# I Ching and West Asia: A partial vindication of Terrien de Lacouperie

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DRAFT, May 2012 © 2012 Wim M.J. van Binsbergen

### Introduction

*I Ching* (易經 yì jīng) is a classic Chinese wisdom text, the focus of a correlative system that contains a comprehensive cosmology addressing all aspects of human society and the universe, and that is expressed,

- in the first place in eight trigrams ( = 'figures consisting of three superimposed lines', each line broken or unbroken), each with their own multidimensional meanings,
- and in the second place 64 combinations of two trigrams superimposed one upon the other the hexograms (= 'figures consisting of six superimposed lines'), with complex and dynamically shifting ('changing') correlative meanings.

When a random generator (a material apapratus producing chance outcomes, e.g. coins that are thrown, or numbered yarrow stalks that are cast) is coupled to a particular algorithm to translate the chance outcomes into a specific combination out of the 64 possible ones, *I Ching* may be used as an oracle, which during most of China's recorded history has compelled immense respect. *I Ching* became known to Europe (cf. Smith 2012) as a result of the communications of Jesuit Christian missionaries working in China from the late 16th century onwards, and the famous German mathematician and philosopher G.W. Leibniz (1646-1716 CE; Leibniz 1984) was the first to recognise the system's binary numerical implications.

The idea of an Ancient Mesopotamian origin of the Chinese people<sup>2</sup> and of I Ching

<sup>&</sup>lt;sup>1</sup> Cf. Fiskejo 2000; Graham 1986. The fundamental idea of a correlative system is that each of its constituent parts can be considered in terms of a number of dimensions at the same time (kinship term; direction of the compass; profession; fortune; social status; colour; the animal world, etc.), in such a way that the parts correlate systematically with one another along each of these dimensions, e.g. A = brother-northwest-butcher-small misfortune-low status-red-hyena, parallel to B = father-south-priest-great fortune-highest status-golden-lion, etc. (the example is fictitious), etc.

<sup>&</sup>lt;sup>2</sup> In Terrien's writings this postulated people is called 'Bak' or 'Bak Sing'. Writing half a century later, the Armenologist Karst (1931: 287) proposes to apply to them the attested names 'Ketshi', 'Ketsü', 'Kotchi', 'Kütsché'. Note the assonance with the personal name / ethnonym / place name Kush (according to *Genesis 10* a 'son' / division of Ḥam, and – although Ḥam in that connection is mainly

was launched, both in well-received lectures before the Royal African Society, London, and in numerous publications,<sup>3</sup> by the distinguished French Sinologist A.E.J.-B. Terrien de Lacouperie (c. 1845-1894), who at the time of this untimely death from typhoid fever was professor of Indo-Chinese linguistics at University College London, one of the principal institutions of higher learning in the United Kingdom. In the present paper, after vindicating the stature of Terrien's scholarship and situating it in its own time and age, I will summarise his theory as to the Western origin of the Chinese people and of the *I Ching* in Ancient Mesopotamia, consider its weaknesses, and dismiss his reductionist view of the whole sale origin of the Chinese. However, I will also maintain that his point as to the Western origin of *I Ching* still stands, adducing much new material to that effect, including a long excerpt from my book in press *Before the Presocratics: Cyclicity and transformation as features of a substrate element cosmology in Africa, Eurasia and North America*.

## The stature of Terrien de Lacouperie's scholarship

Apparently unfamiliar with the meaning of 'University College' in the London / United Kingdom context, the Japanese scholar Yoshihiro (2003) makes of Terrien an obscure scholar 'in the fringes of academic life' ('a mere college'?), allegedly only publishing in his own journal', i.e. *Babylonian & Oriental Record*. Concerning Terrien's theory of decisive Mesopotamian influence on the rise of Chinese civilisation, and specifically of *I Ching*, Yoshishiro gives the impression that it has long been refuted. Characterisations such as 'fancyfull', 'fantasist', 'obscure', 'infamous', 'a failure', 'invented the Bak Sing tribes', 'speculative extremes', 'too sanguine speculation', 'ingenious but indigent [ = poor ]', etc. are also found in other, cursory reviews of Terrien as author of an external theory of the rise of Chinese civilisation.<sup>4</sup> More to the point and less anachronistic is the assessment by Blagden (1913), of Terrien as 'highly imaginative and brilliant, but not always reliable'.

The truth is that Terrien, considering the relatively short span of his academic life, had an amazing output, and both phenomenal and surprisingly lasting success. Among his achievements we may count pioneering work in general linguistics, Chinese historical syntax, the identification of pre-Chinese languages of East Asia, decisive systematic work on East Asian numismatics, important contributions to the history of Buddhism

associated with the African continent – likewise associated with Mesopotamia as 'father / overarching unit' of Nimrod – the hunter, first king and (through his tower) challenger of Heaven. The names 'Ketshi' etc. do not ring a bell in this connection. In such languages as 'Schrift-Oiratisch' of Western China, in Tuvan, and in Kalmuk, *ketsü* occurs with the meaning of 'hard, bold' (Poppe 1964: 204; Bayarma Khabtagaeva 2009: 43), from proto-Altaic \*k'ét'ó, with the same meaning, and with reflexes in Turkic, Mongolian, Tungus-Manchu, Korean and Japanese (Starostin & Starostin 1998-2008, s.v. 'Altaic etmology'). In Japanese, moreover, *ketsü*, means 'blood' and also stands for a particular form of identitary rhetoric.

<sup>&</sup>lt;sup>3</sup> Terrien de Lacouperie 1880, 1882, 1883a, 1883b, 1887a, 1887b, 1888b, 1890, 1892a, 1892b, 1894. For provisional bibliographies, cf. Anonymous 2012.

<sup>&</sup>lt;sup>4</sup> Cordier 1895; Andrews 1925; Yetts 1925; Girardot 2005; Kroeber 1940; Armstrong 1945; Levenson & Schurmann 1969: 9; Rutt 2002 / 1996: 72; Leibild 2011.

and of South, Central and East Asian writing systems and scriptures, the ethnography and linguistic description of Formosa, the archaeology of Korea, explorations in Assyriology, and the first recognition of the striking similarities between the Indus valley and Easter Island scripts. Famous and soon, posthumously, notorious<sup>5</sup> for his theory of the Ancient Mesopotamian indebtedness of Chinese civilisation, this was by no means his principal contribution to scholarship. No informed scholar would expect the fruits of Sinology and Assyriology from the 1880s to survive the confrontation with present-day knowledge, methods, and resources. However, quite unusual for linguists that have been dead for nearly 120 years, Terrien's pioneering work in the linguistic classification of the Sinosphere, and other scholarly achievements, continue to reverberate in authoritative specialist works of a later date, up to the present.<sup>6</sup>

Beyond the sphere of Western scholarship, and rather uniquely, in recognition of Terrien's non-hegemonic worldview, his West Asian theory on Chinese origins (in other words, his theory of common origins shared by the Chinese and European civilisations) was eagerly received by influential Chinese scholars writing around 1900, and as a result the debate on, and with Terrien de Lacouperie is still continuing in China, Japan, and Thailand to this very day, while in the West his name has long been reduced, undeservedly, to mainly that of a bogeyman of pan-Babylonism avant la lettre.

With its predilection (very conspicuous in Martin Bernal, who prides himself in this trait) for obsolete authors once championing now counter-paradigmatic causes (e.g. Leo Frobenius), Afrocentrism has also identified Terrien de Lacouperie as a partisan (Rashidi 1988), transforming the latter's thesis in the following terms:

'One of the oldest oracles of antiquity, the I-Ching was constructed by the Black Akkado-Sumerians of Elam-Babylonia and is dated circa 2800 BCE'.

Brinton (1895) claimed that de Harlez, 'in Schlegel's [journal] *Archives d' Orient*' (more likely *T'oung Pao*, cf. de Harlez 1896), had totally demolished Terrien's theory by exposing a faulty etymology and by adducing the alleged fact that

'presence of the true Mongolian race in the Euphrates valley in protohistory is fantasy'.

This claim of utter rejection has ever since been adopted by an increasing number of scholars, leading to the unverified, unreferenced truism it has become today. However, while rejecting Terrien's reductionist view of the wholesale Western origin of the Chinese people, we shall see that Terrien still has a point as far as *I Ching* is concerned. Moreover, as we shall see below, Rashidi – like so often in the case of Afrocentrism, cf. van Binsbergen 2005, 2011 – has more of a point than one would be

<sup>&</sup>lt;sup>5</sup> Cf. Brinton 1895; Cordier 1920: 21 f.; Bushell 1905 merely maintains that Terrien's theory 'has not been proven'.

<sup>&</sup>lt;sup>6</sup> Pinches 1912; Hopkins 1916; Corney 1917; Charpentier 1919; Hopkins 1922; Maspero 1926; Ayrton &Silcock 1929 / 2003: 3 ('one authority (...) now somewhat discredited'); Yetts 1931, although Yetts's 1925 assessment of both Terrien and Ball was dismissive; de Hevesy 1938; Wiens 1949: 14; Hamilton 1954; Bartel 1958; Jettmar 1983; West 1988; Egerod 1991; DeLancey 2010, 2012; Blench 2010.

<sup>&</sup>lt;sup>7</sup> Cf. Nakamura 1947; Dikötter 1990; Dufourmont 2006; Li Fan 2005, 2008; Hon 2007, 2010; Kyong-McClain 2010; Lin 1999; Feng 2005; Fong 2009.

inclined to give him credit for, even though his expression 'the *Black* Akkado-Sumerians of Elam-Babylonia' does unmistakable violence to Terrien's original.

