

Hybrid Thought and the Teachings of Socrates

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PRELUDE

A hybrid, according to the Encyclopaedia Britannica, is the offspring of parents of different species or of different genetically determined traits.

A thought, according to same source, is a covert symbolic response to intrinsic or extrinsic stimuli. A hybrid thought might from this point of view be understood as a symbolic response to at least a pair of stimuli not belonging to the same species. One might think of a combination of visual and acoustic stimuli, or of two or more stimuli simultaneously creating positive and negative reactions.

If thought is understood as symbolic response it follows that a vast number of stimuli create responses codified in language¹. Verbal responses cover a disproportionately large area of all possible responses. This disproportionality allows me to concentrate on language when speaking of „Hybrid Thought“, thus making my argument at the same time more concrete and more sociological.

A hybrid symbolic response can also be the offspring of some sensory stimulus together with a verbal stimulus. Someone calling a present human person (visual stimulus) an „ox“ (verbal) could create such a hybrid, which might be a mental image similar to the Minotaur. However the mere sentence „Adam is an ox“ - without Adam being present - will probably create comparable responses. Hence the difference between the fathering stimuli is not necessarily the distinction between physiological and mental. The stimuli may also be of the same kind - both verbal or both visual - and still trigger hybrid thoughts, as „Adam“ is the name of an object belonging to a different species than „ox“.

A puzzling question arises: What happens if language does not do us the favour of providing an adequate term, e.g. „Minotaur“ or „mule“. And further, even when language does provide a term, how can we know that it is a term for a hybrid? A mule probably cannot by mere sight be identified as a hybrid creature. To understand this we need a background story. If, as in many cases of modern agricultural products, such stories are not provided, it will be quite impossible to identify a hybrid tomato or potato as a hybrid.

The example illustrates that we should give more thought to the term „species“ used above. A „species“ is a mental - or better a social - construct which will not by necessity have a corresponding entity in reality, i.e. where pure sensory inputs trigger adequate responses. From this follows that a „hybrid“, also is a mental construct.

THOUGHT STYLES

Turning again to the Encyclopaedia Britannica we learn that a „species“, is „a biological classification comprising related organisms that share common characteristics and are capable of interbreeding.“ A little further down, we read: „Organisms are grouped into species partly according to their morphological, or external, similarities, but more important in classifying sexually reproducing organisms is the organisms' ability to successfully interbreed.“

¹ This fact reminds us that verbal responses are in all those cases where the stimuli are not of some verbal origin, hybrid thoughts themselves.

From this one may conclude that a species is a natural phenomenon insofar as members of the same species are capable of identifying each other for mating. The argument is not very convincing, as members of one species identify only a very limited number of individuals as mating partners, which would exclude all the others from being members of the same species. Many song-birds for instance identify each other by their songs. These songs however differ regionally within the same species so much that birds of the same species often do not recognise each other. As they do not mate, one could argue that they belong to different species.

Consequently it is our special interpretation, e.g. that individuals would or could interbreed, which rests on our conceptions of preselected external similarities, and which defines membership in a given species. Thus species have no immediately obvious correspondence in nature but are mental constructs.

A hybrid understood as the off-spring of generating stimuli belonging to different species is therefore also the product of some classificatory activity and consequently the product of a certain thought style.

It is common knowledge that classifications based on similarity are often spurious. The selection of decisive properties from a multitude of attributes is highly tinted by preconceptions².

Classifications are rigid constructs which require by necessity the drawing of boundaries. Objects classified are either members of one class or of another. They are never allowed to be simultaneously members of two or more classes. W.V.O. Quine's (1969) insight that a species is not an independent fact but an element of some presently functioning theory, is a most remarkable one. Whether we speak of identity or of similarity, both statements are normative statements, which are sanctioned by one or more social institutions. In other words, identity or similarity can only be discerned if there already exists a set of predefined categories for reference to begin with. Only then will it be possible to assign membership to one of these categories. Similarity is hence a social institution resting on tradition. This may be illustrated by citing an ancient Chinese method of distinguishing animals. A top category is formed by animals belonging to the emperor. Regardless if the animals are dogs or horses they form one category and horses or dogs not belonging to the emperor form another one.

One aspect deserves additional consideration. Referring to Quine's observation that a species is an element of a functioning theory, we have to put stress on the fact that several different theories may be functioning simultaneously. If a theory is functioning or not depends on its social context, on tolerance, methods of proof, context of application, etc.. Some theories are of practical service, others serve to legitimise social structures, others again are valued because of their beauty or of their latent non-committing vagueness. The pioneering work of Lurija (1974), who compared classification procedures of persons belonging to different cultures, provides rich evidence for this.

What seems quintessential for making a theory work within this context is that it must allow comprehensible communication between members of the same social structure. There must be some reference to collectively shared experiences. These common experiences are provided by the very social structure and this is the ultimate common ground for reciprocal interaction (Douglas, 1996, p. xiii). Theories serve a double purpose. They must provide instructions for

² Even a concept as "identity" is doubtful, as no object or person is identical to itself in the course of time. The idea that something remains identical over time is not better than assuming an endless chain of metamorphic transformations.

successful action and at the same time offer models for common parlance and interpretation. My thesis may be formulated thus: hybrids are mental phenomena which emerge and disappear as results of certain social structures, which in turn are sources for classificatory regimes.

BINARY CODES AND THE TEACHINGS OF SOCRATES

Our references to biology are helpful crutches whose capability to support the argument may however also create inhibitions and limit our radius of thought and activities. We must be aware that the concept of parenthood itself suggests the idea of a pair. What appears as obvious in biology need not hold in the realm of thought.

Despite this reservation we must also pay credit to propositions formulated by Structural Anthropology and here most prominently by C. Lévi-Strauss. Lévi-Strauss (1958) suggests that binary codes are preeminent. He provides for this a vast array of examples from the most divergent regions and cultures.

