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The Greek idea of causes and its Chinese counterpart.

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1. When we make a comparison between cultural worlds very different and distant from our own culture, as ancient Greece and Far East are, we use, more or less consciously, three terms of comparison. For instance, if we make a comparison between Greek and Japanese theatre we start from our idea of theatre or of drama as a sort of semantical bridge. In other terms, we can make a comparison between *tragôdia* and *nô* because in our culture we have the idea of a dramatic performance, and starting from this very idea we can put under the same category items designated in the original language by terms that have an etymology and a basic meaning completely different. In fact *tragôdia* literally means “song for a goat” (Chantraine 1999, p. 1128) and *nô* means simply “talent” (Shûichi 1987, p. 330). To put together the two realities is possible for us only if we understand both terms to designate similar phenomena, and the criterion of similitude is what happens by us. The same applies when we speak of cause and causality. We should start from our conception of *cause* in order to have a conceptual basis necessary to make a comparison between terms such as the Greek *aitia* and the Chinese *gù* (故) or *shi* (使) (Lloyd 1996, p. 108).

2. But in the preset case things are not so simple. When trying to make comparison people often forget that such terms as ‘cause’ are not univocal, but they indicate a cluster of concepts, in a way connected but also very different. So, what seems to be a decisive difference or similarity in an usage of the terms, vanishes if we consider other possible meanings of the words employed. Following the example of Lloyd, I’d like today to present some observations about what we mean when we use expressions such as “The Greek concept of casuse” and “Our concept of cause” and the multiplicity of meaning of those sentences. At the end I will go back to Lloyd’s article.

3. Let’s start from the term *aitia*. In my opinion, and against the advice of some famous scholars of today, I think that there is no difference between the meaning of the feminine noun *hê aitia* and the substantiated neuter form of the adjective, *to aition*, “the thing which s an *aitia*”. *Aitia* is a term of common language. It derives from the adjective *aitios* “the person who has the role of an

aitia” and is connected to the verb *aitiaomai* “to attribute to somebody the role of an *aitios*”. But what means *aitios*? Etymological dictionaries connect *aitios* to the concept of “responsible, the person who makes something happen” and in judiciary language *aitia* means “responsibility” or even “accusation” to be responsible for something. The thing produced can be designated with the term *aitiaton*, “the effect”, whereas who is not responsible of something is *anaition*, and an accomplice can be designated as a *sunaition* or a *metaition*, adding to *aitios* the prefixes *a-*, *sun-*, *meta-* that here mean non- with and together (Chantraine 1999, p. 41). The indications given by Chantraine are confirmed by some ancient epigraphic testimonies, as the Law of Draco (VII cent. B.C.) and the Laws of Gortina (VI-V cent. B.C.). There the responsible of a murder is called *aitios phonou*, and the husband who abuses his wife is considered *aitios kereuseôs*, responsible of the divorce. According to the more recent research (Darbo – Viano 2015) here *aitios* always indicate somebody who has some moral or juridical responsibility and not merely the moving cause of an event, without any evaluative undertone. The term *aitia* itself indicates an accusation, from which somebody must defend himself in front of a court, as in the treatise between Gortina and Rhittenia (V cent. B.C.). Here is agreed that citizens accused of a crime should respond to the assembly and refute, if they can, the accusation made against them, *amities as k'aitiasontai*. In sum, the origin of Greek concept of cause is connected to the juridical language.

4. But how and when this term, *aitia*, became a technical term in the philosophical language? I agree with Michael Frede when he says:

When the use of 'aition' was extended such that we could ask of anything 'What is the aition?', this extension of the use of 'aition' must have taken place on the assumption that for everything to be explained there is something which plays with reference to it a role analogous to that which the person responsible plays with reference to what has gone wrong; i.e., the extension of the use of 'aition' across the board is only intelligible on the assumption that with reference to everything there is something which by doing something or other is responsible for it. (Frede 1987, p. 132)

When did it happen? If we listen to Aristotle, already Thales (VII-VI cent. B.C.) has discovered the material cause, and the idea of cause was present at the beginning of Greek philosophy. But Aristotle clearly attributes to his

predecessors his own language. The Presocratics used a very different language, and recently Vegetti said, very correctly:

The surprising result ... in the early Greek philosophers is the virtually total absence of any reflection on the problem of causal explanation. The evidence on them includes abundant references to the language of cause. Yet ... that evidence has no value whatsoever because it depends entirely on Aristotle's interpretation. (Vegetti 1999, p. 374)

After that, Vegetti discusses texts by Sophists, Historians and medical writers. In the Historians he finds a completely common usage of *aitios* as the person responsible for something. He finds only some passages where the notion of responsibility is applied also to inanimate things, as the causes of the floods of the Nile (Herod. II 20, 2-3) or the causes of the plague in Athens (Thuc. II 48, 3). But even here he thinks we have a metaphorical attribution to a thing of a quality normally reserved to living beings.

According to Vegetti we can find the first appearance of the philosophical concept of cause in the writings of the Hippocratic collection. In order to be brief, I will quote only the most important passage, from *The ancient medicine*:

we must consider the cause of each complaint to be those things which, being present in a certain fashion, the complaint exists, but it ceases when they change to another combination¹

Here, according to Vegetti, *aitia* indicates something which has the role of a sufficient cause, in fact «(1) its presence produces a certain effect, (2) this effect is necessarily determinate and in a univocal manner, and (3) its absence or alteration produces the failure of the effect itself» (p. 284).