# Terrien on a wholesale West Asian origin of the Chinese people

Terrien wrote in the formative decades of Assyriology, and a quarter of a century before the establishment of pan-Babylonism, i.e. the short-lived scholarly theory (no doubt in part inspired by Terrien) according to which *all* civilisation world-wide originated in Ancient Mesopotamia (cf. Winckler 1903, 1907). Terrien's main arguments were:

 more or less superficial correspondences (also cf. Ball 1913) between formal characteristics of isolated script signs

meanwhile both Assyriology and Sinology have progressed tremendously, and the oracular bones and other archaeological sources have yielded much older forms of Chinese script than available to Terrien and Ball;

- vague (possibly misunderstood) traditions of what appeared a trans-Asiatic migration from West to East Asia by the 'Bak' tribe, linking up to the widespread tradition of 'the 100 families' of China;
- onomastic parallels;
- mythological parallels e.g. concerning the Flood globally so widespread<sup>8</sup> that they do not prove much of a specific Mesopotamian-Chinese connection;
- but also what would still count as impressive in the eyes of modern scholarship: correspondences between Ancient Mesopotamian and Ancient Chinese king lists.<sup>9</sup>

As far as specifically *I Ching* is concerned, Terrien rejected the dominant tradition (in the Western scholarship of his time represented by the leading Sinologist James Legge) that considered the *I Ching* and its extensive commentaries to constitute one unified corpus. Thirty years later the prominent Sinologist H.A. Giles (1915: 5 f.) summarised Terrien's argument in the following terms:

'The foreign student is disappointed when he comes to a study of the  $Canon\ of\ Changes\ [=a]$  literal rendering of the title  $I\ Ching\ ]$ ; partly because of the exaggerated value set upon its contents by native scholars of all ages, and partly from an inability to penetrate its labyrinthine mysteries and seize the hidden spirit of the book. It has been alleged by Chinese enthusiasts that, if you have only the wit to seek, you will find in the  $Canon\ of\ Changes\$ the germs of all the great scientific discoveries; on the other hand, it was reserved for two foreign students (Sir R. Douglas [ cf. Douglas 1893 ] and Terrien de Lacouperie) to put their heads together and

<sup>&</sup>lt;sup>8</sup> E.g. Dundes 1988; Witzel 2010; van Binsbergen c.s. 2008.

<sup>&</sup>lt;sup>9</sup> Modern scholarship still greatly relies on the matching on king lists, e.g. this is a major argument for Dierk Lange (2009, 2012) when claiming major and direct Assyrian influence upon West Africa, c. 600 BCE.

publicly announce that this work, regarded in China as based on a divine revelation, is nothing more than a vocabulary of an obscure Central Asian tribe—so obscure indeed that to this day it remains unlocated and unknown. A translation of the Canon of Changes was made by Dr Legge, <sup>10</sup> the greatest Chinese scholar of modern times at the day of his death. Dr Legge thought that he had "found the key," but it is doubtful if anyone else has ever shared with him that opinion.' (my italics – WvB)

The most nuanced modern negative assessment of Terrien's wholesale thesis is perhaps that of oracle-bone specialist D.N. Keightley (1983: x f.; cf. 1978), who rather than denouncing Terrien's impressive scholarship, advances a number of reasons why his theory should be rejected:

- (a) lack of archaeological support;
- (b) great trust in late Chinese texts;
- (c) reliance on the argument *post hoc ergo propter hoc* ('B followed A in time therefore A is the cause of B');
- (d) inability to distinguish between proper genetic connection and coincidence, and
- (e) an exogenous, external, instead of endogenous and spontaneous, conception of cultural innovation.

Still, while negative, this is very far from conclusive. While conceding (b) (the short oracle-bone texts on which Keightley's own research focused were at least one millennium older than anything available to Terrien), we note

• that (a) is an exaggeration (the Neolithic and Bronze Age continuity, across the Eurasian Steppe, of pottery, agricultural implements, animal style art, wheeled chariot, the Altaic linguistic phylum covering the entire Eurasian Steppe region from Anatolia to Korea and Japan, the comparative study of divination, <sup>11</sup> and

'Divination is applied in Mesopotamia on two distinct levels - the popular or folklore level and that of elaborate scholarly amplification and specialization. Both constitute a trans-Asiatic culture trait. Evidence for this is available from the Mesopotamian region across Asia to China, with Japan in the East and Etruria in the West as outposts. In Egypt, divination remains conspicuously absent up to the last dynasties, when a good deal of "Asianization" took place. There is a wide range in the media and the techniques of divination, conditioned by time and region. These variations only underline the deep-seated and lasting need for this type of communion with the supernatural, whatever specific methods of observation and interpretation are applied. (...) Wherever in Asia either the observations or the predictions related to divination have been preserved in writing, or where – this optimum happened only in Mesopotamia – both aspects of this science are available to us, we are given the opportunity to look deep into such a civilization. From the oracle bones of Anyang in northern China and the earliest liver models found in Mari to the elaborate horoscope of yesterday's India, we have an overwhelming abundance of information well able to take us on a grand tour through space and time, exploring much of the intellectual history of Asia. Like currents which move across the entire immense continent, central Asiatic divination practices reach the Euphrates (extispicy) and become there the object of scholarly endeavors from the early second millennium B.C. onward, and Mesopotamian astrology and other divination methods penetrate eastward through India, TIbet, and into China during the first half of the the first millennium

<sup>&</sup>lt;sup>10</sup> Legge 1882, where the signs of his controversy with Terrien de Lacouperie are to be found at p. 18 f. The latter had declared that Legge's was 'not a translation but a mere paraphrase'. Legge in his turn retorted that Terrien showed no understanding whatsoever of the meaning of *I Ching*.

<sup>&</sup>lt;sup>11</sup> Cf. the following statement by the leading Assyuriologist Oppenheim:

religico-mythological concepts (e.g. snake-feeted divine figures such as Fu Xi 伏羲, Nü Wa 女媧, Ancient Greek Cecrops and Erichthonius, and apparently cognate fish-tailed figures such as Oannes – cf. Basque Basojaun, Italic Janus, Indian Ganesh – mentioned by the Hellenistic writer Berossus) makes standard textbook examples; there is, in other words, the evidence in favour of continuity not only from archaeology but also from fields not mentioned by Keighley: linguistics, comparative historical ethnography and iconography, and comparative mythology); 12 also see the Appendix, below.

- that (c), the argument *post hoc ergo propter hoc*, although admittedly risky and patently insufficient to build a fully-fledged theory upon, is an obvious and ubiquitous *first* step in the formulation of historical *hypotheses*;
- while (d) (the distinction between proper genetic connection and coincidence) and (e) (the distinction between exogenous, external, instead of endogenous and spontaneous, conception of cultural innovation) inevitably spring, not directly from the quality of the available evidence nor from the quality of a specific theory at hand, but depend on something far more optional and transient, notably: the wider, overarching paradigmatic framework in the light of which a particular theory is being judged these two points of criticism, in other words, are matters of scholarly appreciation and opinion, and therefore cannot be counted as *errors* but must simply be considered points of scholarly disagreement.

In other words, although there is an unmistakably quixotic element involved in my present attempt to defend Terrien de Lacouperie as a respectable scholar he was, and to take up the case of his external theory once more, we need to treat with considerable reservation the present-day contention that his theory of a West Asian origin of the Chinese paper has been conclusively refuted.<sup>13</sup> The problem with claims of transcontinental continuities is that they tend to be taken too literally and too comprehensively, in a 'winner takes all' way: as if the mere claim

- A has had *some specific* influence upon B,
- were identical to the claim that
  - B has been *totally determined* by A and by A alone. <sup>14</sup>

A.D. To trace these lines of contact will be the task of several generations of scholars from many disciplines.' (Oppenheim 1966: 37).

<sup>&</sup>lt;sup>12</sup> Also in comparative mythology the Mesopotamian / Chinese link has been backed up: Mori Masaka 2009; West Eurasian leopard-skin themes around the Greek god Dionysus have parallels in Ancient Chinese army ranks and the royal chariot (I am indebted to Dr Haifang Lui, IWAAS, Beijing, for retrieving this information for me from Chinese sources).

<sup>&</sup>lt;sup>13</sup> It would be interesting to investigate whether Needham with Wing, whose first volume of *Science* and civilization in China is entirely taken up with the state of the art concerning contacts between China and the West, mention Terrien at all – but I have no access to that volume right now.

<sup>&</sup>lt;sup>14</sup> The Biblical Exodus story is a case in point: unmistakably there has been such massive Ancient Egyptian cultural and religious influence upon Ancient Israel (Görg 1997 and his entire, multi-volume series *Fontes atque pontes: reihe Ägypten und Altes Testament*, Wiesbaden: Harrassowitz) that the idea

One thing that comes through in our most recent endeavours to map and interpret transcontinental continuities of a different kind, notably those between Asia and sub-Saharan Africa, <sup>15</sup> is that they may be considered part of a *multi-centred* and *multidirectional* prehistoric and protohistoric system of exchanges, in which an emerging global maritime network played an increasing role. In other words, in transcontinental continuities influences may be complex, may come from different directions, and may operate both ways. One-factor totalising theories of transcontinental continuities (including Terrien's) therefore may never be adequate. But that does not mean that at the level, not of wholesale pronouncement about a total people and its culture, but at the level of the analysis of specific individual traits, all thoughts of transcontinental continuities (e.g. Terrien's intuition of letting *I Ching* come from West Asia) have to be banned.

# Recent support for the view of a West Asian origin of I Ching

Interestingly, when I was still unaware of the work of Terrien de Lacouperie except for a faint, unreferenced echo of it in personal communications with the Sinologist Martin Bernal (1996) concerning the presumably Indo-European etymology of the fundamental eight trigram names in *I Ching*, I also ended up with Giles' puzzle ('which West Asian ethnic group? situated where? speaking which language?'). With the aid of long-range historical linguistics, I was able (in the manner set out in detail in the Appendix, below) to suggest an answer for at least one of the trigram names: kun 坤, 'earth' (belonging to the trigram ••), without obvious Sino-Tibetan etymology,is likely to derive from proto-Hittite or proto-Greek spoken in the Aegean-Anatolian region in the Early to Middle Bronze Age — not exactly Ancient Mesopotamia but still West Asia and a region that has been recognised to have been influenced, in many ways (religion, mythology, science, technology), by Ancient Mesopotamia and by West Asia in general.