To us examples drawn from antiquity are possibly more familiar, as many people will be aware of a corresponding peculiarity in ancient Greek thought. The Greeks organised their cognitive world by reference to pairs of opposites, such as hot and cold, wet and dry, up and down etc.. Aristotelian physics draws heavily on this mode of thinking, but affairs of everyday life, such as gender relations, were also conceived and practised in a comparable manner, as e.g. R. Sennett³ (1998) shows.

It would however be preposterous to assume that Greek thought was thoroughly homogeneous in the course of history. Some scholars distinguish three periods of Greek thought, an Archaic one up to the reign of the dictator Peisistratos of Athens, a third one from Alexander the Great to the reign of the Roman emperor Augustus (it is indicative that this last person is no longer a Greek) and a second one in between. The endpoints of these periods are interestingly enough synchronous with breaks in the social and political structure at first of Athens and then more generally of Greece. It is no coincidence that Sparta hardly figures in intellectual life.

The second period attracts our attention. It coincides with remarkable changes in Greek thought, particularly in Athens, and was a period of transition and social and mental development comprising divergent speeds and directions. Starting from the archaic mode which was not erased but challenged I will outline these challenges in what follows.

PROTAGORAS AND SOCRATES

Sophists spearheaded by Protagoras, a cosmopolitan and because of this unavoidably an individualist, enriched the archaic „either-or-logic,, by a wealth of opposites for any single proposition. By this practice the Sophists acknowledged seemingly diverging individual experiences and the resulting penumbra of meanings attached to any expression. Protagoras, who claimed man as an individual person to be the measure of all things, cultivated a subtle sensualism and relativism, which led him to deny that opposites exclude each other. His dialectics made him accept contradictory statements as being equally true. Protagoras as well as the other Sophists adhered to a highly cultivated individualism which was neither interested in nor capable of advocating a specific social system.

³ Hot and dry was in Greece a male prerogative, whereas women were cold and wet.

We learn from the Platonic dialogue, that Protagoras for instance evaluates an action as pleasing but also as bad, or as unpleasant and also good. Socrates, his counterpart, compels Protagoras to abandon the multitude of opposites in favour of one single continuous dimension on which all opposites are to be mapped. Protagoras accepts while insisting instead on shades of opposite propositions putting emphasis at the same time on the existence of a region of neutrality in the middle. Socrates is however not satisfied by these concessions, he erects in what follows a gapless continuum between the opposite poles and avows this to be the basis of a measurement scale, doing away implicitly by this move with the original pair of opposites. He achieves by his procedure a situation which, for example, can neither be qualified as "hot" nor as "cold", but – in modern terminology - by a temperature scale.

Socrates and Protagoras both tried to break the rigid rule of binary codes, albeit with different methods and very different outlooks guided by divergent spheres of interest and experience. Protagoras perceives and acknowledges the manifold complexity of the world and of sensual stimuli. He seems dissatisfied with „black-or-white“- attributions and tries to confront these views by allowing hybrids everywhere. He practises a subtle dialectics. „Anything goes“ - to quote our contemporary Sophist P. Feyerabend - nothing must be excluded from consideration. His world is uncertain and ruled by chance, he was as we would say today a „sceptic“.

Socrates has in principle no objection to this recognition of a wealth of phenomena except that his intentions are directed towards simplification and order. His intention is to devise a scientific method which reduces the bulk of hybrids by a system of measurement and a unified nomenclature. He causes not only hybrids to disappear, but also polarities begetting these hybrids.

ARISTOTLE

One might think that the development described above is the natural way of progress. Surprisingly however Aristotle, no contemporary of either of the two, reintroduces the dual mode of organisation of thoughts.

This cannot be the place to give a full account of Aristotle's voluminous opus, so it must suffice to recall that distinctions such as matter and form, substance and essence, quantity and quality, the moved and the un-moved, species and genera were introduced by him.

In book four of the Metaphysics he enriches this mode however by introducing three fundamental laws of thought, the law of non-contradiction, the law of the excluded middle and the law of identity. Here the second of these laws is of interest for our present subject.

This second Aristotelian rule of thought requires the exclusion of the middle, hybrids become extinct, parental stimuli survive. And - due to the gulf in the middle – there is little choice but to decree that the negation of a negation has to produce the original proposition. What a difference to Protagoras, who ruled that a proposition and its negation, but also any intermediate may be simultaneously true.

These laws of thought distinguish Aristotle from the ancient philosophers, although he reproduces in many respects many of their features of thought. His discrimination e.g. between Greeks and barbarians or Greeks and slaves, whom he even denies human nature, resemble deeply the ancient mode of binary codification based on „us“ and „them“.

This resemblance disappears however as soon as one takes a closer look at his detailed

description of the universe. Here a highly elaborate mode of hierarchical ranking procedures pervades his presentation, regardless whether he speaks of animals or of causality, where for instance a dominant, teleological cause exists even when applied to natural phenomena. Aristotle promotes the concept of a closed world, be it the state or the celestial realm, which is internally structured by a system of graded distinctions between high and low, up and down. His position is somewhere between the static archaic world and the world of Socrates and is far removed from Protagoras' flexible views. He adheres to the conception of four elements (water, earth, air, and fire) which invites us immediately to distinguish between the well-known attributes and properties such as wet or dry, etc..

Aristotle also distinguishes between two types of substance, one resting in the material form of any individual object, the other resting in the species. This reminds us of the above mentioned parental traits. Aristotle attributes an essential quality of existence to anything bearing a particular name and hence also to abstract concepts. Concepts signify an existing essence. But this essence is an idol, resembling Platonic ideas. Since Aristotle also enjoys a reputation as a full-fledged empiricist, one wonders what may have determined his thoughts to grant concepts or names the status of existence. One is tempted to think of the biblical phrase „In the beginning was the word“. A possible answer to this question will be offered below.

