

On the role of colligation in historical explanatory competition

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abstract

The relation between description and laws in explanation has been a traditional topic in the analytical philosophy of history. Raymond Martin proposed a new approach to this problem: analyze how historians try to show that their explanation is better than competing explanations. The goal of this article is to develop Martin's account by introducing the concept of colligation to provide a better understanding of the role of description than Martin's account. According to Martin, when historians try to show that one explanation is better than others, there are two relevant factors: the justification and sufficiency of explanation. To change these factors, historians use four kinds of arguments: (1) increasing or (2) decreasing the likelihood of a particular *explanans*, a sentence to explain other sentences, (3) increasing the likelihood that a particular *explanans* is partially sufficient, and (4) decreasing the likelihood that a particular *explanans* is sufficient. In Martin's account, the arguments of kinds (3) and (4) deploy the strategies regarding lawful connections. To complement this account, I argue that historians also deploy a particular kind of description, *colligation*, in the arguments of kinds (3) and (4). Colligation unifies discrete lower-order descriptions into a single higher-order description whose criteria of justification is different from likelihood. I suggest that colligation plays a crucial role in deciding which law-like generalizations are relevant to explanation, which is why description can play a role in the arguments of kinds (3) and (4). I will demonstrate these claims through the case study of the controversy over the relationship between the Enlightenment and the French Revolution.

1 Introduction

The relation between description and laws in historical explanation has been a traditional topic in the analytical philosophy of history (Roth 2018). In the past, while some positivists claimed that explanation requires laws, their critics proposed different modes of explanation where laws are not required. In recent years, this problem has been tackled again by some philosophers (Roth 2017).

Raymond Martin (1989) proposes a new approach to this problem. He suggests analyz-

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ing how historians try to show that their explanation is better than competing explanations. Martin argues that this approach provides a better understanding of the role of description in explanation than the traditional approach, whose discussions center on whether explanation requires laws. Although his analysis has some problems, his approach still provides a good step to elucidating the role of description in historical explanation.

The goal of this article is to develop his account by introducing the concept of *colligation* to elucidate the role of description in historical explanation. The operation of colligation, which unifies lower-order discrete events into a higher-order single whole, has been a focus of attention in recent debate in the philosophy of history. Kuukkanen (2018) points out that colligation has some roles in explanation, but there has hardly been any analysis of those roles. By analyzing the case of the controversy over the relationship between the Enlightenment and the French Revolution, I will argue that colligation plays a crucial role in the justification of historical explanations that Martin overlooks.

The structure of this article is as follows. In section two, after a brief description of Martin's proposal, his account is briefly introduced. In addition, I point out the limits of Martin's account, and argue that colligation play a crucial role in historical explanatory competition and that clarifying its role provides a more profound understanding of the role of description in historical explanatory competition. Section three introduces as a case study the debate about the relation between the Enlightenment and the French Revolution. In section four, I demonstrate that my account better fits the case study than Martin's.

2 Martin's analysis: Its merits and problems

The goal of this section is to introduce Martin's analysis of historical explanatory competition. After briefly showing the merits of analyzing explanatory competition (2.1), I will provide an overview of Martin's analysis (2.2) and argue that his analysis ignores the relationship between lower-order descriptions and higher-order descriptions, which has recently been discussed in terms of colligation (2.3). The problems of his analysis will be discussed further through a case study in the later sections.

2.1 Why analyze historical explanatory competition?

Before introducing Martin's analytical approach, I will show some merits of his approach. The first and most important one is that this approach can evade a problem that lies in the traditional approach to historical explanation. The analysis of historical explanation was a hot topic in analytical philosophy in the 1950s-60s. The debate centered on the claims made by Hempel, who applied the covering-law model of scientific explanation to history. Roughly speaking, according to the model, explanation is an argument that consists of three parts: *explanandum*, the description of a particular event to be explained;

the description of a particular event to explain explanandum; and some general laws. All three parts are required to be justified to validate explanation. This means that historians should formulate and justify general laws to validate their explanation. The opponents of this claim tried to show that general laws are not necessary for historical explanation (Dray 1957).

According to Martin, in this controversy, both the proponents and the opponents of the covering-law model shared one problematic assumption: if the covering-law model captures the conditions of the ideally satisfactory explanation, historians should satisfy all the required conditions in order to justify their explanation. In other words, they assume that, if the covering-law model is correct, historians cannot justify their explanations unless they satisfy all the conditions required by the covering-law model.

This assumption entails that relative superiority is not enough to justify explanations. Suppose, for example, that an explanation is better justified in its descriptions than the others, but its general law is no more justified than that of the others. Under this assumption, this explanation is not justified because it does not satisfy a required condition (the justification of law). Without this assumption, however, this explanation need not satisfy all the required conditions. Therefore, this explanation can be justified on the ground that it satisfies more of the conditions than the other even when its law is not well justified.

Martin argues that this assumption has been problematic because it prevented both the proponents and the opponents of the covering-law model from distinguishing the two claims below:¹

- (A) Historians cannot provide an explanation without implicitly or explicitly appealing to some general laws or, in a weaker case, some nomic connections.
- (B) Historians should formulate and justify general laws in order to provide full-fledged explanations.

Without the assumption, accepting (A) does not mean accepting (B). Even when an explanation lacks the justification of its law, it can be supported in terms of relative superiority even if (A) is admitted. Under the assumption, however, this explanation is not justified because it does not satisfy a required condition (the justification of law). Thus, under the assumption, accepting (A) means accepting (B).

This tacit assumption misdirected both the proponents and the opponents of the covering-law model. On the one hand, whereas the proponents defended the covering-law model on the ground that (A) is difficult to reject, they also asserted that historians should formulate and justify general laws in order to provide explanations, that is, (B). This assertion is unrealistic because few resources are available to justify general laws

¹ In the recent debate on scientific explanation, James Woodward makes a more detailed distinction between claims which Hempel made as if they were the same (Woodward 2003, Chapter 4).

in most areas of historical research. On the other hand, the opponents were forced to deny (A) though what they wanted to reject was (B), because (A) involves (B) under this assumption. However, (A) is very difficult to refute. In sum, whereas this assumption directed the proponents of the covering-law model to the unfounded claim (B), it misdirected the opponents to the unsuccessful attempts to reject (A).