Vegetti makes a great deal of this passage, in which he sees the beginning of a new chapter in the history of philosophy and a radical novelty in rigour and capacity of universal conceptualization. May be this is too much, because, in our opinion, the aim of the doctor is always a practical one, to cure the patient, and not to establish new concepts in a rigorous way. Far from being the three

¹ δεῖ δὲ δήπου ταῦτα αἴτια ἐκάστου ἡγέεσθαι, ὧν παρεόντων μὲν τοιοῦτον τρόπον ἀνάγκη γίνεσθαι, μεταβαλλόντων δὲ ἐς ἄλλην κρῆσιν παύεσθαι, (*Prisca med.* 19,3)

criteria above quoted the core concept of the Greek notion of cause, they seem to me some practical way to individuate the origin of the symptoms in the patient.

Be it as it may, it seems clear to me that in V cent. B.C. we find a development of the realm of *aitia/aitios* from the human behaviour to natural phenomena and to involuntary events, in order to find the thing immediately responsible for them. On the contrary, Defoort (1997, p. 170) tells us that “it is difficult to find any discussion of causation in the classical corpus that is not directly related to political concerns”.

5. This meaning of *aitia* as the immediate responsible of a phenomenon gave birth to a special kind of literature, called *aitiologia*, the search of the cause of a puzzling natural phenomenon. Here is an example taken from an Aristotelian collection of *Problemata*:

Why do waves calm down more slowly in the wider open sea than in shallow waters? Is it because everything calms down more slowly after much motion than after little. Now in the wide open sea the ebb and flow is greater than in shallow waters; there is, therefore, nothing strange if that which is greater is more slow in calming down.²

This kind of activity, possibly already present in Democritus, was put in practice above all in the Peripatetic school, both in Hellenistic and Imperial times, and we have ample collections of *Problemata* attributed to Aristotle and Alexander of Aphrodisias. But also philosophers from other Schools engaged in such curiosities, as the Stoics Posidonius and the Platonic Plutarch. In the Aristotelian school there were never doubts about the importance of such research, where as in other school it was sometime seen as a waste of time. For instance Strabo Says about Poseidonius:

² Διὰ τί ἐν τοῖς μείζοσι πελάγεσι βραδύτερον καθίσταται κύματα ἢ ἐν τοῖς βραχέσιν; ἢ ὅτι ἐκ τῆς πολλῆς κινήσεως βραδύτερον καθίσταται πᾶν ἢ ἐκ τῆς ὀλίγης; ἐν δὲ τοῖς μεγάλοις πελάγεσι πλείων ἢ ἄμπωτις γίνεται ἢ ἐν τοῖς βραχέσιν. οὐθὲν οὖν ἄλογον τὸ πλείον βραδύτερον καθίστασθαι, (*Probl.* XXIII, 17, 933b5-10).

[Posidonius] is much too fond of imitating Aristotle's propensity for diving into causes, a subject which we [Stoics] scrupulously avoid, simply because of the extreme darkness in which all causes are enveloped.³

Other philosophers practiced *aitiologia* not as an interest *per se*, but with a moral and political end in view: the search about nature is useful to free men from superstitions and the fear of the death. Such was the motivation of the physical enquiries by Epicurus and Seneca.

6. In my opinion, the real thematization of the concept of cause in ancient Greece starts with Plato's dialogues, There we can observe the passage from the common usage of the word *aitia/aitios* to a specialized and technical meaning. This passage is facilitated by the fact that Plato's writings are dialogues.

The word *aitia* together with other etymologically related terms (*aition*, *aitios*, *aitiasthai* etc.) is frequently used in Plato's works: a TLG search shows more than two hundred and fifty interesting contexts. At a first glance, we can say that for Plato *aitia* belongs to everyday language and is used as such. This is due to the literary genre of the dialogue: the interlocutors of the various dialogues discuss with each other in the current language of the educated classes of Plato's time and not in the technical language of philosophical treatises. It is only through philosophical investigation that *aitia* takes on – in some contexts and not always – a technical meaning. However, the most common uses of the word are not completely set aside. Plato's use reflects the common usage very precisely.

A) We have some dialogues in which the word *aitia* indicates an 'accusation' or a 'charge'. This usage is not confined to a particular period of Plato's activity, but is attested throughout the dialogues from the *Apology* to the *Laws*.

B) Connected with the use of *aitia* in the sense of 'accusation' is the use of *aitia* in the sense of 'guilt' 'crime': in the *Apology*, Socrates claims that the Thirty had ordered him to catch a certain Leon, ὡς πλείστους ἀναπλήσαι αἰτιῶν, «in order to involve as many people as possible in their crimes».

C) With a lighter connotation, the *aitia* can simply be a 'name' or a 'reputation', as in the case of the Scythians, as we read in *Resp.* 435e 4: «Thracians and Scythians have the reputation of having an aggressive spirit» (Τὸ θυμοειδὲς

³ πολὺ γὰρ ἔστι τὸ αἰτιολογικὸν παρ' αὐτῷ καὶ τὸ Ἀριστοτελεῖζον, ὅπερ ἐκκλίνουσιν οἱ ἡμέτεροι διὰ τὴν ἐπίκρυψιν τῶν αἰτιῶν (Strab. *Geogr.*, II 3,8).

... οἱ δὲ καὶ ἔχουσι ταύτην τὴν αἰτίαν, οἷον οἱ κατὰ τὴν Θοράκην τε καὶ Σκυθικὴν). Therefore, when Socrates declares himself *aitios* of something – as it often happens in the dialogues – the word can be equally translated as ‘guilty’, ‘blameworthy’ or ‘responsible’: «I am blameworthy (or: responsible) for the fact that you have not replied correctly» (Ἐγὼ αἴτιος μὴ καλῶς σε ἀποκρίνασθα, *Lach.* 191c 7). One can also be the cause or can also be responsible of goods. We read quite often, in particular in the *Symposium*, that «the god is the cause of their goods» (Τῶν ἀγαθῶν ὧν ὁ θεὸς αὐτοῖς αἴτιος, 194e 7).