The Aristotelian world is in contrast to the previous ones a strange mixture of features of all the others. Aristotle's code allows graded distinctions to be applied within a system itself, for example the conception of a continuous scale of nature from inorganic substances to biological ones going on to psychological phenomena and so on - some argue as far as god. A species is an element of a certain genus and made up of subspecies etc. Insofar the system comes close to a Socratic one. But contrary to Socrates⁴ his scale does not appear to be continuous, but rather comparable to the sequence of real numbers. Every entity is distinctly separated from the next one by a gap. N. Georgescu-Roegen (1971) coined for this version of a continuum the term „arithmomorphic“.

SOCIETY

Protagoras and his Sophist colleagues were products of their time as were Socrates or Aristotle. Their period was one of absolute upheaval, in politics, economy and foreign relations. The traditional way of life could not be maintained, although Sparta tried to resist the onslaught of the tide.

Athens on the other hand had spearheaded the novel trends already since the laws of Solon. After the collapse of the tyranny the necessary reforms of Cleisthenes again shattered the older political system. The new and cosmopolitan Athenian world was devoted to commerce, money and democracy. Men of this stature could, due the heterogeneous life experiences resulting from their mode of production and far flung interactions, no longer be satisfied with a frugal black-or-white representation of life. An increasing significance of artisan production and international trade, expanding wealth and monetary economy paired with growing mobility, best exemplified by the Sophist teachers and philosophers themselves, are closely connected to these trends. The invasions of the Persian army contributed further to the upheaval.

Such an era of turmoil is at the same time one of uprooting and alienation and one of growing egocentricity and individualism, insofar as the mobile classes expose themselves by necessity to foreign cultures, religions and thoughts.

⁴ Socrates was certainly not familiar with irrational numbers. But he seemingly used as a paradigmatic example the scale of a balance, which allows for no gaps, as it applies a continuous material beam.

Given these developments it can hardly be avoided that established social institutions tend to crumble away. The necessary social backing for particular world-views weakens as does consensus based on shared practice. Scepticism will raise its head, as practised by the Sophists. The Athenian way of life was a threat to the Spartan world. In this transitional period Sparta was trying to keep up tradition by sometimes rigorous methods, e.g. by periodical expulsion of any foreigners in its domain, by the prohibition of travelling abroad or the use of coined money. The maintenance of an archaic way of life dominated by a landed nobility was the declared aim and at the core of politics. From Structural Anthropology we may infer that archaic life as it was cherished in Sparta was dominated by a binary mode of thought. Spartans adhered to a view which separated a world of "us" from a world of "them" and maintained this binary distinction when organising their mental world. An undeniable gulf opens thus between Sparta and Athens resulting in a gradual change of thought styles.

PROTAGORAS

Protagoras, born in 486 B.C., spent his youth in Abdera. In all likelihood he must have been exposed to and must have experienced various impacts of the Persian way of life. One may add that he was a widely travelled cosmopolitan - as were many of his Sophist colleagues - with an „international“ reputation. He was a „man of the world“. Protagoras became rich by his teaching and he certainly was no exception in this respect. But those who financed his income were even richer and they were the parents of his students⁵. His great reputation did however not save him from being accused of impiety and of being exiled at the age of 71 for the rest of his life.

The simultaneous presence of a great number of highly mobile foreigners in Athens with their experiences of different traditions, practices, and interpretations was conducive to a flexible structure of mind. They confronted the traditional fixation on an „either-or-logic,, with one, which may be labelled a logic of „not only-but also,, or one of „as-well-as,,. This is exemplified by Platons dialogue "Protagoras" which I have summarised above.

Mentioning these qualifying traits of the time serves to show that thought systems are not the extravagant product of certain ingenious persons, but that these persons' thoughts result from prevailing non-adapted social situations.

SOCRATES

Socrates was a native Athenian, 16 years younger than Protagoras. He can hardly have gathered experience in foreign cultures comparable to that of Protagoras but was raised in the atmosphere of a rapidly expanding Athenian empire, the Periclean democracy with its gusts of market economy, money and wealth and an insistent struggle between the ancient nobility oriented towards Sparta and a mobile civil society craving for wealth and self-determination. Socrates, of whom some contemporaries say that his home was the market place, was obviously familiar with the practices of haggling and bargaining. Markets are a peculiar form of social organisation. They harbour a very loose and volatile version of interaction and are therefore poor in institutions. Generally they are founded on the principle of equality, because any kind of obvious dominance would make negotiations irrelevant insofar as the weaker party could then be forced to accept disadvantageous offers. This egalitarian posture allows for piecemeal haggling which gradually

⁵ A contemporary of Protagoras and Socrates was Alkibiades whose biography may be taken as illustrative for the lifestyles of the Athenian youth.

leads toward an acceptable compromise for both sides. This process gets, if necessary, support from neutral arbiters, the highest degree of arbitrating objectivity being ascribed to inanimate objects. In this capacity for arbitration lies the social significance of yardsticks, scales or clocks. The experiences of the market seem to have formed the backcloth of Socrates' arguments in the fore-mentioned dialogue, as markets were since times immemorial governed by the rule of scales. Socrates' life was, apart from these everyday experiences, for more than half of his time determined by the Peloponnesian War and its disastrous consequences. The defeat of Athens was not only a defeat for democracy, but at the same time a victory for those parties in Athens who advocated the reestablishment of an aristocratic government. Again it can not be the intent of this essay to give a representative account of Greek history. But one thing is of interest to us. After the collapse of democracy in Athens a series of oligarchies and the repressive rule of Sparta dominated the political scene. When Sparta finally lost its supremacy after the battle of Leuktra in 371, Athens regained democratic rule, but it rested on weak foundations. At the same time however a good number of other Greek city-states experienced various forms of autocratic rule, while the Ionian cities in Asia Minor lost their freedom to the Persian empire and its satraps as a consequence of the so-called „King's Peace“.

