cognitive faculty of conception through which we 'see' the

similarities and differences between objects. Such insight is not, note well, claimed to be always true – it may well be false *sometimes*, but it cannot be declared always false without self-contradiction. Its veracity in principle is verified by the principle of induction, in exactly the same way as the veracity of experience is in principle verified. That is to say, we may assume in any given case such conceptual insight true, until and unless it there is experiential or rational cause to regard it as false.

It is very important to understand all this, for all rational knowledge depends on it.

20. The laws of thought in meditation

The three laws of thought are commonly considered by many current commentators[78] to be (at best) only relevant to rational discourse, and not relevant at all or even antithetical to meditation and all the more so to its finale of enlightenment. Nothing could be further from the truth, as will now be explicated.

The laws of thought are principally 'moral' imperatives to the thinker, enjoining him or her to have certain cognitive attitudes in all processes of thought. They call upon the thinker to make an effort, so as to guarantee maximum efficiency and accuracy of his or her thoughts. The 'metaphysical' aspect of the laws of thought is a substratum and outcome of this practical aspect.[79]

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78 Judging by Internet postings and debate on this topic.

79 It could also be said that the two aspects are 'co-emergent', mutually significant and equally important. But here I wish to stress the psychological side of the issue.

1. **The law of identity** is a general stance of 'realism'.

   In *discursive thought*, this means: to face facts; to observe and think about them; to admit the factuality of appearances as such and that of logical arguments relating to them; to accept the way things are (or at least the way they seem to be for now), that things are as they are, i.e. whatever they happen to be; and so on.

   Clearly, these same cognitive virtues are equally applicable to *meditation practice*, which requires **awareness**, receptivity and lucidity. The antitheses of these attitudes are evasiveness, prejudice and obscurantism, resulting in "sloth and torpor"[80].

   At the apogee of meditation, in the *enlightenment* experience, this is expressed as (reportedly) consciousness of the "thus-ness" (or "such-ness") of "ultimate reality".

2. **The law of non-contradiction** is a general stance of 'coherence' (which is an aspect of 'realism').

   In *discursive thought*, this means: while giving initial credence to all appearances taken singly, not to accept two conflicting appearances as both true (or real), but to place one or both of them in the category of falsehood (or illusion); to seek to resolve or transcend all apparent contradictions; to pursue consistency in one's concepts

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[80] See Kamalashila, p. 253.

and theories; to reject inconsistent ideas as absurd and self-contradictions as untenable nonsense; and so on.

Clearly, these same cognitive virtues are equally applicable to *meditation practice*, which requires **harmony**, balance and peace of mind. The antitheses of these attitudes are conflict, confusion and neurosis (or madness), resulting in "restlessness and anxiety"[81].

At the peak of meditation, in the *enlightenment* experience, this is expressed as (reportedly) the "one-ness" (monism or monotheism) of "ultimate reality".

3. **The law of the excluded middle** is a general stance of 'curiosity' (which is also an aspect of 'realism').

   In *discursive thought*, this means: engaging in research and study, so as to fill gaps in one's knowledge and extend its frontier; engaging in speculation and theorizing, but always under the supervision and guidance of rationality; avoiding fanciful escapes from reality, distorting facts and lying to oneself and/or others; accepting the need to eventually make definite choices and firm decisions; and so on.

   Clearly, these same cognitive virtues are equally applicable to *meditation practice*, which requires **clarity**, judgment and understanding. The antitheses of these

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81 See Kamalashila, p. 249.

> attitudes are ignorance, uncertainty and delusion, resulting in "doubt and indecision"[82].
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> At the pinnacle of meditation, in the *enlightenment* experience, this is expressed as (reportedly) the "omniscience" of "ultimate reality".

Thus, I submit, rather than abandon the laws of thought when we step up from ordinary thinking to meditation, and from that to enlightenment, we should stick to them, while allowing that they are expressed somewhat differently at each spiritual stage. Whereas in discursive thought awareness is expressed by intellectual activity, in meditation the approach is gentler and subtler, and in enlightenment we attain pure contemplation.

When such final realization is reached[83], the laws of thought are not breached, but made most evident. "Thus-ness" is the essence of existence; it is the deepest stratum of identity, not an absence of all identity. "One-ness" is not coexistence or merging of opposites, but where all oppositions are dissolved or transcended. "Omniscience" is not in denial of ordinary experience and knowledge, but their fullest expression and understanding. What in lower planes of being and knowing

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82 See Kamalashila, p. 258.