D) On the other hand, Plato is not inclined to ascribe causality / responsibility to inanimate entities. They appear as causes only when Plato reports the doctrines of the physicists and of the philosophers of nature which he rejects.

E) In a high number of passages Plato seems to ascribe the causal function and the qualification of *aitia* to states of affairs, events and complex situations. In this case Plato’s use of the terminology of *aitia* is rather metaphorical. Es.: the *aitia* of the philosophical nature of Eros is the fact that he is the son of Poros and Penia (204b 5). The *aitia* of the fact that Lysias’ parents do not let him play the lyre is that he is not good at it (*Lys.* 209b 8). The translation ‘explanation’ or ‘reason’ for *aitia* in these passages would not be very amiss, if we took into account that in these cases we have to do with the description of a complex situation in which a plurality of causal factors interplay with each other.

F) As is well known, for Plato the capacity to point at the *aitia* of something and, therefore, to provide an explanation for something, is what distinguishes *technê* from *empeiria*. For only he who has *technê* or *epistêmê* knows the nature of the object of its enquiry and its cause: ἔχει λόγον ... ὥστε τὴν αἰτίαν ἐκάστου ... ἔχειν εἰπεῖν (*Gorg.* 465a 3-5, cf. 501a 2-6). Only *technê* and *epistêmê* are characterised by *logismos aítias*, ‘causal reasoning’. In its connection with science, the relation between a cause and its effect grows stronger and acquires a character of necessity (*Meno* 98a 3; *Soph.* 253c 3). In the *Lysis* and in the *Timaeus* Plato comes to establish a sort of principle of causality similar to that of the Stoics (frag. 55 L&S = SVF I 89), according to which:

- 1) there is no effect without a cause;

2) there is no cause without effect.

Plato develops two kinds of enquiry on the notion of *aitia*. On the one hand he tries to account for it by reducing it to an allegedly simpler and more intuitive notion, i.e. the notion of 'producer'. On the other hand he aims at picking out those beings which are the most important *aitiai*, which must be held responsible for the very fact that the world is well organised. These two accounts are of a different nature, the first one concerning the nature of the relation of causality, the second one concerning some of the beings which stand to each other in this relation. We are now particularly interested in the first. There are passages where Plato claims that, in general, *hê aitia* or *to aition* should be connected with the idea of production, referring to what Aristotle would call the efficient cause.

In the *Hippias maior* – whose authenticity is actually disputed – the beautiful (*to kalon*) is defined as the useful, and the useful is defined as what produces (*to poioun*) the good; but Plato adds that «what produces is nothing but the cause (*to aition*)» (ΣΩ. Τὸ ποιῶν δέ γ' ἐστὶν οὐκ ἄλλο τι ἢ τὸ αἴτιον· ἦ γάρ; - ΠΠ. Οὕτως, *Hipp. Ma.* 296d 3-297a 1). Here 'cause' and 'producer' are identified.

The *Philebus* is even more relevant, since in this dialogue *Aitia* is assumed as the fourth highest genus of being, a genus which is responsible for the generation of entities to which the other three genera apply. We are told that:

- a) all that comes to be, comes to be *διὰ τινα αἰτίαν*, «in virtue of a certain cause», so to speak (26e 3);
- b) the essence of the cause consists in producing, so that 'cause' and 'producer' are synonymous:

- Socr.: So the nature of what produces does not differ at all from the cause, if not for the name, and we can correctly say that the producer and the cause are just one thing?
 – Prot.: That is correct».⁵

⁴ Αἰτίας γὰρ ἀπολομένης ἀδύνατόν που ἦν ἔτ' ἐκεῖνο εἶναι (*Lys.* 221c 3); πᾶν δὲ αὐτὸ τὸ γιγνόμενον ὑπ' αἰτίου τινὸς ἐξ ἀνάγκης γίνεσθαι· παντὶ γὰρ ἀδύνατον χωρὶς αἰτίου γένεσιν σχεῖν (*Tim.* 28a 4-5). Τὸ γὰρ κινήσομενον ἄνευ τοῦ κινήσοντος ἢ τὸ κινήσον ἄνευ τοῦ κινήσομένου χαλεπὸν, μᾶλλον δὲ ἀδύνατον, εἶναι· (*Tim.* 57e 3-5).

⁵ ΣΩ. Οὐκοῦν ἢ τοῦ ποιῶντος φύσις οὐδὲν πλὴν ὀνόματι τῆς αἰτίας διαφέρει, τὸ δὲ ποιῶν καὶ τὸ αἴτιον ὁρθῶς ἂν εἴη λεγόμενον ἓν; - ΠΠΩ. □ Ορθῶς, (*Phil.* 27e 6-8).

This passage establishes that two things, cause and producer, differ only by name, but in fact they are one single reality (*hen*). In this important passage Plato resorts indifferently to the feminine substantive *aitia* and to the substantivated neuter adjective *to aition* to indicate the cause. There is also the idea of an helping cause, that is subordinated to the main cause, and is indicated by the term commonly used to designate an accomplice, *sunaition*.