The lasting political instability may already have led Socrates to look for new concepts of order, but certainly his student Plato, the offspring of an old aristocratic family and relative of one the dominant oligarchs, did not support the idea of democratic rule but rather despised democracy. It must suffice that K.R. Popper (1944/45) labelled him an autocratic reactionary. The conception of a monarchic kingdom was supported by many a philosopher of the time, whereas democracy found hardly any advocate. An exemplary case is Isokrates whose glorifying views of monocratic rule are preserved in his letters to the tyrant of Cyprus written about 370. Comparable positions were articulated by Speusippos, the victorious successor of Plato at his academy in the forties of the fourth century B.C..

One detail may be still of interest in this context: Plato, who for some time acted not very successfully as an advisor to the tyranny in Syracuse, founded - as mentioned above - after his return from Sicily the famous „Academy“. This is of interest insofar as none of the other philosophers mentioned so far made an attempt to root his teachings in a well-established organisation. The academy had, not surprisingly, a proper administrative staff, with a headmaster and various layers of underlings.

ARISTOTLE

Aristotle, himself a student and later a teacher at the academy, applied for the post of headmaster but was rejected. One possible reason for this was that he was a foreigner and hence not eligible for various juridical and political reasons. Thus Aristotle experienced in his own life what it meant to practice the rigid archaic discrimination of „us“ and „them“.

He left Athens and moved to Assus, a newly founded city in Asia Minor governed by Hermeias, a Greek vassal of the Persian king. Hermeias was an aspiring person who wanted also to establish a new academy. Aristotle apparently assisted him in this endeavour, but worked also on his book on Politics, where despite his own experiences he advocated the absolute supremacy of Greeks and their domination over Non-Greeks destined to be serfs and slaves. His preferred kind of government was the oligarchy or kingdom, where the top position however should not be occupied by a philosopher.

Soon after this, 343 or 342 B.C., he became the teacher of Alexander the Great, who was then at

the age of thirteen. For about three years he stayed at the Macedonian court and educated Alexander to become a military leader. After this he returned to Stagira at first, then went back to Athens, where he founded in 335 B.C. a school of his own, the „Lyceum“, following in the footsteps of his former master. In this enterprise he received massive assistance from the Macedonian king. The city was by then already under control of the Macedonian rulers, Philip the Great and then Alexander. At the peripatetic school he directed his students to engage in numberless series of empirical studies, which probably contributed to his perennial reputation by their sheer number inspite of their repetitive copying practices. Aristotle was regarded as a collaborator of the Macedonian party after the collapse of the Alexandrian empire and was also convicted for blasphemy because of this. Shortly before his death he went into exile. He thus shared a comparable fate with Protagoras and Socrates. This is a strong indication that the majority of Greeks of the time maintained their traditional thought styles, steeped in mythology, regardless of the ongoing philosophical debate.

Two aspects should therefore be emphasised in this context. First: The entire era after the collapse of the Athenian empire was driven by a desire for a „strong man“ to guide the community. Various attempts to realise these intentions in the form of a newly established tyrannis or of oligarchies failed or could not achieve permanence until the battle of Chaironeia in 338 B.C., which Philip II of Macedonia won and where Alexander earned his first laurels as a commander of the most crucial segment of the front line.

The desire mentioned above stemmed from the chaotic results of the Peloponnesian war and was cherished and cultivated by a great number of philosophers of the time, Plato of course included. Aristotle was a diligent student of his and an advocate of the same principal idea.

Second: The lyceum formed the foundation for Aristotle’s enduring reputation. Comparable to Plato’s Academy which passed on his teachings until its closure by Justian in the 6th century A.C., Aristotle’s lyceum achieved similar success. Although we know very little about how Aristotle designed the organisational structure of his lyceum, it will not be too far fetched to assume that he did it according to his principal ideas of hierarchical ranking. The salient point is however that such an organisational structure serves as a carrier of thought styles and functions as an institution for evaluations. Institutionalisation was a necessary accomplishment for allowing a continued opposition to tradition and myths and, as I would argue, for defeating sophism whose proponents were isolated individuals with no organisational and hence institutional backing.

THE TEACHINGS OF ANTIQUITY

Hybrids, we said above, are mental phenomena which emerge and disappear as results of certain social structures, which themselves are the sources of classificatory regimes. My argument, as exemplified by Greek political history together with a history of ideas, is that social structures and their breakdown or displacement create new thought styles. We have seen that archaic societies tend to be governed by polar codes in thought and at the same time by a regime of social enclosure. This strategy created strong feelings of belonging and at the same time similarly strong ones of repulsion for those not integrated. The binary mode of organisation held for external relations as well as for internal ones. One result of this regime was a gulf between the female and the male gender. Strictly regulated activities permitted only for one or the other sex formed the dominant feature of social life. But there was also the practice and ritual significance of rites of passage and of initiation. Initiates were required to complete and perfect their qualities and were made to wait at the doorstep, i.e. in a sort of limbo. They were thought of as being hybrids in-between "them" and "us". Falling out of the clear cut system into some kind of in-

between-ness created for them a state of liminality attributed with a blend of lowliness and/or sacredness (V. Turner, 1969). Their state resembled the situation of strangers who were occasionally allowed to enter, as in the Spartan example. This in-between-ness was however not necessarily restricted to a temporary state of passing from one social status to another. Some persons spent their whole life in this limbo as the biography of the mercenary-poet Archilochos illustrates, who was the offspring of an aristocrat and a slave-woman. He was never granted the rights of nobility nor allowed to marry a woman of noble descent. Aristotle's rebuff at the academy shows comparable features. Social life was governed by a rather strict logic of partaking. It followed a rigid system of segregation, one either belonged or did not.

Binary codification is not restricted to attributes like "hot" versus "cold". Nouns are organised in a comparable manner, as the widespread distinction between "man" and "woman" demonstrates. This distinction is usually considered as being absolutely natural and devoid of any arbitrariness. It constitutes however an essential ingredient for social organisation and will therefore be heavily guarded.

