

**Understanding causation in the Mohist Canons: A difference-making
view of actual causation**

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Later Mohists place the utmost importance on causation in the Mohist Canons. However, the causation theory in the Mohist Canons is not well-understood in the literature. Traditional research has simply investigated *gu* 故 (cause) as logical conditions, and specifically, a *xiaogu* 小故 (major cause) could be regarded as a part of a *dagu* 大故 (minor cause). In this essay, we interpret *gu* 故 (cause) in the Mohist Canons as actual causes and argue in favour of a difference-making causation theory for later Mohists. We demonstrate in an actual scenario that a major cause provides a causal explanation that is distinct pragmatically from minor causes. Mainly motivated by Graham (1989), we put forth that later Mohists proposed this distinction for challenging the theory of causation by cosmologists in the relevant period.

Keywords: Later Mohist, actual causation, difference-maker, causal explanation, cosmologists

1. Introduction

The Mohist Canons are not a book, but constitute six chapters in *Mo Zi*, the collection of Mohist literature of ancient China. The six chapters of the Canons can be divided into three groups:

1. Canons A and Canons B, which are short aphorisms that record philosophical definitions and propositions;
2. Explanations A and Explanations B, which explain Canons A and Canons B using longer statements; and
3. The Greater Selection and the Lesser Selection, which are two fragments from several Mohist essays.

The Mohist Canons are regarded as a collection of literature from the later Mohist school, written in approximately 3 B.C. The topics include the philosophy of

language, ethics, epistemology, logic, and science, and, implicitly, the theory of causation. In various philosophical traditions, causation and actual causation are the most critical issues. For the later Mohists, *gu* 故 (cause) is the most crucial concept in argumentation (*bian* 辯), as ‘explanations are used to bring out causes’ (NO. 10).¹ As such, *gu* 故 (cause) is the first concept defined by the Canons.²

The earliest edition of the Mohist Canons we see today was collected and preserved by *Daozang* 道藏. It is accepted that Explanation A1 was damaged in the original texts; thus, the major cause sub-definition in Explanation A1 is usually emended based on the minor cause sub-definition. The most popular emendation of Explanation A1 is that of SUN Yirang 孫詒讓 (Sun, 2001, pp. 332–333). The text after emendation is as follows:

The cause of something is what it must get before it is completed (*cheng* 成).

Minor cause—having this, it will not necessarily be so: lacking this, necessarily it will not be so. It is a part. Like having a starting point. Major cause—having this, it will necessarily <be so>: lacking <this, necessarily it will not> be so.

¹ Translations in this essay mainly follow Graham (1979), with minor changes in reference to Fraser (2020) and Johnston (2010). It can sometimes be difficult to reveal certain aspects of the problem discussed in this paper with reference to the existing translations. Thus, I provide my own translations in a few places. My convention for citing the Canons follows Graham’s. For example, I cite the 10th section of the Lesser Selection as (NO. 10), the first article of the Canons (‘Jing Shang 經上’) as (Cn. A1), the first article of the Explanations (‘Jingshuo Shang 經說上’) as (Ex. A1), and both of them together as (Cn. and Ex. A1). The only exception is Explanation A1, which has two different emendations; thus, I assigned the label (Ex. A1-Liang) to Liang Qichao’s emendation.

² Accordingly, in the Mohist Canons, *gu* 故 could refer to both reason and cause (Fraser, 2020, p. 1). In this essay, I only investigate the role of *gu* 故 as ‘cause’.

Like coming into view (*jian* 見) completing the seeing (*jian* 見). (Cn. and Ex.

A1)

故，所得而後成也。

故：小故，有之不必然，無之必不然。體也，若有端。大故，有之必<然>，無<之必不>然，若見之成見也。

However, ZHANG Binglin 章炳麟, LIANG Qichao 梁啟超, and some other interpreters have proposed another emendation. They think that the character ‘lacking’ (*wu* 無) in the sub-definition of the major cause is redundant (Liang, 1923, p. 1; Yang, 2002, pp. 50–53). Therefore, they correct the second sentence in Explanation A1 to:

Major cause—having this, it will necessarily be so. Like coming into view completing the seeing. (Ex. A1-Liang)

大故，有之必然，若見之成見也。

Although Sun mentions that the cause–completion (*gu–cheng* 故-成) relation might present certain relations such that everything comes from the former to complete the latter (‘凡事因得此而成彼之謂’; Sun, 2001, p. 309), Hu Shih was the first scholar to explicitly interpret *gu* 故 as ‘cause’. For Hu Shih, it seems that the nominal and conjunctive forms of *gu* 故 need to be translated as ‘cause’ and ‘because’, respectively. The main thrust of Hu Shih’s idea is that *gu* 故 should be the ““because” in [the] deduction’ (Hu, 1922, p. 107). Deductions in the Mohist Canons are explanations (*shuo* 說); therefore, the relation between *gu* 故 and its conclusion in the explanation can parallel causes and effects in causation. At about the same time, Liang straightforwardly claims that Canon A1 discusses the ‘causal law’ (因果律). Moreover, *gu* 故 as ‘why

things are, that is, the cause of the matter' should be viewed as the causal relata (Liang, 1923, p. 2).