The first merit of Martin's analytical approach is that his approach can avoid these problems. He analyzes historical explanatory competitions under the assumption that historians defend their explanation by showing that their explanations are better than others, in other words, dismissing the above assumption. Therefore, these problems do not arise to him: he can accept (A) without accepting (B). Moreover, it illuminates the strategies historians employ to defend their explanation which are not captured by the traditional approach. As later shown in detail, historians integrate defenses of their own explanation with attacks against non-favored explanations to justify their explanations. The traditional approach missed the dynamics of these integrated strategies. Certainly, relative superiority does not necessarily mean that explanations are satisfactory, but the understanding of this dynamics makes a better step toward elucidating the role of description in explanation compared to the traditional approach, which tries to deny the irrefutable claim that historical explanation implicitly involves some law-like generalizations.

2.2 Martin's analysis of explanatory competition

For these reasons, Martin analyzes how historians try to show that their explanations are better than others in historical explanatory competition. Martin uses as a case study the controversy over how to explain the collapse of the Classic Period of the Lowland Maya civilization in the ninth century A.D. In this debate, there were several accounts that explained the collapse by postulating natural disasters, environmental deterioration, peasant revolt, foreign invasion, and so on. Martin argues that archaeologists in this debate defended their position by showing that their explanation was better than competing explanations.

Martin assumes, following Hempel, that explanation can be expressed as *that p* (at least partially) explains *that q*, where *p* and *q* are replaced by complete sentences in the indicative mood. For example, *that* there were several earthquakes in Peten in the Late Classic Period explains the fact *that* the Lowland Maya civilization collapsed in the Late Classic Period. He uses the term "explanans" to refer to the sentence that replaces *p* in the explanation and the term "explanandum" to refer to the sentence that replaces *q*. In this case, *that* there were several earthquakes in Peten in Late Classic Period corresponds to the explanans, and *that* the Lowland Maya civilization collapsed in the Late Classic Period corresponds to the explanandum. In addition, he defines the "explanandum event" as what explanandum claims to be the case and the "explanans event" as what the explanans

claims to be the case (Martin 1989, p. 39).

In the debate on scientific explanation, *explanans* refers not only to particular events but also lawful connections between events. However, Martin seems to limit *explanans* to sentences about particular events. Following Martin, I assume that *explanans* refers to only particular events but that explanations contain some law-like generalizations as well as *explanans* and *explanandum*.

For the sake of simplification, Martin assumes that competing explanations share an *explanandum* and that there are only two relevant factors that determine which of two competing explanations is better: (a) the degree to which each explanation is justified by the available evidence and (b) the degree to which each explanation is sufficient. According to the covering-law model, an explanation is completely justified if and only if the *explanans* and law-like generalization are confirmed and the *explanandum* is a consequence of the *explanans* and law-like generalization. The larger proportion of these conditions an explanation satisfies, the better justified it is. An explanation is sufficient if and only if the *explanans* is the sufficient condition of the *explanandum*. Suppose that the *explanandum* is a building collapse. The building collapse might be explained by a building implosion, a controlled demolition of buildings by explosive materials. If building collapses are known to occur after the controlled use of explosive materials, the explanation is sufficient. The building collapse might be explained by an earthquake. Suppose, in addition, that some buildings do not collapse in the earthquake. Then, the earthquake is not a sufficient condition for the building collapse, and it is necessary to add another *explanans*, such as some structural failures of the building. If buildings with structural failures are known to collapse after earthquakes, the explanation is sufficient.

The difference between two factors is that, while the first (a) is raised by the justification of the *explanans*, the second (b) is not. For example, if building collapses are known to be caused by gas explosions, a building collapse might be explained by a gas explosion even when there is not satisfactory evidence that a gas explosion actually occurred. In this case, though the explanation is sufficient, the explanation is not fully justified. Suppose that some additional evidence support that the gas explosion did actually happen. Then, the evidence raises the degree of justification (a) but not the degree of sufficiency (b).

On this assumption, Martin claims that there are three questions that we need to answer to deal with the larger question of how historians show one explanation is better than competing explanations.

- (Q1) How do historians show that one explanation is better in (a) than competing explanations?
- (Q2) How do historians show that one explanation is better in (b) than competing explanations?
- (Q3) How do these two factors determine which of two competing explanations is bet-

ter? Is one factor more important than another?

To answer these questions, he analyzes the strategies that historians employ to show that their explanations are better than others and suggests a taxonomy of those strategies. According to his taxonomy, historians employ four strategies to show the relative superiority of their explanations (Martin 1989, p. 40):

- (1) arguments that are intended to increase the likelihood that a particular explanans is true
- (2) arguments that are intended to decrease the likelihood that a particular explanans is true
- (3) arguments that are intended to increase the likelihood that a particular explanans is a partially sufficient explanation of its explanandum
- (4) arguments that are intended to decrease the likelihood that a particular explanans is a sufficient explanation of its explanandum

I have one thing to note before elaborating on these strategies. Likelihood here is not used as a statistical technical term but in the ordinary sense. The reason why Martin does not use the term “probability” is perhaps because he intends to avoid some philosophical implications of the term.

In any case, arguments of kinds (1) and (2) concern the likelihood that a particular explanans is true. Both arguments are equivalent to showing that the best explanation for the available evidence is that the explanans of a favored explanation is true. To present arguments of kind (1), scholars have to provide some data that cannot be explained without supposing that the explanans of the favored explanation is true. For example, a proponent of the *peasant revolt explanation*, which attributed the collapse to the revolt of the peasant class against the elite class, argued that certain damage of monuments is best explained as deliberate acts against the elite class. To make the arguments of kind (2), scholars have to show that there is no evidence for or some evidence against the explanans of some non-favored competing explanations. For example, the opponents of the peasant revolt explanation argued that the damage of monuments can be explained by the hypothesis that some invaders from outside broke them down.