Gender distinctions for example are undoubtedly at the basis of the division of labour from times primordial. Thus binary codification is much more than a mere description of natural distinctions, it is rather a normative rule to which natural phenomena are made to correspond because they lie at the roots of society. As the examples from antiquity demonstrate, this is almost unresolvably linked to other binary codifications, such as hot and cold, humid and dry etc.. „Hot sexual relations,, were e.g. relations between men and not between man and woman in Greece.

Beings who cannot be easily assigned to these binary codes are made to appear as being rare, but still possible exceptions. This demonstrates amongst other examples the above mentioned passage from one social status to the next. Seen from a different cultural tradition however „this ain't necessarily so“. These cultural differences formed the centre of Sophist's attentions.

When applying binary codes or an „either-or-logic,, a practical problem arises quickly: how to keep opposites apart or how to make the abyss sufficiently deterring. The aim is to achieve a state, where everyone is interested by himself in being assigned to either one or the other status, as life in an abyss is made unpleasant and difficult.

This strategy does not always reap success. Hybrids exist in spite of all and in a binary world pose a problem more serious than simply one of signification. Exceptional cases of hybrid forms find no proper place in society but may be dealt with individually, whereas a multitude of them threatens the entire system. In such situations it becomes necessary to devise strategies for dealing with nonconformist cases. It will be of primary importance to ensure that intermediary cases are perceived as rare exceptions. Consequently, the majority of unruly instances will by force be assigned to the one or the other group⁶. This procedure keeps the number of exceptional cases low. Once the number of remaining instances is small enough it will become feasible to deal with the exceptions exceptionally. As this small number will not put the social system in peril it may become acceptable to assign a special status to such characters, which is not infrequently neither „male“ nor „female“, but something beyond⁷.

Ancient societies tended to make such beings mediators between the holy and the profane.

⁶ P. Simpson's (this volume) example of the prosecution of A. Brener is a fine illustration of these attitudes of re-establishing social order even today.

⁷ What was exemplified by reference to gender relations becomes more drastic in cases where no obvious relation to natural traits exists. Being a Helen or a barbarian, a slave or a citizen are discriminations fundamental to a social system as such.

Modern ones shut them away in asylums by declaring them mentally or physically handicapped. What ever the practice may be, the „neither-nor,-strategy saves the acknowledged social structure and allows to outlaw anything in-between.

This method of organising social practice by classifying members as belonging or not is generalised to other cases and dominates thought. Food and consequently plants or animals will be categorised in a similar manner, food for women, food for men, food for foreigners and food for slaves. Textiles, proper activities, locations and even time can be arranged in comparable ways. Precondition is the safeguarding of the abyss in-between.

Apart from making the abyss appear unpleasant, other instruments are also employed. We will mention only two. One is the cultivation of taciturnity and frugality of language. If language is reduced to what B. Bernstein (1971) labelled restrictive codes, many thoughts will only be thought but not expressed. Tacit knowledge (M. Polanyi, 1966) dominates thinking then and will not permit detailed and hence controversial communication. Lending expression to the recognition of divergent cases and articulating their evaluation becomes difficult if not impossible given such conditions. Thus taciturnity saves social peace and stabilises social practices under such regimes. This does not mean that what cannot be said will also not be thought. Many thoughts remain clandestine, but with some effort they become apparent by demonstration or from clumsy expressions or much better in the language of art. Achieving this was the indisputable success of the sophists and of Socrates.

Before discussing these contributions, let us look at the second tool for stabilising this particular social structure. The practice of ostracism of foreigners in Sparta has already been mentioned. This ritual of seclusion found additional support by impeding foreign travel as much as possible in order to safeguard people from detrimental experiences. It required special permission from the king to travel abroad. Average Spartans hardly ever left their social environment, and the opinions of these people never became exposed to divergent experiences nor to different lifestyles and world views as cherished by foreigners. By necessity their views grew to be very similar, and possible differences were kept at bay by both, obscurantism and ostracism.

We may conclude from all this: Hybrids dwell in the abyss created by binary codes and their guardians. They are no natural phenomenon and can be made to disappear as we will see now.

Sophists radically combated these habits. Their biographies exhibit one similarity which may, in present terminology, be characterised as urban and cosmopolitan. They could hardly avoid acknowledging that persons of different social backgrounds judge experiences differently and attach values to actions and objects not in concordance with other people's judgements. They rarely travelled in groups but rather individualistically, which made them comparatively feeble in any arising conflicts. Such conditions make it advisable to accept positions taken by others even if strange and unusual. The attitudes of Protagoras as outlined above can be understood more easily from this perspective. If a defensive stance becomes customary one finds in this habituation the causes which determined the disregard of the abyss between opposites. The closing of the gap between the polarities did however not entail abandoning the opposites themselves. Maybe Protagoras abstained from doing so because he was still rooted too much in tradition, maybe it merely was a smart concession to his clients. His tactics and his achievements were the recognition that the gulf must be closed in order to approach the world of phenomena in a more satisfactory manner. One may summarise that the sophists confronted the archaic frugality with opulence. Hybrids bore for the sophists no embarrassment. They were actually quite universal and more frequent than their assumed parental polar stimuli.

In my understanding Socrates did away with these polarities by introducing an open-ended measurement scale. By this move he abolished also hybrids. But I dare say this was not his only great achievement. Contrary to Protagoras who certainly was a most eloquent and versatile person and a master of the subtleties of language, Socrates knew of those failings of language which produce taciturnity as sketched above. He challenged muteness by pointing to concrete instances, such as the beam balance, which embody what cannot be said by words⁸. At this point one may conclude by saying that Socrates countered opulence with a new frugality, a reported quality of his life in general.