The apparent truism that no Mongolians ever lived in West Asia must not be taken at face value, either. Initial appearances, although ultimately mistaken, already suggested otherwise: Before Hrozny's decipherment (1917) of the Hittite script and language identified the Hittites as Indo-European speaking (which says nothing about their somatic and genetic makeup), on the basis of their self-images in iconography the Hittites tended to be identified as Chinese (e.g. Conder 1898, 1915). Scholarship had proposed, for better or worse, a Chinese / Sinite association for at least two out of the over 70 ethnic names in *Genesis 10* (van Binsbergen & Woudhuizen 2011: ch. 6).

of *some* (probably very limited) population migration from Egypt north to Palestine, possibly led by an Egyptian prince / magical specialist a certain Mosis / Moses, is quite plausible; but that is a very different proposition from the naïve Jewish and Christian perception of the Early Iron Age population of Palestine, and of the edifice of Israelite religion in that period, as deriving largely from such a migration.

<sup>&</sup>lt;sup>15</sup> Cf. the International Conference 'Rethinking African's transcontinental continuities in pre- and protohistory', Leiden, African Studies Centre 2012; cf. van Binsbergen 2012 and in preparation (a).

Karst (1931) assumed such extensive influence of Chinese on West Asia and the Eastern Mediterranean that he proposed a Chinese etymology for the very common place name and ethnonym *Ethiopia(n)* (albeit, regrettably, on the basis of modern Chinese forms *hai tīng* 海汀 'sea island', and not the proper archaic ones *smāʔthēŋ* – Preclassic Old Chinese; Starostin & Starostin 1998-2008, 'Chinese characters' – circulating in the Bronze Age when the name Ethiopia was first attested...). This is all totally obsolete scholarship now. However, we are on more secure ground when in a recent synthesis prominent linguists claimed extensive Sino-Caucasian (conceivably including Sino-Tibetan < Chinese) presence for the Northern shore of the Mediterranean up to the Late Bronze Age (McCall & Fleming 1999).

Of course, archaeological and epigraphical work of the last hundred years has led to the recognition of the non-mythical nature of the earliest Chinese dynasties, which therefore have become roughly contemporary to the early dynasties of Ancient Mesopotamia and Egypt. Like in India and Japan, and Africa, modern Chinese scholars now prefer a predominantly endogenous model for the origin of their national and regional civilisation; they are no longer flattered – like leading Chinese intellectuals were a hundred years ago – to be granted, in Ancient Mesopotamia, a common cultural prehistory with the West – a thought whose anti-hegemonic implications their present-day Chinese counterparts seem to miss, <sup>16</sup> or which they are tempted to replace by their own implicitly hegemonic regional chauvinism.

Anyway, regardless of these considerations of hegemony in the politics of the production of history, in a scenario that makes Chinese origins contemporary to those of Ancient Mesopotamia and Egypt there is, admittedly, no longer room for Terrien de Lacouperie's wholesale thesis that Chinese civilisation derived lock, stock and barrel from Ancient Mesopotamia as we know it.

But, again, that does not rule out the likelihood of more limited transmissions of knowledge in the course of the Bronze Age, when horse and chariot technology, and nautical technology, presented the material conditions for extensive transcontinental exchanges – and when the results of such exchanges are emphatically clear from the correspondences between formal cultural systems in these various regions. It is my contention, on the basis of the extensive empirical material and analysis presented in the Appendix below, that, when all is said and done, Terrien's point stands that I Ching, and its constituent symbolism of eight named trigrams (pa gua left), is among such eastbound transfers.

# Rashidi's Afrocentrist perspective concerning the origin of I Ching

This brings us, in conclusion, to Rashidi's Afrocentrist point. It should be enough to offer a controversial partial vindication of Terrein de Lacouperie's controversial

<sup>&</sup>lt;sup>16</sup> Here a reading of the Sinologist's Bernal's *Black Athena* (1987) would be illuminating.

theory concerning the West Asian origin of *I Ching*, and I should be content to leave the matters at this. However, and once again, the perception of transcontinental continuities depends not so much on proper data, but on an overarching paradigm admitting or denying the possibility of transcontinental continuities. Such paradigms reflect power relations between regions, classes, ethnic groups, within the world system. Shifts in such paradigms may well reflect shifts in these power relations. Since the 1990s I have repeatedly championed the cause of Afrocentricity (van Binsbergen 1996-1997, 2000a, 2000b, 2005, 2011). This was not (pace Amselle 2001) in order to curry favour with my African friends and colleagues (although it did in fact endear me with them). Nor was it an attempt at political correctness, compensating Africans as recognised and self-acclaimed victims of recent global history, by offering them the mere illusion of a glorious past. My defence of Afrocentricity has sprung from my consideration that once peripheral, subjugated or excluded groups - with whom I, admittedly, do identify, by birth, choice, and adoption (van Binsbergen 2003) - may have preserved, in their own specific worldviews, knowledge of historical facts and relationships which otherwise have been expelled from collective consciousness by the hegemonic paradigms of dominant groups in the world system: until yesterday these were the dominant, White, educated inhabitants of the North Atlantic region and today and tomorrow these may well be Chinese, Indian, and Brazilian elites. Therefore, in the final stages of my twenty-years research project to bring to light the submerged history of geomantic divination, in Africa, East Asia (where it manifests itself as I Ching), and globally (cf. van Binsbergen 1996, 1997, 2003: ch. 5-8, 2012), I think I should take the risk of alienating my readers still further, and take the following step.

I suggested that Afrocentricity may contain and reveal dissimulated facts surreptitiously preserved for particularist group memory, while otherwise eclipsed from global memory under the influence of dominant, elite-associated paradigms. One such 'fact' appears to be the existence, in the Neolithic and Bronze Age, of a highly pigmented ethnic cluster in West Asia, displaying many cultural traits (including proto-geomancy, early metallurgy, a fire cult, and a rudimentary element cosmology) and some genetic traits which I have provisionally designated as 'Pelasgian' (for a list, see van Binsbergen & Woudhuizen 2011; also cf. van Binsbergen 2011c), and apparently surfacing to historical attestation or attribution in widely distant contexts, including

- the Caucasus (Herodotus, *Historiae*, IV.140; Armayor 1978, 1980; Jairazbhoy 1985),
- Ancient Mesopotamia (Nimrod as displaced son (situated not in North East Africa but in Mesopotamia) of Kush son of Ḥam; *Genesis 10*;<sup>17</sup>
- South Asia (Dravidian speakers usually considered, like Singhalese, to have a West Asian origin –, perhaps Vedda, Semang, possibly also continuous with population elements in New Guinea and Australia some of which are traced to South Asia);

<sup>&</sup>lt;sup>17</sup> Van Binsbergen & Woudhuizen 2011: ch. 6 offers an exhaustive analysis of *Genesis* 10 from the perspective of ethnic studies.

- isolated parts of the Mediterranean (Homer's Sinties, *Iliad* I, 594, XVIII, 394; *Odyssea* VIII, 294 their close association with the fire and metallurgical god Hephaistos (from proto-Berber \*hifau, 'fire')<sup>18</sup> suggest them to be early iron workers, reminiscent of their latter-day namesakes the Sinti (and Roma) known also by the outsider-imposed name of Gypsies; here particularly attention is called for the another outlying cluster associated, in *Genesis* 10, with Ḥam: Ludim ('Lydians / Carians / Lycians'), as 'descendants' of the Mizraim ('Egyptians'), <sup>19</sup> as descendants of Ḥam, for it is from a volcanic spot in Lycia that the cult of Hephaistos is claimed to originate; <sup>20</sup> perhaps also Ligurians and Elymians), possibly also the Maghreb, and Mesolithic Eastern Iberian peninsula (rock paintings of honey collecting; microliths; cf. Bandi & Maringer 1952);
- Ancient Ireland ('Black Irish', Fomorians);
- blacksmiths throughout the western Old World, as outsiders associated not only with magical power and fire but also with blackness.
- probably South Central Africa where they are associated with the Bantu subphylum of the Niger-Congo phylum, traces of which have been detected in the West Asian specifically Palestinian Bronze Age (van Binsbergen & Woudhuizen 2011; van Binsbergen 2011);
- as well as South West Asia and isolated pockets in East Africa (Khoisan speakers, Hadza), where populations are found that are only moderately pigmented and whose great genetic distance from other present-day populations (Patterson 2010) does not preclude Cavalli-Sforza's point (based however on classic genetic markers and not on state-of-the-art molecular biology) that part of their ancestors still lives in West Asia 10 ka BP (Cavalli-Sforza et al. 1994) a part of the world and a period where, I submit, archaeological signs of their presence can be picked up in the form of a prehistoric depiction of elongated *labia minora*, <sup>21</sup> perhaps ostrich shell

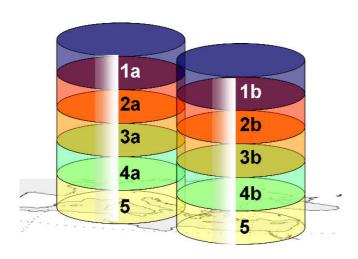
 $<sup>^{18}</sup>$  Cf. van Binsbergen, in preparation (b); contra Blazek 2010, who insists on deriving Hephaistos' name from the Ancient Egyptian theonym pth.

<sup>&</sup>lt;sup>19</sup> The Egyptian link with South West Anatolia was not only acknowledged in *Genesis* 10, but also played an important role during the Sea Peoples episode of the Egyptian New Kingdom, when grain transports from Egypt were to quench a famine on the other side of the Mediterranean, in defiance of Hittite control of Anatolia. *Cf.* Barnett 1953, 1987.

<sup>&</sup>lt;sup>20</sup> Maximus Tyrius 1804: II, 194, Dissertatio 38.