83 I submit, on the basis of my own limited experience, but also out of logical expectation of consistency between all levels of being. I think many people more knowledgeable than me would agree with the descriptions here given of the higher realms.

seems obscure, divergent and uncertain, becomes perfect at the highest level.[84]

Those teachers or commentators who claim that the laws of thought are abrogated once we transcend ordinary discourse are simply misinterpreting their experiences. Either their experience is not true "realization", or their particular interpretation of their realization experience is just an erroneous afterthought that should not be viewed as part of the experience itself.

Instead of the laws of identity, non-contradiction and exclusion of any middle, they propose *a law of non-identity, a law of contradiction, and a law of the included middles!* According to them, the ultimate reality is that nothing has an identity, all contradictories coexist quite harmoniously, and there may be other alternatives besides a thing and its negation!

They adduce as proofs the Buddhist principles of non-selfhood, impermanence and interdependence.

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[84] Buddhist, and especially Mahayana, philosophers often stress that nirvana (the common ground of all being) and samsara (the multiplicity of changing appearances) are ultimately one and the same. Even while admitting this, we must remain aware of their apparent difference. The whole point of the philosophical idea of monism ("nirvana") is of course to resolve the contradictions and gaps inherent in the experience of plurality ("samsara"). At the same time, the one-ness of nirvana is in a sort of conflict with the multiplicity of samsara. We must somehow both admit and ignore this tension. In truth, all this remains an unsolved problem at some level.

But they cannot claim that something has no "nature" whatsoever, for then what is that "something" that they are talking about? If it is truly non-existent, why and how are we at all discussing it and who are we? Surely these same people admit the existence of an "ultimate reality" of some sort – if only a single, infinite, universal substratum[85]. They call it "void" or "empty", but surely such a negation is not logically tenable without the admission that something positive is being negated; a negation can never be a primary given.

Similarly, we might argue, "impermanence" means the impermanence *of* something and "interdependence" means the interdependence *of* two or more things. They cannot claim infinite impermanence, without admitting the extended existence in time of something however temporary; and they cannot claim a universal interdependence, without admitting causal connections between actual facts.

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[85] The "great self" or "ocean of permanence", to use the words of Dogen (p. 267). Note that Dogen is not here saying there is no such thing, but is stressing that we do not – as some people claim – *automatically* all return there after death, but rather are subject to various rebirths according to our respective karmas; he is implying that to get there is hard-won realization, not something given *gratis* to all comers). Some identify this underlying ultimate reality with the "*Deus sive Natura*" of Baruch Spinoza (Holland, 1632-77). But I hasten to add that I do not subscribe to Spinoza's equation of God and Nature, which implies that God is like Nature subject to determinism. For me, as in normative Judaism, God is the free, volitional creator of Nature. He underlies and includes it. It is a mere product His and but a tiny part or aspect of Him.

There is an unfortunate tendency here to use words without paying attention to their relational implications. Another example of this practice is to speak of "consciousness" (or perception or thought or some such cognitive act), without admitting that this implies consciousness *of* something (called an object) *by* something (called the Subject).

This is done deliberately, to conform with the ideological prejudice that there is no cognizing self and nothing to cognize. Similarly, so as not to have to mention the Agent willing an action, volition is concealed and the action is made to appear spontaneous or mechanical. They refuse to admit that *someone* is suffering, thinking, meditating or becoming enlightened.

Another claim often made is that our common experience of the world is like a dream compared to ultimate reality. The implication being that the laws of thought are not obeyed in a dream. But in truth, even in a dream, though images and sound come and go and seem to intertwine, actually there is no contradiction if we observe carefully. As for the difference between dream and awake experience, it is not strictly a contradiction since they are experienced as distinct domains of being.

Contradiction is not even thinkable, except in words (or intentions). We cannot even *actually* imagine a contradiction, in the sense defined by Aristotle (is and is not at once in every respect). We can only *say (or vaguely believe)* there is one. We of course commonly encounter apparent

contradiction, but that does not prove that contradiction exists in fact. It is an illusion, a conflict between verbal interpretations or their non-verbal equivalents.

We formulate theories; they yield contradictions; we correct the theories so that they no longer yield these contradictions. We tailor our rational constructs to experience. We do not infer contradiction to exist from contradictions in our knowledge. We question and fix our knowledge, rather than impose our beliefs on reality. That is sanity, mental health. That is the way knowledge progresses, through this dialectic of thesis-antithesis-synthesis.

21. Reason and spirituality

In Judaism, the rabbis consciously practice non-contradiction (and the other laws of thought) in most of their discourse; but in some cases, they desert this virtue.