Plato also distinguishes between a real cause and a necessary condition, in a well known passage in the *Phaedo*:

Whoever talks in that way is unable to make a distinction and to see that in reality a cause is one thing, and the thing without which the cause could never be a cause is quite another thing.⁶

Riguardo alla causa migliore, il Socrate di Platone è molto esplicito: egli vorrebbe conoscere quale è, ma non lo trova nei Presocratici né è capace di trovarla da solo:

they do not look for the power which causes things to be now placed as it is best for them to be placed, nor do they think it has any divine force ... I would gladly be the pupil of anyone who would teach me the nature of such a cause; but since that was denied me and I was not able to discover it myself or to learn of it from anyone else ... I thought I must have recourse to definitions and examine in them the truth of realities ... nothing else makes it beautiful but the presence or communion (call it which you please) of absolute beauty, however it may have been gained; about the way in which it happens, I make no positive statement as yet, but I do insist that beautiful things are made beautiful by beauty. ...⁷

And *Phaedo* comments:

⁶ τὸ γὰρ μὴ διελέσθαι οἷόν τ' εἶναι ὅτι ἄλλο μὲν τί ἐστὶ τὸ αἴτιον τῷ ὄντι, ἄλλο δὲ ἐκεῖνο ἄνευ οὗ τὸ αἴτιον οὐκ ἂν ποτ' εἶη αἴτιον, (*Phaedo* 99b).

⁷ τὴν δὲ τοῦ ὡς οἷόν τε βέλτιστα αὐτὰ τεθῆναι δύναμιν οὕτω νῦν κείσθαι, ταύτην οὔτε ζητοῦσιν οὔτε τινὰ οἴονται δαιμονίαν ἰσχὺν ἔχειν ... ἔδοξε δὴ μοι χρῆναι εἰς τοὺς λόγους καταφυγόντα ἐν ἐκείνοις σκοπεῖν τῶν ὄντων τὴν ἀλήθειαν ... οὐκ ἄλλο τι ποιεῖ αὐτὸ καλὸν ἢ ἡ ἐκείνου τοῦ καλοῦ εἶτε παρουσία εἶτε κοινωνία εἶτε ὅπη δὴ καὶ ὅπως προσγενομένη, οὐ γὰρ ἔτι τοῦτο διισχυρίζομαι, ἀλλ' ὅτι τῷ καλῷ πάντα τὰ καλὰ καλὰ, (99b-100c)

after all this had been admitted, ... they had agreed that each of the forms is something and that other things which participate in these get their names from them.⁸

Here we can find two different types of superior and excellent supreme causes: (a) an agent who ordines the entire cosmos in the best way – an idea already present in Xenophon's *Memorabilia Socratis* (IV, 3) – and (b) ideal Forms that somehow give to their material counterparts their essence and their correct name.

Divine cause is an agent who acts with a good in view, hence it is a particular kind of *poioun*, of producer, and one might ask whether in Plato the causality of Ideas falls within the range of production or within the range of explanation. Many English-speaking scholars have endorsed the thesis that the causality of the Idea consists in an 'explanation', which only allows to classify a determinate physical being under a determinate class or category. This is called a 'logical and metaphysical' kind of causality. Forms as explanations make us to understand the material beings which resemble, even if imperfectly, them. Forms have 'no causal efficacy' (Vlastos, p. 92). Other scholars, including many Italians (Fronterotta, Ferrari, Natali, Dixsaut, Sedley *et al.*), contrast this view. Over the last years, they have remarked that Plato, when speaking about Ideas, uses a language implying the notions of production and generation. Hence, they maintain that Plato's Ideas somehow transfer their defining features to empirical beings by exerting a sort of 'efficient' causality on them.

6) Let's consider it enough for now, and let's go to Aristotle. With Aristotle we step into a different literary genre. His writings are *pragmateiai*, i.e. treatises meant to be read in his school and therefore written in a technical language and with different concerns from Plato's dialogues.

In Aristotle's authentic treatises the number of the occurrences of the word *aitia* is very high (1.852 cases). All of them have been recently collected and discussed in a Ph.D. dissertation in Venice (Lombardi 2016). Among them only in a few cases the term is connected to the original meaning of accusation and culpability. In fact this applies only to 2,54% of passages examined, that is in 47 passages among 1.853.

⁸ ἐπεὶ αὐτῶ ταῦτα συνεχωρήθη, ... ὁμολογεῖτο εἶναί τι ἕκαστον τῶν εἰδῶν καὶ τούτων τὰλλα μεταλαμβάνοντα αὐτῶν τούτων τὴν ἐπωνυμίαν ἴσχειν, (102a-b).

So, Aristotle makes a near exclusively technical usage of *aitia* and connected terms. But what means Aristotle by *aitia*? It is not very easy to say, because he does not define the general concept of *aitia*, but only the four species (*Metaph.* 994b28 and 996a18) in which this general concept divides, material, formal, moving and final cause. In my opinion there was a wide discussion of the species of causality in the Early Academy, and Aristotle's discussion was born in a context we have lost. But some general features of causality in Aristotle can be extracted from his works.

He connects very strongly the notion of cause to the scientific enquiry, as Plato did:

this enquiry aims at knowledge, and we believe that we do not know any thing before we grasp the why of each of them, which corresponds to grasping the primary cause, it is clear that we have to do this also with respect to coming-to-be and passing-away and to every physical change.⁹

But the enquirer must look for different kinds of causes in each case. Each thing has many causes, but not more than four:

In one sense, cause is said to be that out of which something derives, this being immanent, for instance the bronze of the statue and the silver of the cup and their genera; in another sense the form and the model, namely the definition of the essence and its genera – for instance <the cause> of the octave <is> the rapport $\frac{1}{2}$ and number in general – and the parts of the definition; furthermore that from which, derives the first principle of movement and rest – for instance, who deliberates is a cause, and the father of the son and, in general, who produces is the cause of what is produced and who changes of what changes; furthermore as the end, namely that for the sake of which – for instance health is <the cause> of walking. Why does he take a walk? – we ask. In order to be healthy. And by saying this we believe that we have provided the cause.¹⁰

⁹ ἔπει γὰρ τοῦ εἶδέναι χάριν ἢ πραγματεία, εἶδέναι δὲ οὐ πρότερον οἴομεθα ἕκαστον πρὶν ἂν λάβωμεν τὸ διὰ τί περὶ ἕκαστον (τοῦτο δ' ἐστὶ τὸ λαβεῖν τὴν πρώτην αἰτίαν), δηλον ὅτι καὶ ἡμῖν τοῦτο ποιητέον καὶ περὶ γενέσεως καὶ φθορᾶς καὶ πάσης τῆς φυσικῆς μεταβολῆς, ὅπως εἰδότες αὐτῶν τὰς ἀρχὰς ἀνάγειν εἰς αὐτὰς πειρώμεθα τῶν ζητουμένων ἕκαστον (*Phys.* 194b 17-23). Here “primary cause” indicates the cause which is first in the series of causes and not the proximate cause.