Depicted at the site of Göbekli Tepe, Pre Pottery Neolithic B, Anatolia (8800-8000 BCE), Landesmuseum 2007; cf. discussion in van Binsbergen & Woudhuizen 2011: 84 f. Whether natural or as a result of deliberate and prolonged stretching as a cultural practice (specialists are not yet in agreement on this point; cf. Montagu 2010), the 'Khoisan apron' of elongated *labia minora* has been associated with Khoisan-speaking populations of Southern Africa ever since these attracted the Western scientific gaze; as a result of cultural practice, the adult female genitals of many Bantuspeaking groups in Southern and South Central Africa have taken the same shape. Outside Africa, the practice is rarely recorded. Yet the idea of a prehistoric West to Central Asian origin is suggested – given the reconstructed dispersal pattern of human populations out of Africa since the Middle Palaeolithic – by the fact that the 'winged' or 'butterfly' vulva is a recognised, sporadic trait in China and Japan, while the concept is even attested (as a verbal insult) among Native Americans; cf. van Binsbergen & Woudhuizen 2011: 85 f. and references there.

beads, <sup>22</sup> round-plan dwellings soon to be replaced (Hawkes c.s. 1977: 59), in the archaeological record, by square-plan ones.



|   | linguistic<br>(macro-)<br>phylum                                | Constituent ethni   | remarks  |  |  |
|---|---|---|--|--|--|
|   |   | Western Mediterranean   | Eastern Mediterranean  |  |  |
| Secondary Pelasgians are typically found in this row    | 1. Indo-<br>European (a)<br>satem group;<br>(b) kentum<br>group | 1a. Secondary Ibero-Ligurians,<br>Caphthor / Caslukhim (with an<br>Indo-European speaking ruling<br>class) in Spain, Sicanians,<br>Tyrrheno-Tuscans, proto-Illyrians                          | 1b. Secondary (Illyro-) Pelasgians (including pre-Israelite Pherisites, Secondary Philistines, Numidian Persae) Secondary Leleges, Caphthor / Caslukhim (with a partly Indo-Aryan ruling class) ≈ Carians, Alarodians (= Caucasian speakers) | this layer manifests itself<br>particularly as that of a semi- |  |
| Primary .   | 2. Afroasiatic<br>('Hamito-<br>Semitic' /<br>'Hamitic').        | 2a. Jaccetani, Rhaetians, Rasenna,<br>Rutenu <i>i.e.</i> Afroasiaticised<br>Sicanians   | 2b. Secondary Leleges. NB. Insofar as Cushitic, this Afroasiatic element is often 3rd millennium <i>i.e.</i> older than '3' (3 = (proto-) Basquoid)  |  |  |
| elasgi  | 3. (proto-)<br>Basquoid   | 3a Western Mediterranean:<br>Basquoids, Ibero-Sicanians   | 3b.Eastern Mediterranean: Liguroid or Eastern Basquoid Leleges   |  |  |
| Primary Pelasgians are typically found in these<br>rows | 4. Caucasian  | 4a. In the Western Mediterranean this layer is inconspicuous, its place seems to remain largely occupied by '5' Liguroid pre-Euscarian groups: Opici, Opsci, Sicani, Ausci, proto-Basques     | 4b (Eastern Mediterranean).<br>Abkhazoids (pre-Leleges, Teleges,<br>Telchines, Tubal peoples)  |  |  |
|   | 5. Complex<br>substrate of<br>Ligurian                          | if interpreted in the light of the stat<br>(which was not yet available to Ka<br>presences of Sino-Caucasian, and o<br>notably Uralic, Altaic and Dravidia<br>Saharan and Niger-Congo / Bantu | archaic popular bottom layer / substrate   |  |  |

Fig. 1. Layered linguistic complexity of the Bronze Age Mediterranean according to Karst 1931.

 $<sup>^{22}</sup>$  Although these artefacts have such a long human history since the Middle Palaeolithic that contrary to common belief they are not enough to identify Khoisan speakers by; Bednarik 1993.

Both the Sumerian (Kramer 1959: 72 and passim) and the Chinese self-identification (**黎民** li min) was in the puzzling terms of 'the blackheaded people' – another indication of the plausibility of an attenuated version of Terrien's claim, to the effect of some Chinese-Mesopotamian continuity. Despite Rashidi's failure to substantiate his claim by proper scholarship (as is so often the case with Afrocentrists), his suggestion to situate the origin of the I Ching system in this largely forgotten or dissimulated cluster of West Asian Blacks reminds us of the fact that simple protogeomancies are found throughout the Pelasgian realm, in whose westerly and southerly extension (towards the Mediterranean and sub-Saharan Africa) a significant role was played by highly pigmented West Asian, associated (van Binsbergen & Woudhuizen 2011; van Binsbergen, in press (b)) with at least part of the constituents elements towards the Bantu linguistic sub-phylum.

This may sound promising, but an important objection would of course be that, if at least part of the trigram names in *I Ching* are considered to be reflexes from some Indo-European, notably proto-Hittite or proto-Greek Anatolian root, it is not clear how a widely dispersed, highly-pigmented population originating from West Asia and associated with proto-Bantu and perhaps other African linguistic macrophyla such as Khoisan, could be held responsible for transmitting these lexical elements to East Asia. Here a closer look at the layered ethnico-linguistic situation in the Mediterranean / West Asia in the Bronze Age (Fig. 1; from van Binsbergen & Woudhuizen 2011: Fig. 4.8, p. 96) may provide the answer. Contrary to common belief the ethnic and linguistic situation in that part of the world during the Bronze Age was - according to Karst's 1931 somewhat dated reconstruction, which van Binsbergen & Woudhuizen have tried to update and develop) not characterised by clearly demarcated, ethnically and linguistically homogeneous population groups. It already displayed traits of proto-globalisation in that, both in the eastern and in the western parts of the Mediterranean, populations were ethnically and linguistically heterogeneous, in a layered way that reflected the local (pre-) history of the succession of ethnico-linguistic specificities – the older layers, also more highly pigmented, being relegated to the lowest social status, the most recent layers, composed of Indo-European and Afro-Asiatic speakers, constituting an aristocratic exploitative class. Our postulated cluster of West Asian Blacks appears to have been associated not only with the earliest trigram names (of Indo-European provenance but circulating throughout the heterogeneous local population cluster) but also with metallurgy, and conceivably the trigram names were part of a correlative cosmology that enshrined the secrets of early blacksmiths where they spread their craft in all directions throughout the Old World.

The idea of a submerged, collectively denied substratum of excluded, discarded Black people (ultimately expelled to the fringes of the Old World: sub-Saharan Africa, South Asia, and Australia / New Guinea?) may also some way towards explaining why an inveterate, old and widespread racialism appears to be a major factor in the obliteration of transcontinental continuities, not only between Africa and Asia but also (like in the present case of *I Ching*) across Eurasia: such continuities imply association with, even cultural indebtedness to, Blacks with whom the groups dominant during the last few millennia do not wish to be identified. The idea,

admittedly, smacks enough of political correctness to arouse suspicion. Yet it has enough empirical plausibility not to be smothered in prejudice.

# APPENDIX. Trying to identify the cradle of the Old World transformative cycle of elements on the basis of the nomenclature of the pa gua (eight trigrams)<sup>23</sup>

## Comparative historical linguistics of the eight-trigrams nomenclature

A substantial scholarly literature has built up which throws light on the many parallels between the Presocratic four-element system from Ionia / Graecia Magna (Southern Italy), and the cosmologies of other regions. Several authors have stressed the continuities with West Asia, foremost Kingsley (1995). Already Przyluski (1938) has brought out the parallels between Empedocles and what he claims to be the Zoroastrian pattern. Kaliff (2007) has opened an Indo-European perspective connecting the Ancient Scandinavian cosmological and ritual system hinging on 'fire, water, heaven and earth' with the entire Indo-European world, including the Presocratics but also West and South Asia. Also from an Indo-European-Studies point of view, Franklin (2002) has stressed the continuity between Empedocles' and Indo-Iranian cosmology – in both the concept of harmony is crucial (cf. Lambropulou 1998). By the same token, Empedocles receives considerable attention in McEvilley's (2002: 67 f, 106 f, 304 f) comparative studies of Greek and Indian philosophy. In the light of such recent sympathy for a long-range approach to Empedocles' four-element doctrine, the dismissive attitude of early-20<sup>th</sup> century editor of Empedocles' Fragments, W.E. Leonard:

'In Chinese philosophy the elements are supposed to conquer one another according to a definite law. We are told that wood conquers earth, earth conquers water, water conquers fire, fire conquers metal, and metal conquers wood.<sup>24</sup> But there is nothing in E.'s thought that seems to correspond.'

now seems to have little factual meaning beyond being characteristic of classics scholars' time-honoured reluctance to admit to any foreign influence upon their cherished domain – an attitude that largely triggered the *Black Athena* debate.

It is in East Asia that the most conspicuous and elaborate forms of the transformative element cycle have been attested, but that does not necessarily mean that element systems originated there. Going back to at least the first millennium BCE, and surfacing in various parts of the Old World and of the New World, the system could

<sup>&</sup>lt;sup>23</sup> The following is an excerpt from the penultimate version of my book in the press (2012): *Before the Presocratics: Cyclicity and transformation as features of a substrate element cosmology in Africa, Eurasia and North America.* Obviously, the contents of this appendix remain to be integrated with summarised excerpts from it as appear in the main draft text of this article.

<sup>&</sup>lt;sup>24</sup> Original reference to Carus 1898 / 1902: 47.

have originated anywhere.