Arguments of kind (3) increase the likelihood that a particular explanans is partially sufficient for the explanandum. This kind of argument is designed to show that events of the same sort as the explanans event have a lawful relationship to the events of the explanandum event. An example is found in the argument of the proponents of the environmental deterioration explanation. They showed some recent co-occurrence cases to support that a forest tends to be replaced by grass when population densities reach a certain level in swidden agriculture.

Arguments of kind (4) decrease the likelihood that a particular explanans is sufficient

for the explanandum. To achieve this, three strategies are used. The first strategy points out that there was no other case where events of the same sort as the explanandum events succeeded events of the same sort as the explanans events. The second strategy provides a counterexample to the lawful relationship between events of the same sort as explanans events and events of the same sort as explanandum events. For example, critics of the environmental deterioration explanation pointed out that no similar collapse occurred in the surrounding area that would satisfy the same condition as with the Mayans. The third strategy employs theoretical considerations. For example, critics of the environmental deterioration explanation maintained that the results of soil experiments showed that there was no destruction of forests under the conditions of the Late Classic Maya Period.

It may be suspected that there are arguments that are intended to decrease the likelihood that a particular explanans is partially sufficient or increase the likelihood that a particular explanans is sufficient for the explanandum, but according to Martin, almost no arguments are found that are clearly intended to do so. Martin holds that this is perhaps because they are difficult: denying that a particular explanans is partially sufficient means that the explanans is completely insufficient, and asserting that a particular explanans is sufficient for an explanandum means that no other explanans is necessary for the explanandum.

Martin provides a profound insight into the relation between arguments of kind (3) and kind (4). Arguments of kind (3) are rarely used and, even when they are used, they are integrated with arguments of kind (4). Martin argues that this is because arguments of kind (4) are a common part of a strategy showing that a given explanans explains the explanandum. The role of arguments of kind (4) is, so to speak, to “make room” for another explanans. By establishing that extant explanation is not sufficient, arguments of kind (4) show that another explanans remains to be added. Moreover, another explanans is so often assumed to explain the explanandum that arguments of kind (3) are deployed only when the relevance of the explanans to the explanandum is not familiar.

By using this taxonomy of the strategies, Martin addresses the questions above, (Q1), (Q2), and (Q3). According to his answers, the relative superiority of explanations is shown through the combination of the four strategies as below.

A1: Archaeologists have shown their explanations are better justified than those of competing explanations by a combination of three arguments: arguments of kind (1), which support the truth of favored explanans; arguments of kind (2), which question the truth of the non-favored explanans; and arguments of kind (4) which question the truth of law-like generalizations and the sufficiency of the non-favored explanans.

A2: Archaeologists have combined arguments of kind (3) with kind (4) in a certain way. The first thing they presented was an argument of kind (4), offering unfavorable evidence against the explanans of the non-favored competing explanation to show that the non-favored competing explanation is not sufficient. Then, they supplemented the explanantia

of the best justified partial explanation of the collapse by offering an additional explanans to the explanantia of the best justified partial explanation. For instance, although most archaeologists supported some versions of the environmental deterioration explanation, most of these archaeologists found that the explanations were not sufficient. Some archaeologists supplemented the explanation by postulating some additional explanantia, such as a hypothesis that there was migration.

A3: Martin argues that there is no answer because there is no criteria of how much emphasis should be put on factors (a) and (b). Suppose that there are two competing explanations and that one is better in (a) and the other is better in (b). To decide which explanation is better, it is necessary to decide which of (a) or (b) is more important, but there is no grounds for making this decision.

From this analysis, Martin makes two claims. First, in historical explanatory competition, each explanation is evaluated through the comparison with each other. To show that one explanation is better than others, the strategies of defending and attacking an explanation are combined in a certain way. The dynamics of this combination was missed by the proponents of the covering-law model. Second, the proponents of the covering-law model mistakenly underestimated the importance of the justification of descriptions and overestimated the importance of the justification of law-like generalizations. In historical explanatory competition, whether explanantia are fully justified is often the foci of debate. For example, the *peasant revolt explanation*, which attributed the collapse of the Lowland Maya civilization to the revolt of the peasant class against the elite class, was criticized for the lack of evidence in its explanans. Whereas arguments of this kind (2) were frequently deployed, there are much fewer cases where explanantia are justified and the relevance of explanantia and explanandum is the topic of controversy. This means that the justification of descriptions is a no less important topic of debate than the justification of law-like generalizations. The proponents of the covering-law model overlooked these important roles of the justification of descriptions in explanation.

2.3 The limits of Martin's analysis

Though Martin's analysis provides a good step for clarifying the role of description in historical explanation, this analysis does not fully appreciate the roles of description because of two interrelated problems. The first problem is that this case study is taken from archeology and not history. This is a problem because it raises a concern about the applicability of his analysis to the full-blooded historical debate. This concern is increased by a character of full-blooded historical studies. In many areas of historical studies, historians less frequently talk about lawful connections between events than archaeologists do, perhaps because there is not much evidence available. In Martin's account, however, arguments of kind (4) concern mostly law-like generalizations even though they are the

most frequently used.

The second problem is more crucial: his account does not take into consideration the fact that historians often unify discrete lower-order descriptions into one higher-order single whole. This operation is called “*colligation*” in the philosophy of history. Before presenting an argument for why this is problematic, I will introduce the discussion about colligation in the philosophy of history. The term colligation was derived from William Whewell and applied in the philosophy of history by W. H. Walsh. Walsh (1974) defined the term as “the activity by which the historian groups different events together ‘under appropriate conceptions’ ” (Walsh 1974, p. 133). For instance, the concept of the Scientific Revolution is widely used to group different events together, such as the change in worldview, the change in the method of empirical inquiry, and so on.