¹⁰ ἕνα μὲν οὖν τρόπον αἴτιον λέγεται τὸ ἐξ οὗ γίνεταί τι ἐνυπάρχοντος, οἷον ὁ χαλκὸς τοῦ ἀνδριάντος καὶ ὁ ἄργυρος τῆς φιάλης καὶ τὰ τούτων γένη· ἄλλον δὲ τὸ εἶδος καὶ τὸ παράδειγμα, τοῦτο δ' ἐστὶν ὁ λόγος ὁ τοῦ τί ἦν εἶναι καὶ τὰ τούτου γένη (οἷον τοῦ διὰ πασῶν

As we can see, here as well causes and effects can be things as well as qualities, states of affairs, and even events.

It is important to understand well Aristotle's move. Aristotle operates a 'deconstruction' (as Derrida would say) of the Platonic cause, by separating the efficient and productive function from the function of *paradeigma* and from the material function. Platonic Ideas, at least according to our interpretation, have the capacity of generating an effect, of transferring determinate features and qualities to the participated being. Aristotle criticizes the Ideas in the first place because, being separate, they cannot be able to perform the function that Plato ascribes them. Furthermore Aristotle introduces the form in the matter and separates the efficient function from the formal function, ascribing a different kind of causality to each of them. The same happens with respect to the Presocratic concept of matter. Aristotle separates the function of the substratum from that of the efficient cause, which were merged together in the views of Presocratic philosophers. Such a 'deconstruction' of the Platonic cause conciliates Presocratic discourse about "principles (*archai*)" and Platonic causality: matter and form can coexist once they are deprived of the efficient function.

The commentators in late antiquity said that the general meaning of *aitia* is *diati* "something because of which". The idea is not wrong. Thus we can describe the fundamental characteristics of Aristotelian notion of cause as a *dependency relationship*, which has the following characteristics: it is (1) a kind of relation. And, more specifically, (2) a relation of objective dependence, which is (3) unidirectional, (4) transmissible and (5) necessary. Therefore the word *aitia* indicates an asymmetrical relation which is not reversible:

$C \rightarrow E$

7. Let's take stock for a moment. 'Till now we have three main usages of the word *aitia* and cognates:

τὰ δύο πρὸς ἓν, καὶ ὅλως ὁ ἀριθμὸς) καὶ τὰ μέρη τὰ ἐν τῷ λόγῳ. ἔτι ὅθεν ἡ ἀρχὴ τῆς μεταβολῆς ἢ πρώτη ἢ τῆς ἡρεμήσεως, οἷον ὁ βουλευσας αἷτιος, καὶ ὁ πατήρ τοῦ τέκνου, καὶ ὅλως τὸ ποιῶν τοῦ ποιουμένου καὶ τὸ μεταβάλλον τοῦ μεταβαλλομένου. ἔτι ὡς τὸ τέλος· τοῦτο δ' ἐστὶν τὸ οὐ ἔνεκα, οἷον τοῦ περιπατεῖν ἢ ὑγίεια· διὰ τί γὰρ περιπατεῖ; φασίμεν ἵνα ὑγιαίῃ. καὶ εἰπόντες οὕτως οἰόμεθα ἀποδεδοκέναι τὸ αἷτιον. (*Phys.* 194b 23-35).

a) the common usage connected to the practice in tribunal, that is “accusation”, “responsibility” “culpability”.

b) a larger usage made up by philosophers, Plato and the Academics above all, who extended the meaning in a way such that we could ask of anything 'What is the aition?' The implied idea is that with reference to everything there is something which by doing something or other is responsible for it. Here *aition* is identified to *to poioun*, the producer. It is, in modern terms, a *productive account* of causality.

c) a deconstruction of the Platonic idea of a cause that acts with an end in view with the non voluntary help of a matter that is only a *sunaition*, a necessary condition or a con-cause, of the action of the producer, made by Aristotle. Here we have a *dependence account* of causality, which nonetheless includes a *productivity account* as a particular case – i.e. as a case which is confined to just one of the four causes: the mover.

Both accounts were a way to put order in the universe and to see it as an ordered mechanism that can be explained in a scientific (i.e. universal and necessary) way. The aim of causal discourses was also to contrast a vision of the world dominated by the miraculous, the magic and the ‘supernatural’. Greek doctors and philosophers wanted to find the cause in the essence or nature of the thing studied.

The two accounts of causality, a productive account and a dependency account, still dominate in the contemporary debate on causality, as we will see in a moment.

8. What happens in the Hellenistic and Imperial ages? Very shortly we can say that the idea of a plurality of causes was widely accepted, and to put an order in the universe the philosophers thought the best way to be to accept a multiplicity of kinds of causal relationships. This is why I entitled this paper as “The Greek idea of causes”.