In my first extensive treatment of the transcontinental connections of geomancies and *mankala* board games (van Binsbergen 1997), written when I was barely aware of such long-range approaches in linguistics, genetics, archaeology, mythology and ethnography as were then already gaining momentum in the international literature, nor of the attending methodologies, I was impressed by the Sinologist's Martin Bernal's suggestion (personal communication, 1996) that  $\frac{1}{2}$  kūn, the eighth trigram in  $\frac{1}{2}$  in  $\frac{1}{2}$  in  $\frac{1}{2}$  ing, commonly interpreted as 'the receptive field, the earth', had no Sino-Tibetan etymology and might be connected with Ancient Greek  $\frac{1}{2}$ 060 khthōn, likewise meaning 'earth', thus conveying the suggestion of a non-Chinese, possibly Indo-European origin of the  $\frac{1}{2}$ 17 jīng system ( $\frac{1}{2}$ 17 Cokharian A and B as far eastern extensions of the Indo-European language family).

| 1                   | 2                   | 3           | 4                | 5           | 6       | _7_                              | 8       |  |
|---------------------|---------------------|-------------|------------------|-------------|---------|----------------------------------|---------|--|
| 1î                  | sun                 | ₽ăn         | kăn              | khân        | khien   | tui                              | khwăn   |  |
| Second<br>daughter. | Oldest<br>daughter. | Oldest son. | Youngest<br>son. | Second son. | Father. | Father.<br>Youngest<br>daughter. | Mother. |  |
| S.                  | S.E.                | E.          | N.E.             | N.          | N.W.    | w.                               | S.W.    |  |

Fig. 2. King Wăn's trigrams according to Legge 1882.

I will now present a linguistic attempt to identify the Taoist system's origin more closely, starting with  $yij\bar{n}g$ , and tracing the etymological antecedents of the names of its trigrams to their language's and language phyla's \*proto-forms (*i.e.* proposed earliest \*forms, systematically reconstructed by reference to accepted sound laws and explicit correspondence tables), if possible all the way back to \*Borean. The data are presented in Table 9:

<sup>&</sup>lt;sup>25</sup> Note that this and the following is based on a particular, widely accepted but not unanimous reading of the *I Ching*. Legge (1882) offers (see my Fig. 2) the trigrams according to King Wăn, where Earth appears as  $khw\hat{a}n$ , with might have led to a rather different etymological analysis.

Table 1. Tentatively proposed etymologies of the names of the 八卦 pa gua (eight trigrams)

|                               | 1  | 2  | 3   | 4   | 5  | 6   | 7   | 8                               |
|-------------------------------|--|--|---|---|--|---|---|---------------------------------|
| Trigram<br>Figure             | (■)  | (≝)  | (☲)   | (≝)   | <b>    (       </b>                          | <b>♯(=</b> )  | <b>    (                 </b>               | ( <b>==</b> )                   |
| Binary<br>Value               | 111  | 110  | 101   | 100   | 011  | 010   | 001   | 000                             |
| Translation : Wilhelm, others | the Creative,<br>Force   | the<br>Joyous,<br>Open                       | the<br>Clingin<br>g,<br>Radianc<br>e        | the Arousing,<br>Shake  | the<br>Gentle,<br>Ground                     | the<br>Abysmal,<br>Gorge                            | Keepin<br>g Still,<br>Bound                 | the<br>Recept<br>-ive,<br>Field |
| Image in<br>Nature            | heaven, aether<br>(天)  | swamp,<br>marsh<br>(澤)                       | fire (火)                                    | Thunder (雷)   | wind<br>(風),<br>wood<br>(木)                  | water (水)   | mount<br>ain<br>(山)                         | earth<br>(地)                    |
| Name                          | 乾 qián   | 兌 duì  | 離 lí  | 震 zhèn  | 巽 xùn  | 坎 kǎn   | 艮 gèn                                       | 坤 kūn                           |
| Karlgren<br>code              | 0140 с   | 0324 a-<br>c                                 | 0023 f                                      | 0455 s  | 0433 a                                       | 0624 d  | 0416 a                                      |                                 |
| Preclassic<br>Old Chinese     | ghar kār   | Ł(h)ōts;                                     | raj   | tərs  |  | khēm?   |   |                                 |
| Chinese<br>meaning            | be creative  | to open<br>a<br>passage<br>through,<br>clear | be<br>separate<br>d                         | to shake  | to concede;<br>compliant,<br>soft;<br>modest | pit; bury<br>in a pit;<br>be<br>sounding<br>kan-kan | refract<br>ory,<br>obstina<br>te,<br>resist |                                 |
| comments<br>on Chinese        | (a)  | (b)  | (c)   | (d)   |  | (e)   |   |                                 |
| proto-Sino-<br>Tibetan:       | *kār, 'dry' f)   |  | *răl,<br>divide,<br>be<br>separate<br>d (g) | *t[+]r ( ~ d-),<br>'shake, shiver' (h)  |  | *khʷēmH   |   |                                 |
| Borean                        | KVRV, 'dry'  |  |   | TVRV, 'to shake'  |  |   |   |                                 |
| Eurasiatic                    | *kVjwV(rV), notably: Altaic: *k'jóbarV (~-ju-); Uralic: *kujwa Khanty (Ostyak): kŏjəm- (V), xŏjəm- (DN Kaz.) 'fallen, sich vermindern (vom Wasser)' ?; Chukchee- Kamchatkan: *kъгуъ- (also *kъffa-t-?) |  |   | *dVrV, 'to<br>tremble', notably<br>Indo-European:<br>*dhreugh- ()<br>Altaic: *déru (~-f-)<br>Uralic: *tarV-,<br>*tarkV 'tremble,<br>shake'<br>Dravidian: *tir-i-<br>References:<br>Dolgopolsky n.d.:<br>566 *daRugV 'to<br>tremble, shake'<br>(with a very<br>dubious Arabic<br>parallel) |  |   |   |                                 |
| Afroasiatic :                 | *kVr-, notably<br>Semitic: *kVr-<br>'drying'<br>Berber: *k**ar- 'be<br>dry' Central  |  |   |   |  |   |   |                                 |

| Sino-<br>Caucasian : | Chadic: *kiwir- 'dry season' East Chadic: *kar- 'to make dry (cereals, land)' Low East Cushitic: *kar- 'dry'  *=íxG(w)Ăr, notably North Caucasian: *=iG_wĂr Sino-Tibetan: *kār Yenisseian: *qo(ʔ)r1- (~-l-) Burushaski: *qhar- Basque: *agor |  | *dVrV, 'to shake',<br>notably Sino-<br>Tibetan: *t[i]r (~d-<br>) Yenisseian: *-<br>tV(?)r | *gńwắmd<br>V 'hole,<br>pit' (i) |  |
|----------------------|--|--|---|---------------------------------|--|
| Austric              |  |  | proto-<br>Austronesian<br>*eter, *terter<br>'shake, vibrate,<br>tremble'. (j)             |                                 |  |
| African (misc.):     | Bantu *-kàd- 'dry up'  |  |   |                                 |  |

### NOTES TO THIS TABLE: 26

- a) Staroskin & Starostin (1998-2008) remark on this point: 'perhaps: be associated with the forces of Heaven'. Old Chinese \*ghar is also used as the name for the 1st hexagram in Yijing ('Heaven'). Middle Chinese gen is not quite regular in this series (one would rather expect Middle Chinese gen). For \*gh-cf. Xiamen khian², Chaozhou khien², Fuzhou khien². Another frequent (and archaic) reading of the character is Old Chinese \*kār, Middle Chinese ka^n Fan Qie 古寒), Mandarin gān 'to be dry' whence, possibly, Vietnamese cạn 'dry, shallow; on land, on shore' (although the tone is rather strange and a chance coincidence is not excluded); khan 'hoarse, husky, raucous; anhydrous'. Note that regular Sino-Vietnamese for Middle Chinese ka^n is can.
- b) Also read \*\(\Lambda(h)\)\(\text{ots}\) (Middle Chinese thwa\(\Lambda\_i\), Peking t\(\text{ui}\)) id.; \*\(\Lambda(h)\)\(\text{ots}\) 'glad' (Later Zhou).
- c) Also used for homonymous words: \*raj 'to fasten in a net, get tangled, caught in a net' (obviously related to 羅 \*rāj 'bird-net', 籬 \*raj 'hedge'; sometimes written with another character, 罹 which, however, has also a metaphoric meaning 'trouble, anxiety, sorrow' < 'drag into, involve'); \*raj 'be hanging down'; in the die-sheng 流離 \*ru-raj 'horned owl'. For Old Chinese \*r cf. Min forms: Xiamen, Chaozhou li², Fuzhou lie². There also exists a qu-sheng reading \*raj-s, Middle Chinese lè (Fan Qie 力智) 'to separate'. Regular Sino-Vietnamese is ly. Vietnamese also has rò'i 'be separated, separate' probably a more archaic loan from the same source.
- d) Sagart 1999: 51 (Chin.-AN).
- e) Chinese: 坎 \*khēm?, 坅 \*khəm? 'pit'. Tibetan: gjam 'a shelter, a grotto'. Lushai: kōm 'a hollow in the ground', kuam 'a valley, a hollow, a depression'. Comments: Possibly two roots, but hard to distinguish from each other.
- f) Chinese: 乾 \*kār 'dry' (cf. also 旱 \*ghān? 'drought, dry').

<sup>&</sup>lt;sup>26</sup> Sources for both table 13 and the notes: Starostin & Starostin 1998-2008, 'Long-range etymologies' and 'Sino-Tibetan etymologies'.

Burmese: kanh' to dry up', khanh 'to be dried up, exhausted as liquid'.

Kachin: ka2 'be dried up' (?).

Comments: Matissoff 2003: 180; Luce 1981: 52. Loss of final consonant in Ji npho is not clear (Matissoff cites the form as kan², which is probably Jinpho kan² coagulated, see \*kān). *Cf.* also Gurung \*khar, Kaike khar-pa, Rourou ka.<sup>44</sup>, Bugun gau 'dry'.

g) Burmese: hrajh to make an opening through a crowd by dispersing and scattering on both sides; to part forever

Kachin: gəran3 to divide, distribute, (H) məran, pəran to separate, ran be apart, separated.

Lushai: rel? to escape, steal with away (cf. also rāl from a distance, rol go into seclusion into jungle).