For example, it often happens that equally authoritative commentators have divergent interpretations of the same text; nevertheless, both their positions are upheld as traditional and true so as to avoid any suggestion that any important rabbi might ever be wrong. In such cases, the rationale given is that the different, even conflicting, perspectives together deepen and enrich the overall understanding of that text. In non-legal contexts (*haggadah*), there is no pressing need to decide one way or the other, anyway; while in legal contexts (*halakhah*), a decision is often made by majority[86].

Also, as I have shown in my *Judaic Logic*, some of the hermeneutic principles used in the Talmud are not in

[86] Although in some cases, centuries later, scattered groups of Jews may follow different interpretations of the same decision.

conformity with syllogistic logic; some yield a *non sequitur* in conclusion, and some even a contradiction. In such cases, the absurdity occurs on a formal level, within a single line of reasoning (rather than in relation to conflicting approaches); yet the conclusion is often accepted as law anyway, because the (erroneous) form of reasoning is considered traditional and Divinely given.

However, it is interesting to note in this regard that there is a Talmudic law[87] about two people who find a prayer shawl and bring it together to the rabbinical court, both claiming it as their property (on a finders-keepers basis); these people are not permitted to both swear they found it first, since these oaths would be in contradiction and that would make one of them at least a vain use of God's name (a grave sin).

This Judaic law shows that the rabbis are ultimately forced to admit the logical law of non-contradiction as binding, i.e. as indicative of objective reality.

Similarly, in Buddhism, there are many teachers who insist on the importance of keeping one's feet firmly on the ground even while one's head is up in the heavens. They teach that karmic law should not be ignored or denied[88] – meaning that

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[87] I unfortunately cannot find the exact Mishna reference at this time, but I heard it discussed by two Rabbis.

[88] I give you for example Dogen, who quoting Baizhang ("don't ignore cause and effect"), Nagarjuna ([do not] "deny cause and effect in this worldly realm... in the realm of practice"), Yongjia ("superficial understanding of emptiness ignores causes and

one should not act as if there are no laws of nature in this world and anything goes. To act irresponsibly is foolish and at times criminal. I would include under this heading adherence to the laws of thought; for without the awareness, harmony and clarity that they enjoin, healthy respect for causality would not be possible.

It is important, at this juncture in the history of philosophy, that people understand the danger of denial of all, or any, of the laws of thought. Due to the current influx of Oriental philosophies, and in particular of Buddhism, some would-be philosophers and logicians are tempted (perhaps due to superficial readings) to take up such provocative positions, to appear fashionable and cutting-edge. But while predicting that Western philosophy will be greatly enriched by this influx, I would warn against abject surrender of our rationality, which can only have destructive consequences for mankind.

Logic is one of man's great dignities, an evolutionary achievement. But it is true: logic alone, without meditation, morality and other human values, cannot bring out the best in man. Taken alone like that, it can and sometimes does apparently lead people to narrow-minded and sterile views, and dried-up personalities. But in the last analysis, people of that sort are simply poor in spirit – their condition is not the fault of logic as such. In fact, they misunderstand logic; they

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effect") and others, decries "those who deny cause and effect" (pp. 263-9).

have a faulty view of it – usually an overly deductive, insufficiently inductive view of it.

The current ills of our society are not due to a surfeit of logic. Rather, our society is increasingly characterized by illogic. Many media, politicians and educators twist truth at will, and people let themselves to be misled because they lack the logical capacity or training required to see through the lies and manipulations. Rationality does not mean being square-minded, rigid or closed, as its opponents pretend – it means, on the contrary, making an effort to attain or maintain spiritual health. To give up reason is to invite mental illness and social disintegration. Taken to extremes, unreason would be a sure formula for insanity and social chaos.

Aristotle's answer to irrationality was effectively to train and improve our reason. I do not think this is "the" single, complete solution to the human condition – but it is for sure *part of* the compound solution. Logic is only a tool, which like any tool can be unused, underused, misused or abused. Logic can only produce opinion, but as I said before it helps produce the best possible opinion in the context of knowledge available at any given time and place. It is not magic – only hard work, requiring much study.

Rationalism is sometimes wrongly confused with 'scientism', the rigid state of mind and narrow belief system that is leading mankind into the spiritual impasse of materialism and amorality. On this false assumption, some people would like to do away with rationalism; they imagine it to be an obstacle

to spiritual growth. On the contrary, rationality is mental health and equilibrium. It is the refusal to be fooled by sensual pursuits—or spiritual fantasies. It is remaining lucid and open at all times.