Based on the sub-definitions of the major cause and the minor cause emended according to Sun, the major cause is a sufficient and necessary condition for the effect. Hu applies to Sun's emendation, taking the major cause as that which is called 'the complete cause' (完全因), that is, the sum of minor causes, while taking the minor cause as an 'incomplete (partial) cause' (不完全因) (S. Hu, 1922, p. 94). This view implies that the relation between major and minor causes is simply a part-whole relation, that is, the minor cause is a part of the major cause. Differing from Sun's emendation, Liang's emendation considers the major cause only as a sufficient condition for the effect. However, Liang completely agrees with Sun's interpretation that the relation between major and minor causes is a part-whole relation. He suggests that the major cause is the 'total cause' (總原因), while minor causes are 'partial causes' (分原因) (Liang, 1923, pp. 1-3).

In summary, traditional interpreters only investigated *gu* 故 (cause) as a logical condition; hence, a minor cause could be regarded as part of a major cause. It seems that no one was concerned about whether the concept of causation in the Mohist Canons is about potential causation or actual causation. Nevertheless, both of them agree that the minor cause is a necessary condition for the effect. However, partial causes usually are an unnecessary condition for the effect when considering potential or general causation. This conclusion can be shown in a classic causation example described below.³

³ The following example could see Halpern and Hitchcock (2015, p. 428, p. 441), or a similar case in Kutach (2014, p. 90).

Yesterday afternoon, a flash of lightning, L, struck the ground, causing a big forest fire in our actual world. There are many potential causes that can lead to a forest fire. For example, an arsonist could have dropped a match, M, in the same place, which would have led to the same effect. In addition to this, forest fires have many conditions other than lightning strikes, such as the presence of sufficient oxygen, O. Hence, we have:

L&O or M&O or ... implies a forest fire.

We can borrow a causal concept, the partial cause, from Mackie's INUS conditions (Mackie, 1980, pp. 62–64). For Mackie, every partial cause is a condition for the effect that is a part of the full cause L&O or M&O or ..., such that L is 'an insufficient but necessary part of an unnecessary but sufficient' condition for a forest fire; hence, it is unnecessarily necessary to the effect.⁴

As partial causes are unnecessarily necessary to the effect, it becomes difficult to explain why minor causes are necessary. In our view, the Mohist Canons stating that a cause is necessary for the effect indicates that its causation theory always corresponds to a particular causal scenario and context, as if L&O actually occurred. In our actual scenario, there is only one causation—the relation from L to the forest fire that happened in a space–time region of the actual world, which is the so-called actual causation. Only in this particular scenario is the cause L a necessary condition for the effect.

⁴ If you suggest that L&O is also a part of the full potential cause, hence we should take L&O are a partial cause, it is still not a problem. This is because L&O are also unnecessarily necessary to the effect.

Nevertheless, GAO Heng 高亨 (1958) tried to solve this difficulty in the 1950s, who proposed that Explanation A1 be interpreted as in a specific causal scenario, to bypass the problem that a partial cause is generally not necessary for the effect to occur. Gao mentions that the cause–completion (*gu-cheng* 故-成) relation in the Canons should be interpreted as holding up when both cause and effect happen. For the sub-definitions of *gu* 故 (cause), he introduces three concepts of causation to articulate his idea: partial cause (體因), whole cause (兼因), and singular cause (單因). There is no doubt that the minor cause is the partial cause (體因); however, the major cause would be the singular cause rather than the whole cause. The reason for this argument is that there are two causal scenarios of an actual causation: one-cause-to-one-effect (一因而成一果) causation and multi-causes-to-one-effect (多因而成一果) causation. Minor causes are conditions in a multi-cause-to-one-effect causal scenario. By contrast, the major cause is the singular cause in a one-cause-to-one-effect causal scenario, which fits the sub-definition of ‘having this, it will necessarily <be so>: lacking <this, necessarily it will not> be so’ (Gao, 1958, p. 31). Therefore, the point of the distinction between major and minor causes is not to distinguish the two causes in general but to distinguish causes in different actual causal scenarios.

Angus Graham thinks that the later Mohists hold the position that, sometimes, causes are hard to identify in causal scenarios (Graham, 1978, p. 360). He mentions the example that there might be more than one potential cause of the effect when the actual causal scenario is unclear because of ‘coinciding circumstances’.

Whether the fighter’s breakdown is due to drinking wine or to the midday sun cannot be known: ‘coinciding circumstances’. (Cn. B10)

If this translation is correct, only by the paradigm of actual causation can we say that there is just one decisive factor instead of saying that there are two causes for the fighter's breakdown. Ontologically, we should agree that for the later Mohists, only the factor that actually determines the fighter's breakdown could be *gu* 故 (cause). As Benjamin Schwartz comments on Graham's view, the later Mohists 'are deeply committed to seeking out separate particular causes for separate effects' (Schwartz, 1985, p. 168).

Moreover, Chad Hansen views the cause-completion (*gu-cheng* 故-成) relation as actual causation. He concludes that we cannot interpret major and minor causes as conditions because the later Mohists want to achieve actual causation:

One could, of course claim that the causes were reasons and greater and lesser causes were "necessary and sufficient conditions," but I cannot see any reasons for doing so rather than an abiding desire to prove that Mohists were investigating arguments and logic. The Canons in question does seem to be dealing with actual causation, not justification. (Hansen, 1983: 186)

As noted above, if Sun's and Liang's emendations were correct, later Mohists would not want to provide a theory of general causation. Furthermore, we argue that causation theory in the Mohist Canons is about actual causation. As we have shown above, many researchers have implicitly accepted these ideas for a long time, but they have not been examined closely.