- h) Chinese: 震 \*tərs shake; fear; clap of thunder. Tibetan: ãdar to tremble, shiver, quake. Burmese: tun to tremble, shake, shiver, fear. Lepcha: tir, tjir, tjăr to move, to shake, to curl, as in contempt; to shake, as earth, house.
- i) North Caucasian:\*gfwăndV (~-ĕ-,-ĭ-) . Sino-Tibetan: \*khwəmH . Yenisseian: \*kə?d- (~g-,-ǯ-,-ʒ-) . Comments and references: *Cf.* \*gwVntV . For Sino- Tibetan *cf.* rather Burushaski qam / qom 'hole, cave, grave'.
- j) proto-Austric: \*tVr 'shake'; proto-Austroasiatic: \*tVr 'tremble'; proto-Austronesian: \*eter, \*terter 'shake, vibrate, tremble'. References: Peiros 1989

With state-of-the-art long-range linguistics, we now have the tools available to check Bernal's suggestion, and it proves most valuable. According to the authoritative *Tower of Babel* etymological database, <sup>27</sup> the eight trigram names with the exception of 乾 qián ('the creative, heaven') and 震 zhèn ('the arousing, thunder') have no etymologies beyond the Sino-Tibetan realm, and as many as four (notably: 兌 duì 'the joyous, swamp', 巽 xùn 'the gentle, wind, wood', 艮 gèn 'keeping still, mountain' and 坤 kūn) even seem to lack a proto-Sino-Tibetan etymology. On the other hand, Greek khthōn is generally accepted to derive<sup>28</sup> from proto-Indo-European: \*dg'hem-, 'earth'. Of the many transformations of this etymon in Indo-European languages only Hittite: tekan, taknas 'earth', dagan, tagan- 'down, on the ground' (Friedrich 1932: 204, 220), and Greek khthōn- come anywhere near Chinese kūn, whereas the geographically best qualified languages, Tokharian A and B, remain at a greater distance with A tkaṃ B kem (Adams 1999: 192; note the n/m problem).

## Transcontinental relationships and periodisation: China and West Asia

The outcome of our etymological detective work lends credibility to Bernal's suggestion, but also creates further puzzles.

<sup>&</sup>lt;sup>27</sup> With Sino-Tibetan etymology, and treatment of Chinese characters, compiled by the late lamented Sergei Starostin; *cf.* Starostin & Starostin 1998-2008.

<sup>&</sup>lt;sup>28</sup> Cf. Pokorny 1959-69: I 662 f; Buck 1949: 16.

If kūn, and perhaps some of the other trigram names, constitute Anatolian words, was it because the trigrams originated in West Asia and from there diffused to East Asia; or was proto-Hittite's original home much more to the East? Before Hrozny's decipherment of Hittite established the Indo-European nature<sup>29</sup> of that language (in the 1910s), its speakers were commonly regarded as 'Turanic', and even as downright Chinese, especially in circles of Biblical studies. Movement back and forth across the Asian Steppe along an East-West axis has a very long history, and intensified even greatly after the invention of the chariot. Both the Tocharian language and the recently found Tarim mummies (Mallory & Mair 2000) suggest that exchanges (both linguistic, and cultural) between Indo-European and Sino-Tibetan may have taken place far east on the Steppe (cf. Tsung-tung Chang 1988). On the other hand, the linguist Karst (1931a) suggested – albeit on the erroneous basis of far too modern Chinese language forms – that the realm of Sino-Tibetan may have extended into West Asia in the Bronze Age - thus foreshadowing recent, more systematic explorations into the continuities between Basque, Caucasian languages, Sino-Tibetan, and Na-Denē by such long-range linguists as Starostin, Fleming, Bengtson, etc. As a result, modern scholarship no longer limits the Bronze-Age western extension of the Sino-Caucasian macrophylum to the Caucasus area (although as a part of West Asia this would already suit our argument), but would also include the Northwestern Iberian peninsula, part of the Northern shore of the Mediterranean, possibly also Sardinia (McCall & Fleming 1999; van Binsbergen & Woudhuizen 2011). In addition to exchanges in a contact area where the two language groups and their distinctive cultures more or less share a habitat, we may reckon with the simple displacement of people, linguistic elements, and ideas across the great distances of the Steppe. Needham with Ling's path-breaking study (1961 / 1954) gives a long list of East-West technological and intellectual exchanges. In the preceding decades there has been a tendency, partly based on now obsolete paradigms (including pan-Babylonism), but partly also inspired by a long-range awareness which (initially based on Western Assyriological and Sinological knowledge that was far below today's standards) was to become increasingly counter-paradigmatic in the course of the 20th century CE, to see astronomical and astrological knowledge as travelling West-East in (proto-) historical times, i.e. from West Asia to China, by long-range spatial transfer.

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<sup>&</sup>lt;sup>29</sup> The affinity and interpenetration of the Sino-Tibetan and the Indo-European language phyla has constituted a persistent theme in scholarship. The immense Steppe environment in combination with horse-riding and chariot technology and the migratory patterns of extensive animal husbandry created favourable conditions for extensive language contact. The above exercise concerning the possible origin of the Chinese word kūn has several more authoritative counterparts, *e.g.* Pulleyblank 1966; Ulving 1968-1969; Tsung-tung Chang, 1988; Blažek 2010. In addition to horizontal borrowing, there is a strong argument for a genetic relationship. Under Fleming's and Starostin's \*Borean hypothesis, the macrophyla to which the Sino-Tibetan and Indo-European phyla respectively belong, Sino-Caucasian and Eurasiatic, are both branches of the \*Borean trunk, and as I argue elsewhere there are strong statistical indications that their separation only took place in the Uppermost Palaeolithic (van Binsbergen & Woudhuizen 2011: 77 f) so that even when allowing for phonological and semantic drift we would still expect a fair degree of lexical overlap – as in fact has been found.

<sup>&</sup>lt;sup>30</sup> Conder 1909, 1915. Turan is an obsolete name for Central Asia.

Already the 17<sup>th</sup>-century scholar Athanasius Kircher, enlightened by the flow towards Europe of valid Sinological knowledge from Jesuit missionaries, but despite all his efforts unable yet to read Ancient Egyptian texts, claimed that the Chinese civilisation was largely dependent on Egypt. Under the then prevailing Jesuit Figurism, his older contemporary Bouvet equated the mythical emperor and culture hero Fu Xi 伏羲 with such heroes of the Western (including Islamic) esoteric tradition as Hermes Trismegistus, Zoroaster, Enoch and Noah (Walker 1972; Leibniz 1994: 98); the idea however was more than just a vindication of Christianity in disguise, for a long-range look at some of these culture heroes reveals that they have much in common (e.g. as White Gods of creation or Second Creation) and are likely to have an antiquity that goes back to the proto-Neolithic if not earlier (van Binsbergen & Woudhuizen 2011: ch. 5). Terrien de Lacouperie (1882, 1888) specifically claimed a Mesopotamian origin for yì jīng, which was contested by Legge 1891/ 1988: xix. Warrington Eastlake (1880) made a similar claim. Many scholars at the time<sup>31</sup> saw, on the basis of the material techniques involved and the attending texts, close parallels between the Urim and Thummim oracle of Ancient Israel, 'Lo Pan' (luó pán 羅盤) divination of Ancient China, and the Mesopotamian (Sumerian, Akkadian) forms of divination that make up an considerable part of the Assyriological corpus and that had been closely studied by 1900. Half a century later the same opinion was, more systematically, expressed by the great Assyriologist Oppenheim 1966: 37). A study in its own right could be written on the correspondances, and perhaps historical continuities, between Sumerian me 声, Greek logos λὸγος, and Chinese Tao 道 – to say nothing of Ancient Egyptian  $ma^c at$  .

In addition to astrology and other divinatory ancient sciences, also mythological iconography plays a role in establishing East-West continuities across Eurasia. Primal gods and culture heroes with snake-like legs are to be found in the West, in Ancient Greece as, presumably, a Pelasgian heritage (Cecrops and Erichthonius, associated with pre-Hellenis Athens), and in China as Fu Xi and Nu Wa. According to the controversial Assyriologist Temple (1976)<sup>32</sup> the connection between these extremes,

<sup>&</sup>lt;sup>31</sup> Kugler 1900: 79f; Bezold 1919 (surprisingly sophisticated and apparently little dated); Ungnad 1932-. Carus (1911; 1902, 1907; also *cf.* Ball 1891, for which see Anonymous 1909. Not every scholar joined this choir, e.g. Eberhard (1949) rejected Dubs' (1946) theory of Zoroastrian influence on Taoism.

<sup>&</sup>lt;sup>32</sup> Temple (1976) invoked the intervention of extraterrestrial civilisation to account for the myth of Oannes at the onset of the Sumerian civilisation, and for the alleged superior knowledge of the Dogon concerning the composite nature of the star Sirius (α *Canis Major* A, B) – probably a total artefact, based on Griaule & Dieterlen's mishandling of Dogon ethnography and mythology, and its subsequent New Age misappropriation, in combination with the fact that knowledge of the composite nature of Sirius goes back to Bessel and his contemporaries towards the middle of the 19th century, and among the Dogon could easily be attributed to terrestrial European civilisation, given the existence, between 1850 and 1930, of astronomical expeditions into West Africa, and the general circulation of astronomical knowledge among educated Europeans visiting that part of the world. A further argument for this claim is the number of satellites that, in the same kind of argument, is spuriously attributed to the prodigious astronomical knowledge of West Africans: nearly a dozen, which does not reflect the actual number (of several dozens) now upheld by state-of-the art astronomy, but merely the consensus among North Atlantic professional astronomers around 1900.

in space and time, is the Sumerian mythical figure Oannes, likewise alleged to combine an aquatic nature with the status of culture hero; also the Ancient Mesopotamian water god Ea / Enki has the same serpentine features.