This third state of affairs finally found its logical conclusion in Aristotle. Earlier I promised to offer an explanation for Aristotle's return to the cult of the abyss. Quintessential seems to be, apart of the spirit of time moulded by the disaster in Athens and the prevalent longing for a „strong man“ or a king, his „Hellenistic nationalism“, but even more his experiences at the royal court in Pella. There he was obliged to educate the juvenile Alexander to become a military commander⁹. This meant among other topics to instruct him how control of large armies as well as of extensive administrative bodies could be achieved¹⁰.

Aristotle as teacher of Alexander was duly familiar with the practices of substantiating authority and imperialistic dominance. This makes it unavoidable to have at one's disposal a language free of ambiguities and contradictions. Commands of any kind must never be contradictory and should never be in need of interpretation, which would establish an undesired liberty for arbitrariness. Therefore any dubious middle term must be excluded. This step when becoming a convention imposes the necessary gap keeping opposites apart.

Unquestionable commands create consequently a version of reality which is in its essence the embodiment of a commander's intentions. It should - if it is successful - be clear-cut without any invitation to interpret its meaning. A command is usually also part of a plan which could fall apart if not put into practice consistently. This constitutes the social background of Aristotle's second law of the excluded middle. The social reality behind Aristotle's system of thought is hierarchy and authoritarian rule, little wonder that comparable systems favoured Aristotelian philosophy. Aristotle articulated what software engineers propose today. The adequate term for this conception is „prescriptive language“, it is embodied in information technology.

Hybrids are understood as being the logical offspring of binary systems, i.e. of the archaic systems of binary codes.

The way hierarchies deal with hybrids is more sophisticated than their treatment in archaic systems. As hierarchical structure is internally differentiated it can adopt a similar strategy for „forbidden,, hybrids. There exists no continued need to assign the quality of sacredness to exceptional cases. Hybrids may be secluded somewhere on the fringes of a differentiated system thereby being made irrelevant or queer. This method will work as long as no-one will interfere with the ruling of the system. Only when hybrids threaten the smooth flow and execution of

⁸ In another Platonic dialogue, „Menon“, Socrates who could have no knowledge of irrational numbers demonstrates the existence of the square of two, again by demonstration.

⁹ As we know from sources from antiquity the preparation for war was a longlasting and complex project. It required complex planning. Aristotle's novel views of causation which distinguish him from Plato and previous thinkers focus attention on these prospective intentions, which he labels „telos“, the aim.

¹⁰ E. Kapp (1942) argues in a similar vein when investigating the origin of logics in Greece. His argument is that it was the result of didactic strategies aiming to teach students of rhetorics strategies for victory in juridical disputes.

commands will they fall prey to merciless extinction. In most other cases they are allowed to play the role of a court-jester.

GAINS AND THREATS OF HAVING MONSTERS – THE POLITICS OF IN-BETWEEN-NESS

Summarising our arguments so far, we see that the concept of „hybrids,, is one resulting from a special kind of thought. It results from binary codification and dwells in what we called above „closed societies,,. Such societies tend to subordinate the individual aspect to the social aspect, whatever structural form the communality itself may take. Calling them „closed,, expresses precisely this condition, as membership in such societies is regimented. Finding oneself within or without is not a decision taken by the respective individual himself but by certain guardians. They define the rules of belonging and apply them. By doing this, they act politically, since one of the most basic activities in politics is the shaping and controlling of the state of the polity as such.

Who is admitted to a polity and who is not, and admitted according to which principles of selection, constitutes a method of shaping qualities and tensions within this polity.

Precondition for any such decision-making is a comprehension of what a community is and of the properties shared. Only those exhibiting these properties will have access, others will not. Additional considerations may come into play, such as size or scarcity of social space, but such additional conditions change little of the basic requirements and the principal distinction between „us,, and „them,,.

V. Turner (op.cit.) suggests that such processes seem to occur and to create at the same time two „major models of human interrelatedness, juxtaposed and alternating,,. The first is a society, structured, differentiated and often hierarchical, the other one an unstructured and relatively undifferentiated community of equal individuals.

Turner's observations find their counterpart in what we have said so far. The two systems of human interrelatedness replicated in the liminal process are at the same time those two systems which create these states of liminality¹¹ or hybridification.

Our examples from above suggest however two more models of human interrelatedness, the Sophist one showing hardly any interaction and an extreme degree of arbitrariness and the Socratic one of exchange relations and rationalisation on the basis of objectified measurement procedures. These two are those of which we have said that hybrids have no place, as questions of belonging will not occur. People interact at will or not at all.

Interactions figure in this context as meetings between Ego and Alter at „events,, - as Mead (1934) calls this situations - i.e. encounters of strangers with occasionally shared interests. In such situations "belonging" does not exist. Keeping spaces for negotiation as widely open as possible requires at the same time that no prohibited areas should be defined. The initial opposition between Ego and Alter must vanish at some balanced point of neutrality to let the desired exchange occur.

From this it should become clear that epistemological structures are also political structures. If classificatory systems provide untouchable niches the control of which is delegated to experts of what stature ever, they provide also a certain redefinition of political power. Power rests with

¹¹ "Liminality" is the already mentioned state after trespassing a boundary and before being admitted into another classified group. In other words, it the transitional state of being a hybrid.

those who make the necessary decisions of attribution and this power is taken at the same time from their counterparts subjected to these decisions.

Providing areas of negotiation where a dividing abyss does not exist is to abstain from regimentation by leaving decision-making to the persons involved. This should be labelled as an egalitarian system.

If we define the intermediary region due to its inherent untidiness as unclean, it is correct to agree with the saying of certain anthropologists, that „Power Rests in Dirt,,.

HEGEMONIES, TRANSLATIONS AND INTERMEDIARIES

Recalling our initial sentences about hybrids and thought, we may by now argue that the assumed „parental stimuli,, fathering hybrid thoughts do not really come from the natural environment but rather from the social one, regardless if we address by this term politics or language.

Politics as an activity of reshaping or of maintaining social relations relies on the supposed structure of the environment, as it is represented by accredited knowledge and revised by science if necessary.