The rest of this paper is organised as follows. In Section 2, we clarify why the theory of causation in the Mohist Canons should be viewed as a difference-making theory of actual causation, which we developed based on Graham's idea. In Section 3, having analysed the examples in Explanations A1, we re-examine the example of 'like coming into view completing the seeing' and provide evidence in an actual scenario that

a major cause provides a causal explanation that is distinct pragmatically from minor causes. In Section 4, having analysed the causal relations of the example of ‘like having a starting point’, we suggest that the distinction of the sub-definitions of causes in the Mohist Canons aims to challenge cosmologists in the relevant period. Furthermore, as we discuss some concepts that readers may be rather unfamiliar with, we list and define all the relevant terms in the Appendix so that the readers can easily refer to it instead of searching all over the paper.

2. Causes in Mohist Canons as difference-makers

A hallmark of causation theories is the distinction between the productive theory and the difference-making theory. The cause having intrinsic power or following principles to generate a continuous, causal process may be regarded as a productive theory. The ancient version of a productive theory might go back to Aristotle, in which an effective cause, by principle, devolves causal power in the causal process. In the contemporary version of productive theories, the continuity and systematic aspect were developed. These theories (e.g., transference or mechanism theories) take a causal process as involving the transfer of a quantity of an object through its collisions, or interactions with parts of an emergent system. For instance, the occurrence of lightning causes a forest fire because there is a continuous physical process from the lightning to the fire, and there is electrical power in the lightning, through which the lightning generates the forest fire, transferring its power to the effect.

The difference-making theory has a more scientific and logical perspective. This theory is mainly attributed to David Lewis, who holds that an actual cause is not something that generates the causal process but is instead something that makes a difference to the effect. Lewis inherits David Hume’s criticism of power and principle

as mysterious and his view of causation as a black box. In Lewis's (1973) view, a difference-maker is a counterfactual antecedent to the effect. For instance, the occurrence of lightning is considered to have caused the forest fire simply because if no lightning had occurred, there would not have been a forest fire, and if lightning had occurred, then there would be a forest fire.

We argue that the same hallmark of distinction in Chinese philosophy during the period of the later Mohists could be roughly parallel to the distinction between the productive and difference-making theories. This distinction had been inadvertently mentioned in Graham (1989). In his book, he attributes the approach of 'Yin-Yang system-building' to the so-called cosmologists and labelled later Mohists as pursuing logical rigour.

...the Mohist's thinking is strictly causal, not the Yin-Yang system-building which broke into the philosophical schools from the world of diviners, astronomers, physicians, and musicians late in the 3rd century B.C. In China... The Later Mohist enterprise, like those led by Archimedes in Greece and by Grosseteste in 13th-century Europe, is one of those brief episodes which look in retrospect like breakaways from correlative system-building in the direction of what we now recognise as true science. We may see the school as driven to causal explanation, on the one hand by a logical rigour distrustful of the looseness of correlative thinking... (Graham, 1989: 161)

In the late Warring States period, many philosophers were affected by the Yin-Yang trend of thought. We borrow from Graham (1989) by referring to these philosophers as cosmologists. We can see their thoughts expressed in different writings, most of which were in the Yin-Yang Doctrine and in Daoism. In their view, the Dao is a fundamental principle and power within causal processes. This principle is in the form of harmony

and collision of Yin and Yang with a circulation mechanism. Dao, as the principle and the power, could explain why physical phenomena or things—specifically, diseases or death—exist (Fung, 2020, p. 190):

Therefore, yin-yang and [the] four seasons are the circulation rule of all things, the original ground of death and life. Opposing them generates (*sheng* 生) catastrophe and harms life. If one follows them, severe diseases will not bring out (*bu qi* 不起). This is called ‘obtaining dao’. (*Huang Di Nei Jing Su Wen*: 2-14-1)⁵

Here, Yin and Yang have physical carriers that embody power in a causal mechanism:

The yang, that is the qi of heaven. It rules the outside. The yin, that is the qi of the earth. It rules the inside.... Hence, the yang [conduits] receive the wind qi; the yin [conduits] receive the dampness qi.... If one was harmed by dampness, the lower [parts of the body] receive it first. (*Huang Di Nei Jing Su Wen*: 29-180-1)

On the contrary, the Mohist Canons only correlates the completion of disease and the difference-maker dampness but does not mention any power and mechanism about the dampness.

*Shi*⁶. To tell (*Wei* 謂). The cause.

⁵ Citations for the *Huang Di Nei Jing Su Wen* 黃帝內經素問 are from Unschuld and Tessenow (2011). The translation of this sentence is attributed to Fung (2020, p. 190), and Unschuld and Tessenow (2011); I combined them and made minor changes. The translation of the next quotation from Unschuld and Tessenow (2011) has no changes.

⁶ *Shi* (使) is a word that is hard to translate. I followed Johnston (2010) and retained the Chinese term.

To give orders is ‘to tell’. The thing does not necessarily come about. Dampness is a cause. It necessarily depends on the completion of what it brings about. (Cn. & Ex. A77)

使，謂、故。

使：令，謂謂也，不必成。濕，故也，必待所為之成也。

This contrast can be considered an illustration of the difference-making causation in the Canons beyond Cn. and Ex. A1, in which the cause is only defined by time and modal relation from the completion (*cheng* 成) and has nothing to do with the unverifiable principle, namely, power and collisions in circulation mechanisms. In B43, later Mohists directly refute ‘the theory that the five processes request each other in a regular cycle’ (Graham, 1989, p. 162). Later Mohists try, as much as possible, to avoid using the example of a disease explained by Yin and Yang’s circulation. The requirement for dampness to be an actual cause is only that the effect (*cheng*) has occurred. When the effect—the completion—is ‘what it brings about (i.e., what it has done)’ (所為之成), there is no need for a detailed examination of every specific aspect of ‘what it does’ (所為).