In recent debate, Kuukkanen (2015), who widely reviews the past discussion concerning colligation, emphasizes that colligation produces *higher-order* descriptions. His definition is as follows:

Colligatory concepts: (1) organize lower-order data into higher-order wholes; (2) categorize without any necessary shared features or resemblance among subordinated entities; and (3) are particular, that is, deal with phenomena restricted to a specific time and place. (Kuukkanen 2015, p. 113)

He takes as an example the concept of “Thaw,” which describes particular phenomena restricted to a specific time and place (3), that is, “the period in the Soviet History from the mid-1950s to the early years of the 1960s, when the Soviet leader Nikita Khrushchev initiated the process of de-Stalinization” (Kuukkanen 2015, p. 113). The concept of “Thaw” relates to some lower-order descriptions of discrete events, such as “the easing of repression and censorship in publishing, the release of prisoners from the Gulag labor camps, the politics of peaceful co-existence with the West, the improvement of relationships with China and Yugoslavia, the creation of cultural contacts with previously hostile countries and economic reforms” (Kuukkanen 2015, p. 113). These descriptions are organized into a description of a single whole, for example, “the cultural atmosphere of the Soviet Union in general changed and warmed from the ‘freeze’ of Stalin to Khrushchev’s” (Kuukkanen 2015, p. 113).

Providing higher-order descriptions has criteria of justification different from likelihood of descriptions. Kuukkanen (2015) contends that there are five factors that constrain choosing higher-order descriptions: exemplification, coherence, comprehensiveness, scope, and originality. Since comprehensiveness is an adequate criterion for my analysis, I will not describe the other factors. Kuukkanen (2015) defines comprehensiveness as follows;

Comprehensiveness: The concept that applies to a larger amount of historical data

than its rival on the assumed historical phenomenon is preferable. (Kuukkanen 2015, p. 126)

For the sake of simplicity, suppose that we replace what we know as Industrial Revolution with Agricultural Revolution, which has the higher description, like “a remarkable increase in agricultural production.” Agricultural Revolution cannot apply to a variety of historical facts, such as the increase in factories, the change in products, and so on. It should be noted that what matters here is not the likelihood of description. The change in the manner of agriculture is supported by historical data. The problem is not that Industrial Revolution is more likely than Agricultural Revolution, but that Industrial revolution applies more comprehensively to the historical phenomenon in the time and place in question.

Martin ignores this operation of providing higher-order descriptions, therefore problematically simplifying the justification of descriptions. This simplification is problematic because arguments about the comprehensiveness of higher-order descriptions play a crucial role in arguments about the sufficiency of explanations (arguments of kinds 3 and 4). In most areas of historical studies, historians do not frequently talk about lawful connections between events, perhaps because of the scarcity of available evidence. Therefore, to discuss the sufficiency of the explanans, historians more often appeal to arguments about the comprehensiveness of higher-order descriptions. If this is the case, Martin overlooks an important role of description in explanation.

Before moving on to the next section, one qualification is required for my claim. I do not intend to claim that comprehensiveness is another distinctive factor that determines which explanation is better than others. I suspect that the claim can be defended, but the goal of this paper is not to defend the claim. My claim is that Martin does not fully show the strategies that historians employ in arguments of kinds (3) and (4) and that colligation should be added to them. This claim suffices to show an important role of description Martin ignores. In the later sections, this point will be demonstrated through a case study of the historical explanatory competition.

3 Case study: Did the Enlightenment cause the French Revolution?

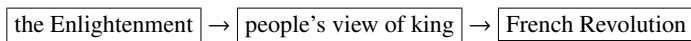
The goal of this section is to provide a case study of the historical explanatory competition for developing arguments in the next section. I use as the case study the historical debate over the relationship between the Enlightenment and the French Revolution. I will provide an overview of three positions in this debate. My aim here is not to make a comprehensive survey of this debate and, therefore, I will focus on four points to describe each position: (a) explanatory claims, (b) description of explanans event, (c) arguments for explanatory claims, and (d) criticism of the position.

I make a bit of comments on my choice of the case. This case is taken from the field of cultural history. The case studies of colligation already exist in political history, and thus, the resultant analysis about colligation will probably apply to political history. My choice of the case is intended to diversify the case studies.

Before examining three positions, I will sketch the debate over the relationship between the Enlightenment and the French Revolution. According to the traditionally accepted view, the Enlightenment, which criticized the Old Regime, influenced people's view of the Old Regime, which contributed to the French Revolution. Against this view, Robert Darnton (1982) did extensive research on the literary underground in the eighteenth century and maintained that "Grub Street hacks," who failed to enter the closed literary circle and led a hard life, made a more important contribution than famous Enlightenment philosophers.² In response to Darnton, Roger Chartier (1991) argued that what was more notable was not what was read but how it was read. Chartier claimed that the influence of books depends on the reading practice of people. Accordingly, it was not that illegal books changed people's worldview but that people's attitude toward reading enabled their acceptance of illegal books. This means that the new political culture affecting people's reading practice was a more important condition of people's change and the French Revolution. In this debate, historians agree that people's view of the king changed and that the change partially explains the outbreak of the French Revolution. In other words, they share a common explanandum event, which can be restated as "In the eighteenth century, people changed their attitude toward the Old Regime," but they disagree about how to explain it. In the following part, how historians defend and attack their explanations will be examined.

3.1 Traditional view

(a) Explanatory claims The traditional view says that Enlightenment philosophy influenced people's attitude toward the Old Regime, which promoted the French Revolution. This is obviously an explanatory claim; the wide-spreading Enlightenment philosophy is claimed to be the cause of the change in people's attitude. This claim can be expressed roughly through the following schematic:



(b) Description of explanans event The explanans of this explanation is "the Enlightenment." The Enlightenment is regarded as an intellectual movement that proposed a rational worldview and criticized the traditional worldview.