The various forms of possible social interrelations as exemplified above are far more general and ubiquitous than the presented instances might suggest.

Cultural Theory as proposed by M. Douglas and her disciples claims the universality of these four types and even more: their simultaneous coexistence in any society. These cultural types representing patterns of social interrelatedness and related thought styles are in the truest sense political as they determine preference orders of their membership and for value systems. This means consequently that the distributive system of the various forms of wealth is by necessity closely attached to this orders. Knowledge is an essential part of wealth and must not be separated from this web of socio-cultural relations.

If this is true we wonder how communication and interaction may occur if any society comprises all possible styles of thought and of social relatedness. Another riddle is, which forces cause dominant thought styles to change in the course of history, as our outline of ancient history has shown. These riddles must be tackled before final conclusions can be offered.

A. Gramsci coined the phrase „cultural hegemony,, meaning by this an ideological domination of the population by intellectuals. From his point of view society is a „moral-political bloc,,. Society is held together by a voluntary adherence to dominant ideas. These ideas formulated and expressed by sophisticated intellectuals define the self-comprehension of each epoch. A proper term for this would be „Zeitgeist“. It is instilled in the majority by being mediated and popularised by the intellectual rank and file, for example teachers or journalists. These persons depend usually to a high degree on the benevolence of those holding power, partly due to their weak institutional position. But intellectuals cannot entirely ignore the world of „real circumstances,,. They are basically social.

From the point of view of Gramsci it is the class situation of the oppressed which provides the leverage for cultural change. This may hold for the 19th century or even the 20th, but it is doubtful if cultural switches before this period can be explained the same way. From my point of view the fabric of social interrelatedness changes over time as a result of various forces, such as overpopulation, wars, commercial or technological developments, sudden scarcities of vital resources due to depletion, blocked routes of transport etc., and last but not least due to internal social developments which undermine the maintenance of order and inhibit the supply of basic prerequisites for a large number of persons. This convolution of causes calls for novel structures

of social organisation.

New interpretations and explanations of social life, nature and the universe have to be provided and they have to correspond to and match the novel experiences in order to gain adherence and support. Persons forced to change their lifestyles tend to become adherents of new world views, whereas a minority remaining static continues to uphold the older ideologies until their day of revival may come again. Frequently this minority will be from the dominant class, the class being most interested in the maintenance of order and continuity.

Thus thought styles coexist within a society, with a particular one becoming dominant and shaping institutions anew, while the rest becomes marginal.

Both perspectives, cultural hegemony over other cultures within a society and a pluralist view can be represented in the model offered by Cultural Theory. Periods of transition from one dominant cultural form to another are at the same time periods of intellectual battles. This was illustrated above with respect to Greek antiquity.

One riddle remains. How may a society made up of divergent cultures and thought styles interact internally and survive as such?

It is probably one of the most popular bedside stories to make believe that individual members of a society interact with each other like players of two antagonistic soccer teams. In reality however the majority of players of one team plays most of the time with players of their own team in a co-operative way. The exceptional cases when two teams confront each other may be decisive for their external reputation, but more decisive are tournaments for the internal structure and the well-being of the team itself. Victories or losses have an impact on the team. Interrelations between competing teams change only little. Albeit teams may rise or fall in some charts, some may even get kicked out of the charts, rules and procedures of competitions will not be altered by this.

This very complex of relations is similar to intercultural actions. The majority of representatives of one culture interact in a majority of cases only with members of their own group. Exchange of any kind across cultural boundaries is for the majority not the rule but the exception. It is not the rule because it is tiresome and difficult to acquire competence in subtle nuances of conduct of another group. In many cases such intermingling is in addition heavily guarded and policed.

Although people may for example speak the same language, say English or Spanish, people will use different terms and codes. But this constitutes a minor problem. What is more serious is that identical terms may connote different meanings, particularly where value judgements are concerned. A simple statement like „The music band was playing well last night,„ invokes a gust of associations, leading at times to approval and sympathy or to disdain and social distance. To avoid such unpleasantness people either have to be familiar with the cultural traits of the other side or they will simply have to avoid to get into such situations. This last option constitutes the general rule, which keeps cultures apart. Societies survive by cultural segregation.

As on the other hand a certain amount of interaction must occur to uphold unity, certain occasions and procedures to cope with differences must exist. Such interactions are of significance, otherwise they would not occur and would not be sought. To govern such events special rules exist in general, which are either very formal or very loose - but mostly both in a certain sequence. Everyday interactions of this sort are however entrusted to experts, who take care of such interrelations. Such persons will have to serve as translators and interpreters. Although such characters are usually expected and thought of as being translators, the second

term, interpreter, comes much closer to what they are expected to do.

They have to interpret, to close the gaps not merely by using words corresponding to each other as in a dictionary, but by mapping corresponding situations onto each other. Knowing e.g. that some cultures value soccer and pork, but others despise this game and food as vulgar, they may try to use phrases from tennis or hockey and from haute cuisine as adequate translations in one direction performing the opposite transformation in the other direction. This constitutes not only a difficult, maybe an impossible task, it runs the risk of being blamed for cheating, incompetence etc.. The Sophists were grand-masters in this kind of game.

Interpreters have to have substantial knowledge of the cultures of both sides which means they have to be thoroughly acquainted with the routines and daily practices of each side. Like jugglers they have to play with many balls simultaneously. They usually exhibit rather unusual biographies which make them strangers for both sides. This may be an advantage and a disadvantage at the same time. In some respects their trusted neutrality and disinterestness may be valued but this may also cut them off from essential resources, i.e. institutional backing which could foster their credibility especially in tasks of subtlety.

Such an exchange between cultures is however not a regular nor a daily affair. Because of this irregularity societies consisting of different cultures are able to survive. Prolonged interchange could form a serious threat to their functionality and would require profound cultural change in the long run.

CONCLUSIONS: STRATEGIES FOR INNOVATION

In summary I have tried to show prerequisites for the emergence of hybrid thoughts. From this point of view hybrid thought occurs precisely where chances for innovation are lowest.