Recalling the sub-definitions in Ex. A1 and Ex. A1-Liang, ‘Minor cause—having this, it will not necessarily be so; lacking this, necessarily it will not be so’ and ‘Major cause—having this, it will necessarily be so’. We suggest ‘having this’ and ‘lacking this’ mean having or lacking a difference-maker (i.e., an actual cause). Based on the text of Ex. A1, the sub-definitions of the major and minor causes are contrastive. Therefore, we need to identify the two types of difference-makers.

3. Major cause and the causal explanation

One feature of the difference-making theories of causation is that these theories are in

favour of selecting the salient cause from background conditions in a specific causal scenario. This terminology is mainly from David Lewis, who named the selection of the salient difference-maker as a causal explanation (Lewis, 1986, p. 125), while ontologically holding a subtle egalitarian view that causal explanations seem essentially pragmatic. Other philosophers, such as Menzies (2007), do not pick a salient cause from conditions pragmatically, but rather ontologically. However, whatever ontological position is taken, the general informative aim of a causal explanation is to select the salient cause from the conditions in the actual scenario. The causal selection criterion is usually in terms of the context. As Lewis argues:

...[philosophers] may be looking for the most remarkable part, the most remediable or blameworthy part, the least obvious of the discoverable parts, Some parts will be salient in some contexts, others in others. Some will not be at all salient in any likely context, but they belong to the causal history all the same... (Lewis, 1986: 125)

In actual causation, the salient cause is distinguished from the (background) conditions in the scenario's context. For the forest fire example in Section 1, the forest fire has many conditions in the actual scenario other than lightning strikes (L), for example, sufficient oxygen (O). These conditions are also necessary for the effect. However, in the context of the actual causal scenario, for the forest fire, normally, sufficient oxygen is present in certain regions in our daily life scenarios. Hence, oxygen (O) does not trigger the actual causation. Therefore, in the actual scenario we provided in Section 1, the salient cause should be the (L), while (O) is only a (background) condition. Therefore, (1) and (2) are true:

- (1) With sufficient oxygen, which is a background condition, a forest fire will not necessarily occur, and without sufficient oxygen, necessarily no forest fire will occur.
- (2) In the context of the actual causal scenario (sufficient oxygen), given the lightning strike, which is a salient cause, the forest fire will necessarily occur.

According to David Lewis's theory, (1) and (2) above should be written as counterfactual conditionals about what would have happened (Lewis, 1973, pp. 560–563). Item (2) above is true because, in the context of this causal scenario, the default is the presence of sufficient oxygen, and we should examine (2) based on the corresponding context when proposing a causal explanation.

In Section 1, we mentioned that Gao has, at least, a logically coherent explanation for the sub-definitions of *gu* 故 (cause) in the Mohist Canons. However, his interpretation, whereof major causes only occur in one-cause-to-one-effect scenarios, according to which the major and minor causes cannot happen in the same causal scenario, is somewhat problematic. Suppose the major causes always occur in a causal scenario in which there are no minor causes or other conditions. Why should we think major causes are generally major? Hu Pu'an 胡樸安, likely based on such difficulties, emendates the sub-definition of the minor cause as 'having this, it will necessarily be so' (which becomes the same as the major cause), and then interprets it as follows: 'a minor cause completes a minor effect, and a major cause completes a major effect. It is the same that: Having any of them, it will necessarily be so. Lack any of them, necessarily it will not be so' (小因成小果，大因成大果。有之必然，無之必不然，小大同也； P. Hu, 2002, p. 481). However, this emendation reflects no semantic difference between major and minor causes.

Given that the theory of causation in the Mohist Canons can be regarded as a difference-making theory, we suggest that it shares the same idea as that of a causal explanation. We suggest this view on the basis that the scenario concerning the sub-definitions in the Canons is somewhat akin to the forest fire example, in that the context provides the presence of background conditions, which could explain why major causes are greater than minor causes in one causal scenario.

The example corresponding to the major cause is in Explanation A1, *jian zhi cheng jian* 見之成見. For Explanation A1, Graham (1978), translate both instances of *jian* 見 differently as ‘appearing completing the seeing’. He makes this interpretation in that Ex. B4 shows ‘seeing and appearing apart’ (*jian jian li* 見見離; Graham, 1978, p. 79, p. 263). For discussion, following Fraser (2020), we translate ‘appearing’ here as ‘coming into view’. In the pre-Han literature, the meaning of ‘appear’ (i.e. ‘come into view’) 現 and the meaning of ‘see’ 見 both are often carried by the character *jian* 見. As the same as in Explanation A1, *jian* 見 occurred twice in a paragraph of *Menzi* with these two different meanings:

I can see him today. But if I don’t directly correct him (where the defects of Mohism are), the Dao will not appear. (*Menzi*, Book III • Part A/5)⁷

吾今則可以見矣。不直，則道不見。

We also find that, although Gao Heng does not clearly take the first *jian* as ‘appearing’ or ‘coming into view’, he has a somewhat similar explanation. He states, in the example of Explanation A1, ‘the first *jian* means that something be looked at, the second *jian* means that having the perception of it. (上見字謂有所視，下見字謂有所覩也; 1958,

⁷ My translation. The citation for it is from Lau (2003).

p. 32)’ Therefore, there are two types of *jian* 見 in Explanation A1. In the example of the major cause ‘like coming into view completing the seeing’, the first *jian* 見 is non-agential and the second is agential. In summary, the ‘coming into view’ to an observer is a cause, while the effect is the seeing by an observer (what is seen from the observer’s perspective). Moreover, the later Mohist school depicts the time sequence of the realisation of cognitive functions until the process of seeing is complete.