Ancient Sumerians identified as 'blackheaded people' (Kramer 1959: 72 and passim), but so has (for better or worse) the classic Chinese expression lí mín 黎民 (lit.: 'black people') often been translated, as basis for a debate on Chinese-West Asian continuities that has been waged since the times of G. Schlegel (second half 19th c. CE), and that has acquired Afrocentrist overtones in recent decades with the work of Clyde Winters.<sup>33</sup> Archaeologically, the continuity between West Asia and China in Neolithic times in terms of ceramics, food production (agricultural implements, names of domestic animals) and weaponry was found to be remarkable, perhaps with an overall tendency towards West-East movement. Terrien de Lacouperie made reference to a much contested tradition according to which Chinese civilisation owed a considerable debt to the 'hundred families' allegedly settling on Chinese lands from Central Asia (Sogdiana, Bactria etc.), where Hellenistic and Mesopotamian influence was considerable. In recent work reflecting today's scholarly standards, these viewpoints have largely been discarded, yet similar ideas have replaced them and for very good reasons, e.g. in Witzel 2009 (where, with a focus on Japan, he lists the many trans-Steppe Eurasian mythological continuities; and in Mori Masako (1995, 2009), where the specific claim is made that the mythical archer Hou Yi – one of the most popular figures of Chinese mythology – goes back to a Mesopotamian prototype and thus is cognate to Graeco-Roman Heracles / Hercules.

Meanwhile the expression 'black(-headed) people' opens up quite another discussion. It is a cherished Afrocentrist theme (van Sertima 1985, which collection contains one of Martin Bernal's first statmeents on his *Black Athena* thesis) that, from the extreme West (the so-called Black Irish of popular ethnic classification, and of myth) to the South (the highly pigmented Dallit, once designated 'Untouchables', who have been claimed to be continuous with the population of sub-Saharan Africa; Winters (1988) also throws in the Tamil ethnico-linguistic cluster), to even East Asia, where Winters (1983, and many recent discussion on the Internet) claims that the Xia and Shang dynasties were founded by Black Africans. In my own research of transcontinental connections (especially van Binsbergen & Woudhuizen 2011) I have repeatedly stumbled upon 'uninvited guests', *i.e.* linguistic and cultural varieties that appeared to be 'out of place' from the perspective of prevailing theoretical and geopolitical paradigms. Thus I established a Bantu-speaking presence in the Bronze Age Eastern Mediterranean, as one of the linguistico-ethnic components of what stood out as the Pelasgian complex. This, in combination with

- archaeological and ethnographic evidence of now mainly African traits in West Asia (elongated labia, round house plan, spiked wheel trap, the belief in a the unilateral mythical being, etc.) and of
- my demonstration of a substantial \*Borean and temperate-zone background

<sup>&</sup>lt;sup>33</sup> Cf. Winters 1980a, 1980b, 1981, 1983a, 1983b, 1985, 1988a, 1988b.

- for the Niger-Congo phylum of which Bantu is a major branch (van Binsbergen 2011a, and in press (b))
- and (*ibidem*) indications of an early associated between Bantu-speakers and metallurgy (even though these cannot be claimed to be the very earliest metalworkers)

brought me to propose (with now discarded predecessors such as Trombetti) a rather different early history of the Bantu sub-phylum: from West, South, South East or East Asia, into Africa, where despite specialists' claims of an origin c. 8 ka BP near Lake Chad, true Bantu expansion is only considered to date from the second half of the 1<sup>st</sup> mill. BCE – as can be very well accommdated within my proposal. These counterparadigmatic linguistic and cultural considerations are well compatible with the Afrocentrist idea of a highly pigmented population segment preceding the spread of lowly pigmented populations in Eurasia.

Theoretically it is conceivable that both Chinese kūn and the superficially similar Greek and Hittite forms derive not from one another but from a common ancestral form. This however turns out not to be the case: there is undoubtedly a genetic relationship, but it cannot have produced kūn in the Sino-Tibetan context:

The etymology of the Indo-European words in question is not controversial: via proto-Indo-European \*dg'hem- or \*dhģhem- 'earth' they derive from Eurasiatic: \*DVG- 'earth', which has also yielded proto-Altaic: \*t'āgo [+ Tungus-Manchu \*tuka(la)?] ('dirt (dust, clay; no reflexes in Japanese); Kartvelian: \*diq- - ('clay, earth'); Dravidian: \*TūK- ('earth'); and Eskimo-Aleut: \*taɣŋə- ("-ŋɣ-) ? ('black') (cf. Illich-Svitych 1965 / 1967: 342, 1971-1981: I, 220; Dolgopolski n.d.: 551, 2331, 2347. Ultimately Eurasiatic \*DVG- may be claimed to derive from \*Borean (approx.): \*TVKV 'earth', which appears in other linguistic (macro-) families as follows. proto-Afroasiatic: daķw- 'clay'; proto-Sino-Caucasian \*[t]VQV, whence – Starostin 1989 – proto-Sino-Tibetan: \*dhěk 'clay, mire' (with Chinese: 埴 \*dhèk, \*thèks 'clay, clayey' – not even remotely reminiscent of 坤 kūn, proto-Tibetan: ãdag 'clay; cleaving, adhering', proto-Lushai: diak 'mud, mire'), proto-Yenisseian: \*təq-, proto-Burushaski: \*toq; Austric: proto Austronesian \*bitak, \*-tak, \*litek 'mud; earth, ground', ?, proto Austroasiatic \*tVk 'sticky'; Amerind (misc.): \*tVk- 'dirt'; African (misc.): Bantu \*-tàkà 'soil'; cf. (Illich-Svitych 1965 / 1967: 342; Bengtson & Ruhlen 1994: 42).

All this means that Bernal's long shot was surprisingly well-aimed. It would constitute a project in comparative historical linguistics in its own right to ascertain whether the remaining three apparently exotic trigram names, duì, xùn, and gèn, could likewise be argued to have an Anatolian/Greek background. Meanwhile, we may now safely assume that at least one of the eight trigram names, kūn, has an Anatolian / Greek language origin, which also allows us to date that name to 2nd-3rd millennium BCE. Remarkably, the traditional Chinese account of the origin of the trigrams has been that the legendary ruler / culture hero 伏羲 Fu Xi, mythically dated at the early 3rd millennium BCE, first perceived the eight trigrams on the back of a mythical

animal (dragon-horse<sup>34</sup> or turtle) emerging from the River Luò 洛河, with which also the invention of the luò shū 洛書 magic square is connected. Conventionally depicted (e.g. by the Song-dynasty painter Ma Lin 馬麟; early 13<sup>th</sup> c. CE) as wearing a leopard skin and/or deer skin, the character of Fu Xi not only has shamanic and Steppe connotations but is especially continuous with iconographic patterns attested in Neolithic Anatolia,<sup>35</sup> classical Greece,<sup>36</sup> and, probably not unrelated (Vandenbroeck 2000), in the Neolithic Sahara, where likewise leopard skin clothing has been depicted (Breuil et al. 1954), and where an apparent proto-script largely built of horizontal lines and dots has been attested, i.e. reminiscent of geomantic notation (Lhote 1954). The Anatolian / Black Sea region has long been recognised as exceptionally innovative, among the earliest regions of Neolithic domestication of crops and animals and of metallurgy, and arguably the homeland of at least one major language family (Indo-European), at the same time skirting the Sino-Caucasian and the Afro-Asiatic distribution areas, and recognised as a major region for the innovation and subsequent diffusion of mythical materials e.g. flood myths. I think we have now found serious indications that it was also in the Anatolia / Black Sea region, in Neolithic times, that the very ancient heritage of a 2<sup>n</sup> based counting, classification and divinatory system came to be greatly developed and formalised into a protoform of the transformative element cycle. The latter subsequently found its way to China to produce the Taoist element cycle and yì jīng; much later (late 1st mill. CE) to Mesopotamia in <sup>c</sup>Abbāsīd times where (most probably under further Chinese feedback) it became <sup>c</sup>ilm al-raml, and also to North and sub-Saharan Africa: certainly after 1,000 CE as a form of diffusion of the then recently formulated cilm al-raml, but possibly (and this would accommodate Afrocentrist insistence that geomancy is not a recent import but is genuinely at home in Africa) already several millennia earlier; after all, the classic formulation of cilm al-raml is by shaykh Muḥammad al-Zanātī (c. 1200 CE),<sup>37</sup> whose Berber name just might suggest that he formalised a system already in use in the Saharan environment where it is still widely attested.<sup>38</sup>

<sup>&</sup>lt;sup>34</sup> Another well-known Chinese myth (from the *Shūjīng* 書經 *Classic of History*) also shows evidence of a transformative cycle of elements: Kun / Gun 鯀, in the shape of a white horse tries to control the primal waters, but he is killed by the fire-god; in Kun / Gun grows his son [Da] Yu 大禹, a dragon who does succeed in taming the waters. Similarly, the transcformative cycle of elements is implied in the common stories of the Chinese god of fire Lui tze, locked up in a cage but upon his release causing a Flood (Dennys 1876: 121 f).

<sup>&</sup>lt;sup>35</sup> A case in point is the famous site of Catal Hüyük; Mellaart 1967; Kammerzell 1994.

<sup>&</sup>lt;sup>36</sup> Besides the heroes Jason, Menelaus and Diomedes, the god Dionysus was especially associated with the leopard skin; Dionysus was mythically associated with long-range eastward expansion, and his manifold leopard connotations seem to reappear in the military ranks and the adornment of the Chinese Emperor's chariot.

<sup>&</sup>lt;sup>37</sup> Cf. al-Zanātī 1923.

<sup>&</sup>lt;sup>38</sup> However, like several other North African groups the Zanata tribe is known for its extensive Jewish influence, and Zanati may simply have relied on Hebrew geomancies, such as have been in existence at least since Ibn Ezra אבן עזרא (1092/3–1167 CE) – his geomancy was found at the famous Cairo geniza), and when the Genisa specialist, my dear colleague Saul Shaked was good enough to read it with me at Wassenaar, the Netherlands, 1994-95 (my own command of Hebrew being inadequate), it

Feuchtwang (1974) is one of the few authors to present, beyond a mere philological argument, a cultural-anthropological analysis of Chinese geomantic divination, and to explore its similarities and differences vis-à-vis the African forms; he acknowledges Hébert's (1961) comparative analysis of African geomancies (for which already Steinschneider (1877) established the background in Arabian *'ilm al-raml'*), but rejects Hébert's reference to Greek philosophy as a possible substrate underlying the African forms, and stresses the differences between African and Chinese geomancies:

'Missing altogether from African goemancy, however, is the elaboration of time cycles and the whole dynamic flux [apparently is meant: the transformational and cyclical aspect – WvB] and change so essential to Chinese geomancy and horoscopy' (Feuchtwang 1974: 231).