The 'scientific' attitude, in the best sense of the term, should here be emphasized. For a start, one should not claim as raw data more than what one has oneself experienced in fact. To have intellectually understood claims of enlightenment by the Buddha or other persons is not equivalent to having oneself experienced this alleged event; such hearsay data should always be admitted with a healthy 'grain of salt'. Faith should not be confused with science; many beliefs may consistently with science indeed be taken on faith, but they must be admitted to be articles of faith.

Note well that this does not mean that we must forever cling to surface appearances as the only and final truth. There may well be a 'noumenal' level of reality beyond our ordinary experience and the rational conclusions we commonly draw from such experience. Nevertheless, we are logically duty bound to take our current experience and reasoning seriously, until and unless we personally come in contact with what allegedly lies beyond. Those of us who have not attained the noumenal may well be basically "ignorant" (as Buddhism says), but we would be foolish to deny our present experience and logic before such personal attainment.

Wisdom is an ongoing humble quest. An error many philosophers and mystics make is to crave for an immediate

and incontrovertible answer to all possible questions. They cannot accept human fallibility and the necessity to make do with it, by approximating over time towards truth. I suggest that even in the final realization we are obligated to evaluate our experience and decide what it is.

The phenomenological approach and inductive logic are thus a modest, unassuming method. The important thing is to remain lucid at all times, and not to get carried away by appearances, or worse still by fantasies. Even if one has had certain impressive meditation experiences, one should not lose touch with the rest of one's experience, but in due course carefully evaluate one's insights in a broader context. Logic is not an obstacle to truth, but the best way we have to ensure we do not foolishly stray away from reality. Rationality is wise.

22. Addenda (2010)

1. Concerning chapter 10, **on the Diamond Sutra's discourse**. Although its form is paradoxical, it seems intelligible. How is this to be explained? What is the underlying logic that makes people accept such discourse in spite of its formal flaws? I can answer this with reference to another instance of such discourse, inspired by the said sutra. In *The Zen Teaching of Huang Po* (pp. 64-65), we find the following discourse, as translated by John Blofeld: "The fundamental doctrine of the Dharma is that there are no dharmas, yet that this doctrine of no-dharma is in itself a dharma; and now that the no-dharma doctrine has been transmitted, how can the doctrine of the dharma be a dharma?" (Blofeld explains that he introduced the word 'doctrine' in place of 'dharma' to avoid the confusion of the original Chinese sentence.)

Why is this statement somewhat intelligible? Let me rephrase it a little (square brackets mine): "The fundamental doctrine

of the Dharma is that there are no [verbal] dharmas, yet that this doctrine of no-dharma is in itself a dharma; and now that the no-dharma doctrine has been transmitted [wordlessly], how can the doctrine of the dharma be a [verbal] dharma?" In other words, the non-verbal dharma transmission *cannot* be replaced by a verbal transmission, such as the present words. Such words can merely talk about or somewhat describe the actual dharma transmission, but are incapable of being a substitute for it. Dharma transmission remains possible *only* non-verbally. As can be seen, the paradox arises only due to incompetent verbalization (if not a predilection for paradoxical statements). The underlying idea (that transmission of the mind of Zen can only be effectively performed wordlessly) is not paradoxical. It is quite intelligible (certainly there is no natural necessity that a mere description can do the job) and it can even be verbalized without paradox (as here done).

2. Concerning chapter 18, on dreams. How do **the contents of our dreams** arise? Most people regard that dreams are made up of re-churned memories of sensations, feelings, sounds, images and verbal thoughts, perhaps with a subconscious creative interference at the time of dreaming. In other words, the contents of dreams are partly dished out more or less fortuitously by the brain, and at the same time partly shaped by the dreamer through a half-asleep effort of his will. I do not find this traditional explanation entirely

convincing. It is of course largely true, but I think that it does not suffice to explain the complexity of dreams.

Looking at my own dreams, at the variety and complexity of the actors and scenarios that appear in them, I am perplexed by the fact that they seem far more imaginative than anything I am able to produce when awake. My speculation is that there must be *some additional external input* – by telepathy. During sleep, I believe, we intertwine our thoughts with those of other people.

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(The above list is not meant as a bibliography, but simply details the books referred to within the text.)

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All these works may be consulted on the Internet, at
www.TheLogician.net

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89 First published by author in Vancouver, B.C., 1990.

90 First published by author in Geneva, 1995.

91 First published by author in Geneva, 2003.

92 First published by author in Geneva, 1999. The first edition comprised only Phase I (Macroanalysis), whereas this edition also includes Phase II (Microanalysis).

93 First published by author in Geneva, earlier 2005.

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