The ‘intelligence’: by means of it one knows, one does <not⁸> necessarily know.

Like the eyesight. (Ex. A3)

知：材，知也者。所以知也而<不>必知。若明。

‘Thinking’: by means of one’s intelligence one seeks something (*you qiu* 有求), but does not necessarily find it (*de zhi* 得之). Like peering. (Ex. A4)

慮：慮也者，以其知有求也，而不必得之。若睨。

‘Knowing’ (*zhi* 知): by means of one’s intelligence, having passed the thing (*guo wu* 過物) one is able to gain perception of it⁹ (*mao zhi* 貌之). Like seeing (*jian* 見). (Ex. A5)

⁸ Different interpreters have different views on the emendation about ‘intelligence’. This is the common emendation adopted by most Chinese interpreters, such as Sun Yirang, Liang Qichao, and Gao Heng. Graham (1978), Johnston (2010), and Fraser (2020) do not make this emendation, but the meanings of (3) and (4) remain unchanged, while only leaving the capacity of the observer not to be a minor cause.

⁹ I strongly support the translation ‘gain perception of it’ for *mao zhi* 貌之, rather than ‘describe it’ by Graham (1978), because I think Explanation A5 means that the observer could get the inner representation of this thing (that is, finally completing the process of seeing). However, I could follow Graham’s translation as well, because his translation will not have much impact on my conclusion. Nevertheless, Liang Qichao 梁啟超 directly puts forward that *mao zhi* 貌之

知：知也者，以其知過物而能貌之。若見。

In summary, agents should first have the necessary cognitive organs. Then, they should have a cognitive intention to seek the thing (*you qiu* 有求) that is to be sought. Finally, they should ‘have passed’ (*guo* 過) the thing needed for ‘coming into view’ to get to ‘knowing’ (*zhi* 知) what the agent is seeing. Every step, such as possessing eyesight, peering, and perceiving the thing, in the function of completing the action of seeing (*cheng jian* 成見) is a new cognitive step based on a previous step that meets certain conditions (e.g. having the capacity, seeking something). Therefore, the three sentences on ‘intelligence’, ‘thinking’, and ‘knowing’ all correspond to the time or context when the previous step had been completed.

In this causal scenario of the cognitive function of completing the action of seeing (*cheng jian* 成見), the ‘it’ (*zhi* 之) in ‘find it’ (*de zhi* 得之) and ‘gain perception of it’ (*mao zhi* 貌之) both refer to the perception of the thing. Therefore, the second step of the cognitive function is to seek a thing (*you qiu* 有求) and hope that the observer can find and see it, which is the step of peering. However, peering in itself does not necessarily lead to the effect of seeing something (*er bu bi de zhi* 而不必得之). The third step of the cognitive function is to use one’s vision or eyesight to go past the thing (*guo wu* 過物); this is also the final effect of the cognitive function of completing the action of seeing (*cheng jian* 成見). It is accepted by Chinese interpreters that ‘having

means getting the image of a thing (Liang, 1922, p. 7). Yang Janguang 楊俊光 explains in detail why Liang is right (Yang, 2002: 75).

passed' the thing means connecting with the thing.¹⁰ Hence 'by means of one's intelligence, having passed the thing' is instantiated by the thing's being experienced through the observer's eyes. Therefore, we can suggest that to an observer, 'having passed the thing' ('*guo wu* 過物'), is an active form of the same thing 'coming into (the observer's) view' (*jian* 見).

In summary, in the time and context of seeking something and yet not having 'gone past' the thing that comes into view, seeking by itself does not necessarily have the effect of seeing. Therefore, we hold (3) and (4) as true:

- (3) Seeking something, which is a background condition, will not necessarily amount to seeing.
- (4) In the context where there is eyesight and the act of seeking something, 'having passed the thing' (or the thing that is 'coming into [an observer's] view'), which is a salient cause, will necessarily amount to seeing.

Parallel to (1) and (2), for (3) and (4) it should also be assumed that the previous steps, such as possessing eyesight, have been completed. Item (3) above means that one's seeking (*you qiu* 有求) is a background condition for seeing (*jian* 見) because the previous steps imply that in the absence of seeking, there will (necessarily) not be any seeing (*jian* 見). As we turn back to the sub-definitions of *gu* 故 (cause), these indicate that 'seeking something' fits the sub-definition of a minor cause. Item (4) above

¹⁰ By 'Knowing is the connecting' (Cn. A5) Sun (2001, p. 334) brings a proposal that emendates 'pass' 過 in (Ex. A5) to 'meet' 遇. Liang (1923, p. 7) thinks this emendation could be abandoned, as we can understand 'pass' 過 as 'connect' 接 readily, without emendation. For more details, see Yang (2002, pp. 75–77).

suggests that having passed the thing (*guo wu* 過物) is salient given the background conditions, and thus, is the salient cause of seeing (*jian* 見) in the scenario's context of cognitive function. Testing whether having gone past the thing fits the sub-definition of a major cause implicitly indicates that the previous steps have happened. Therefore, 'having passed the thing' ('*guo wu* 過物') is the major cause of seeing (*jian* 見). Intuitively, the salient cause is always more important than the background conditions. Once the argument above is established, giving the major cause is akin to giving a causal explanation.