Nonetheless, Feuchtwang admits the continuity between Chinese and Etruscan augury – echoing the view that sees Ancient Chinese and Imperial Romans (whose elite women wore Chinese silk) as each other's mirror image. But when we realise that the Pelasgian socio-political system of confederations consisting of twelve named groups has a Eurasian distribution from Etruria, Ancient Greece, Syro-Palestine and North Africa, possibly also Niger-Congo speaking Africa, and all the way to China, we are tempted (and Feuchtwang admits as much, 1974: 224 f) to view also the transformative cycle of elements as *Pelasgian*, to attribute a Bronze Age West Asian origin to it, and to regard the formal similarities as indications of underlying genuine cultural continuities.

In the field of global cultural history, recent decades<sup>40</sup> have made us strongly aware of the potentially Eurocentric and hegemonic implications of hypotheses claiming a European / West Asian origin for such major cultural achievements e.g. as Neolithic food production (now modified by the claims of African and Chinese contributions to the Neolithic revolution). Having contributed to this debate (van Binsbergen 1997, 2010), I am rather loath to conclude, for the Chinese versions of the transformative element system, a West Asian, Indo-European speaking, origin. Yet there is so much converging corroborative evidence from adjacent knowledge fields such as astrology and the zodiac that such an apparently Eurocentric conclusion yet appears inevitable. Already a century ago, the great specialist on the history of astronomy and astrology Boll (1912) gave many reasons why the Chinese twelve-animal zodiac (found all over Eastern Asia from Turkestan to Japan) must be considered to have an origin in Hellenist Egypt – incidentally, an intellectual milieu where Empedocles' four-element system had been accepted as central cosmology. Necessary transformations of details occurred in the process: the Egyptian 'ibis' became the Chinese 'fowl', the 'crocodile' became the 'dragon'. Also the prominent Sinologist Chavannes (e.g. 1906) claimed that the twelve-animal-zodiac (applicable to periods of 12 years, days, and hours) travelled from West Asia to China via Turkestan, with the Greek-Hellenist kingdom of Bactria as the natural bridge. A similar continuity was claimed by Leopold de

turned out to be an unmistakable emulation of Arabic prototypes (*cf.* Faḥd 1966; Skinner 1980; Jaulin 1966).

<sup>&</sup>lt;sup>39</sup> von Vacano 1961: 46; van Binsbergen & Woudhuizen 2011, and extensive references there.

<sup>&</sup>lt;sup>40</sup> Bernal 1987-2006; Needham with Ling, 1956, 1961; Diop 1991.

Saussure (1923).<sup>41</sup> Elliot Smith (1919: 49), once the epitome of British diffusionism and knighted for his great achievements in (brain) anatomy, but little more than an amateur in global cultural history, makes the claim in his characteristic sweeping manner:

'In my last Rylands Lecture I referred to the probability that the essential elements of Chinese civilization were derived from the West. I had hoped that, before the present statement went to the printer, 1 would have found time to set forth in detail the evidence in substantiation of the reality of that diffusion of culture.

Briefly the chain of proof is composed of the following links: (a) the intimate cultural contact between Egypt, Southern Arabia, Sumer, and Elam from a period at least as early as the First Egyptian Dynasty; (b) the diffusion of Sumerian and Elamite culture in very early times at least as far north as Russian Turkestan and as far east as Baluchistan; (c) at some later period the quest of gold, copper, turquoise, and jade led the Babylonians (and their neighbours) as far north as the Altai and as far east as Khotan and the Tarim Valley, where their pathways were blazed with the distinctive methods of cultivation and irrigation; (f) at some subsequent period there was an easterly diffusion of culture from Turkestan into the Shensi Province of China proper; and (e) at least as early as the seventh century B.C. there was also a spread of Western culture to China by sea.'

According to Giles (1898: 811) the theory of the interaction of the five elements is attributed to Wang Chi 王俊, who lived during the Sung dynasty (960-1279 CE). This is about one and a half millennium after Empedocles, and might conceivably, though indirectly, be influenced by the latter. However, another author on the Five Elements mentioned by Giles (1898: 773) was Tsou Yen 以行, of the 4<sup>th</sup> c. BCE – one century after Empedocles (c. 490-430 BCE).

Could we then postulate that the East Asian correlative systems have been derived, after all, from the Presocratics, via the intermediary of Hellenism specifically Hellenist Egypt? Certainly not. Our linguistic detective work suggests that the East Asian correlative systems did owe a considerable debt to West Asia, but their nomenclature betrays a proto-Hittite lexical form that must be at least a thousand years older than the Presocratics, who preceded Hellenism by several centuries again. On the basis of the flimsy evidence available, the best fitting model would be one according to which the transformative cycle of elements was invented in West Asia in the 2<sup>nd</sup> millennium BCE, was from there transmitted to East Asia, but also lingered on locally (for instance in the Indo-Iranian fire cult, whose oldest attestations go back to the same period; or in the cult of the fire and metallurgy god Hephaestus, which is reputed to have its origin in Lycia),<sup>42</sup> and in good time inspired the Ionian philosophers and their followers in Graecia Magna, in the middle of the first millennium CE – but only to lead them to formulate an element system that lacked the cyclic and transformational format then already around for a thousand years, and that was in fact a regression to much older and simpler, recursive, Upper Palaeolithic forms.

One of my methodological principle has been that, if long-range transcontinental

<sup>&</sup>lt;sup>41</sup> Such spread need not have depended on state agencies; itinerant diviners and magicians may have been in part responsible for it (Needham with Ling 1961; Burkert 1983).

<sup>&</sup>lt;sup>42</sup> Maximus Tyrius (1804): *Dissertationes*, 37.

connections are to be taken seriously, this implies that conditions at one end of a chain of transcontinental connections may also apply at the other end, even if this means at thousands of kilometres and thousands of years distance. In the Skagit Native American's account of a North American element system, knowledge of the system was stressed to be secret. This suggests that the element system is originally esoteric, decret knowledge, to be transmitted in initiation cults such as bestow on new, young members of society the local worldview and mythology, or such as are likely to have attended the early millennia of metallurgy (Eliade 1962; McNaughton 1988). The well-known imperviousness of such cults to change may be one argument for our Working Hypothesis – the great antiquity and transcontinental spread of these systems. The secrecy element may also go some way to explain the enigma surrounding the transformative cycle of elements in the Empedoclean context: attested, affirmed by such great authorities as Aristotle and Plato, yet ignored, largely by Empedocles, and entirely by his successors in the history of Western science and cosmology.

In fact, Empedocles and the other Presocratics searching for one or more materiae primae present something of an enigma: considered as a group it is clear that they could work on the basis of knowledge of a four-element cycle of transformations from which each took his pick until Empedocles took all four elements; the additional evidence such as the Homeric struggle of Achilleus (whom I have argued to represent Earth) and Hephaestus (Fire) against Scamandrus (Water), and the very frequent mythological evocations of transformations or metamorphoses (again, Ovid's delightful Metamorphoses is entirely devoted to them) reveals that such knowledge probably had been available in the Greek world since at least the early Iron Age. Here and in many other oral and epic expressions of the transformative cycle of elements world-wide (cf. the North American Flood stories we considered above) the typical formal relationships defined within the transformational system (notably: to kill or destroy vs. to produce, give birth to, and the attenuated forms of hindrance vs. assistance) dictate the interactions between hero protagonists and explain the futility of victory and the relative nature of defeat (van Binsbergen 2010c). And yet the dynamism of the transformative element cycle is scarcely used by Empedocles, and despite Plato's and Aristotle's commentaries is scarcely played a role in the Empedoclean reception in later centuries.

Meanwhile the above transcontinental analysis leaves us uneasy. Scholars like Boll and Chavannes wrote at the hightide of European colonialism, when it was common even for scholars to underestimate the cultural initiative and achievements of peoples outside the North Atlantic European tradition. While admitting some West-East flow, half a century later Needham with Ling (1961) present a long list of more than 70 items (including the four cardinal ones: paper, printing, the compass, and gunpowder) where the flow of cultural indebtedness was unmistakably East-West. The Hellenistic time perspective evoked by Boll and Chavannes is suspiciously shallow, when we realise that ever since the invention of horse-riding and chariot technology, in Central Asia 3,000-2000 BCE) the Eurasian Steppe has been an open corridor through which all sorts of cultural achievements have constantly travelled in both easterly and westerly directions.

But do we need transcontinental transmission at all to explain the vicissitudes of element systems in Eurasia? Certain prominent scholars today claim that we can do without. Based on the inspiration from neurobiology, a new, typically postmodern light is thrown upon these transcontinental connections by the work of Steve Farmer et al. (2002), in their contribution to a collection of papers (Fiskejo 2000) on correlative cosmologies with special emphasis on East Asia. For these authors, the many formal correspondences between the correlative cosmologies we have considered in Table 5, are not in the least indicative of actual historic borrowing. Instead, they argue that within every literate religious tradition, specialists are constantly at work to reconcile, through ever more convoluted compromises, the contradictions that arise when their own tradition encounters, or is influenced by, an adjacent tradition with, originally, a totally different formal structure and contents. These (largely hypothetical) procedures of reconciliation are claimed to produce converging forms of layered complexity, which might even be predicted with a purely formal algorithm – so even if the initial input of original, local systems was absolutely unrelated and disparate, the end result, after many centuries, will show very marked similarities regardless of any real exchanges of content. This view would render the hypothesis of a common origin in some proto-historical or prehistorical substrate superfluous under Occam's Razor. While the eminent Asianist specialists co-signing that argument are sufficient warranty to take it seriously, it is my view that these postulated mechanisms of convergence explain only a relatively small part of the similarities and convergencies we see in the scriptural evidence.

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