Neither hierarchies nor clans, as Cultural Theory (CT) labels the archaic, egalitarian structures, are prone to innovations. On the other hand such systems where hybrid thoughts are rare or not part of dominant thought styles are the most likely candidates for innovative thoughts and technological innovations. These are the „Isolates“ and the „Markets“ in the terminology of Cultural Theory.

„Isolates“, that is the sophists' corner, lack however sufficient power and energy to realise any of their novel ideas. Hence promising innovations emerge mainly in the „market-corner,. Markets are networks of interaction, which in CT means much more than a mere exchange of goods. Markets are dynamic and also not foreseeable, hence unreliable. They are innovative but lack the endurance to become involved in the implementation of larger projects. At the same time they cultivate interaction, even if for special activities and on a short-lived basis only. This generates interest in more reliable companions and in objective tools or technologies. An alternative could be found in interaction with groups from the other side of the gulf, which is the locus where hierarchies and enclaves settle. Particularly in such intercultural exchanges technologies can become an integral constituent of the social fabric, as they may serve as twisters, interpreters, and unmoved stabilisers. They frequently function as highly regarded boundary objects.

At the same time individualised members of markets tend to cultivate their individualism so much that they possess little alternative but to adapt to a great variety interactions not previously experienced. Hence they develop mastership in flexibility employing common sense arguments, which would never allow for rigid binary codification. Due to these varied experiences market individualists are characters likely to have gathered sufficient knowledge of the vernacular practices of other cultures. It is in this corner that the probability of discovering greater numbers

of capable go-betweens is highest.

From our point of view the recipe for increasing innovative thought is then less the cultivation of hybrid ideas, but an emphasis on hybrid socialisation and on cultural plurality.

RETROSPECTIVE PROSPECTS

After a long period of disregard the post-Socratic philosophical schools, Platonism, Aristotelianism, and the Stoics, enjoyed a revival during the later Middle Ages. With the advent of Natural Philosophy which turned into Natural Science in the 17th century, modernity, we are told, did away with Aristotelianism which was dominant compared to the other two. I consider this wishful thinking.

Looking at the exuberant recurrence of binary codifications in Natural Science, such as energy - matter, particle - wave, magnetism - electricity, observer - observed, subject - object, time - space, nature - culture/ society, man - animal, *res cogitans* - *res extensa*, body - spirit, civilisation - primitive cultures etc., one may wonder. It is difficult for me to see these pairs of polar concepts other than as being a renaissance of archaic thought.

After a century or so however, doubt and scepticism raised their head again. M. Montaigne started this new version of scepticism, it was refined by the Scottish moral philosophers in particular by D. Hume, deepened by J.-J. Rousseau and possibly completed by F.W. Hegel.

This trend was accompanied, in a comparable manner as in Athens, by a rapid increase in mobility due to technological advances such as the steamboat, the railway, telegraphy, telephony etc., but also by various social processes such as intensified population growth, industrialisation, urbanism etc., not the least by the perturbations of the French Revolution and of the Napoleonic wars.

Following the advent of a global market economy and of Bentham's utilitarianism, C. Darwin did away with the opposites animal – man; S. Freud accomplished comparable results. J.C. Maxwell dissolved the dual concepts of magnetism and electricity, A. Einstein and H. Minkowsky shattered the time-space polarity, W. Heisenberg and N. Bohr the wave - particle opposition, Dadaism did away with the contrast between primitive and civilised, A. Turing with the distinction between man and machine. Their strategies were repetitions of those of Socrates, i.e. erecting new continuities and, when feasible undisrupted scales. This trend continued until recently, when mathematics abolished the concept of discrete dimensionality by allowing for fractal dimensions nestling between whole numbers.

These intellectual developments were mainly achieved at times and in countries where moves towards democracy and universal commerce were prominent or during periods of general social unrest¹².

It seems all the more surprising and possibly an early warning signal that first examples can be recognised which may indicate a rebirth of Aristotelianism.

A. Zeilinger (2003), a physicist of international stature known for his work in connection with so-called quantum computers, proclaims the equality of reality and of information. Without information, he argues, no access to reality exists. One may possibly argue about this

¹² The simultaneous occurrence of political, social and intellectual restructurings was also recognised by vigilant observers such as Agassi (1981), Forman (1971), or Sassower (1995).

identification. But the crux of his assertions seems to be that information can only be transferred in bits, i.e. in discrete entities countable by natural numbers. Thus a dis-continuous scale, labelled above as „arithmomorphic“ is re-established which allows immediate ranking. As Zeilinger advocates the identity of reality and information the consequential conclusion can be nothing else but a comparable ranking of reality. Aristotle would be deeply satisfied. And as pointed out before, this occurrence is not accidental. Aristotle's laws of logic are the outgrowth of a prescriptive language for commands. A.Turing writes:

„If one wants to make a machine mimic the behaviour of the human computer in some complex operation one has to ask him (the worker) how it is done, and then translate the answer into the form of an instruction table.“ (Turing, 1936/37, p.8/9)

This fits together with another insight articulated in Arden (1980):

„Software is better defined as a logical doctrine for the co-operation of people and machines. Such doctrine takes the form of programs for hardware and users' guides/ operating instructions for people“. (p.806)

By this the computer engineer becomes the central figure of any organisation, being an administrator and organiser of human and non-human labour. This tendency is an undeniable fact. It entails a massive increase in authoritarian rule. When simultaneously keeping in mind current trends presented under the heading of a „New World Order“ and parallel ones to be recognised in several European nations and governmental bodies at present, one can hardly avoid thinking that the final phase of an intermediary era has already begun, an era placed between a period of archaic tradition and a period of authoritarian rule as in ancient Greece.

I conclude by proposing that hybrid thought is probably not what it promises to be, a vehicle for innovation. But it may be a very handy utensil for an analysis of social trends.

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