As noted above, we define the provision of a salient cause as the causal explanation. Menzies called the provision 'context-sensitive pragmatic principles' (Menzies, 2007, p. 199), in that the salient cause is sensitive to the context. For instance, in a laboratory accident, a fire occurs in a scientific laboratory that is devoid of oxygen. We might this time select the presence of oxygen (O) in this context as a salient cause rather than a background condition.

The later Mohists seem to have studied the famous sophistry of Hui Shi: 'the eye does not see'. This sophistry usually is considered to mean that cognitive capacity has no effect on seeing. The Canons refute this sophistry by pointing out a causal explanation that, in the context of 'the eye does not see', a major cause of failing to see is the lack of illumination, rather than the lack of eyesight. Therefore, in the context of this argumentation, possessing eyesight could be a salient cause of seeing. Hence, this sophistry is fallacious.

The knower is seeing by means of the eye and the eye by means of fire but the fire is not seeing. (Ex. B46)

智：以目見。而目以火見，而火不見。

The major cause is greater because it is more important in context-sensitive epistemology. Early Mohist ethics is characterised by pragmatic consequentialism, which becomes pragmatism in the philosophy of language and epistemology when extended to the later Mohists (Fraser, 2020 [2015], section 1). For the later Mohists, causes come from a scientific and singular observation, which means they are related to the actual context or a particular causal scenario. Therefore, it is not surprising that for the later Mohists, the concept of the major cause should be context-sensitive.

The fundamental purpose of the saying that ‘explanations are used to bring out causes’ (*yi shuo chu gu* 以說出故; NO 10) has never been to explore all conditions that determine an effect. To adduce a causal explanation, one does not need to find all the background conditions that make the effect appear, but only the triggering set of all conditions involved in the dispute’s context.

Particularly for the later Mohists, the cognitive function is sensitive to the pragmatic context. If asked whether a thing is seen, a later Mohist would not have answered that it is because you have sufficient light or you have eyes, because this kind of background has a low sensitivity to the context of the normal scenario of seeing, and hence, does not have strong explanatory power in an argument. Therefore, it is not surprising that the salient cause, which has stronger explanatory power in the causal explanation, is called the major cause. As such, the later Mohists take the cognitive experience of ‘seeing’ that is sensitive to the pragmatic context as the stock example of the major cause. Now, let us focus on the minor cause. We propose that, typically or at least in the stock example, the minor cause is non-sensitive to the pragmatic context, and the later Mohists deliberately distinguished it from the major.

4. Minor cause and the mereology

It is generally believed that the example of the minor cause, ‘like having a starting point’, is abbreviated or diminished by the thought, ‘like a measured length is having a starting point’. This idea is directly based on A2¹¹:

A part (*ti* 體) separates from a whole.

For example, one of two, or the starting point of a measured length. (Cn. and Ex.

A2)

體，分於兼也。

體：若二之一，尺之端也。

The later Mohists define a part as an individual element that has a mereological and partial relation to the whole. It is a common view that a point and a measured length have a mereological relation to one another. Combining A2 and A1, the causal scenario ‘like a measured length is having a starting point’ indicates that, while there is a starting point, having it will not necessarily mean an actual measured length exists. However, if it is assumed that there is no starting point, there would definitely be no measured length. Therefore, it is widely accepted among later Mohists that the mereological relation should be taken as a type of causation.

We explained in Section 2 that the later Mohists’ view of causation differs completely from that of cosmologists. The later Mohist school seems inclined to assume

¹¹ This has been a common interpretation by almost all interpreters in the 20th century. For a comprehensive and detailed summary of this point, see Yang (2002, pp. 43–56). Graham (1978, p. 263) seems to not only agree with this interpretation but also propose a deeper yet somewhat far-fetched understanding that ‘the minor reason is a necessary condition allowing more than one possible consequence, like a starting-point from which more than one measurement can be made’.

that a particular fact that happened in the past is the actual cause of an event in the present. As noted in Section 3, facts, or even actions, are causal relata of the major cause, as in the case of the observer's eyesight having passed the thing or the observer seeing the thing. However, for the later Mohists, the causal relata of the minor cause remain somewhat obscure. According to the sub-definition, under the context of the realisation of the cognitive function, adequate light may be regarded as a minor cause. However, the stock example of the minor cause given by the later Mohists is about mereology. This means that the relata of causation for a minor cause and its effect could be objects rather than facts.

Similarly, cosmologists seem to have many ideas concerning the completion and separation of objects in the universe. *Lu's Spring and Autumn Annals* 呂氏春秋 also has the view that the Dao (though the book called it the Grand One 太一) is the productive power of all objects in the universe:

Sun, moon, planets, and constellations: Some move fast, others slow. In the completion of their movements. ... The myriad things that emerged were created by [the] Grand One and transformed by Yin and Yang. (5/2.1)

This cosmology of Yin-Yang transformation might be influenced by Daoism, which has more relativistic views:

A Dao is made by walking on it; things are so because they are called so. What makes them so? Making them so makes them so. What makes them not so? Making them not so makes them not so. ... Their separation leads to their completion; their completion leads to their destruction. (*Zhuangzi*, 2/ 35)¹²

¹² Translations of *Zhuangzi* in this essay mainly follow Watson (1996; except for Chapter 33, which follows Graham). Nonetheless, for consistency, I replaced some terms in their translation

道行之而成，物謂之而然。惡乎然？然於然。惡乎不然？不然於不然……

其分也，成也；其成也，毀也。

Leaving behind relativistic thought and focusing on the ontology, in the quote above, a transferring process among objects leads to completion. Here, the road metaphor could indicate that the Dao is developed after running. Causes are behind why all things are so, and there are causes as to why they are not. The separation, completion, and destruction of objects (parts) are circular processes that will eventually return to the whole. The causal mechanism and power source behind these circular processes is the Dao. In contrast to what Mohists believe, cosmologists, as we call them, seem to take causation as completion and separation of objects without involving facts about the human experience.