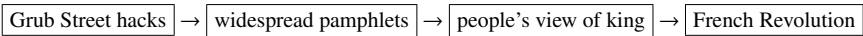
² In response to Darnton's research, a collection of essays was edited titled *Darnton's Debate* (Mason 1998), which shows how important Darnton's research has been regarded.

(c) Criticism by Darnton In contrast to this explanation, Darnton maintains that the activity of Enlightenment philosophers was not against the Old Regime. Instead, they were integrated into the elite class. Their living was supported by government pension and patrons. They led a life in a very closed circle, and most of them wrote few books. Of course, there were several exceptions, but the crude pamphleteering of Grub Street was more revolutionary and more influential (Darnton 1982, p. 40).

3.2 Darnton's view

In response to the traditional view, which exclusively focuses on famous philosophers, Darnton argues that there were much more “Grub Street hacks,” who “expressed the passion of men who hated the Old Regime in their guts” (Darnton 1982, p. 40). The literary world was divided into two layers: “a *monde* of mandarins,” on the one hand, and “Grub Street,” on the other hand. Darnton argues that Enlightenment philosophers belonged to the first and that the Grub Street hacks, who failed to enter the closed literary circle and led a hard life, had more influence on people than the Enlightenment philosophers.

(a) Explanatory claims Darnton claims a strong causal connection between the activity of Grub Street hacks and the change in people's view of the Old Regime. Darnton, however, does not claim that the Enlightenment had no influence on the people. He claims that the most important cause is the Grub Street hacks rather than the Enlightenment philosophers. His claim can be expressed roughly through the following schematic:



(b) Descriptions of explanans event Darnton provides at least two explanantia.

- (1) **pamphleteering of Grub street hacks** The first explanans event is the activity of the Grub Street hacks who hated the Old Regime in their guts. Grub Street hacks failed to enter the closed circle of a *monde* of mandarins, and they led a hard life. The hard life in Grub Street convinced them that the Old Regime had decayed beyond the point of recovery, both morally and physically. This conviction enabled them to write illegal pamphlets in the tone of moral outrage about subjects like sexually sensational scandals. Those sexual scandals included ridiculing the king, which destroyed the belief in the king's nobility.
- (2) **Widespread reading** The second explanans event is the fact that those pamphlets were widely read. Obviously, if they had not been read, they would not have been able to have any influence. That is why Darnton offers some evidence for this fact.

(c) Arguments for explanatory claims Darnton makes at least two arguments to justify the explanantia and to strengthen the relevance between explanans and explanandum.

- (1) **Widespread reading** First, Darnton provides two pieces of evidence that back up the fact that those pamphlets were widely read. The first is a case of the clandestine book trade. In the case Darnton examines, the number of those illegal pamphlets that were ordered was much larger than that of the Enlightenment philosopher's book (Darnton 1982, Chapter 4). The second is the fact that the government saw those pamphlets as widespread.
- (2) **Power of writings** Second, Darnton offers at least three arguments to strengthen the relevance between explanans and explanandum. The first is the fact that those illegal pamphlets expressed a feeling of total contempt for a corrupt elite. That is why "they communicated a revolutionary point of view" (Darnton 1982, p. 35). The second is the fact that some illegal pamphlets included sexual scandals of the king. The ridiculing of the king had a great deal of damage to his nobility because, in those days, nobility was identified with "seminal fluid" (Darnton 1982, p. 205). The third is the fact that the police took the pamphlets seriously. This is supported by the fact that the police hired hack pamphleteers to manipulate rumors (Darnton 1982, Chapter 2).

(d) Criticism by Chartier To refute Darnton's explanation, Chartier contends that readers were not affected as the author intended. He provides at least three arguments for this point.

First, he offers the case where the same philosophical book was read by different classes who made different choices in the face of the revolutionary event (Chartier 1991, pp. 83-86). For instance, Rousseau was read by both the leaders of the French Revolution and the aristocrats who were exiled abroad. Chartier does not show how they read Rousseau, but it is probably different. Therefore, this case works as a counterexample to the view that readers were affected as the author desired.

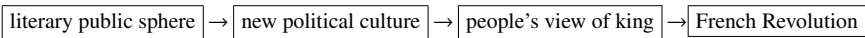
Second, he argues that how readers interpret a text depends on what they expect and what they use to interpret and so on. He takes as an example a pamphlet attacking Marie-Antoinette (Chartier 1991, pp. 86-87). This pamphlet was written to justify her adversaries in the court by disqualifying her and not to make people believe that she was as the text pictured her. Even if people do not believe the content of the pamphlet, it had effects on the politics of the court. Some readers familiar with the struggle among coteries did not believe what was written but others may have believed. The interpretation of the text varied from person to person.

Third, he claims that the fact that illegal pamphlets were widely read was not the cause but the result of the change in people's attitude (Chartier 1991, pp. 89-91). There was a gradual change in reading practice from reading one valuable book carefully to skimming various kinds of books. This change enabled widespread distribution of illegal pamphlets.

3.3 Chartier's view

In contrast to Darnton, Chartier's attention is directed to the change in reading practice and the new political culture that brought about the change.

(a) Explanatory claims Chartier claims that the change in the relation between the king and the people was brought about by the combination of some social changes, such as the secularization of religion, and the development of the "public sphere," and so on. These changes gave rise to the development of the new political culture, which enabled the outbreak of the French Revolution. His claim is obviously explanatory, which is very roughly expressed as follows:



(b) Descriptions of explanans event In Chartier's explanation, the most obvious explanans is "the development of new political culture," which produced the growth of the political consciousness. This trend is a long-term process that included many social changes. Tracing this process very roughly is enough here. The beginning of this process is the politicization of the literary public sphere. Due to the appearance of the salons and cafés, the elites of the public literary sphere began to critically discuss the evaluation of literature. This culture spread over other parts of society, which allowed people to criticize religion and the Old Regime. Therefore, people started to participate in politics. This took the form of an increase in litigation among the lower class.