Most part of philosophers accepted the *productive account* of causality, as we do now in common language, but some notable exceptions (Lloyd, p. 98). The Epicureans put a productive capacity in the atomic matter, capable to act in different ways in different context. The Stoics were for many centuries the most important school and engaged in a profound analysis of the concept of *aitia*. But in extremely general terms we can say that for a Stoic philosopher an *aitia* is

something that produces efficiently its result, and that the *aitiaton*, the result, is something dynamic, a process, and event or a state of things consisting in some dynamic arrangement of matter (the *pneuma*). The distinction between causes, here, under the influence of medical debates, was founded in the different degrees of efficacy of cause, some that can act alone, and be therefore “sufficient” others that must to act in collaboration with some other causes. So we have ‘preliminary’ (*prokatartika*) causes, ‘sustaining’ (*sunektika*) causes, complete (*autotelea*) causes, auxiliary (*sunerga*) and joint (*sunaitia*) causes. The are, or are not, sufficient to produce their effect and are distinguished from this point of view. It is a quantitative and not qualitative criterion of distinction. The distinction between *internal* and *external* causes became very important in Stoic thinking, perhaps under the influence of medical analyses of causal factors of the diseases.

Also the Sceptic attack on the concept of causation refers essentially to a *productive* account of *aitia*. This account prevailed in antiquity and also Plotinus, as many scholars say, as a good follower of Plato held a productive idea of causation. A recent scholar wrote:

la relazione che in Plotino collega i corpi alle loro cause è diversa da quella che collega un “fatto” al suo “perché”. Le cause intelligibili sono esplicitamente descritte da Plotino come forze e potenze causali *efficienti* che sostengono ciò che dipende da esse (Chiaradonna, p. 41).

It is not clear to me if this depends on a Stoic influence in Plotinus concepts or rather, and more probably, on the reading of Plato’s dialogues, in which, as we saw before, the Idea and the Demiurge are considered causes but the meaning of cause is *to poiouon*, the producer.

On the other side, defending a *dependence account* of causality were obviously the Peripatetics, both Theophrastus and the first disciples of the school, and Alexander of Aphrodisias and the Peripatetic school in Imperial times. Perhaps also the Middle Platonists, influenced by Aristotle, refused to reduce the concept of cause to the concept of a producer. They unified a Platonic and an Aristotelian conception of causality by adding to the four Aristotelian causes a fifth cause, the “paradigmatic cause”. This move has some precedent in the position of a direct disciple of Plato, Xenocrates. This way, the Middle

Platonists accepted the Aristotelian interpretation of *aitia* as a formal one, leaving aside any efficient sub tone. Plotinus seem to have reacted to this tendency and restored a more orthodox concept of *aitia* in the Platonic tradition.

There were also polemics in Imperial time between the different schools about what is to be considered truly an example of *aition*, and between rival taxonomies of *aitia* (Lloyd, 109). On Stoic side, Seneca in his 65th Brief expressed the Stoic view according to which there is only one meaning of "cause", i.e. "something that produces the effect". He says:

Aristotle thinks that cause is said in three ways. The first cause, he says, is the material itself, without which nothing can be produced. The second is the workman. The third is the form, which is imposed on each work as it is on a statue. For Aristotle calls this the form. 'A fourth cause,' he says 'accompanies these: the purpose of the entire product.'¹¹

and later he adds:

The swarm of causes which is posited by Plato and Aristotle includes either too many or too few. For if they decide that the cause of making something is anything whose absence means that the thing cannot be made, then they have stated too few. Let them include 'time' among the causes; nothing can be made without time. Let them include place; if there isn't a place for something to be made it surely won't be made. Let them include motion. Nothing is either done or perishes without it; there is no craft without motion, no change.¹²

On the other side, Alexander of Aphrodisias, criticising the Stoics, said:

There is a certain difference among the causes, in expounding which they speak of a swarm of causes, some initiating, some contributory, some sustaining, some constitutive and so on ... and they say that it is equally true of all of them that it is

¹¹ *Aristoteles putat causam tribus modis dici: 'prima' inquit 'causa est ipsa materia, sine qua nihil potest effici; secunda opifex; tertia est forma, quae unicuique operi imponitur tamquam statuae'. Nam hanc Aristoteles 'idos' vocat. 'Quarta quoque' inquit 'his accedit, propositum totius operis.'* (Seneca, Ep. 65.4).

¹² *Haec quae ab Aristotele et Platone ponitur turba causarum aut nimium multa aut nimium pauca comprehendit. Nam si quocumque remoto quid effici non potest, id causam iudicant esse faciendi, pauca dixerunt. Ponant inter causas tempus: nihil sine tempore potest fieri. Ponant locum: si non fuerit ubi fiat aliquid, ne fiet quidem. Ponant motum: nihil sine hoc nec fit nec perit; nulla sine motu ars, nulla mutatio est.* (65.11).

impossible that, when all the circumstances surrounding both the cause and that for which it is a cause are the same, the matter should sometimes not turn out in a particular way and sometimes should ... if we abandon the chain of causes and [instead we] assign the causes starting from the things the ere coming to be and are subsequent and, further, we look for the causes in the proper sense of the things that are coming to be we will find both that nothing that comes to be comes to be without a cause and that it is not, on account of this, the case that everything that comes to be will be of necessity.¹³

Leaving aside the differences, both positions agree, contrary to our modern intuitions about causality, that the chain of cause cannot be traced back indefinitely. In Aristotelian perspective the chain of causation has a first cause, i.e. the essence and the nature of a thing, and transmissibility is possible only in a segment of causation. In Stoic perspective, the real *aitia* of a thing or event are one or more causes *immediately* or *very closely* connected to the effect in temporal terms. With the passage of time and going back on the rings of a chain of causes the causality slowly disappears. Stoic causality is not really transmissible, as Cicero says:

'Cause' is not to be understood in such a way as to make what precedes a thing the cause of that thing, but what precedes it effectively ... To this class of expression belongs the phrase of Ennius "Would that in Pelius' glade the pine-tree beams / Had never fallen to earth by axes hewn!" He might have gone even further back, 'Would that no tree had ever grown on Pelius!' and even further, 'Would that no Mount Pelius existed!' and similarly one may go on recalling preceding events in infinite regress ... None of the causes mentioned therefore is really a cause, since none by its own force effects the thing of which it is said to be the cause.¹⁴

¹³ οὐσης δέ τινος διαφορᾶς ἐν τοῖς αἰτίοις, ἢν ἐκτιθέντες σμῆνος [γὰρ] αἰτίων καταλέγουσιν, τὰ μὲν προκαταρκτικά, τὰ δὲ συναίτια, τὰ δὲ ἐκτικά, τὰ δὲ συνεκτικά, τὰ δὲ ἄλλο τι ... ἐπ' ἴσης ἐπὶ πάντων αὐτῶν ἀληθές φασιν εἶναι τὸ ἀδύνατον εἶναι, τῶν αὐτῶν ἀπάντων περιεστηκότων περὶ τε τὸ αἴτιον καὶ ᾧ ἐστὶν αἴτιον, ὅτε μὲν δὴ μὴ οὕτως πῶς συμβαίνει, ὅτε δὲ οὕτως. ἔσεσθαι γάρ, εἰ οὕτως γίνοιτο, ἀναίτιόν τινα κίνησιν ... ἂν γὰρ παυσάμενοι τῆς ἀλύσεως τῶν αἰτίων καὶ τοῦ τοῖς πρώτοις γενομένοις λέγειν ἐξ ἀνάγκης ἔπεσθαι τὸ αἰτίους φύσει ὀφείλειν γίνεσθαι ὡς ἐν τῇ οὐσίᾳ αὐτῶν τὸ αἴτιον περιέχουσιν, ἀπὸ τῶν γινομένων τε καὶ ὑστέρων τὴν ἀπόδοσιν τῶν αἰτίων ποιῶμεθα ἔτι τε τῶν γινομένων κυρίως ζητῶμεν τὰς αἰτίας, οὔτε ἀναιτίως τι τῶν γινομένων γενήσεται οὔτε διὰ τοῦτο ἐξ ἀνάγκης καθ' εἰμαρμένην τοιαύτην πᾶν τὸ γινόμενον ἔσται (Alex. Aphr., *De fato*, 192,17-25 + 194,2-7)

¹⁴ non sic causa intellegi debet, ut, quod cuique antecedit, id ei causa sit, sed quod cuique efficienter antecedit, ... Ex hoc genere illud est Ennii, "utinam ne in nemore Pelio securibus / caesae accidissent abiegnae ad terram trabes!" Licuit vel altius: 'Utinam ne in Pelio nata ulla umquam esset arbor!' etiam

9. Let's go now to the second main point I want to discuss, i.e. the multiple meanings of the modern concept of a 'cause'. What happened in modern times? To make a long history short, the *productive* account of causation prevailed in modern times, after Galileo, but was criticised by Hume with some arguments derived from Sextus Empiricus' sceptic criticism of the physics. In 20th century many people held to a so-called "Humean concept of causality" as a necessary connection of two events under a scientific law sometimes called a "covering law". Here causation means essentially a necessary connection of phenomena, without any ontological implication. This idea of 'cause' was rightly considered not very useful and was criticised at the beginning of XX century by Bertrand Russell who compared, it to English Monarchy, both being a relic of a bygone age. He proposed to substitute it with the concept of a function, as in mathematics (Russell 1917, p. 180).

It must be said that this happened almost a century ago, but it still seems to be common knowledge and still influences most non-specialists. Some of the scholars engaged in comparisons between western and Chinese concept of cause still consider the contemporary idea of cause to be this one. We can make some example taken from texts interesting for our purposes:

Needham (1956), p. 281: events [in western science] are seen as caused by one powerful and preceding event.

Frede (1987), p. 125: philosophers since Hume ... have tended to think of causes as events.

Defoort (1997), p. 165: A cause has been traditionally thought of as that which produces an effect and in terms of which this effect can be explained ... in modern science is generally considered a relic of the past" (referring to Taylor1967) .

Now, there has been a revival of studies on causation in the last twenty years. New conceptions of cause have been proposed and the concept itself, far from being banished as obsolete from scientific thinking, has been revived and

supra: 'Utinam ne esset mons ullus Pelius!' similiterque superiora repetentem regredi infinite licet ...
Nulla igitur earum est causa, quoniam nulla eam rem sua vi efficit, cuius causa dicitur.

riproposed in many forms. Today the debate on the notion of cause is constantly growing and many different theories compete with each other.

On the one hand, some people think that the main opposition at stake is between «(a) dependence accounts of causation and (b) production ones» (Psillos 2009, p. 154). Amongst the theories of causation as dependence we could mention theories based on regularity, probabilistic theories and counterfactual theories, although the latter seem to be characterized by a certain scepticism. Amongst the theories of causation as production, we could mention those based on the notion of intervention and manipulation as well as those which are linked to the notion of *causal powers* and those which start with the notion of causal process as transmission of a *mark* from one being to another. The debate concerns also whether the notion of causation is (c) epistemic and, in some sense, subjective or, rather, (d) physical and objective; whether the term 'cause' can be defined, or must be known only through the ostension of paradigmatic cases, and so on; whether it is transmissible or non-transmissible; whether the causal relation is necessary or not. In the recent years there has been a revival of the conception of causation as an asymmetrical relationship, different from the mere necessary connection between two events usually individuated as "the Humean concept of cause". So, the field of the enquiry into causation today appears wide open and the debate is extremely lively.¹⁵ Even a so-called neo-Aristotelian tendency of interpreting causation in terms of powers of a substrate is gaining attention in the last years. Instead of a position, like the Humean one, that sees the world as a series of unconnected events in which we find some patters of regularity the proposants of such a position, sometimes called causal dispositionalism, see in the world natures that act as powers to produce changes and instead of pure necessity they propose a sort of conditional necessity (Mumford 2012). This position is neo-Aristotelian not in the sense that recuperates the Aristotelian analysis of the notion of *aitia*, but in the sense that recuperates much of Aristotelian metaphysics of natures and potentialities,