Furthermore, the cosmologists even fiercely go against the thought that cause is obtained through empirical observation. This is particularly evident in Hui Shi's view of causation, as explained in *Zhuangzi*:

There was a strange man of the South called Huang Liao, who asked why heaven does not collapse or earth subside, and the causes of wind, rain, and thunder. Hui Shih answered without hesitation, replied without thinking, had explanations for all the myriad things, never stopped explaining, said more and more, and still thought he hadn't said enough, had some marvel to add.

(*Zhuangzi*, 33/81–83)

where the same Chinese characters occur in the Mohist Canons. References to the *Zhuangzi* cite section and line numbers in the Harvard-Yenching Institute Sinological Index Series, No. 20, A Concordance to Chuang Tzu 莊子引得, as quoted in Sturgeon (2011). Locations of the textual references given in this paper can also be determined using the Chinese Text Project website: <http://ctext.org/tools/concordance>

南方有倚人焉，曰黃繚，問天地所以不墜不陷，風雨雷霆之故。惠施不辭而應，不慮而對，遍為萬物說；說而不休，多而無已，猶以為寡，益之以怪。

The results of scientific observation, such as of marvels, should be a fact expressed by a proposition, not an object. Therefore, whether ‘Hui Shi’ here implies a later Mohist (for which it is a common idea that the so-called ‘school of name’ has similarities with later Mohism), it is readily accepted that *Zhuangzi* despises ‘Hui Shi’, who provides a causal explanation of scientific phenomena (the salient causes of wind, rain, and thunder).

However, the critical issue examined in this paper is how the later Mohists replied to the cosmologists. From the later Mohists’ perspective, what they should care about is the very major cause, which is a fact that could make a pragmatic causal explanation successful. Therefore, their reply, in contrast to cosmologists, considers causation between objects only involving separation and completion to be minor.

Therefore, it is reasonable for later Mohists to regard the part–whole relation as a stock example of a minor cause. A mereological relation is the least sensitive to the pragmatic context, and thus, it must not be of key importance to them. Although seeking something is the minor cause in some particular contexts, the best way to provide an example of the minor cause is to show the most non-context-sensitive case.

Moreover, the Mohist Canons (Cn. and Ex. A67) interestingly show that even the relation between the minor cause and the act of completion differs from the transformation of objects as referred to by cosmologists. To show this contrast, we should first confirm that cosmologists believe the part–whole relation between objects seems to be held by interaction, or what they call ‘touching’ 櫻. The following quote

from *Zhuangzi* seems to use the same sentence pattern before Cn. A1 to express the stock example and transformation of objects.

This is the kind of thing it is: there's nothing it doesn't send off, nothing it doesn't welcome, nothing it doesn't destroy, nothing it doesn't complete. It is called 'Peace-in-Touching'. 'Peace-in-Touching' is touching before it is completed. (*Zhuangzi*, 6/42-43)

其為物，無不將也，無不迎也；無不毀也，無不成也。其名為櫻寧。櫻寧也者，櫻而後成者也。

The Mohist Canons Canon A1 only replaced 'touching' (*ying* 櫻) from the sentence quoted above with 'what it got' (*suo de* 所得), that is, *gu* 故.¹³ 'Touching' (*ying* 櫻) has the fundamental meaning of *interaction* (相交; Gao, 1958, p. 71). In *Zhuangzi*, 'touching' (*ying* 櫻) could mean disturbing something, such as 'take care how you meddle with and stir up (*ying* 櫻) men's minds' (*Zhuangzi*, 11/17). We posit that, during that era, the separation, combination, and transformation of objects comprised a typical stock example in the principle analysis of causation. *Ying* 櫻, in this stock example, does not indicate a difference-maker but refers instead to the causal interaction through disturbance, which is the transformation of objects when causation occurs. The completion of this causation is *ying ning* 櫻寧. We cannot identify which parts are touching (*ying* 櫻) or disturbing other parts.

¹³According to conventional views, the quotation above from *Zhuangzi* Chapter 6 is *Zhuangzi*'s own work in the middle of the Warring States period, and the Mohist Canons might generally be viewed as a collection of later Mohism in the late Warring States period. Therefore, Mohist Canon A1 might aim to review this stock example.

However, the later Mohists do not agree with this perspective. They think that the interaction by disturbance or *ying* 攪 in *Zhuangzi* can be defined by objects in space.

Touching (*ying* 攪) is occupying each other.