(c) Arguments for explanatory claims For these explanantia, Chartier seems not to provide arguments about lawful connections between explanans and explanandum. This is perhaps because Chartier takes it for granted that his explanantia are relevant to his explananda. Illustrating these changes and synthesizing them into a single trend (the development of the new political culture) is the largest part of Chartier's arguments.

(d) Criticism by Darnton Darnton makes some objections to Chartier. Darnton admits that interpretation of texts involves readers' expectations and attitude. Darnton, however, argues that readers cannot interpret the text as they like because interpretation also depends on the culture in which readers are situated. Darnton complains that Chartier's analysis of readers' attitude is only directed to the literary public sphere, in other words, the elite class, and fails to take into account the barnyards and streets, where ordinary people refashioned their view of the world (Darnton 1995, p. 186, pp. 172-179).

3.4 Competing explanations

In the above debate, historians seek to show that their explanations are better than competing explanations rather than to show their explanations satisfy the conditions of the complete explanation. Moreover, they share the explanandum event, that is, the change

in relation between the king and people, and give an explanation to it and criticize other explanations. These characteristics of this debate allow us to see this case as an example of competing explanations.³ How well does Martin's account fit historians' strategies in this case?

4 Complement to Martin's account

The goal of this section is twofold. On the one hand, I aim to demonstrate, through the case study, that Martin's account applies quite well to full-blooded historical debates. On the other hand, I intend to show two problems of Martin's account. First, in Martin's account, the justification of descriptions concerns the likelihood of descriptions, but there are some cases that this account does not fit. I will argue that these cases can be interpreted as an example of colligation (4.2). Second, according to Martin, arguments of kinds (3) and (4), which influence the sufficiency of explanation, do not concern descriptions but law-like generalizations. Contrary to this view, I will argue, through the case study, that providing descriptions, including colligation, influences the sufficiency of explanation (4.2). Of course, if this is the case, one question would arise: why does just giving descriptions influence the sufficiency of explanation without discussion on law-like generalizations? I will propose that this is because providing descriptions, including colligation, has an influence on deciding which laws are relevant to the explanandum event, and that colligation plays a particularly crucial role (4.3). Thus, the idea of colligation illuminates the roles of description overlooked by Martin.

4.1 Applicability of Martin's account to the case study

Before applying Martin's account to the case study, I will briefly review his account. Martin postulates two factors that affect the status of two competing explanations: (a) the degree to which each explanation is justified by the available evidence and (b) the degree to which each explanation is sufficient. To show that one explanation is better in (a) and (b) than the other, historians combine four kinds of arguments (in detail, see pp. 6-9):

- (1) arguments that are intended to increase the likelihood that a particular explanans is true
- (2) arguments that are intended to decrease the likelihood that a particular explanans is true
- (3) arguments that are intended to increase the likelihood that a particular explanans is a partially sufficient explanation of its explanandum

³ Strictly speaking, the concept of competing explanations is difficult to define (Day 2004), but these characteristics suffice here.

- (4) arguments that are intended to decrease the likelihood that a particular explanans is a sufficient explanation of its explanandum

To show that one explanation is better in (a) than another, arguments of kinds (1), (2), and (4) are employed. When historians try to show the relative superiority of their explanation in (b), the first thing to do is arguments of kind (4), which “make rooms” for another explanans. Then, historians provide another explanans that is not contained in the non-favored explanation. The arguments of kind (3) are also used to strengthen the relevance between the explanans and explanandum. This account provides an analysis of Darnton’s and Chartier’s arguments as follows.

4.1.1 Darnton’s arguments

Darnton’s arguments are divided into two parts: the criticism against the traditional view and the defense of his own explanation. In the criticism against the traditional view, Darnton complains that the traditional view focuses only on highbrow philosophers, whose activity was not against the Old Regime but instead was integrated into the elite class. He claims that highbrow philosophers were less revolutionary and less influential than the crude pamphleteering of Grub Street.

This criticism against the traditional view corresponds to arguments of kind (4); Darnton tries to show that the explanation by the Enlightenment is not sufficient for the change in people’s attitude to the Old Regime. In fact, he claims that the Enlightenment philosophy was less influential than the traditional view assumed. Here, he makes room for another explanans and adds another explanans, the crude pamphleteering of Grub Street.

However, contrary to Martin’s account, his argument here does not concern any law-like generalizations. Darnton here just adds descriptions about the social character of the Enlightenment philosophers and he does not mention any law-like generalizations. This does not fit Martin’s account.

In defense of his own explanation, Darnton bears out his hypothesis that illegal political pamphlets were widely read in the eighteenth century by examining a case of the clandestine book trade. Darnton also provides evidential support to his claim that illegal political pamphlets influenced their readers by demonstrating that the police regarded them as having a serious effect on public opinion. Whereas the examination of a case of the clandestine book trade is an example of arguments of kind (1), the defense of illegal political pamphlets’ influence corresponds to arguments of kind (3).

In general, Darnton’s arguments follow Martin’s account. Darnton makes room for another explanans through arguments of kind (4), and he supports his own explanans with arguments of kinds (1) and (3). However, contrary to Martin’s account, Darnton’s argument against the sufficiency of the traditional explanation does not concern any law-like generalizations.

4.1.2 Chartier's arguments

Chartier's arguments can also be roughly divided into two parts: the criticism against Darnton's claim and defense of his own explanation. In the criticism against Darnton, Chartier tries to invalidate the claim that the pamphleteering of Grub Street hacks influenced the people by citing the case where the same philosophical book was read by different classes who made different choices in the face of the revolutionary event and by contending that what was read in books was not determined solely by what was intended by the authors but also by how they were read.