The 'modern' conception of causality quoted by some scholars engaged in comparisons is in fact a very old one, and a more precise knowledge of contemporary debates on causation would be needed to make a real

¹⁵ See Laudisa (1999) (in Italian); also Kistler (1999), p. 17-102 and the very useful essays collected in Beebe *et al.* (2009).

comparison. I cannot say which contemporary theory of causality would be more useful for the comparison we are discussing today, because the discussion is very recent and began at the dawn of XXI century, but I am sure we should not stick to the assumption of last century about causation

10. Finally, as I promised, let's go back for a moment to Lloyd's article (Lloyd 1996) and let's examine it in some detail. He correctly begins his examination of Chinese concepts of causation by examining the meaning of the main terms, and starts at his page 108 with a list of the terms used in classical Chinese to indicate the concept of cause:

case. The problem is exacerbated because there is a relative dearth of explicit discussion, in classical Chinese texts, of the key terms in question, notably 故 (*gu*, reason, cause), 使 (*shi*, send, command, cause), 原 (*yuan*, spring, source, origin), 因 (*yin*, rely on, because), 由 (*you*, to proceed from, source), and 本 (*ben*, root)

To tell the truth, the above terms seem to me to oscillate between the general idea of a *principle* from which something derives, and the more specific idea of causation. A principle can be, as Aristotle says, that from which each thing would be originated, be it internal or external to the thing itself, whereas the concept of a cause adds to it an idea of responsibility. A river flows from a source, but the source is not the cause of the river itself or of its characteristics and nature.

Be it as it may, after that Lloyd tackles the question about which fields in Chinese culture were more interested in causal explanation. As in Greece, a major interest in causal explanation is to be found in medicine and history. This is not strange, because it is in the nature of those disciplines to be interested in causal factors and causal explanations. Lloyd quotes many examples from ancient medical treatises but also adds that Chinese historians commented on the reasons for success and failure of individuals, rulers, dynasties. Since he does not quote historical examples, I'd like to provide a random example taken from an historical treatise of XI cent. A.D.:

Extreme floods, in the autumn of the third Tongguang year [A.D. 925] had forced residents of the Yellow river and Huai river valleys onto the highways and caused tax collections to the capital to fall short, soldiers in the Six Armies often dropping

dead. The court still pressed for the next summer and fall, as an aggrieved populace took to the streets in embittered rancour (Davies 2004, p. 135).

As their Hellenistic counterparts, Chinese historians looked for the causes of events in the past, in order to use them as a repository of examples and sources of recommendations, warnings, encouragements or remonstrations. I do not know if Chinese rulers used to read histories from the past in order to have suggestions how to behave in future, as some Greek kings did. E.g. Photius tells us that king Philip V of Macedonia extracted from the general history of Hellas by Theopompus the passages regarding his ancestor Philip II, the father of Alexander Magnus, with the intent of finding a model to follow in his reign. A wrong idea, judging from the fact he was defeated by Romans and taken prisoner to Rome.

Both ancient cultures, Chinese and Greek, took the idea of causality from human domain and inquired about the origin of things, not just about their chronological starting points, but as that in virtue of which they acquire their principal characteristics.

A main difference between Greek and Chinese texts, Lloyds adds, is the lack of public assemblies where to deliberate political issues and of popular juries charged to decide about private litigations and processes. So, in China seem to be absent the main source of the Greek notion of causality, the juridical language.

It must be said that this is a specifically Athenian element, rather than a general feature of Greek culture. Athenians used to delight in private litigations, and the comedians made fun of their attitude. Aristophanes in the *Wasp* tells us about a son who is forced to keep his senile father under lock and key because of this mania:

This father has a curious complaint ... of all men, it is he who is fondest of tribunals. Thus, to be judging is his hobby, and he groans if he is not sitting on the first seat. He does not close an eye at night, and if he dozes off for an instant his mind flies instantly to the clepsydra ... He is a merciless judge, never failing to draw the convicting line and return home with his nails full of wax like a bumble-bee ... Such is his madness,

and all advice is useless; he only judges the more each day. So we keep him under lock and key, to prevent his going out; for his son is broken-hearted over this mania.¹⁶

But the fact that philosophy in classical times had its most important centre in Athens had the effect to impregnate philosophy with specifically Athenian, rather than generally Greek, terms and concepts.

Another main difference between Greek and Chinese texts is the fact that, according to Lloyd, Chinese philosophers did not devote much effort to proposing elaborate explicit theories of what counts as a cause and *a fortiori* did not so to defend one such theory against rivals or competitors.

In fact, among the texts quoted by Lloyd there is a polemic passage against *aitiologia*, the search of the causes of singular events (*Zhuangzi* 33, 81-83), similar to Strabo's polemic against Aristoteles above quoted. The pursuit of causal explanation beyond a certain point seemed futile to both to the Chinese and the Greek author.

In conclusion, it seems to me interesting to inquire why it has been typical only, or principally, of Greek and Roman culture such a general extension of the use of causal terms on the assumption that for everything to be explained there is something which plays with reference to it a role analogous to that which the person responsible plays with reference to what has gone wrong, as Michael Frede said, and if some similar process can be found in other civilisations.

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