[Touching.] Of measured length, neither is wholly covered by the other. Of starting points, each is wholly covered by the other. Of the measured length and the starting point, one is wholly covered and the other is not. The hard and the white, in touching (*ying* 攪), wholly cover each other. Parts touching (*ying* 攪) do not wholly cover each other. (Cn. and Ex. A67)

攪，相得也。

攪：尺與尺俱不盡，端與端俱盡。尺與或盡或不盡。堅白之攪相盡，體攪不相盡。

If two starting points overlap, they will become one. At the same time, a starting point will be included in a measured length and become a cause of this measured length (Graham, 1978, p. 314). In connection with Explanation A2, for a measured length, a starting point occupies a position in it, as a minor difference-maker. Interaction by disturbance has nothing to do with these points. Therefore, parts should be the difference-maker of the whole, although they could not cover the whole. There is no productive power within the starting point that transfers to the measured length. With the touching of the measured length and the starting point, the starting point is wholly covered, and the measured length is not. This idea indicates that having a part, in other words, a difference-maker that occupies space, will not necessarily correspond to the whole object, and lacking a part occupying a space will not necessarily be the whole object. Parts and the whole among objects only concern the space extension. This

mereological difference-maker causation with non-sensitive minor causes goes against the productive theory.

5. Conclusion

The later Mohists did not think that causation is a process or that causal principles and power are behind the causal processes that transfer them. Motivated by their scientific preference, they provided a type of difference-making theory of actual causation. Their theory is about actual causation because *gu* 故 (cause), according to its definition, can only be identified in its particular scenario.

Major and minor causes are two components of *gu* 故 (cause). The minor cause is the secondary component of *gu* 故 (cause); it is the background condition in the causal explanation. The major cause is the primary component of *gu* 故 (cause); it is the salient cause in the causal explanation. The major cause is salient when the background conditions are regarded as the default in a particular context. Therefore, Liang's emendation (Ex. A1-Liang) is preferable, because the last step of 'having this, it will necessarily be so' is an articulation of this principle, based on the default condition (i.e., the minor cause) that 'having this, it will not necessarily be so'. There is no need for us to mention again that 'lacking this, necessarily it will not be so'.

Regarding the most non-context-sensitive causation with objects, it is interesting to note that cosmologists, as is seen in some chapters of *Zhuangzi*, mention this type of causation and despise the causal explanation that later Mohists might be in favour of. However, later Mohists might believe that only minor causes lead to causation with objects. Hence, we should not pay immense attention to the minor causes for pragmatic purposes. In conclusion, we can present a diagram to summarise key arguments in this essay.

	Later Mohists		Cosmologists
	Major cause-completion	Minor cause-completion	
Stock Example	Causal explanation: Coming into view—seeing	Mereology: A Starting point—a measured length	Similar to mereology: touching—completion
Causal relata	Fact	Object	Object
Context-sensitivity	High	Low	Low
Kinds of causation	Actual causation	Actual causation	?
Type of causes	Salient cause	(Background) condition	?
Theories of causation	Difference-making theory	Difference-making theory	Productive theory

Table 1. Views of causation of later Mohists and Cosmologists

Of course, this essay also leaves many questions that have not been answered. For example, what kind of causation had the cosmologists studied in the above diagram: are they also concerned about actual causation? Alternatively, they may just have taken two kinds of causation as undistinguished. Similarly, this essay did not further classify the cosmologists. It is well known that *Zhuangzi* might contain many opinions on ontology different from the so-called ‘Yin-Yang school of thought’. However, as a kind of stone soup, we believe the work on this essay could help further in-depth research on other trends of thought on causation during the relevant period.

Appendix

Dictionary

Cheng 成 (Completion/ Complete) The Mohist Canons’ terminology, which refers to the effect in causation. This term has no exact definition in the Mohist Canons.

Gu 故 (Cause) The Mohist Canons' terminology. *Gu 故* could refer to both reason and cause. Cn. A1 provide the definition of it: 'The cause of something is what it must get before it is completed'.

Dagu 大故 (Major cause) The Mohist Canons' terminology, a sub-concept of *gu 故*. Ex. A1 provide the sub-definition and a stock example of it. The sub-definition is 'having this, it will necessarily <be so>: lacking <this, necessarily it will not> be so'. The stock example is 'Like coming into view, completing the seeing'.

Xiaogu 小故 (Minor cause) The Mohist Canons' terminology, a sub-concept of *gu 故*. Ex. A1 provide the sub-definition and a stock example of it. The sub-definition is 'having this, it will not necessarily be so: lacking this, necessarily it will not be so'. The stock example is 'Like having a starting point'.

Jian 見 (Seeing/ Coming into view) *Jian* has two meanings: 1. 'seeing'; 2. 'coming into view' or 'appearing'. The Mohist Canons often use this term in describing the cognitive function and epistemology.

Ying 櫻 (Touching) The Mohist Canons' terminology. Cn. A67 provide the definition of it. However, in the relevant period, *ying 櫻* could also mean 'interaction' in other literature.

Actual causation/Potential (or general) causation Two kind of causation. The stock example is: Yesterday afternoon, a flash of lightning (L), struck the ground, causing a big forest fire in our actual world, while an arsonist could have dropped a match (M) in the same place, which would have led to the same effect. For this forest fire, the relation from the L to the fire is actual causation, while M to the fire is potential (or general) causation.

Productive theory/Difference-making theory Two theories of causation. A productive theory regards the cause as having intrinsic power or following principles to generate a continuous, causal process, while a difference-making theory just takes the cause as a difference maker and causation as a black box.

Salient cause/ (Background) condition Two type of conditions for the effect in actual causation. The selection of the salient cause is the causal explanation. The terminologies derived from Lewis (1986). The causal selection criterion usually functions based on the context. The stock example is that, in the context of the daily life causal scenario, for

the forest fire, the salient cause could be the lighting (L), while the sufficient oxygen (O) is a (background) condition.

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