This criticism against Darnton corresponds to arguments of kind (4); Chartier tries to show that the pamphleteering of Grub street hacks is not sufficient for the change in people's attitude toward the Old Regime. His argument can be interpreted as giving a counterexample to the law-like generalization that Darnton implicitly assumes, that is, books were read as the authors intended.

In defense of his own explanation, Chartier holds that there were a series of changes in people's reading practice and political attitudes by citing some examples. Chartier does not seem to furnish any arguments about law-like generalizations. It might be suspected that his argument can be interpreted as arguments of kind (1), but this is not the case. His argument does not concern the likelihood of description because his example is not something that is best explained by his hypothesis, such as changes in people's reading practice.

In sum, Chartier's argument follows the procedure that Martin suggests. Chartier makes room for another explanans by arguments of kind (4), which denies the sufficiency of Darnton's explanation, and then adds his own explanantia to the explanation. However, Chartier's defence of his own explanantia cannot be interpreted in terms of Martin's account.

4.1.3 Darnton's objection to Chartier

Darnton makes some objections to Chartier. One main objection is that Chartier's arguments focus on the literary public sphere, in other words, the elite class, and fails to take into account the barnyards and streets, where ordinary people refashioned their view of the world. This argument is difficult to interpret in terms of Martin's account. At least, it is difficult to suppose that Darnton denies the likelihood that literary public sphere existed.

4.1.4 Two problems

In this way, Martin's account applies to the case study quite well, but two problems remain that cannot be solved based on Martin's account. First, some arguments in the case study do not fit Martin's account. Darnton's criticism against the traditional view seems to be equivalent to arguments of kind (4), but the criticism does not correspond to any strate-

gies in arguments of kind (4). The criticism does not concern any lawful connections, let alone theoretical consideration. In addition, Chartier's defense of his own explanation and Darnton's objection to Chartier have no correspondent in Martin's account. Second, in Darnton's criticism against the traditional view, Darnton seems to make room for another explanans even though he just describes the social activity of the Enlightenment philosophers. This means that giving some descriptions plays a crucial role in arguments of kind (4). Martin cannot account for why it is possible to deny the sufficiency of explanation just by giving some descriptions.

Addressing these problems will contribute to elucidating the role of description in historical explanation that Martin overlooks. In the following part, I will argue that these problems can be solved by introducing the idea of colligation.

4.2 Colligation in explanatory competition

I will begin with the first problem. The arguments in the case study that do not fit Martin's account can be interpreted as an example of colligation. This viewpoint provides a better analysis of Darnton's and Chartier's arguments.

4.2.1 Darnton's arguments

Darnton criticizes the traditional view by describing the social activities of the Enlightenment philosophers and contending that the activities of the Enlightenment philosophers were integrated into the elite class and were not likely to contribute to the revolution. This criticism concerns the comprehensiveness of colligation.

The Enlightenment is an example of a colligatory concept. In the traditional view, the Enlightenment has a higher-order description, for example, an intellectual movement that proposed a rational worldview and criticized the traditional worldview, and has some lower-order descriptions concerning the works of famous philosophers. Darnton proposes an alternative higher-order description, for example, an intellectual activity that was closed within the elite class and was integrated into the Old Regime. This higher-order description is based on the lower-order description regarding the social life of the Enlightenment philosophers, such as their living was supported by government pension and patrons and they led a life in a very closed circle, and most of them wrote few books, and so on.

Darnton's higher-order description is more comprehensive than that of the traditional view; that is, it applies to a larger amount of descriptions relevant to the phenomenon. This is why Darnton's higher-order description is better justified than that of the traditional view. It should be noted that the comprehensiveness is not equivalent to the likelihood. To compare the likelihood of two higher-order descriptions is nonsense, like comparing the likelihood of Industrial Revolution with that of Agricultural Revolution.

It might be suspected that justification of higher-order descriptions shows that Darnton's explanation is better in justification, and that is why Darnton's colligation contributes to showing the relative superiority. However, it should be noted that Darnton's higher-order descriptions also seem to play some crucial roles in questioning the sufficiency of the traditional explanation. I will later discuss the reason why furnishing another higher-order description contributes to the sufficiency of explanation.

4.2.2 Chartier's arguments

In defense of his own explanation, Chartier holds that there were a series of changes in people's reading practice and political attitudes by citing some examples and that those changes enabled people to accept political pamphlets. This argument is also an example of colligation.

Chartier introduces the colligatory concept, such as politicization of the literary public sphere and new political culture. Each concept has a higher-order description, for example, due to the appearance of the salons and cafés, the elites of the public literary sphere began to critically discuss the evaluation of literature, and people started to participate in politics, and a lower-order description, for example, some example of literary discussions and an increase in litigation among the lower class. These higher-order descriptions seem to have stronger relevance to the explanandum than individual lower-order description. The reason for the stronger relevance is discussed in the next part.

4.2.3 Darnton's objection to Chartier

If Chartier's argument is colligation, Darnton's objection is intelligible. Darnton complains that Chartier's arguments focus on the literary public sphere, in other words, the elite class, and fails to take into account ordinary people. Darnton here does not talk about the likelihood that the literary public sphere existed. Rather, Darnton casts doubt on the comprehensiveness of Chartier's higher-order descriptions of the literary public sphere. Denying the validity of description can influence the sufficiency of explanation, as I argue in the next part.

Thus, the first problem is solved. Though some arguments in the case do not fit Martin's account, they can be regarded as examples of colligation. The idea of colligation clarifies what historians do in the case study. However, this analysis also poses a new question: why do higher-order descriptions have stronger relevance to the explanandum than individual lower-order description, as in the Chartier's argument? In other words, why do historians take bother to colligate events rather than just describe events in historical explanatory competition. I will return to this question after dealing with the second problem.

4.3 Description vs. laws

In the following part, I will give an answer to the second problem. The second problem is the reason why providing descriptions, especially colligation, influences the sufficiency of explanation. To address this problem, I argue that providing descriptions, including colligation, plays a crucial role in arguments regarding which law-like generalizations are relevant, at least in explanatory competition. To reach this conclusion, the first thing to note is that, under the different descriptions, the same event leads to different consequences. For example, the event of “Enlightenment” is likely to have a vast influence on ordinary people’s thoughts under the description “an intellectual movement that proposed a rational worldview and sought to liberate people from the traditional Christian worldview,” while, under the description “an intellectual movement whose leaders are supported by the government and integrated into the elite class,” the same event is unlikely to influence the ordinary people.

Of course, just describing an event has no implication on its consequence. The reason why different descriptions have different consequences is that different descriptions are implicitly paired with different law-like generalizations. Talking about their consequence tacitly involves some lawful connections between events. In the case of the Enlightenment, whereas the traditional view implicitly assumes some law-like generalizations under which the event is likely to influence people, Darnton seems to tacitly use some law-like generalizations that make it likely that the phenomenon has no influence.

In other words, Darnton does not just redescribe the explanans event but provides an alternative set of explanans and some law-like generalizations. Consequently, some law-like generalizations of the traditional view are dismissed on the ground that the explanans paired with them is less justified than that of Darnton, not on the ground that the law-like generalizations itself is justified. Under an alternative law, the Enlightenment would not be sufficient to change people’s attitude toward the Old Regime. This means that dismissal of the explanans of the traditional view leads to denying the sufficiency of the traditional view.

Of course, these kinds of law-like generalizations are not justified by empirical evidence because they are not explicitly mentioned and they are difficult to formulate in a clear form. The role of these kinds of law-like generalizations is discussed by Danto, who claims that they are “little more than truism” (Danto 1965, p. 243). Danto argues that they make some consequences likely, but still it is also likely that the consequences do not occur. In addition, they are difficult to state clearly; therefore, their scope is quite vague. However, they do not require support by evidence since they are derived from our ordinary practice of explaining events.

There could still remain a doubt on whether such a weak “truism” is able to play a role in explanation. However, it should be noted that I analyze explanatory competition, where

showing that one explanation is better than others takes precedence to showing that one explanation satisfies the ideal conditions. To show the former, historians do not need to justify law-like generalizations strictly because justification of descriptions contributes to showing the relative superiority, especially when competing explanations do not strictly justify law-like generalizations. In the case of the Enlightenment, the traditional view also does not bother to justify law-like generalizations. Therefore, choosing law-like generalizations based on the paired explanans is satisfactory for showing that one explanation is better in sufficiency than other explanations.⁴

Of course, the situation can be different in other fields of history. In the historical studies about books, which is part of case study, there have been much fewer resources for the justification of law-like generalizations than that of description. In this field, many attempts have been made to establish law-like generalizations based on statistical data, but they have failed (Darnton 1982, Chapter 6). This may be one reason why historians do not highly regard the justification of law. The situation is probably different in fields like economic history, especially cliometrics, which is based on the statistical method. We should be careful about generalizing this analysis.

In any case, providing descriptions can play a crucial role in arguments regarding which law-like generalizations are relevant, at least, in explanatory competition. This view sheds light on the reason why historians take bother to colligate events. It is because colligation can strengthen the relevance of the explanans and explanandum. Higher-order descriptions often implicitly utilize several law-like generalizations that are not available unless discrete lower-order descriptions are unified. For example, Darnton describes the activity of “Grub Street hacks” as expressing a feeling of moral indignation at the Old Regime and ridiculing the sexual life of the king. These lower-order descriptions are colligated into a high-order description of “Grub Street hacks.” This colligation also involves the combination of relevant law-like generalizations. For example, some law-like generalizations are paired with Grub Street hacks, such as “moral indignation effectively damages the respect for the king,” “sexual scandal of the king effectively damages the nobility of the king,” and so on. In this way, higher-order single wholes combine the powers of several law-like generalizations to strengthen the relevance between the explanans and explanandum, which is one reason why colligation has a particularly important role in historical explanatory competition.

In this section, I have made two claims so far: historians sometimes provide higher-order descriptions (colligation) in historical explanatory competition, and providing descriptions, especially colligation, plays a significant role in arguments about the suffi-

⁴ What historians discuss when choosing explanans in this way is very similar to what Leuridan & Froeyman (2012) calls the question of “stability of law,” which “historiographical discussions are often centered on.”

ciency of explanation through influencing the relevance of law-like generalization. These claims illuminate the arguments in the case study that Martin's account does not fit. Therefore, I conclude that my two claims work as a complement to Martin's account.

5 Conclusion

As Martin points out, when historians try to show that one explanation is better than another, there are two relevant factors: the justification of explanation and the sufficiency of explanation. However, Martin misses some roles of description in historical explanatory competition. Martin claims that the former concerns likelihood, but when historians introduce higher-order descriptions through colligation, justification of higher-order descriptions has criteria different from likelihood, for example, comprehensiveness. In addition, while according to Martin's analysis, description cannot influence the sufficiency of explanation, there are cases where justification of descriptions, especially colligation, affects the sufficiency of explanations. These cases can be accounted for by supposing that law-like generalizations are chosen based on how their relevant descriptions are justified. In other words, law-like generalizations whose relevant descriptions are well justified are chosen by historians, which is why the justification of descriptions affects the sufficiency of explanation. Moreover, higher-order descriptions unify several lower-order descriptions and utilize several law-like generalizations relevant to their lower-order descriptions to strengthen the relevance of the explanans and explanandum. This is one reason why colligation has a particularly crucial role in historical explanatory competition.

There are some assumptions for simplification that should be modified in the future. For example, I assume covering-law model of explanation and the regularity concept of causation in accordance with Martin, but it seems to be old fashioned. Further analysis should be done given the recent discussion on explanation and causation in the philosophy of science.⁵

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